**A NETWORK SCIENCE BASED APPROACH FOR OPTIMAL MICROSERVICE GOVERNANCE**

Saranga S.A.G

De Silva N.

L.S Jayasinghe

M.V Lakshitha

B.Sc. (Hons) Degree in Information Technology

Specializing in Software Engineering

Department of Software Engineering

Sri Lanka Institute of Information Technology

Sri Lanka

September 2020

**A NETWORK SCIENCE BASED APPROACH FOR OPTIMAL MICROSERVICE GOVERNANCE**

Saranga S.A.G

De Silva N.

L.S Jayasinghe

M.V Lakshitha

Dissertation submitted in partial fulfillment of the requirements for the Bachelor of

Science specializing in Software Engineering

Department of Software Engineering

Sri Lanka Institute of Information Technology

Sri Lanka

September 2020

**Declaration**

We declare that this is our own work and this proposal does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other university or institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Also, we hereby grant to Sri Lanka Institute of Information Technology, the nonexclusive right to reproduce and distribute my dissertation, in whole or in part in print, electronic or other medium. We retain the right to use this content in whole or part in future works (such as articles or books).

**Signature:**

|  |  |  |
| --- | --- | --- |
| **IT17016230** | **Saranga S.A.G** |  |
| **IT17006880** | **De Silva N.** |  |
| **IT17012966** | **L.S Jayasinghe** |  |
| **IT17410250** | **M.V Lakshitha** |  |

The above candidates are carrying out research for the undergraduate Dissertation under my supervision.

**Signature of the Supervisor: ……………………………………**

**Date: …………………………….**

**Abstract**

With the introduction of microservice architecture for the development of software applications, a new breed of tools, platforms, and development technologies emerged that enabled developers and system administrators to monitor, orchestrate and deploy their containerized microservice applications more effectively and efficiently. Among these vast arrays of technologies, Kubernetes has become one such prominent technology widely popular due to its ability to deploy and orchestrate containerized microservices. Nevertheless, a common issue faced in orchestration platforms such as Kubernetes is the employment of vast arrays of disjoint monitoring solutions that fail to portray a holistic perspective on the state of microservice deployments, which in turn, inhibit the creation of more optimized deployment policies.

In response to this issue, the research carried out proposes the use of a network science-based approach to the creation of a microservice governance model that incorporates the use of dependency analysis, load prediction, centrality analysis, and resiliency evaluation to effectively construct a more holistic perspective on a given microservice deployment. Furthermore, through analysis of the factors mentioned above, the research conducted, then goes on to create an optimized deployment strategy for the deployment with the aid of a developed optimization algorithm.

**Keywords:** Auto-scaling, Chaos Engineering, Kubernetes, Machine Learning, Microservices, NSGA-Ⅱ, Time Series

**Acknowledgement**

We would like to thank my supervisor, Dr. Dharshana Kasthurirathna for the guidance and motivation provided in order to make this research a success. We would also like to thank the Department of Software Engineering of the Sri Lanka Institute of Information Technology as well as the CDAP lecturers and staff for the guidance and support provided.

**Table of Contents**

[**Declaration** i](#_Toc51619422)

[**Abstract** ii](#_Toc51619423)

[**Acknowledgement** iii](#_Toc51619424)

[**Table of Contents** iv](#_Toc51619425)

[**List of Figures** v](#_Toc51619426)

[**List of Tables** viii](#_Toc51619427)

[**List of Abbreviations** ix](#_Toc51619428)

[**List of Appendices** x](#_Toc51619429)

[**1.0 INTRODUCTION** 1](#_Toc51619430)

[**1.1** **Background and Literature** 4](#_Toc51619431)

[**1.2 Research Gap** 7](#_Toc51619432)

[**2.0 RESEARCH PROBLEM** 9](#_Toc51619433)

[**3.0 OBJECTIVES** 11](#_Toc51619434)

[**3.1 Main Objective** 11](#_Toc51619435)

[**3.2 Specific Objectives** 11](#_Toc51619436)

[**4.0 METHODOLOGY** 12](#_Toc51619437)

[**4.1 Requirement Gathering** 12](#_Toc51619438)

[**4.1.1 Past Research Analysis** 12](#_Toc51619439)

[**4.1.2 Identifying Existing Systems** 12](#_Toc51619440)

[**4.2 Feasibility Study** 13](#_Toc51619441)

[**4.2.1 Technical Feasibility** 13](#_Toc51619442)

[**4.2.2 Schedule Feasibility** 14](#_Toc51619443)

[**4.2.3 Economic Feasibility** 14](#_Toc51619444)

[**4.3 Requirement Analysis** 15](#_Toc51619445)

[**4.4 System Analysis** 16](#_Toc51619446)

[**4.5 System Development and Implementation** 18](#_Toc51619447)

[**4.5.1 Microservice Co-dependency Network (Co – dependency map)** 18](#_Toc51619448)

[**4.5.2 Load Prediction and Centrality Analysis** 19](#_Toc51619449)

[**4.5.3 Resiliency Evaluation** 24](#_Toc51619450)

[**4.5.4 Optimization Algorithm** 26](#_Toc51619451)

[**4.6 Project Requirements** 30](#_Toc51619452)

[**4.6.1 Functional Requirements** 30](#_Toc51619453)

[**4.6.2 Non-Functional Requirements** 31](#_Toc51619454)

[**4.7 Commercialization** 32](#_Toc51619455)

[**4.8 Time Line** 33](#_Toc51619456)

[**5.0 TESTING AND IMPLEMENTATION, RESULTS AND DISCUSSION** 34](#_Toc51619457)

[**5.1 Testing and Results** 34](#_Toc51619458)

[**5.1.1 Microservice Co-dependency Map** 35](#_Toc51619459)

[**5.1.2 Load Prediction and Centrality Analysis** 38](#_Toc51619460)

[**5.1.3 Resilience Evaluation** 44](#_Toc51619461)

[**5.1.4 Optimization Algorithm** 48](#_Toc51619462)

[**5.2 Research Findings and Discussion** 56](#_Toc51619463)

[**5.4 Summary of Student Contribution** 57](#_Toc51619464)

[**5.4.1 IT17016230 - Saranga S.A.G** 57](#_Toc51619465)

[**5.4.2 IT1700680 - De Silva N.** 59](#_Toc51619466)

[**5.4.3 IT17012966 - L.S Jayasinghe** 62](#_Toc51619467)

[**5.4.4 IT17410250 - Lakshitha M.V** 65](#_Toc51619468)

[**6.0 CONCLUSION** 67](#_Toc51619469)

[**References** 68](#_Toc51619470)

[**Appendix** 72](#_Toc51619471)

[**Appendix A: Overview of Developed Governance Model** 72](#_Toc51619472)

**List of Figures**

|  |  |  |
| --- | --- | --- |
|  |  | Page |
| Figure 1.1 | Microservice Technology Timeline | 4 |
| Figure 4.1 | Key components of the developed governance model | 16 |
| Figure 4.2 | High - level overview of the developed governance model | 17 |
| Figure 4.3 | High - level overview of the co-dependency network | 18 |
| Figure 4.4 | Load prediction and Centrality analysis component of the developed governance model | 19 |
| Figure 4.5 | Overview of the prediction process for load-based inter-microservice link dependency measures/pod resource utilization metrics | 21 |
| Figure 4.6 | Typical process followed in the calculation of centrality measures | 23 |
| Figure 4.7 | High – level diagram of resilience evaluation component | 24 |
| Figure 4.8 | Overview of the optimization algorithm | 26 |
| Figure 4.9 | Gantt chart | 33 |
| Figure 5.1 | Evaluated microservice cluster of 6 microservices | 34 |
| Figure 5.2 | Generated quantified dependency CSV | 35 |
| Figure 5.3 | Generated CPU load CSV | 35 |
| Figure 5.4 | Generated node-edge graph based on the dependency | 36 |
| Figure 5.5 | Variation of dependency against the time | 36 |
| Figure 5.6 | Fluctuation of the CPU usage against time | 37 |
| Figure 5.7 | MAPE, RMSE, SMAPE and MASE values - resource utilization prediction | 39 |
| Figure 5.8 | 1-hour forecast of CPU utilization metrics | 39 |
| Figure 5.9 | MAPE, RMSE, SMAPE and MASE values - inter-microservice link dependency measures | 40 |
| Figure 5.10 | 1-hour forecast of load-based inter-microservice link dependency measures | 41 |
| Figure 5.11.1 | Predicted microservice co-dependency network at time t+12 | 41 |
| Figure 5.11.2 | Microservice co-dependency network at time t | 42 |
| Figure 5.12 | Figure of the table depicting the comparison of current and forecasted centrality measures of co-dependency network | 43 |
| Figure 5.13 | Sample chaos experiment(.yaml) | 45 |
| Figure 5.14 | Failed chaos experiment | 45 |
| Figure 5.15 | Defining a steady-state to check the health of microservices | 46 |
| Figure 5.16 | Experiment successfully executed | 46 |
| Figure 5.17 | Section of the pdf report of an experiment | 47 |
| Figure 5.18 | Structure of sample JSON input | 48 |
| Figure 5.19 | Existing performance deployment view | 49 |
| Figure 5.20 | Existing performance instances table | 49 |
| Figure 5.21 | Best performance deployment view | 50 |
| Figure 5.22 | Best performance instances table | 51 |
| Figure 5.23 | Best performance metrics improvement table | 51 |
| Figure 5.24 | Best availability deployment view | 52 |
| Figure 5.25 | Best availability instances table | 53 |
| Figure 5.26 | Best availability metric table | 53 |
| Figure 5.27 | Cost-effective deployment view | 54 |
| Figure 5.28 | Cost-effective instances table | 54 |
| Figure 5.29 | Cost-effective metric improvement table | 55 |

**List of Tables**

|  |  |  |
| --- | --- | --- |
|  |  | Page |
| Table 4.1 | Terms in average latency calculation | 28 |
| Table 4.2 | Terms in fitness calculation | 29 |
| Table 5.1 | Model Parameters – Resource utilization prediction | 38 |
| Table 5.2 | Model Parameters – Inter-microservice link dependency measures | 40 |
| Table 5.3 | Metric Measurement Units | 48 |
| Table 5.4 | NSGA II Algorithm Initialization Parameters | 50 |
|  |  |  |

**List of Abbreviations**

|  |  |
| --- | --- |
| Abbreviation | Description |
| AKS | Azure Kubernetes Services |
| API | Application Programming Interface |
| APM | Application Performance Monitoring |
| ARIMA | Auto-Regressive Integrated Moving Average |
| AWS | Amazon Web Service |
| CNCF | Cloud-Native Computing Foundation |
| CPU | Central Processing Unit |
| CSV | Comma Separated Values |
| HPA | Horizontal Pod Autoscaler |
| HTML | HyperText Markup Language |
| HTTP | Hyper-Text Transfer Protocol |
| IT | Information Technology |
| JSON | JavaScript Object Notation |
| LSTM | Long - Short Term Memory |
| MAPE | Mean Absolute Percentage Error |
| MASE | Mean Absolute Scaled Error |
| NSGA | Non - dominant Sorting Genetic Algorithm |
| RMSE | Root Mean Square Error |
| RTT | Round Trip Time |
| SMAPE | Scaled Mean Absolute Percentage Error |
| SOA | Service-Oriented Architecture |
| TOSCA | Topology and Orchestration Specification for Cloud Applications |
| UI | User Interface |

**List of Appendices**

|  |  |  |
| --- | --- | --- |
| Appendix | Description | Page |
| Appendix A | Overview of Developed Governance Model | 72 |

**1.0 INTRODUCTION**

Microservices have become one of the most popular development architectures for many software applications developed today. ​This is mainly because microservices provide an effective way to develop a software application as a set of interconnected modular services that can be independently deployed and scaled [1]. Furthermore, due to benefits such as easy integration and deployment, support for continuous delivery as well as improved fault isolation, many organizations, including several well-known organizations such as Amazon, Netflix, and eBay have migrated from their traditional monolithic architecture and instead embraced microservice architecture [1].

With the widespread use of microservices, a variety of tools and platforms have been developed in order to deploy microservices efficiently. Among them, containerization of microservices is the most widely used and preferred approach. Containerization enables efficient and easy deployment of microservices through enabling developers and system administrators the ability to package and deploy microservices as container images through opensource tools such as Docker [2-3]. Furthermore, since all required dependencies, libraries, and all other components needed for the microservice are packaged up in the container itself, the software is isolated from its environment, ensuring the performance and the functionality of the software remain the same regardless of the underlying platform [4]. However, in the case when there are multiple containers present in a particular application, it becomes difficult to coordinate, schedule as well as monitor the deployed containers and ensure service availability [5].

In response to this issue, Kubernetes was introduced in the year 2014 [6] in order to provide a framework to run such distributed systems more resiliently by providing effective solutions for load balancing, storage orchestration, automated rollouts, rollbacks, self-healing mechanisms, etc. [5]. Integrating Kubernetes into an application’s deployment strategy, therefore, enables an organization to easily deploy, manage, and handle an application, keeping the inherent benefits of container-based deployments while ensuring service availability. The existence of this unique characteristic in Kubernetes has therefore resulted in its widespread use in microservice deployments and the increased popularity which can be seen today.

The advent of container orchestration tools such as Kubernetes has greatly revolutionized the microservice deployment methodologies and practices throughout the world due to the many inherent advantages it possesses. Regardless, even through the utilization of deployment tools such as Kubernetes, there are still some issues that need to be addressed. In this regard, a prevalent issue pertaining to Kubernetes deployments concerns the policies followed in the deployment of interdependent microservices, which result in the creation of inefficient, sub-optimal deployment polices. Moreover, a key contributor to the existence of the above issue is the lack of the necessary tools and services to obtain a holistic view of Kubernetes deployments and thereby optimize cluster performance.

The current tools and services offered by Kubernetes, in this regard, often have to be pre-configured to the existing pre-conceived knowledge of the developers in contrast to the actual real-time utilization. Although implementing such solutions may be of use in the short term, it maybe it may be difficult to further improve upon the performance of the microservice cluster in the long term due to the lack of a holistic perspective on the interaction of the interdependent microservices in real-time use. Hence, it should be realized that if a particular microservice deployment is to be optimized for performance, a clear understanding regarding the relationships among the interdependent microservices during runtime is required. However, if a microservice deployment is to be truly optimized for optimal performance, it may also be necessary to take into account factors such as the resilience among the interdependent microservices, the effect of autoscaling policies, in addition to a clear understanding on the interactions of interdependent microservices. Regardless, even though there are several monitoring solutions available for such purposes, such as Prometheus, Istio, and Chaos Toolkit, their disjoint nature prevents them from allowing users to obtain a holistic perspective on the state of their deployed microservices.

In addition, there also some issues that exist in the current way in which the effectiveness of Kubernetes deployments is evaluated with respect to performance. Currently, the process being used by developers and system administrators uses a wide array of monitoring tools known as Application Performance Monitoring (APM) tools in order to gather performance metrics regarding the various resources in the Kubernetes cluster and get an idea of the performance of their deployed clusters. This task is usually performed through constant observation of the metrics gathered through these APM tools. This technique is also used in key tasks such as in the identification, setting, and configuring of resource limits and thresholds for resource utilization as well as in the identification of potential performance bottlenecks, and hence is a tedious and time-consuming process. Moreover, even though these APM tools help in the identification of potential problems in a deployment, they are not able to provide an in-depth insight as to why the problem occurred. Therefore, it is quite clear that developers and system administrators are not able to easily obtain a holistic view of the performance of their deployed cluster and get a clear understanding regarding the current and expected performance of their deployments.

This research aims to provide a solution to this problem by taking the initial step by aiming to develop a model that takes into consideration a metric analysis-based approach to optimize and govern microservice deployments in Kubernetes through evaluation of identified dependency measurements. The developed governance model will ultimately aid developers and system administrators to effectively govern their microservice deployments by providing a holistic view, enabling them to configure their deployments with minimal time and effort.

The remaining sections of this document discuss key aspects in the development of the above-mentioned solution and a thorough analysis pertaining to key topics which include the background, research gap as well as the research problem addressed by the developed solution, along well an in-depth discussion and analysis of results obtained. Lastly, the document also discusses future work and suggested improvements to the developed solution along with an overall conclusion of the research conducted.

* 1. **Background and Literature**

The term “microservices” was first introduced in 2011 [7,8]. It was considered as a specialized implementation of Service Oriented Architecture (SOA) and introduced to denote the common architectural approach of decomposing applications into smaller self-contained services and, in turn, develop loosely coupled services. Later on, it was widely adopted by many companies such as Amazon, Netflix, LinkedIn, and SoundCloud as a result of the traditional monolithic applications being hard to develop, maintain and scale [9].

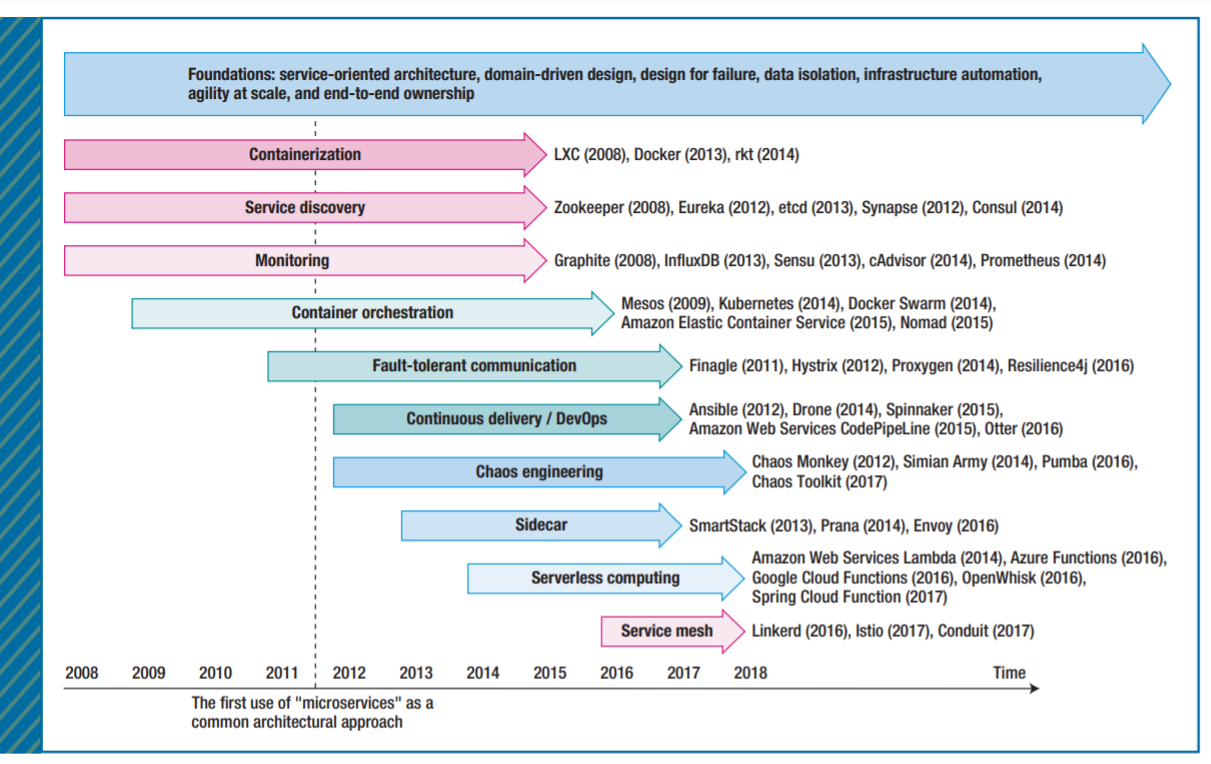
****Over the years, with the increased popularity of microservice architecture, new tools and technologies were introduced to support microservice-based technologies, as shown in Figure1.2. According to the authors of [8], the development of microservice-based technologies came in the form of ten “waves” starting from lightweight container technologies like Docker and LXC and leading up to the last “wave” of service mesh technologies such as Linkerd and Istio.

Figure 1.1: Microservice technologies timeline [8]

As evident from Figure 1.2 given above, with the introduction of various technologies supporting microservices throughout the years, microservices became an increasingly popular development architecture mainly due to several advantages it possesses when compared to the traditional monolithic applications developed. Key advantages include improved scalability, maintainability, delivery, and greater performance. Furthermore, since microservices are developed in a loosely coupled manner, it has enabled developers to develop, deploy, version, and scale applications independently, bringing in benefits such as faster delivery, greater performance, and greater autonomy [8].

Another key difference when between microservice and monolith architecture is when it comes to how they are governed. This term is known as “Microservices Governance” concerning a microservice architecture, and it can be simply defined as a methodology or approach that establishes policies, standards, and best practices for the adoption of microservices to enable an enterprise agile IT environment. [10]. Governance in monoliths is centralized, and decisions are made “top-down” [10], whereas governance in microservices embraces a decentralized governance approach. This, in turn, enables microservices to make use of a polyglot model technology stack in the development of applications.

However, due to the decentralized approach used in the governance of microservices more steps should be taken in order to ensure effective governance is maintained since typical applications require interconnections between a vast number of microservices where business process workflows are continuously introduced, Therefore, in order to ensure an effective microservice governance is in place, organizations currently make use of a variety of tools which facilitate tasks such as monitoring, autoscaling, configuration management, fault tolerance, etc. as seen in some of the examples provided in Figure 1.2 above.

Throughout the years, several strategies have been proposed by research a variety of research publications in order to minimize this issue and optimize performance. These researches primarily focus on performance modeling strategies as well as improving processes on orchestration platforms such as Kubernetes. In this regard, some of the key researches that propose relevant models and methodologies are highlighted below.

Research publications such as [11], propose an architectural approach along with its implementation that federates Kubernetes clusters using a TOSCA-based cloud orchestration tool, whereas research publications such as [12] propose a tool named Terminus to solve the problem of finding the best-suited resources for the microservice to be deployed, so that the whole application achieves the best performance while minimizing the resource consumption.

Other key researches include the reference net-based model for pod & container lifecycle in Kubernetes proposed by the authors of [13] and the generative platform for benchmarking performance and resilience engineering approaches in microservice architectures as proposed in [14]. This platform is comprised of elements such as an underlying metamodel, generation platform, supporting services for workload generation, problem injection, and monitoring.

However, through analyzing the above research publications described above, it is quite clear that there is no current solution proposed that takes into consideration an integrated modeling strategy, and takes into consideration elements such as co-dependencies present as well resilience and centrality measures among microservices when developing a holistic orchestration policy for Kubernetes based microservice deployments.

**1.2 Research Gap**

The primary research gap that this research aims at fulfilling is the lack of modeling strategies that fail to portray a holistic perspective regarding the status of Kubernetes based microservice deployments. A thorough analysis of published research papers throughout the years has managed to highlight some of the issues that are present in current microservice governance methodologies and thereby enabled in the identification of the research gap.

The initial inspiration for the identification of this research problem and also the objectives of this research can be found in [15]. This publication clearly describes some of the key challenges faced in the deployment of microservices and the need for APM tools, especially those deployed in containers to include additional measures to monitor microservices such that they could be used as input for resilience mechanisms and the creation of auto-scaling policies. This publication also goes on to highlight the fact that the shift in use cases for microservice performance modeling, particularly with respect to design-time performance modeling, has moved on from the traditional use cases such as capacity planning to newer emerging areas such as reliability and resilience engineering. Furthermore, the need for new modeling strategies that capture the recent advances in deployment technology such as Kubernetes, and also some of the key challenges that have to be faced, and the fact that making use of techniques from machine learning could solve some of these challenges, is also clearly highlighted in this publication.

Research publications such as [16] state the need for the development of techniques for accurately modeling, representing, and querying configurations of microservices and data center resources in a container and hypervisor-based technology. This publication states that the inability of monitoring frameworks such as Amazon EC2 and Heapster in Kubernetes to measure microservice-level performance metrics, will lead to the creation of several new research topics which include the development of holistic techniques for collecting and integrating monitoring data from microservices and datacenter resources, and, that users such as administrators or a computer program such as a scheduler could track and understand the impact of runtime uncertainties (failure, load-balancing, overloading, etc.). on performance without understanding the whole platform’s complexity.

The publication [8] discusses the evolution of microservice-based technologies throughout the years and some of the challenges that are yet to be addressed in the future. Among the challenges stated that need to be addressed is the challenge faced in the resource monitoring and management process currently in use. Issues such as the overloading of monitoring events, which hinders effective decision making and management decisions, as well as making use of past actions and events to better inform resource management decisions, are clearly highlighted in this regard.

Based on the information derived from research publications mentioned above, it is clear that new modeling strategies for microservice governance should be explored which should incorporate more effective and efficient use of monitoring solutions as well integration with other technologies such as resiliency evaluation and autoscaling in order to improve upon and develop a more optimized governance model for microservice deployments.

**2.0 RESEARCH PROBLEM**

Even though Kubernetes is quite successful and widely used nowadays, it is not without its own unique challenges. This is especially true with regard to some of the current processes in the governance of microservices through Kubernetes, particularly considering processes involving in monitoring, resource utilization, and performance optimization. A key contributing factor prevalent in this regard is the presence of disjoint monitoring solutions utilized in Kubernetes deployments that fail to portray a holistic perspective regarding the status of microservice deployments which thereby lead to the creation of sub-optimal deployment policies.

Currently, the only way in which developers and system administrators can effectively evaluate the effectiveness of their Kubernetes deployments with respect to performance is through the use of a wide variety of monitoring solutions provided via Application Performance Management (APM) tools. This process is quite challenging due to the fact that developers and system administrators have to focus on a variety of factors such as resiliency, security, auto-scaling, etc. which are obtained from these vast arrays of monitoring sources before deciding the optimal deployment configuration for the cluster in order to ensure the optimal performance. Examples of this could also be seen in processes such as resource utilization as well [17,18].

In addition, due to the use of vast arrays of APM tools that are used in these instances, it is also difficult to identify potential performance bottlenecks and identify the root cause for these problems, since developers and system administrators are unable to easily get a holistic view the status of their deployments regarding the expected performance of the deployed cluster unless they constantly monitor and analyze the vast amount of metrics obtained by these APM tools [19-21].

Moreover, with the current trend moving towards cloud-based platforms provided by Azure, Google, and AWS to perform Kubernetes deployments, which primarily incur a cost based on resource utilization [22-24], the need for APM tools has become even more evident. This, in turn, has led developers and system administrators to be more mindful in maintaining a proper balance between performance and resource utilization. However, maintaining this balance between performance and resource utilization is quite a challenging and time-consuming process for developers and system administrators since this process requires constant monitoring of metrics and finetuning multiple variables and paraments in their deployment configurations such that the optimal performance criteria are met. [25]

Adding to this set of problems is the difficulty posed in successfully configuring and integrating these APM tools with the existing tools used by organizations [26]. According to a survey conducted by the CNCF [27] regarding the challenges users faced in Kubernetes deployments as well as a survey [of 1,300 attendees](https://platform9.com/blog/six-enterprise-kubernetes-takeaways-from-kubecon-2019-san-diego/) at the KubeCon CloudNativeCon 2019 [28], monitoring was stated as one of the top-ranked challenges faced.

Therefore, based on the issues mentioned above, as well as the related research gaps highlighted in the previous section, it is quite clear that a more suitable solution should be implemented to enhance the governance of microservice-based deployments. This solution should make use of a unified model, taking into account the variety of factors considered in configuring Kubernetes deployments, to help system administrators and developers to get a holistic view of the status of the current deployment and enable them to easily govern and configure their deployments with minimal time and effort.

**3.0 OBJECTIVES**

**3.1 Main Objective**

The main objective is to model a network science-based approach to govern microservice deployments through the evaluation and analysis of metrics gathered and ultimately come up with a model that aids in optimizing microservice deployments.

**3.2 Specific Objectives**

The following are the sub-objectives of conducting this research.

* To increase the efficiency of microservices deployments by applying the metrics used in network analysis, such as centrality and resilience measures, and link predictions on identified dependency measurements.
* To develop an improved auto-scaling policy for a deployment, based on load prediction.
* To develop a business intelligence dashboard to evaluate performance and monitor microservice deployments.
* To identify key factors that lead to performance reduction in microservice deployments and come up with an optimal deployment strategy.

**4.0 METHODOLOGY**

**4.1 Requirement Gathering**

Requirement gathering was mainly performed through performing an extensive analysis of past research conducted throughout recent years, identification and analysis of the existing systems, as well as reading through a variety of online resources.

**4.1.1 Past Research Analysis**

The past research analysis process was mainly performed through reading and analyzing a wide array of research publications published through recent years. Key topics of interest included microservice deployment optimization, microservice performance engineering, microservice governance, centrality evaluation, load prediction, and forecasting, resource prediction and optimization, resiliency analysis, and microservice monitoring. During the research analysis process, the primary focus was given in the identification of the methodology used, tools used, experiments conducted, as well as the overall findings of the research with respect to performance optimization in microservices.

**4.1.2 Identifying Existing Systems**

A thorough analysis was conducted on a variety of existing APM tools as well as other similar systems, that were available to use with the Kubernetes platform. This process was mainly done by visiting the various online sources and analyzing the available documentation and videos published. During this process, the primary focus was given in identifying the key features and drawbacks that were present in the tools analyzed.

**4.2 Feasibility Study**

**4.2.1 Technical Feasibility**

**4.2.1.1 Knowledge on Kubernetes**

In order to develop the governance model, all members are required to have basic knowledge of Kubernetes and its relevant components. Members should be able to perform basic configuration and should have sufficient knowledge and practical experience on how to deploy microservices through Kubernetes.

**4.2.1.2 Knowledge on APM tools**

In order to develop the governance model, all members are required to have quite an in-depth understanding of the existing APM tools and the features and drawbacks present. The members should also have sufficient knowledge of configuring and APM tools selected for this research as well as knowledge on how to integrate the selected APM tools with the optimization model.

**4.2.1.3 Knowledge on Resiliency Evaluation and Chaos Engineering**

For the resiliency evaluation system to be developed, a thorough knowledge of “Chaos Engineering” and knowledge related Chaos Engineering tools are required. Furthermore, members should have sufficient knowledge of configuring and integrating the selected Chaos Engineering tool with the optimization model.

**4.2.1.4 Machine Learning Knowledge**

In order to develop the governance model, all members are required to have quite basic knowledge of machine learning basics as well as time series analysis. Members should be aware of the time series prediction models as well as knowledge on how to integrate the relevant models with machine learning and develop basic algorithms. Furthermore, members should also have a basic understanding of the Python programming language and related Python machine learning and time series libraries.

**4.2.2 Schedule Feasibility**

The project should be able to be implemented within the scheduled time period of about five months, with about two months allocated for research, requirement gathering, and analysis. Finally, the project should be completed within the end of 7 months, with room for sufficient testing.

**4.2.3 Economic Feasibility**

The cost of the project should be as minimal as possible in order for it to be included and accepted in the existing APM tool market in Kubernetes. This is mainly due to the fact that most APM tools and solutions offered currently with respect to Kubernetes are often opensource.

**4.3 Requirement Analysis**

During the requirement analysis phase, key information obtained during the requirement gathering phase was analyzed. Analyzing the gathered information proved to be of utmost importance to the research process, since key information regarding the potential challenges that may be faced, the potential complexity of tasks involved, as well as other key information regarding the tools used by other research teams were easily identifiable.

Also, since the research carried out a software-based approach, by performing requirement analysis, key information regarding the schedule, technical and economic feasibility was realized and helped in aligning research goals such that the research carried out did not exceed the technical skills of the research members while maintaining the expected deadlines.

During the literature review process, the primary focus was given to the analysis of the methodology and tools used, as well as the outcomes of the research conducted. This helped in improving the decision-making process in the current research by providing credible evidence that helped in deciding upon the directions in which the research should progress. Furthermore, analysis of the online resources regarding current available monitoring tools and solutions helped in the identification of existing features possessed by these tools as well as the potential limitations possessed by them.

**4.4 System Analysis**

The developed governance model is primarily comprised of four primary components, each aimed at capturing a particular dimension of a given microservice deployment. Fig. 4.1, given below, depicts the core components of the developed governance model.

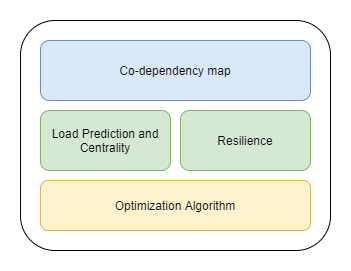


Figure 4.1: Key components of the developed governance model

Figure 4.2 given below depicts a high - level overview pertaining to the organization of the above-depicted components to facilitate the creation of the developed governance model. (**Note**: - See appendix for a clearer image)

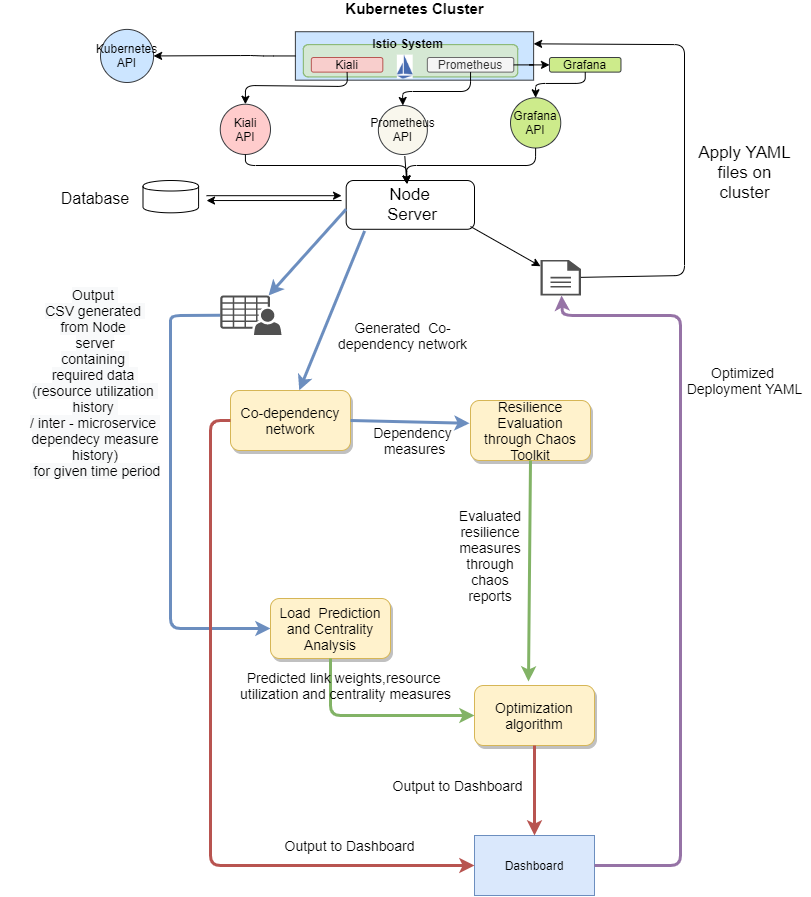


Figure 4.2:  High - level overview of the developed governance model

Through the utilization of the above-depicted core components, the developed governance model focusses on capturing a holistic perspective on a particular microservice deployment. Moreover, the developed governance model integrates with the Istio service mesh deployed on Kubernetes clusters to facilitate the creation of optimized deployment policies through integration with monitoring solutions such as Kiali and Prometheus. The data gathered from these monitoring solutions prevalent in the Istio service mesh is then aggregated into a single server Node server along with the inclusion of a database solution to form the basis for the developed governance model.

**4.5 System Development and Implementation**

**4.5.1 Microservice Co-dependency Network (Co – dependency map)**

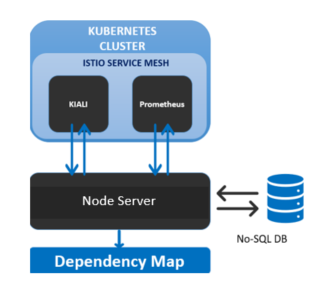


Figure 4.3: High - level overview of the co-dependency network

The microservice co-dependency network consists of three sub-components which can be listed as follows.

1. An Istio service mesh platform that incorporates Kiali and Prometheus monitoring solutions.
2. A backend NodeJS server for integration with metric APIs provided by monitoring solutions.
3. A database solution for the storage of gathered metric data.

The Istio service mesh provides the core metric servers such as Kiali and Prometheus, configured to retrieve data from the app, pod, and node levels in the cluster. In this regard, the microservice dependency map utilizes quantified measurements derived from request and response times obtained primarily from the Kiali metric server to facilitate the development of the microservice co-dependency map.

The Node server aggregates all APIs exposed from the Istio service mesh and exposes a single endpoint such that required metrics could be queried more effectively. The server is configured to query metrics and trigger required processes as per a configured scheduler. The metrics collected in this regard, are then stored in the No-SQL database along with additional information such as timestamps to facilitate the creation of time series datasets utilized in the training of machine learning models. The Node server is also capable of generating CSV (Comma Separated Values) files on demand by reading the No-SQL database. The server will also expose an endpoint that can be accessed via an HTTP request in order to trigger any required functions on demand. All the data stored in the database is maintained within the same Kubernetes cluster without exposing it to the public in order to maintain the privacy of user data. Lastly, in addition to the above, the Node server is also responsible for the creation of a node latency map through the evaluation of latency measures between the nodes in the cluster. Here, the Round-Trip Time (RTT) of network calls between nodes in the cluster is evaluated and, through the use of a developed shell script, the average latency measures between cluster nodes are obtained and forwarded to the optimization algorithm.

**4.5.2 Load Prediction and Centrality Analysis**

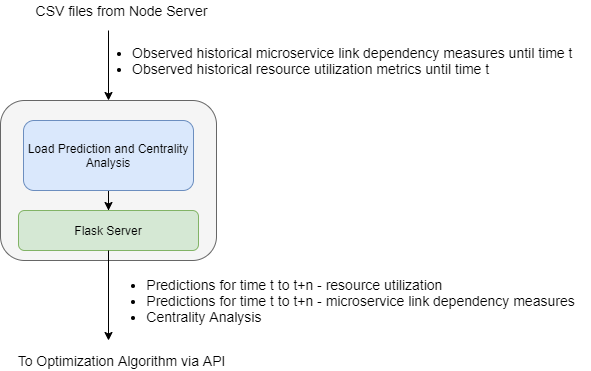


Figure 4.4: Load prediction and Centrality analysis component of the developed governance model

As depicted in Fig 4.4 above, the load prediction and centrality analysis component receives its input via the Node server. The inputs received (primarily in the form of CSV files) are utilized to facilitate the prediction of load-based metrics and calculation measures on the microservice co-dependency network. The resulting outputs are then forwarded to the optimization algorithm via API through the incorporation of a Flask server.

In this regard, the primary objective of the load prediction component and centrality analysis component is the utilization of historical load-based data as well as centrality measures performed on microservice co-dependency networks to aid in the optimization of microservice deployments and the creation of holistic autoscaling policies. In this regard, the component performs the following key tasks.

* Prediction of future resource utilization values (primarily CPU and memory) based on historical pod resource utilization data.
* Prediction of inter-microservice link dependency measures, based on historical link dependency measures derived from the load-based metrics in the co-dependency network.
* Calculation of centrality measures of microservices in the co-dependency network.

**4.5.2.1 Prediction of Load-based Inter - microservice Dependency Measures / Pod Resource Utilization Metrics**

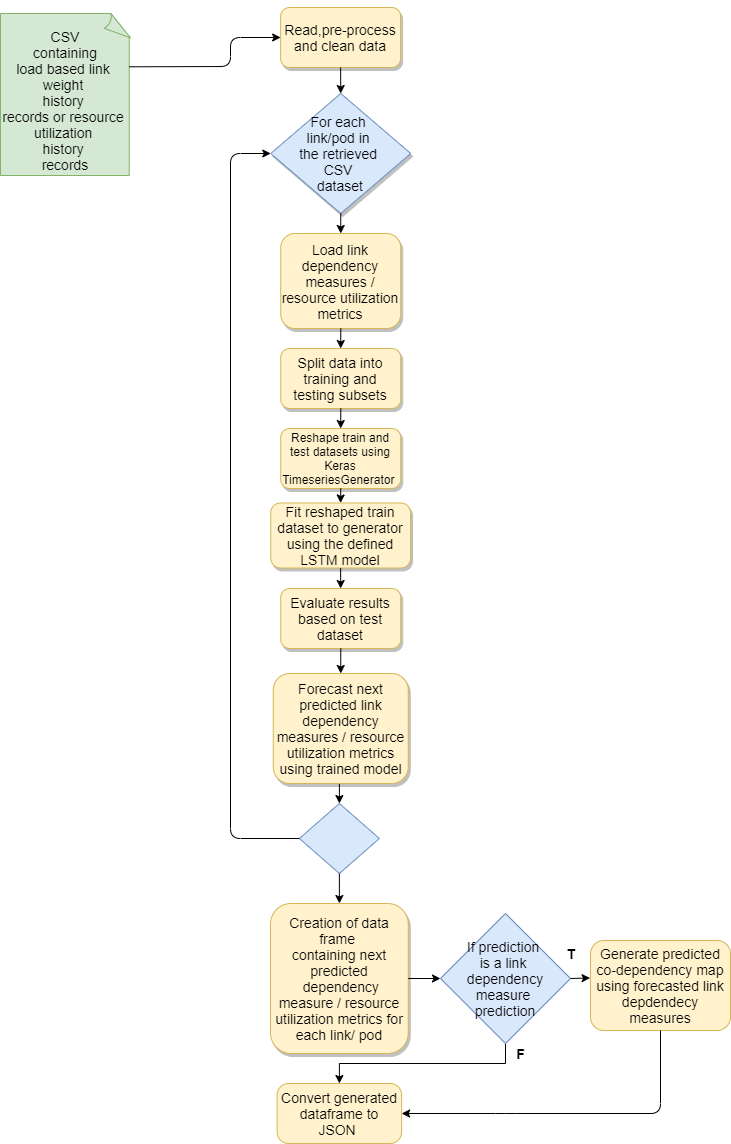


Figure 4.5: Overview of the prediction process for load-based inter-microservice link dependency measures/pod resource utilization metrics

The process utilized for the prediction load-based inter-microservice link dependency measures and resource utilization metrics is quite similar, due to the similarities in functional requirements. Hence, the prediction process of load-based inter-microservice link dependency measures and resource utilization metrics can be depicted as per Fig.4.5 above. However, as evident in the diagram above, the primary variation that exists among the prediction process utilized in the prediction of load-based inter-microservice link dependency measures and resource utilization metrics is the fact that there exists an additional step pertaining to the generation of the predicted microservice co-dependency map through the utilization of predicted link dependency measures.

The prediction of load-based inter-microservice link dependency measures and resource utilization metrics is performed through the application of a Long Short-Term Memory (LSTM) network in which a particular number of time steps (configured as per user requirements), are used to predict future link dependency measures/resource utilization values pertaining to the next time period. Through the application of the forecasted measures derived through the prediction process an accurate estimation of the load/resource utilization that is expected to be received by microservices in the cluster can be estimated. Furthermore, in conjunction with the optimization algorithm of the developed governance model, the load prediction and centrality analysis component facilitates the identification of key potential microservices that highly manipulate microservice placement decisions and the realization of optimal cluster performance.

**4.5.2.2 Calculation of Centrality Measures**

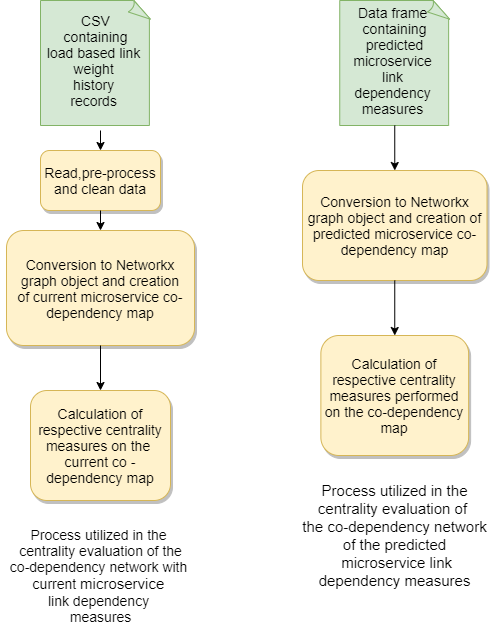


Figure 4.6: Processes followed in the calculation of centrality measures

Calculation of microservice centrality measures is also be performed within the load prediction component. Here, the microservices in the co-dependency network can be evaluated on several centrality measures to facilitate the identification of influential microservices in the cluster utilizing the current load-based microservice link dependency measures or through the predicted load-based inter-microservice link dependency measures.

In addition, the calculated centrality measures obtained in this regard, are then forwarded as inputs to the optimization algorithm, to infer autoscaling decision through the determination of required service instance levels. In this regard, the developed governance model is expected to make use of the key centrality measures such as degree, betweenness, closeness as well as eigenvector centrality measures to facilitate the identification process of influential microservices. Figure 4.6 above depicts the process followed in the calculation of centrality measures of microservices in the current and predicted co-dependency networks.

**4.5.3 Resiliency Evaluation**

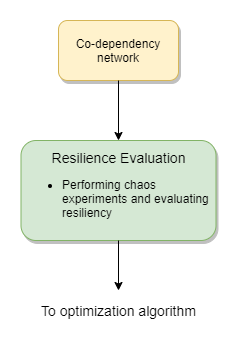


Figure 4.7: High – level diagram of resilience evaluation component

As depicted in Fig.4.7 above, the resilience evaluation component is particularly based on chaos engineering principles and utilizes the dependency measures derived from the co-dependency network to effectively target the most prominent services in the cluster for the evaluation of resiliency measures.

The expected behavior or the steady-state behavior is being determined first, the experiments are done to identify the situation which drives the system away from is normal behavior. For creating different conditions within the application, actions such as pod termination, deleting nodes, creating latency, destroying dependencies are performed using chaos.k8 modules which are included in the Chaos toolkit. Experiments can be differed according to the type of application that we are performing experiments on, and the important fact is to keep the blast radius under control.

Creating chaos in the system allows users to examine how the application responds, it is important to decide what aspects to investigate. Chaos toolkit provides a set of probes that can be used on Kubernetes clusters, health checks, HTTP responses, tolerances, and many more. These probes are used to examine the system behavior and the condition which can be used to identify and decide the necessary precautions or the modifications that have to be done to the application in order to maintain its availability, health, or customer satisfaction.

This process is performed through the use of Chaos Toolkit and the resulting resiliency measures thus obtained, are then utilized to derive a holistic perspective on the resilience and health of interdependent services in the cluster.

**4.5.4 Optimization Algorithm**

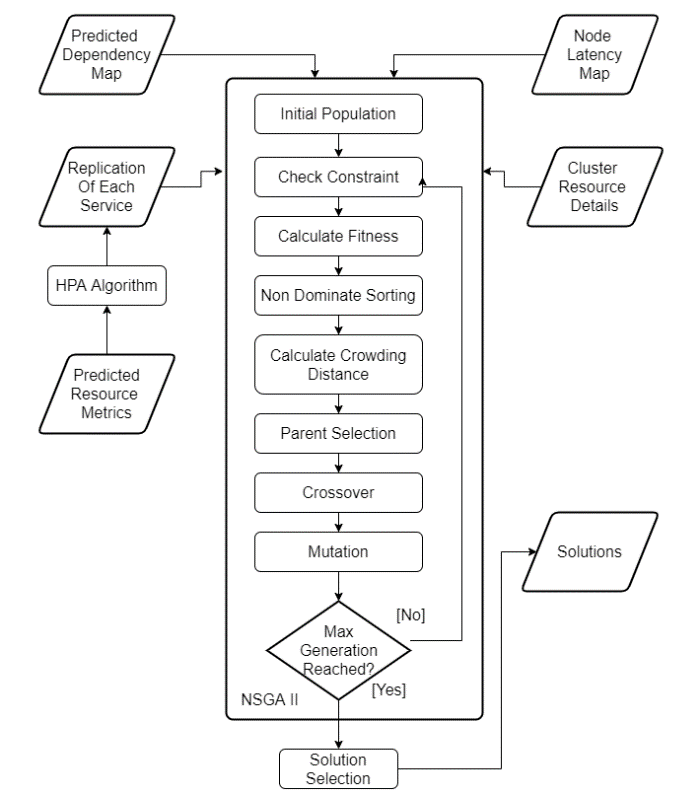


Figure 4.8: Overview of the optimization algorithm

The optimization algorithm utilized in the developed governance model is predominantly based on the NSGA-Ⅱ (Non - dominant Sorting Genetic Algorithm) algorithm. The algorithm generates a multitude of optimized solutions that enables the user to infer optimization decisions predicated on three key optimization categories, which are as follows.

* Solutions optimized for best performance and availability, thereby maintaining a balance between reduced latency and number of instances.
* Solutions optimized for optimal performance based on the reduction of latency.
* Solutions optimized for highest availability based on the maximization of the number of instances.

These optimized solutions are generated following four main input parameters utilized by the optimization algorithm as depicted in Fig. 4.8 above and can be listed as follows.

1. Predicted microservice dependency measures from the load prediction and centrality analysis component.
2. Node latency map generated from the Node Server.
3. Required number of microservice instances derived from centrality measures and predicted resource utilization metrics from the load prediction and centrality analysis component.
4. General cluster infrastructure information gathered from monitoring solutions.

The sub-sections below provide an in-depth insight into the manner these input parameters are utilized in the developed algorithm as well as their impact on the creation of holistic optimization policies.

**4.5.4.1 Application of Predicted Microservice Dependency Measures in the Optimization Algorithm**

In microservice deployments, although factors such as latency cannot be completely eliminated, dependent microservices can be deployed in nearby nodes or the same node in order to reduce the overall latency of an application. Therefore, making use of this approach while intending to solve low availability and sub-optimal performance issues, as well as to aid in the creation of autoscaling policies, the developed optimization algorithm makes use of the predicted load-based link dependency measure obtained from the load prediction component. This is done such that optimal placement and scaling decisions could be performed ahead of time, establishing a future deployment strategy such that users such as DevOps engineers would be able to make use of the gathered information to create an optimized microservice deployment plan. In addition, making use of the predicted dependency measures, optimal placement decisions are determined through the application of (1) and (2), as defined below, which calculates the average latency among the microservice instances, based on the dependency measures and as the node latency map obtained from the Node server.

Table 4.1: Terms in average latency calculation

|  |  |
| --- | --- |
| n | Number of dependencies in pod-level |
| m | Number of dependency links in app-level |
| W | Dependency request weight in app-level |
| L | The latency of dependency in pod-level |
| D | Dependency average latency in app-level |
| TL | Total latency |

(1)

(2)

**4.5.4.2 Application of Node Latency Measures Optimization in the Optimization Algorithm**

The main objective of the optimization algorithm is the maximization of performance through the minimization of latency among microservices. Therefore, the developed optimization algorithm also utilizes a developed node latency map obtained from the Node Server, to evaluate the fitness of generated solutions.

**4.5.4.3 Application of Required Microservice Instances in the Optimization Algorithm**

In the process of fitness calculation, the first step is the calculation of the required number of instances per microservices. Here, the calculation of the required number of microservices instances is performed by utilizing the predicted resource utilization values derived from the load prediction component, applied on the Horizontal Pod Autoscaling algorithm. Also, the centrality measures derived from the co-dependency network will be utilized to infer the optimum microservice instance levels, particularly in cases where historical information of the cluster is unknown. The required microservice instance levels are also utilized in availability fitness calculation measures, aided through the use of a generalized logistic function [29] to avoid giving high scoring fitness values from resources that require low resource consumption and are of low instance levels, thereby establishing a fairer scoring method. In this regard, the fitness is calculated as defined through (3) given below.

Table 4.2: Terms in fitness calculation

|  |  |
| --- | --- |
| R | Required instances for each service |
| S | The current number of instances in each service |
| TA | Total availability |
| n | Number of microservices |

(3)

**4.5.4.4 Application of General Cluster Information in the Optimization Algorithm**

The optimization algorithm also makes use of the general cluster infrastructure information such as the resource power consumption of nodes and node labels names. The information gathered in this regard is primarily utilized in the definition of constraints utilized by the optimization algorithm.

**4.6 Project Requirements**

**4.6.1 Functional Requirements**

The functional requirements for the developed model are as follows:

* Generation and visualization of microservice co-dependency map
* Perform time series-based prediction and forecast future microservice link dependency measures
* Perform time series-based predictions and forecast future pod resource utilization metrics
* Evaluate centrality measures on current and predicted representations of microservice co-dependency map
* The optimization algorithm should effectively determine the optimal placement of microservices in the cluster
* The optimization algorithm should effectively determine cluster autoscaling decisions as part of its optimization process
* The system should analyze the resiliency of the identified microservices in the cluster.

**4.6.2 Non-Functional Requirements**

The following are the key non-functional requirements that are primarily addressed in the developed governance model.

* Usability - The system should be highly usable and provide a unified interface to users to interact with.
* Availability – The system should be highly available and accessible to users
* Performance – The system should be as efficient as possible and make use of minimal resources in the prediction process such that it does not affect the performance of the overall cluster.
* Efficiency – The system should be as efficient as possible and make use of minimal resources in the prediction process such that it does not affect the performance of the overall cluster.
* Security - The system should be as secure as possible and data gathered from the microservice cluster should not be exposed to outside parties.

**4.7 Commercialization**

The commercialization of this research project is mainly considered by developing a tool through the use of the developed governance model. In this regard, the developed tool will be implemented as a Business Intelligence Dashboard, which makes use of the developed governance model to provide developers and system administrators an easy and efficient way in which to optimize their Kubernetes deployment by aiming to provide the following benefits.

* Visualize the level of inter-dependency among deployed microservices.
* Receive suggestions in potential ways to optimize the performance and configure current deployments and automatically perform deployments based on the suggestions.
* Provide an overview of the resiliency of the deployed microservices.
* Automatically configure and auto-scale Kubernetes autoscaling tools based on predicted load and centrality measures.

The developed Business Intelligence Dashboard will allow users to access all the features mentioned above and provide a holistic view of their deployments. Hence, this tool will be mainly targeted to be marketed as an APM tool for Kubernetes deployments for system administrators and developers. Due to the wide variety of APM tools currently available in the market, which are mostly free and opensource, the initial plan is to develop this dashboard into an open-source to enter the current market space effectively. However, throughout the years, a freemium based marketing strategy will be adopted to include additional features.

In addition to that, even though the testing implementation for the research has been done in AKS, the developed solution relies entirely on the Kubernetes platform. It does not use any cloud-native resources, which makes the developed tool can be used from any cloud service provider and any environment which supports Kubernetes core functionalities.

**4.8 Time Line**

The development timeline for the research project per Fig. 4.10 below.

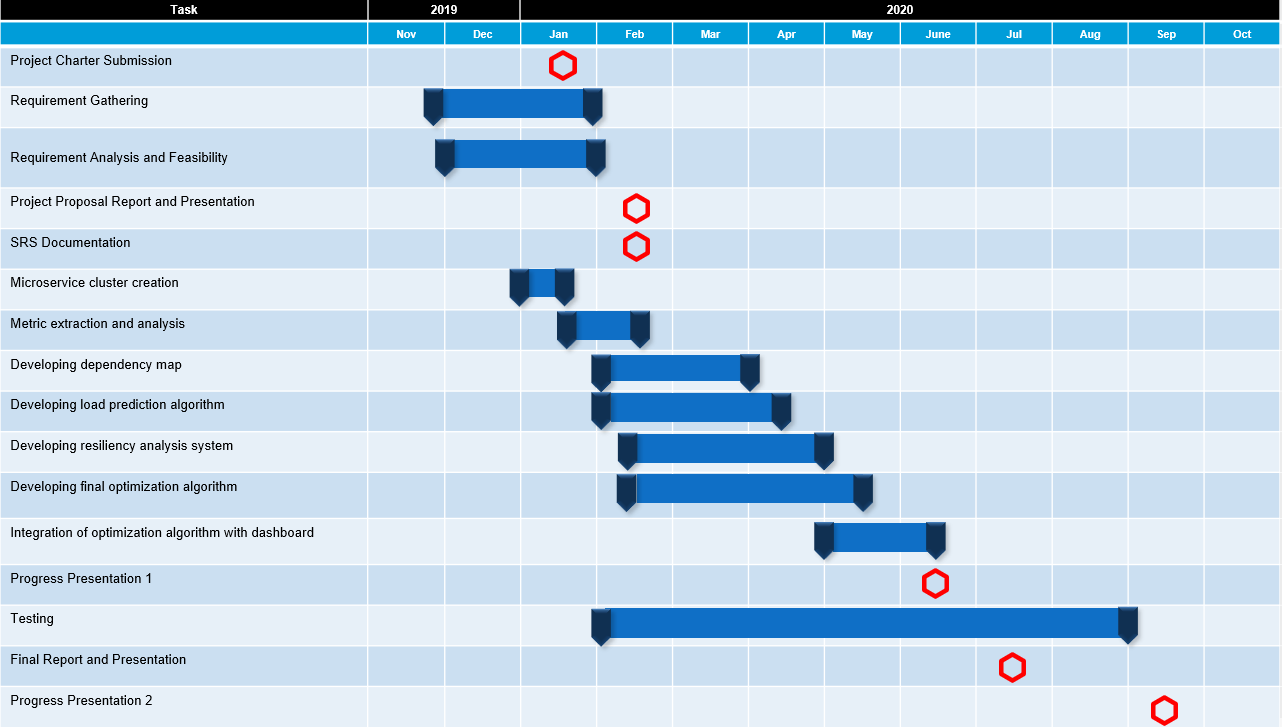


Figure 4.9: Gantt chart

Table 4.1: Personnel and Resources

**5.0 TESTING AND IMPLEMENTATION, RESULTS AND DISCUSSION**

**5.1 Testing and Results**

The testing process of the developed governance model was evaluated on a sample Kubernetes cluster deployed via AKS. The cluster consisted of 6 sample microservices (including the istio service) as per Fig 5.1 below.

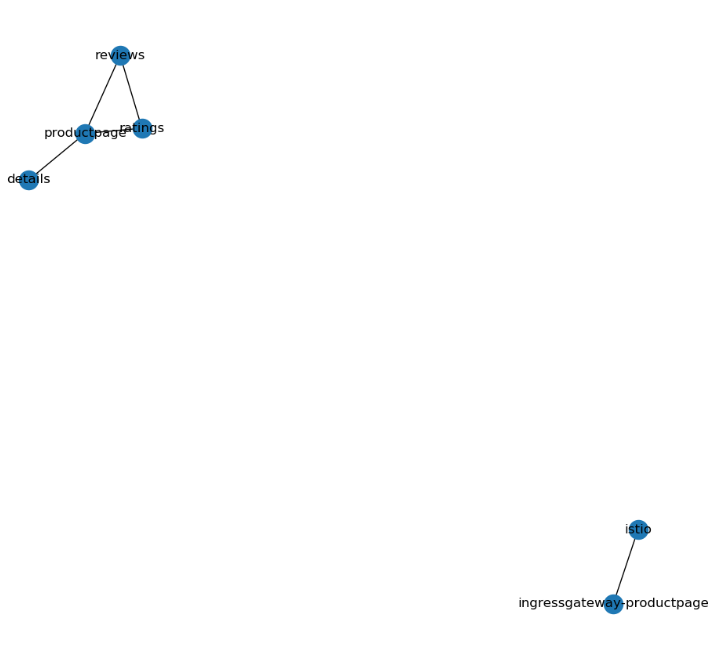


Figure 5.1: Evaluated microservice cluster of 6 microservices

Table 4.1: Personnel and Resources

Application of the developed governance model on the evaluated Kubernetes cluster, test results were obtained pertaining to each component of the developed governance model. The following sub-sections discuss the results obtained with respect to each component in the developed governance model.

**5.1.1 Microservice Co-dependency Map**

The key test results obtained are as follows. Figs 5.2 and 5.3 depict the resulting CSV file obtained via the Node server and Fig 5.4 depicts the generated node-edge graph based on the dependency

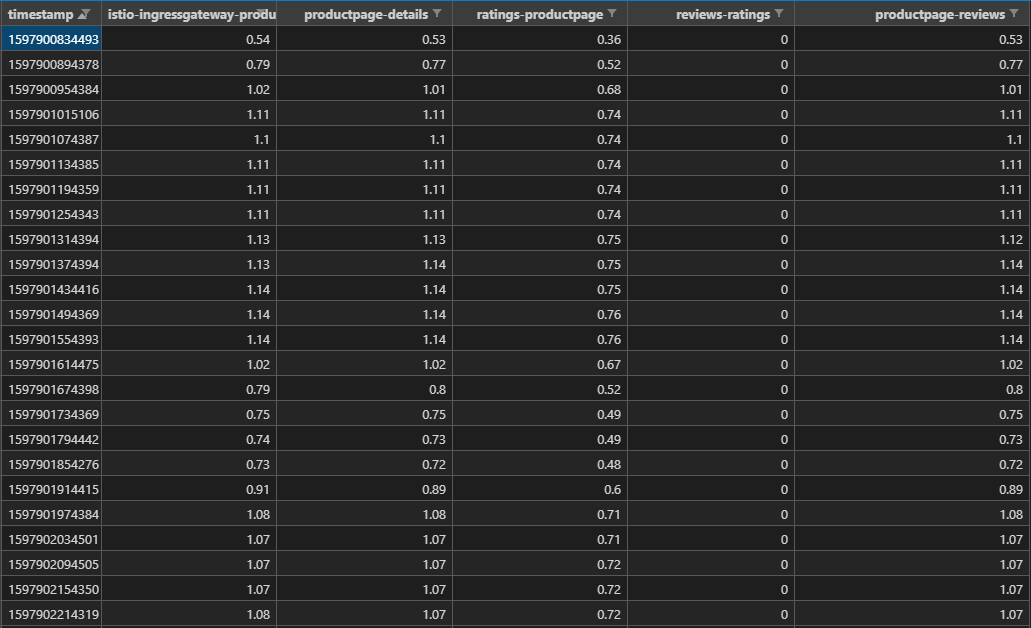


Figure 5.2: Generated quantified dependency CSV

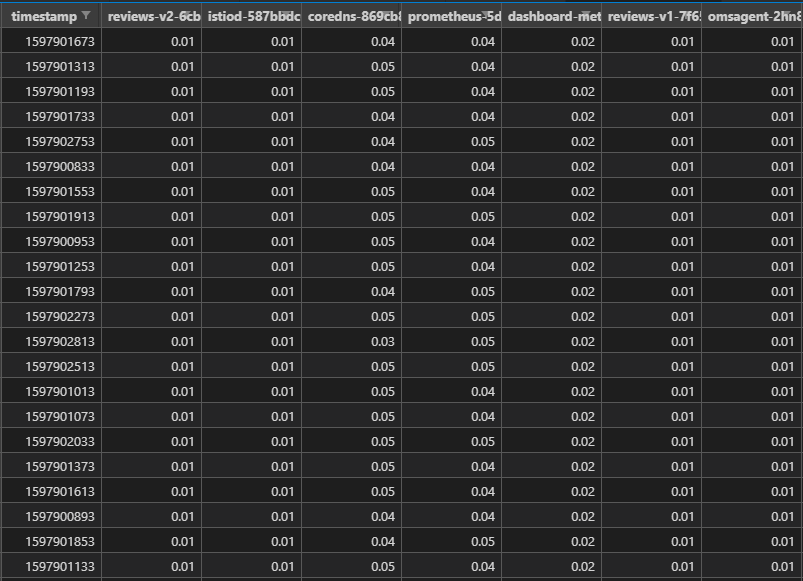


Figure 5.3: Generated CPU load CSV

When it comes to the test results, the gathered metrics clearly display that there is a quantified dependency between microservices. Furthermore, a simple node graph is generated to visualize the direction and the dependency level.

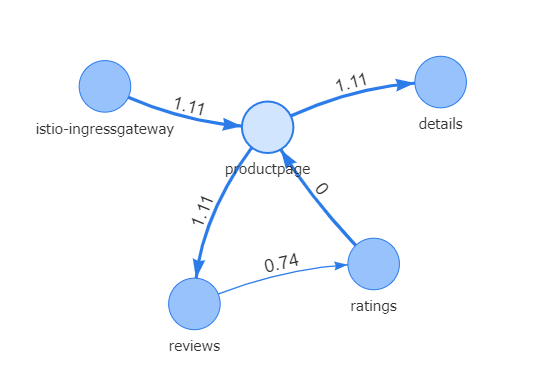


Figure 5.4: Generated node-edge graph based on the dependency

As the data is gathered in a manner of a time series, the fluctuation of the data against the time is visualized.

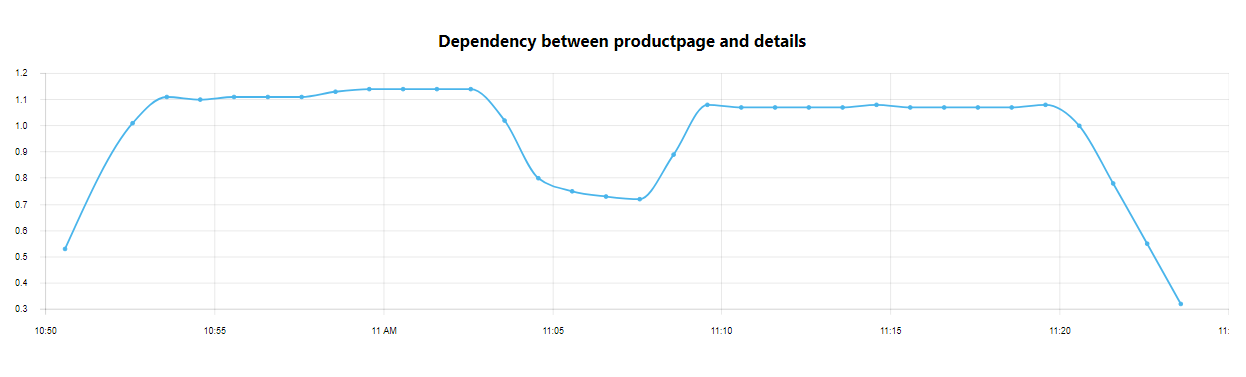


Figure 5.5: Variation of dependency against the time

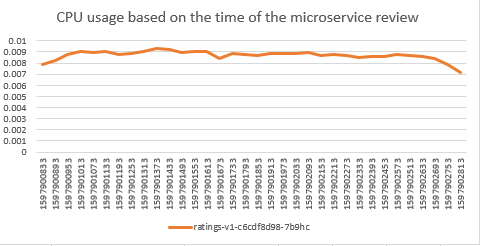


Figure 5.6: Fluctuation of the CPU usage against time

According to Figs. 5.5 and 5.6 it is evident that the usage of the microservice has a significant impact on dependency and CPU usage. When it comes to the deployment strategy of the microservices, if the dependency is considered, the efficiency of the cluster can be increased drastically.

The testing of the research is done on a set of simple microservices. However, the fluctuation of the dependency and the CPU load has a significant amount of values in a production-grade cluster.

**5.1.2 Load Prediction and Centrality Analysis**

**5.1.2.1 Prediction of Resource Utilization Metrics**

Through the evaluation of the developed prediction model on the sample CPU resource utilization metric dataset, the MAPE 2, RMSE, SMAPE, and MASE performance measures were evaluated. In this case, a past history of 1 hour (t-12; where “t” is the last recorded time of the time-series dataset and a time “t-1” represents the time 5 minutes prior to the last recorded time, “t”) was utilized for the prediction of CPU resource utilization values 1 hour in advance (t+12).

In this regard, Table 5.1 depicts the relevant parameter values set for the prediction model during the prediction process whereas Fig. 5.7 and Fig. 5.8 depict the results of key model performance evaluation metrics along with the forecasted results respectively.

Table 5.1: Model Parameters – Resource utilization prediction

|  |  |  |
| --- | --- | --- |
| Parameter | Parameter Description | Value |
| RES\_PAST\_HISTORY | Lookback period | 12 |
| RES\_NUM\_FEATURES | Number of features considered | 1 |
| RES\_NUM\_EPOCHS | Number of epochs | 100 |
| RES\_SPLIT\_SIZE | Split size for train and test subsets | 0.5 |
| RES\_TRAIN\_BATCH\_SIZE | Train subset batch size | 12 |
| RES\_TEST\_BATCH\_SIZE | Test subset batch size | 1 |
| RES\_NUM\_PRED | Number of forecast steps | 12 |

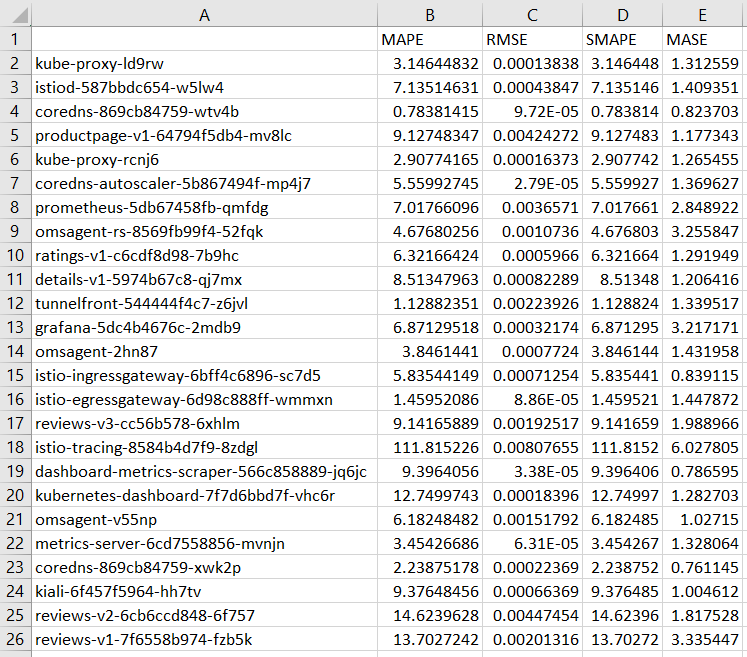


Figure 5.7: MAPE 2, RMSE, SMAPE and MASE values - resource utilization prediction (JSON result converted to CSV for improved readability)

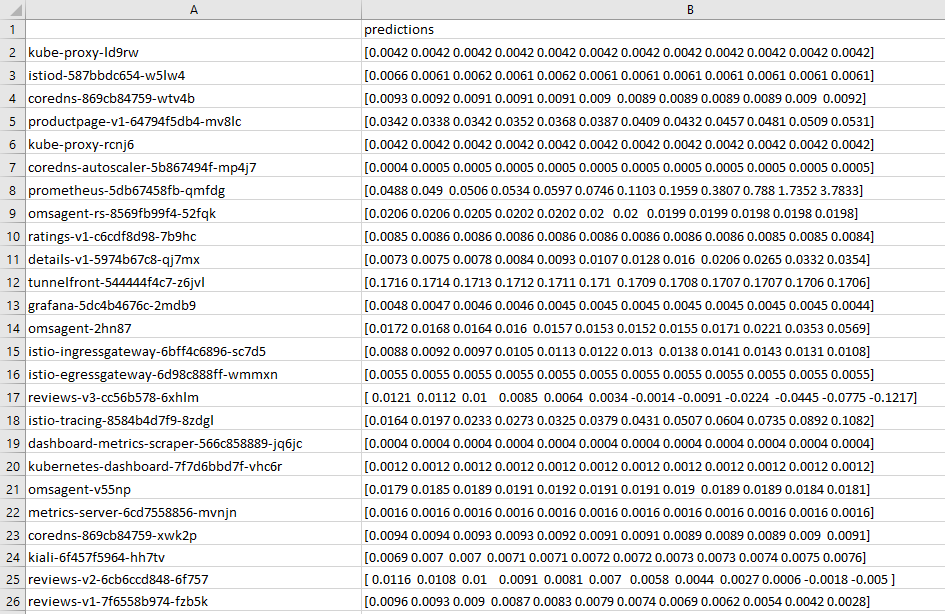


Figure 5.8: 1-hour forecast (t+12) of CPU utilization metrics (JSON result converted to CSV for improved readability)

**Note \***: - Above predictions (Fig. 5.8) depict predictions at 5-minute intervals for the next 1 hour.

**5.1.2.2 Prediction of Load - based Inter- microservice Link Dependency Measures**

Through evaluation of the developed prediction model on the dataset containing load-based inter-microservice link dependency measures, MAPE 2, RMSE, SMAPE, and MASE performance measures were evaluated. In this case, a past history of 1 hour (12 \* 5 min) was utilized for the prediction of microservice link dependency measures 1 hour in advance, with a time interval of 5 minutes between each successive prediction. Table 5.2 depicts the performance evaluation scores of the developed prediction model in the prediction of the results along with the relevant parameter values set for the prediction model.

Table 5.2: Model Parameters – Inter-microservice link dependency measures

|  |  |  |
| --- | --- | --- |
| Parameter | Parameter Description | Value |
| DEP\_PAST\_HISTORY | Lookback period | 12 |
| DEP\_NUM\_FEATURES | Number of features considered | 1 |
| DEP\_NUM\_EPOCHS | Number of epochs | 100 |
| DEP\_SPLIT\_SIZE | Split size for train and test subsets | 0.7 |
| DEP\_TRAIN\_BATCH\_SIZE | Train subset batch size | 1 |
| DEP\_TEST\_BATCH\_SIZE | Test subset batch size | 1 |
| DEP\_NUM\_PRED | Number of forecast steps | 12 |

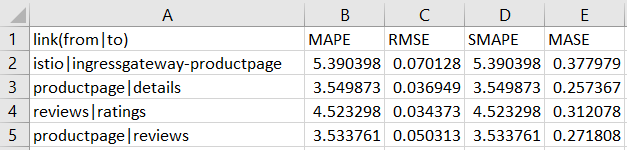


Figure 5.9: MAPE 2, RMSE, SMAPE and MASE values - inter-microservice link dependency measures (JSON result converted to CSV for improved readability)

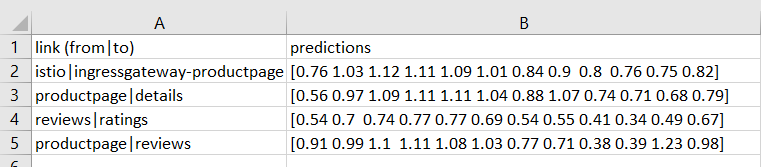
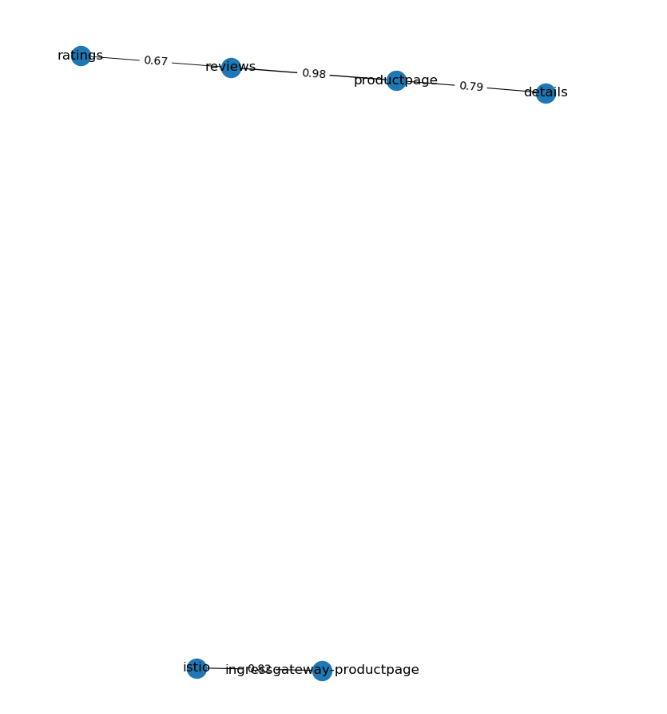


Figure 5.10: 1-hour forecast (t+12) of load-based inter-microservice link dependency measures (JSON result converted to CSV for improved readability)

**Note \***: - Above predictions (Fig. 5.10) depict predictions at 5-minute intervals for the next 1 hour.



Predicted link dependency measures at time t+12

0.82

Figure 5.11.1: Predicted microservice co-dependency network at time t+12 (1 hour in advance)

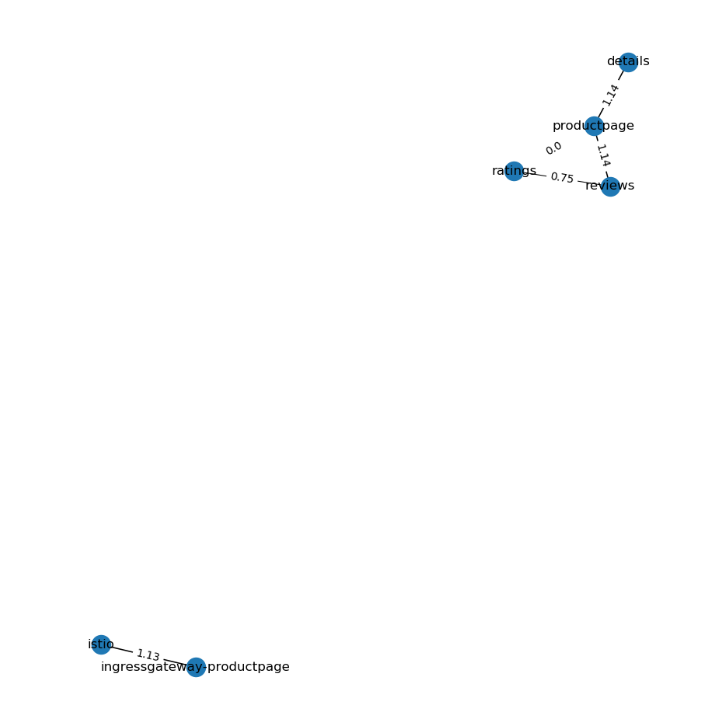
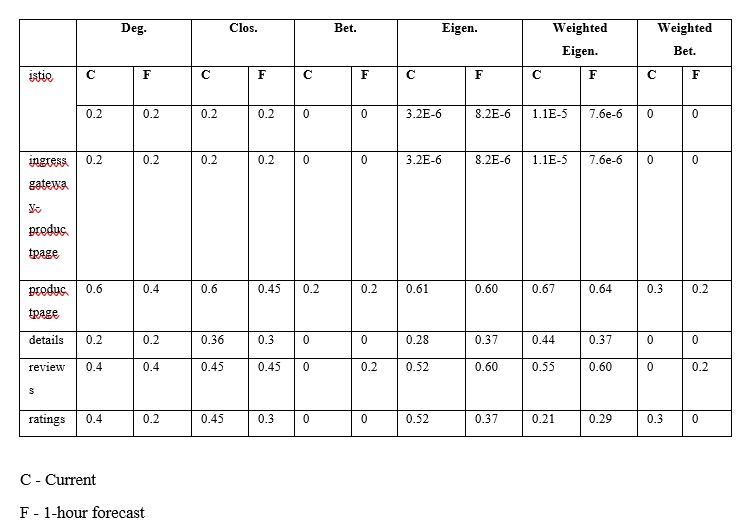


Figure 5.11.2: Microservice co-dependency network at time t

**Note \***: - In the above diagram, a dependency measure of 0 between a two microservices indicates no network traffic was recorded passing through the given link throughout the observed period, until time t.

**5.1.2.3 Centrality Evaluation**

Centrality evaluation measures were performed on the existing (Fig. 5.11.1) and predicted representation (Fig. 5.11.2) of the microservice co-dependency network. Table 5.9 below depicts a comparison of key evaluated centrality measures (rounded off to two decimal places) pertaining to the current and forecasted representation of the microservice co-dependency network.



**C** – Centrality measure for **Deg.** – Degree Centrality

co – dependency network at time t **Clos.** – Closeness Centrality

**F** – Centrality measure for predicted **Bet.** – Betweenness Centrality

co - dependency network at time t+12 **Eigen.** – Eigenvector Centrality

**Mic.** – Microservice

**Mic.**

Figure 5.12: Figure of the table depicting the comparison of current and forecasted centrality measures of co-dependency network

As per the figure provided above, it is evident there are variations in the centrality measures of microservices in the current co-dependency network at time t and predicted co-dependency network at time t +12. In this regard, prominent highlights to the changes in centrality measures between the two co-dependency measures include, the change in degree centrality measures in the “productpage” and “ratings” microservice, the change in closeness centrality measures in the “productpage”, “detail” and “ratings” and microservices, the change in the betweenness centrality in the “reviews” microservice as well as other changes in the centrality measures of microservices with respect to the remaining eigenvector, weighted eigenvector, and weighted betweenness centrality.

**5.1.3 Resilience Evaluation**

Through the evaluation of resiliency, it reveals important and critical failure possibilities that the application can go through. Chaos experiments can be done considering many facts and by creating different kinds of scenarios to the system.

When performing chaos experiments on a cluster, it is important to control the blast radius. As the experiments are done on production, customers should not face any interruptions or discomfort.

Chaos toolkit has its own set of actions and probes that can be used to create chaos in a system, such as killing an instance, creating latency, terminating pods and nodes, draining nodes, doing health checks, and many more. In this regard, an experiment done on sample Kubernetes cluster on the availability of the application when an instance is terminated is shown below.

![A screenshot of a cell phone

Description automatically generated](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAeAB4AAD/4RDoRXhpZgAATU0AKgAAAAgABAE7AAIAAAAKAAAISodpAAQAAAABAAAIVJydAAEAAAAUAAAQzOocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGxha3NoaXRoYQAABZADAAIAAAAUAAAQopAEAAIAAAAUAAAQtpKRAAIAAAADNDMAAJKSAAIAAAADNDMAAOocAAcAAAgMAAAIlgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMjA6MDk6MjEgMDM6MDE6NTEAMjAyMDowOToyMSAwMzowMTo1MQAAAGwAYQBrAHMAaABpAHQAaABhAAAA/+ELHGh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMjAtMDktMjFUMDM6MDE6NTEuNDMyPC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPmxha3NoaXRoYTwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAM+BIYDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDw+iiigC1puny6pfpaW7xrLJnb5hIBIGccDrxSw6dNNY3N2CiR2xVWDZyzMcADjrwTUFtO9rdRXEJxJE4dT7g5rd1nVbLdCuktvje4N7MCpAEh6JyP4efb5q6IRpuF5P8Ar/gamM5TUrLr/X4lSTw9cxiZPPt2uoI/NltAzeYq9T22kgHJAJNEWgStY2t3NeWlvFdkiLzXbJIOMYCk/j0960tR1nzrm5vdP1KxhE6sfKexAmG4cpvEZyeSM7uazNSvbe40HSLeGTdLbpKJV2kbcvkc9+PSrcaKu+3n5/5GcZVWlfr5eX+Y0aFcK119rlhtEtJBFJJKWI3noBtBJ6E9KhtrZU1VYnubTCMCrybnik5GB8oJwfQge+KsaPdvbRzKmowWyyYEkN1CZIpR16BW5z7D2NOuzp134ills5YbK1DBgXRwpIxu2qoYgE5IB6D06Uoxh7rXz1/r9Crzu0/6/r5jL+wurnxLPZR29utyZSvlWw2RgjrjPQcd6ZcaO8VnJdW91b3kULhJWgLfuyemdyjIPqMitWbUrK28Xy6lHdrcW1y0gbyVcPGrDGcMo55zxnpVLzrTTdHvraC8jvZb0ogMSOFjRW3ZO4Dk+gz35pcsOV3ffr939f5CUp6adv8Ag/cLP4YuoJpbdrq1a5ji87yFdizJjOR8uOnYkHjp0pmk+G7zWdI1XUbWW3SHSollmWV9rMGJxtGOTx3xV99XsT4uur0T/wCjyWzIr7G5Yw7cYxnrxVDSbfQptI1WTWL24t76KJTp8USZWZ8nIY4OB07jr36VNeMIt8nn+ZdFzdufy/4JkVd0yCwmuGOqXUkEKLu2xR7pJTkfKvYfUnj0PQ0qs2FtDdXGy4vreyUDd5k6yFSc9PkVjn8McVirX1NWaPi/R7fQPFl7plk8rwW5UI0pBY5RW5IAHU+lY8cbSypHGNzuwVR6k10vj260/VPE91qul6nBdxXLLiNI5VdAEAydyAdR2JqnqiaJYR6TceH72e6ufKEl4s6YEUowcDgcZz3PTrWcHouYV3bTc6KHwNp93rV34ftPt8moWkP72/3oLZZsZCFNuQD90HdnP8OK4MgqxB4I4NekXXjDTZPEUXiBNRQW8Cm5i0iOB1ka6ZdpLtjYeTnfuJ2gACuO0mDQ7nT9Ul1u9uLe8SLdYxxJlZZOeG4OB07jr1qYuVryCO33FjTNEs/+EdbWNUW6nWS5Fpa2lowR5ZMAklirYABxgKSSR0pPF/hweHNThjhM32e6gWeIT48yPJIKPjjcpBBxWl4f8RxQ+ELjSPt8WmXqTma2vJYncKrqFdVKKzI2Bw2OhIyM1l+KNVtb6SwstNdpbPTLUW0czLtMxySz4PIBJ4B5wPwpvm5v67f5ije+vn+en4GFRRRWhYUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUVNaQpPcBJbiO3X+/IGI+nygn9K1PEml2en6rdJZ3UAVHAW2HmF1GPUrj/AMerT2b5OfoQ5pS5TForYv7dofD1oUNhNCZXAngjcSlsZKsWAyBmpo9HsX8Mfamv7VJjdBPNYTYUbM7CAnXPOcY96r2Tu12J9qrJ+djBord8L7G15bKRLa5gk37i8CvuwpwQWXcOme1ZljYS6hM6RFEWNDJJJIcLGo6k9/yyaXs3ZNdf0HzpNp9CrRVy902SyhhnE0Vxbz58uaEnaSDyMMAQRx1HerWveHLzw99g+2y28n2+1S6i8iTdhG6A8dfpkehNZyi47lxalsZNFFa+s6OLKSA2KTyxPZRXUjMN2zeOckDgZ45qW0i1FtNoyKK7a88OWcGjapBC8MP2a7hzdXZG5FMWSMquT8xAwAa5u40WW01FbW4ubaNGiEy3DMfLZCMhhxuP0xn2qI1Iv+vmaSoyil/XWxm0VqXGhtbC1lkvrX7HdhjHdr5hjyvBUjZuB6fw96veK9GsNM1SZLK8tkVUjK2o80vyoyclcd8/e/wp86vYn2crN9jnaKK6p9CivfDOgypPZWTzGWNpJshpnMpCj5VJOB3PA9acpKNrijByvbocrRV9dKZbu5t766t7FrZ9jmcsctkjACqxPQ84x78jNxPCmoSatJp6NbmRbc3KyeZiOSPGQVY+ue+PfFHPHuHs57WMSitn/hGrh5LP7Ld2l1Fd3H2ZJombasnHDZUEdc9DxSXfhy4tLa7lF1a3D2TKLmKF2ZosnHJwAeeDtJwetLniP2c+xj0VtJ4Xu32RfaLZb14fPSyZm80rjI/h25xztLZx2otvDM89jZXct7Z20V8xSDznbLMGK4wqnHTr06c0+eIezn2MWitSHQLp5r5LiSG0TTzi4lmY7UJbaB8oJJJ9BVG7txa3BjWeG4XAKyQsSrAj3AI+hANCknsJwlHdENFORQ0iqzBASAWbOF9zjmtnXbZ4rHSuNOaJ4WEU9nGyGUBtpMhcAk5HXFNuzSEo3TfYxKK7BdKl0zwrbTWselNd3E7+bNcT20o2qBhVLkr3JOOema5BmLMWOMk54GP0pRkpN2KlBwSv1Eoq/Ho91NpsN5bqJhNO1ukUYLSbgAemPQ1Pb+HL26jsniMWLvzCAzEeWsZ+ZnJGAB+NHMl1EoSeyMmitC90iS0sYr2K5gu7WRzH5sBbCuOdpDKpBxz0rPHX0ppp7EtOO4UV015oOmxeG9NuU1OzjlleUPOROVlwRgAbOMfQfjWZaaHJcWaXVxd2tlBLJ5UMlyzASsOuNqkgDjJOBz1qVNMt05IzKK2rfwtfzSagkr29qdOZRcGeTaFDHGQcHI7+p7ZqSLwldzgSQXdm9sbdrkXO9ghRWCt1UEEE8gj6Zo549w9lPt/Wxg0Vu6p4TvdJtpZrme1cQyIkixuxKBs7WPy9Dj69OOabrVs9voul4/s6WBxJ5dxaRury4YA+YWAJweBxRzp2sDpyV+b+tbGJRW+vhC7MltCbyyFzdwCe3gMjb5FK7v7uAeo+YjJHGazrHTVvB+91C0syX8tRcM+WP0VWwORycD8jhqSewnCS3KNFdPovhuE6rf2esywRzW0E2YGMmVZVyHyowVHXrn2NZEWkPdalFZaddW968oJ3xb1VcZJyXVcYAzSU4tlOlJK772/r7zPorRvNGktbAXsF1b3tt5nlNJblvkfGcEMqnkdDjHFZ1UmnsRKLjuFFathoMmpeXHbX1mbuVC0dqXbe2ATjIXYCcdCwp0Hh2aTS4tRuLy0tLaWRog07NkMCONqqT3+nHOOKXMr2GqcmrpGRRVnULCfS9QmsrsATQttbacg+4PpUVvEk06xyTx26nrJIGKr9doJ/IU001dEtNOzI6K3des55fEUFs0WnwyTpEI/sSMkRDgbWwRnPPPFNu/C11aLeg3VpLPYjdcW8TsXRc43Z27T1HAORnkA8VPOral+zlfQxKK1ToMkdnBPc3tpbvcRGWGCV2DOvODkKVGccZYVd0zRbC68Majdz31qs8Zh2Owm/cbmIIYBMHOO27p2oc0lf+uwKnJu39dznaKtx2Mcl3JF9vtVijGTcNvCH6DbvPJ/u+/TmtBPCt9NqVrZ28tvN9shaa3nVyI5FAJPJAIPBGCBzTcktxKEnsYlFad5oktrp4vYrq2vIPOMDNbljsfGcHcozx3GR70t7oUmnKyXd7aJdou57TexkX2J27M45xuz+PFHMg5JdjLorZg8NXU626m5tYrm6j8y3tZHYSSrjIxgFRnsGIzWOylWKsCGBwQR0pqSbshOLSuxKKu6fpU2oJPKJIoLe3AM08zEKmeg4BJJIwAAasT+H7qKSDZNaSw3EZkhuBcLHHIAcEAybcEHgg4NHMr2BQk1dIyqK6vxjbPp95PZ2sOmw2MWxEWPyGnPAOSeZMk+tcpShLmV0OpBwlysKK6VtC07/AIRSC7/tOzSdrtkacifaVCA7MbOoJznHfrSxaTb3HghLgz2dsY790a6lBBYbFwowpc9zjHHJOKnnRSpP8LnM0Vrnw3epqd3ZzNDELNPMnuHY+WqcYbIGTnIwAMnPSq2o6VLpy28pliuLe5QtDPCSVfBwRyAQQeoIFVzRZLpySba2KNFFayeH5J7aeS0vbO5lt4vOlt4mYuqjGTkrtbGecMabaW4oxctjJorej8J3TpZGS9sYWv0V7ZJJG3SE/wAOApwegycDkYJ5qC38OXMumy31xc2tnBDO1vIZ2bKuADjCgk9e2eh7VPPHuV7KfYyKK3LS0uNF8UwWVyltN5kkaktEkySRsQQV3A9R34NV9bt4l8VX1uhitoRdOoO0hIxuPZQTgewo5k2kDg1Ft9DLorZ8SQyQXFkskdgqtaRvG9jGyLIpzhm3AHccc8VFdaFJYxYvLy0huvL8w2bM3mAdcEhdoOOdpbPTjJxTUla4nB3sZdFaenaIdTMUcV/ZxXE5Iit5Hbc57DIUqpJGAGI/UVo6RoNnPpGrSX91bx3NtGMK/m5t28zaS21SDnpxu69qTmkONOUmrHN0Vo2drCmsRoL6xkWNldZJY5TFIcj5SNm725AHXmp9R0y9uvFlxp8dtbLdmUr5VqNkSkDJ25xgYGeafMr2FyO1zHorUudCkhsZby2vLW+ggkEczWzN+6J6ZDKvB7EZHFW7rwheWtxc2zXdm93bRGZrdHYsUHJIO3b05wSDjtS549x+ym+hgUV0nhK2fULj7Jd6clxpbbhcXBgANvxnd5wGVxjoTg88c1z0qqszrG29AxCt6j1p83vconBqKkMoooqiAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAUHDA+hrY8QSWd/qE2o2t9E3nlWMDI4kU4GQfl28H3rIRN7YzjineWv/PQVam1HlIcbyUjaufsR8NQ2aarbPNDNJKVCS/MCowASnXjvge9Q2c9rceHZtOuLpLWUXKzo8iMVYbSpHygkHv0rL8tf+ego8tf+egq3Vbk3bpb7rL9CVSSVr9bmv4cezsdZW6u9QgjjhLrjZIS4KkAjCdOe+D7UukXtvpk17avdQPHdQhFuBAZI1YEEZV1yRxg8H15rH8tf+ego8tf+egoVaUUkltf8dwlSUm23vb8DQ1W8llt4YDfWdzCrMypa2/lBCcZJHlrnP49Kdr1vodv9g/4R+9uLvfao1356bfLm/iUcDj8/qazfLX/noKPLX/noKzlJyd2XGKirIjrt18Q6Sun6bbm4JFxaraah+7b90iqwXtzy+7jP3RXGeWv/AD0FHlr/AM9BWUoKSszanUdN3R1Gva3YXtjq0dtPvafUElhGxhujVCueRx24PNOXVNGnv7Z7iSJmi0iOCKSeFniinC4+ZcHcOo6EZOa5Xy1/56Cjy1/56CpVJJW/raxbrybvb+r3Og8QalaXWgadaQXcNzPBLI0pgtfIQbguMAKARwecA+oqLxJPZatc/wBp21/EHeGMPaukgkVgoUgHbtI4zndWJ5a/89BR5a/89BTVNLYTquWjI63pdStG03w7EJfnsnkM42n5My7h2549KxfLX/noKPLX/noKtq9vIzUmk13Osl1PR7i61iaG4tIru4vd8NxeWhmQwnPCrsbDZ9Vq/b31nquvTGzulaJNBaF5WgMSqwXn5FHA9lyPTNcJ5a/89BVizuprBpWtLgRmWJon+UHKN1HNYuiuWy/rSx0RxD5+Zrrf8bnR6Nd2ltcaJpNrcrdudUS5lmjRlReihRuAJ45JwOtV7q4s9JTW0S8ju7m+YwqkKOBEu/cxYso54AGM96wbWV7K7iubacJNC4dGwDgg5BweKbL++meWSUM7sWY4HJPWq9nrf+uhCrWja39anWX3iL7XfDVNO1PT7KVowTFPp4M0bhdpAkETZBxwd3Q44rLm1O1k0/w9H52ZLN5GuBtPyZl3DtzxzxWJ5a/89BR5a/8APQU1TStbp/X6kyrSkmn1/r9DopNWVvEmr3On6vHaRXUrY8+BninQk8Mu1ueeAV9eR3zvEVzp91qiyaXFFGnlIJfJjKRtJj5iinkL+A+lZ3lr/wA9BR5a/wDPQURppWt0CVVyvfrqNjUPKiM6xqzAF2zhfc4BOPoDXQay1hNoOmQW2q2001jE6OixzAuWct8pKAdD3xWD5a/89BR5a/8APQVTje3kTGXKmrbmpeX1vL4S02yjkzcQTzPIm0/KG2456djWPUnlr/z0FHlr/wA9BTSsKUnK1+h0fh/XLXTfD90skpS+gm8+zUKTuZoyh56DGc81pzeJ9Ki1aFLSQ/YpbOaJ3aDf5DzSFzlGHzBTgHrkevSuJ8tf+ego8tf+egrOVKMnd/1pY1jXnGPKv61ua2q6hO+nLaDU9PuYGk8ww2dp5OGAxuP7pM+nesWpPLX/AJ6Cjy1/56CtFFLYylJy3NsT2Wo+FbKxlv4rO4s5pDiZJCsivg5BRW5BGMGrNtrEM3h2yshd2NpPZM6n7bZCZZVZiwKny3II6EYGeDXN+Wv/AD0FHlr/AM9BU8iLVVr8joRrSSad4hXUL5Li7vRCI5I4iqy7G5wNoxxjqBVHQ763s7XVkuZNjXFk0UQ2k7m3KccdOAetZnlr/wA9BR5a/wDPQUciSa7h7WV0+x2Ova7pmo2+sRW12M3c1qYmaNwCFXDE8cY//VmszVTYS+GtNtYNWtZZrETb0WOYb97AgKTGB+eKwfLX/noKPLX/AJ6CpVNLZ/1aw5VnLdf1e51MOt6evjDR75rjFvbWkUcr7G+VhGVIxjJ59KhsrzSk0WJY57S2vBO7XLXVj9oaRP4fLyrKOOxK8965zy1/56Cjy1/56Cn7NB7aXb+rWOqk13Tm8fX9755+w3kbw+eIz8oaPbu29eDVDQ7y10DXVeS8hureaB4ZJYYmYR7hjO2RVzg4JGOR+VYnlr/z0FHlr/z0FCppK3lYPbSvfzv8/wCkbGqahN/ZzWseqadcQSSBmis7LySSM4Y/uk/metYdSeWv/PQUeWv/AD0FVGKRnKTk9TtNI1fRLG90ueG6tLW2giXz4msPMuDLzuJkKHjvkNwOMVhajqFrP4asLWKXdPDczyOu0jCsRg5xjtWR5a/89BR5a/8APQVKppS5jX20uXlsafim9t9R8TXl3ZSeZBKwKPtIz8oHQ89qzbaJJ51jluI7ZTnMkoYqP++QT+lJ5a/89BR5a/8APQVUY8sVFGUpOUnJ9TpNWu9Ok17Tb+31KCaOAW8cipHKGGwAM3zIBjj1z7U3+1rL+1PEs3nfu76GVbc7G+cmRSO3HA74rnfLX/noKPLX/noKn2atb+tTT20u3b8DptJ1W0isoodY1C2vdPSJx9intmaeMkdI224XkDB3gY5wDxVDRrqz/sfVdNu7kWhuxE8UrozKCjE4O0E8g9cdqyPLX/noKPLX/noKfItfP/hxe1enkbejPpln/aMdxcWjXJjUWl1NbtLADn5vlKE5x0JXsa2Br+mJqGkMb2ORbW0uIpnjtTEodg2MIoxg5HIHucHNcZ5a/wDPQUeWv/PQUpU1Ld/1axUKzhsv6un+hs2eqwWvhX7OHBuk1FLhYipwVVeucY60a/8A2Zf6hdanaakpFwTKLZ4n81Wbqp424B77unasby1/56Cjy1/56CnyK9/66f5E+0fLyvb/AIf/ADOtn19Lv7Fd2WpafYzwwRoyXWnh5EdABuVxE3HGRyMVyMsjTTPJI253YszYxkk9aXy1/wCego8tf+egojBR2FKo5KzNbSby1bRNQ0q8uBa/aGjlimZWZQyZ+VtoJwQeoB5FGr31sdJ03S7OYXK2Yd5JwhVXdzkhQQDgdMkDPpWT5a/89BR5a/8APQU+Vc3N/XYFUajy/L8bmn4pvbfUfE15d2UnmQSsCj7SM/KB0PPasipPLX/noKPLX/noKIxUYpLoTKTlJyfU2bWeyvPCg024vY7O4hvDOhmRyjqyAEZRWIII7jvUU95bf8IhDp6TB7iO+klKhWwUKKA2SPUfWsvy1/56Cjy1/wCegpciK9o7fgdlP4ksJdU1aOK4jWG+ghEVzNbebGrxqOGRlJwTkZwcHBxXP6zfT3EVvbvqFndww7ii2lt5Kxk9ePLTrj3rN8tf+ego8tf+egpRppFSrSktRsZQSqZQSm4bgp5I713A1jRbabUja3lnHaTWbw2sEOnlZFJTGHkKBs5/2mB74rifLX/noKPLX/noKc4KasxU6jpu6OxuxZW8vhu/vr6OJbayikMCo7SSbWJAX5dvJ45YVBIYtW8HzXFxdwWIm1mSXMwdh80YOBsVj3rnbq6mvVgW5uA4t4hFF8oG1B0HHXr3oNzMdOFh9oH2YSmYJtH38Yznr0FR7N/j+tzT2yvtpb9LGzNf2OoeKLa5F4lraWKwRxvcI+6VY8DOEVsE4J5xVPW1tLzxFPPb6nbPDdTPJ5myUCIE5G4FM/kDWV5a/wDPQUeWv/PQVagk0zN1G001v+hu+IZrKdNPmstSt7h7S0it2jWOUFmXOSNyAY57nPtTdffTdV1C41a31FU+0DzDaPE/mq+Mbc42EZ77uh6ZGDieWv8Az0FHlr/z0FChbr/TB1G+nb8DrtL1PRrQaPLDc2lqsG1rxJbDzp3kDclXKnA+jAgdATxVCz1Kye81+Ce4EMOpK/lTsjFQwk3LkAEgH6GsDy1/56Cjy1/56Cl7NXuP20la3Qt29pbLqQR9UtVijw/nlJdjcjgDZuz9QBxW/Pq2n23jmbVYr1Lm0u2lV/JRw8SupXJDKBnnPGelcr5a/wDPQUeWv/PQU3BS38195Majjsuqf3bG2tzZaRoWoWltfR381+yIDFG6rGindk71ByfQZxzzV+XXNObxpq1+Lj/Rri1ljifY3zMYwAMYyOfWuV8tf+ego8tf+egpOmnv5/jb/ItVpK1ls0/uNCC4hXwrd2xu0WWS5jcW5hYswUEbg+cAfMeCM1l1J5a/89BR5a/89BVpWbZk5XSXb/hyOipPLX/noKPLX/noKZJHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRUnlr/z0FHlr/wA9BQBHRXV+DvBI8W/bMaiLX7Ls6Q+Zu3bv9oY+7+tFAHKUUUUAXdKspNQ1FLWEqHfPzMcBQOST7ACtYQ2q+E76PT55rnN3CCXgEeThsYwxzn3xWboN8um6vHcyIXRQVdQcEqRg498GrX9p2Fno0tnp4uXla4jnE0yBc7c8bQxxjI5yc5PSuqn7NQ1/rVHNV53Ky8gfw/EJ7izjvd+oW8RkeLyv3ZKjLKH3ZJAz/CBkdahj0iFNJt7++upYY7l2SMxW/mKuOPmO4Y78AE4FXdR8Q/b2mmj1bVbdplJNqPmiBI5UN5g+X/gPA9ag0TVoNKMcgvL6PBzLaxorRT/XLDGRx9046+wdqTlbp/wd9+3/AAxN6vJfr/wPQqWemxzWU17eXPkWsTiMMke9pHPOFXI7DJyRUun6PBqV5dRw32yGC3afzpIiOBjIKgnHXtnp3p0Wp2c9hdWN7HJBDJcfaIWt1DmJum3aSMjB9R0pNP1Cz06a/EfnyRXFm8EbMoDFmA5IzwPxP40oqndX2t+Nn+pbdSztv/wxFcWVhHDBPBqDSxPIUkUwhZUx32bzkH1yKn8RCbzrFpbxrtGs0aJnhWMqmThSAT09c1lQiJplFw7pHn5mRAxH0BIz+daus3mnXsFp9klujJbW6QBZYFUNgn5shzjr0x+NRdOm7abdSrNTV9d+hZm8MwR6g+nR6l5t6IvMSMQYU/Lu2lt3DYz2I6c+hHa6SfCPnSTTh/tgVpRaIXB8vO0fPyvfOfwq7rN7Z6X4nubxGnlvRCqxxmMLGjGMDdu3EnAOcbRzWNZ31m2iTabfmeMGdZ45YUD4IBUgqWHGD610TVOEpRSXX8zCLqTjGTb6f8En8MoDryrZX81rcMWWCT7MrgjBzuBbjj61R0/Tvtq3E0svk21qm+aTbuIycAAdyT7ge9WdCvNP0zVkvLiW6YQudiRwKd6kEZJLjB56c/WktL2xtVvLMvcS2d3GFaTylWRGU5UhdxBGe2RnNZR5XGPN59fLT8TV8yk+Xy6eev4EkWgJdS6e1ndmS2vZvI8x4trxOOoK7iOhBGD+VMuNGgSxvJrW+897F1WdfK2qdxxlGyc8+oFWLbW7Swk02C2E72trc/aZXdQryNwOFyQMAY681Th1KGPT9WgKvuvShjIAwMPuOefSnL2NrLz79l+tyU6t/u/P/Ikk0ezTwjFq66vbveSXRgbTgP3iLgnzDznHHpjnr2rIrXkuNDPhGK3jsrga4LotJdF/3bQ4OFAz1zjt+PasiuTqdXQ3vCUNnfa5DYX9hDcxzFiXZ5FZcITgbWA6juDUGmxWmq65biQWmnxGRAYf3zLJ8wyB985PuQKf4Yv9P0nVo7+/kud0JbbHDCrhgVI5JcY6+hqnDLaWWsW09tJNPBDKkhMkQRjg5I2hiP1rPXnNdORev+RseMbmdtUuoDq6z26XBVLGMyhYAvAG0qEGBxwTXM1c1e7jv9avLuEMsc8zSKHHIBOeap0U42gkwrSUqjaNrTNFs9VYW1tqL/b2haRY2t8RsQNxTfuznAP8OMjr3qW38PWh07TLu91Nof7Rdkjjjt/MZSH25PzD5enPXnoa2YPGVhFfw3Cy6pFbpb+V/Z0W1YIzsIz975hnnkA988YOBJq8D2GhwBJN2ns5lOBhsybht59PXFTebl5f8P8A8A1apRj3f/Df8Ez9QspNO1K4spirSW8jRsV6Eg4ptn5H2pDcyywxg53xRCRge3yllH61PrV7HqWuXt7ArLHPM0ihxggE55xVe1W2ebF7NNDHj70MQkbP0LL/ADrSLfKm9zCoo87Udrm5rlldXnjs2F9ffaJ5poomufJCZ3BcHYDjgH17VHdeHLeK31I2mo/aJtNI89fI2owLbflbcScHHUD2zU+o6zpk/i631q2e7ZRcRSSQyQKpVU29CHOT8vtVZNat1j18FJc6l/qeB8v7zd83PHHpmslzqMbdv8jo/dub5u/4ajb3Q7fTrO2a9vZY7i6thcRgW2YiCMhfM3ZzjHRSAT171c02z0eTwfqM08s/mLLAGkFmjNETu4QmQZB7n5eg4NJpuv2um2EsIudQuYZIGjOnTIpg3N33bj0PzcID2z1NUdJ1Gzh0nUNN1Hz0iu/LdJYEDlGQnqpIyCCe9N8zTXp+f+RMeRNP1/L/AD+4qwwac1xL517PHbr/AKsi2DSP/wAB34H/AH16de2tH4S83VUtk1BBBNZG9huHjIymM4Zcnb0OcZ/GmaRrFjplpqFtDcXts87J5V/bxKJgoOSpG8YB9m7d6v3Hiyyl1OO4C3sirpj2Zacq8jOQQGJzyOeT+lKTn9n+tP8AMdONJ/H/AFr/AJGTPoMcllbXWkXT3aT3RtAskPlN5mARgbmyDnrkfSo9S02w09prdNSae7gO11FviIt0ZVfdk4PqoBwfapbLXUsdEtLeJGN1bakLwEj5CAoAGc5zkVHqs2j3U1xd2ZvElnbeLd41CRsTlvnDEsOuPlHb05r3uaz2/wCG/wCCR7nLdb/8P/wC1F4Zia6tbCfUDFqV1EJI4fJzGpYZVWfcCCeOinGRWA6NG7I4wynBHoa6q58VG+jgkbWNY0+ZIVjkitvnjZlGNw/eLjOORg8965VmLMWYksTkknrTjzX1FU5Elymlp+kpc6fcahe3DW1nAyxlkj8x3duiquQOgyckVcXw/BHfae7ahCbG8CvDJNG6l/mCshVQ2GByOuPeq+nalajRbnStS85IJZFnilgQOyOBg5UkZBB9eMU+81i3eXSoLVJfsWm42mQAPIS252wDgZPQZPTrR73N/W1v8w9zk8/1v+Vi94zuJ/7Vu7Yaustsk5RLCMyhYQvAG0qEGMY4Jrlx156Ve1q9j1LXL29gVljnmaRQ4wQCc84qjRTXLBJhWkpVG1tc6q/stDTwppUvn3Kb3mHnJYpvkwRw37zt25P4UrW9lN4E0tr+9a2jW5nCiOHzHckr2yBgDqc+nWs9NR0+78O22nag91BJaSu8ckEKyBlfBIILLg5HXmoLrU4JvDdhp6LJ5ttNK7MQNpDYxjn2qVF3s+5rzx38i1L4ZNneakuoXYittOdUeaOPe0hb7gVcjJI55IxVHVdLGni2mhm+0Wt3F5sMpTYSM4IZcnBBBHUj3rfl8YQy6hq3lTX9nb37pJHNbkCWJlXHK7gCD3+YdBXP6tetezoTqV7qCquA94MMvsBvbj8aIOenN/Wn+ZE1TSfL5/n/AJf8OUB19K2U0a0u9PvJtN1B5prKMSyxyW/lq6ZwSjbiTgkdQpwfwrMtJkt72CaaFZ445Fdom6OAclT9eldXeeLLSaHVlF5qtyt9EyQwzBVit8sCAFDEdBjIxj0OeKm5L4SaSg/iKa+FbTztOtpdW23WowJLDGLfKqXXIDtu4yeAQD6kCq6+H7aDR4tQ1PUWtxJNJD5Mdv5j7lIHHzAY65OR265rX1C70/TNQ0PULk3Etzb6bbvHbpGoRmC/Ll92Rz22npUE7WVz4O0ubVp7iMNeXDkW8KuWyVJ6sNv61nzSvv1/U35IbW1t+hUsbe88O+OILGK7dT9piRnhcqJULKRn2II4qhqohbxVfi6kkji+1y7njjDsPmPQEjP5irn9tWl94r/tjUDPbrHLHJFFBEJMhMYUksuOAOeaq6jJpd5rctxHc3iwXEjyuWtV3ISSQAPMw3XrkVUb3Te9jKXLZqO1yx4qS7k12IXN21/LLBEySGFY2IZcqu1SRnmodT0mz0t5bWXUWe/hH7yNIP3Qbuu/dkn/AIDjPfvU+uarYXd9a32mzXXn28cUYSa3VR8igbshz3HTH41HrN5pGpXVxqEP2yK5uPna2Ma7Fc9SJN2SM842/lRG6SQS5W2+un/BE0nRrPVpobOLUXS+nU7ENv8Aug2CQpfcCDx2UjnvV7S7HSW8KatJdSziaNoA7i0RmhJZhhDvGQe/3fxq9p3jCxs5tNl87U7eG0hWN7C22rC7DOXJ3fNnOSCuc96w9N1SzjstUsb8TpDfbGWWFAzIyMSMqSARye9J87uvT8/8io+zik+v+a/zG6Klv/wklutrf3EB85BbT/ZVZt5IALIXwB+J+lSHSrnVfFN9by3KlopJZLm6ZMAKhO59o/kO5AqDTJdMs9ajuZri7MNvKkke22UtJggkEeZhenqavLrOn23iG7u4Tcz2moLKlyjxLG6JIc/KQzAkcHnGcY71Ur307ER5bWl37lf+woLmzS70y9eeEXK28wlgEbxlvutgMwIPPcHjpVm88L28E2pWtvqf2i706NpZF8jbGyqwBAbdncARxjGcjJ61FFq9jp2niy043Myy3Uc9xNNGsZKoeFVQzdyTnPpTzr9qdZ1678uby9SgljhG0ZUuwI3c8dO2al8/Tz/T/glpUra76fr/AMA56ug8Jq7XVwLLUZbO8a3lGBarIjxhdxBJbgnHYH61z9bfhy/03S7lrq+luvMMckQjht1YYZCudxcevTHbrWlTWDsY0mlUi3tdFfRdHOryXOZGjitYGnkMcfmOQMDCrkZOSO44qndx20cw+xXDzxMudzxeWyn0IyR+RPUfSrdnNZWmoNJDfahAFH7m6hiVZFPfK7+4JHD1N4i1eLV7m3eMSSPDAsUlzMqrJOR/EwGR7dScDrRd83kO0eR33MuERNMouHeOIn5mjQOwHsCRn8xXReJrPR7dbEwSzxyNp0LqiWaKshI+8xEnBPfg/U1zNbep6hp2qWNm8j3UF5a2i25RYVeOTZkKd24EZHXg0SvdMKbVpJj7fw7ATYQ32oG2u9QUPBEsG9VDcIXbcCu4+gbA5NJH4dhj0ea/1O/NqILxrR4kh8xywXPy/MAfxI4HXtVz/hKPtNhZxvq2rabLbQiBks/njkC/dbHmJg44PXoKzZtWil8LtpzGaS5bUGujK4GGUpt5Oc7s8/1qPf8A69f8jT91bb+rf5mhaeEbW7kmZNZja3SSBElji3lvNyACu7hgcAjPHPpUGq+GoNJiimm1B5YvtL207RW/KOoBO0FhuHOOcdKZoWt22l2MsNwkrM93bzgoARtjYlhyRzzxVjVNd07VbQ2z/aoEbUZrouIlchGHAxuGTkc8/nSftFLy/wCG/wCCUvZOG2vz8/8AgEHipbl9Xtjd3zXhltYmSVoFiIRhkAqpI4z61YvPCdvb32oWEGqGe8sYWnZfs+1GVcEjduyGwc4xjtmq2vahpmoS2s9lLdmSCCKApLbqoIQY3ZDnk+mPxqy/iO0bxNrGoiOfyb63lijXaNwLAAZ5xjj3o9/l08/+AH7ty97y/wCCZ+k6VY6nPBaNqLw3lwdsai33Rhuihm3AjJ9FIGR7409G0/TP7F1sX7y/aIIlDkWqP5J8wDKEuMk9/u/jVjT/ABZZWi6SRPqVrHZIqzWdrtWKZg2S5bcM56kFeemR1rKsNYtY7jVo7tZha6kjLujUF4zu3KcEgHkcjIolzu6FD2cbNkFppNvePdzx3ciafZxh5Z5IAHyeAoQMQSTwPmHrVj/hGXuLjT/7NuRPb36uY5pU8sx7Pv7xk4x14JzTtI1u30dr61t7m+W1vI1AuoVEU0bLyCFD4IySCNwyD17VJb+Iha65aXc2oajqkEYdZFuhtZVdSp2/O3ODnt0ptzvp/Wn+ZMVTt73/AA2v+RKYrGLwPqi6fdTXK/bIQzSwCLs+MYZs/jiuXrem1PSoPDNzpenrdSSTTpKZ5kVdwXPy7QxxjPXJzk9OKk1LTbGy8G2Ek9tJbavLMxZXY7pIucOVP3R0A4GcHrRF8rbfV/oglHmSSton+bZztdNoFppU/h3V5Lt5TLHAhY/ZVfyf3gGUJcZJ7/d6965mtXRNStrOG/tb8S/Z72Dy2eFQzIwIZWwSM8jpkdauabjoZ0mlNORqeGYLOR9ciiu3W2OnNmeeHaVG9Mnapb8s81T/AOEZa5bTTpVyZ4tRLqjTx+UYyh+bcAW4A5yCaisdQstNXVIomuJ47u0METtEqHcWU8jccDg9Cauaf4oj0210byYpHmsJJjKCdoZZOMKRznGe3Ws3zc14/wBbm0XTcbT/AK2Kdzo9qdMub3Sr57uO0kVJxJB5RAY4Vl+ZsgkEdj04rHrc1bVhdWrxRa5rF2jN/qLxflxnIyfMOSOP4fyrDrSF7amNTlv7pq6TplhqU1vbS6i8N3cvsjUW25FJOFDNuBGT6A4yPcCeDw7ENLur7Ub/AOzJa3RtnRIvMZmx/DyAefUjjnPatTT/ABXZWkOk7ZtStFsgBNaWm1Y7hg2S5bcM5HUFTnpkdaTzbK98I6jPdS3EEEurmRDHCsjcqSAQWUd/Ws5Smn/Xc3hCm13f/Av+foVE8Jo19PG+pJHax2S3yXDRH54yR1UHIPJ455GKo3mnjT7Oy1XS72WSGZ2CSFPKkikQjggMccEEEGt7T9SttVl1fiW3srfRxbxnaHkEauuCRkAk9cZ71iXmoWMtjZaXbtcLZW7tJJO0S+Y7tjJCbsAAADG73oTnez/rcUo0+W6/rYteLppbiPRZZ5HlkfTYyzuxLMctySetM1BX/wCENszb6jLPYrdOi28tqsZR9uSdwZiR83ema7f6XqFnZLZzXnm2dsluFltlVXwT82RIcdemD9afNe6M3hlNMjub4vHcPcK7WiAMSoG0/vTjp15+lCTUfn+oSac3r07+X+ZVj0i2h0uC+1W8kt1uiRbxwQCV3CnDMcsoAzwOSTzxVWCCwMkv2y+kSNG2oYIPMaTrzhmXA47nPI464vnUNO1DRbOz1Jrq3msdyRywRLKJEYlsEFlwQTwQTU+la5Z2OlXVnHNfafJJciVbq0CtI0YBHlsdy49cg9SeKu8tTNKDt/Wtv8y3o+hWVl42tLO/n+1RyFJLfFuGSdGUkbwzDbxjjDVg3sOmJeBba6umQyESl7VV2DP8IEh3fQ4rWvfE8Mniyw1e2juHW1jiVluGBdyow2W759f0rLvRpMl9vtLm88iSRi/mWyho1zxjEnzH/vmpjzXuy5OHK4x/rQveJ47jdpfmXz3sb2SG3L26xMiZICkKTk8dcmpB4WiOpNpP9o/8TZUJ8nyP3RYDOzzN2c4/2cZ4zUet6lpl7bWBsZ7zz7K3SBRLbIqvtJO7IkOOvTBq0fEOmLrz6/El19vZS4tii+UspXBbfuyV5Jxt9s0ve5dPP/gFe456+XX7ytB4ctDZ6XNeam0L6kxWOKO23lCHK5b5h8vTnrz04qO38ONnVXvZ3ji0twkpt4fNZiWIyASo28EkkjtRJrcEiaECspbTiTMcD5sy7/l59PXFL/a1s+vX+oRXuo6e08zPHJbKC20nO1hvX27np0p+/wDn+en4E/uunl+Wv4mRdRwxXDLazmeLAKuU2HkdCOcEdOpHuajRQ0iqzBASAWbOF9+Oa0vEOqRaxrD3cMRQMqqWZQGlIGC7AcAnrgVW0u5hstVtrm6txcwxSKzxN0cA9K0je2pjNJSaWxdfRrWfSbu+0u+kn+xsnnJNbiIlWOAy4Zs8+uKdqGh2+mWsH2y9lW5nthcRqLbMRBGQvmbsk49Fxk4z3rTvvFNtcaTqtqb3Vb171g0X2raEhAfdtC7jjjuPYYFV7DX7TT9Nnt1udQuYZbdoxp86KYUY/wAW7ceh54QHNZJztf8Arb/M6OWldL+t/Xt5nNVas4rOTe1/dSQKuNoih8xmP0LKAB9c8jg84q1v6Jrdtp+j3No013Y3EsquLyyUM5UDlDllIGeeDWsm0tDngk3qUNZ0r+yL1IlnW4iliSaGULt3owyCR2PtSaNpo1fUls/O8ksjsrbN2SqlsYyOuMVZ8S6vDrV/bz2/2jEdrHCxuWDOzLnJLDr9eM+lV9C1FNK120vZVZo4ZMuqgElehxnvgmpXM4eZcuRVPLQsWvhy6lieW73W0X2F72JtofzFUgY68ZJ/+tXQeJNFttT8TTRR3+L5rUSpAIcrhYgcM+RgkA9AR05qndeK7ObSdRtYreZXkHk2THGEh+QFW54OIx0zyTUTeJbM+Mm1YRz+Qbcxbdo3ZMOzpnGM+/Ssn7Ru/kzoj7GK5b3u1f7/APhylHolrDaWU2r6g9o18N0SR2/mbUzje5LLgfTJxWn4Xiv9E8ex6XJcPHiUpMkUh2SYUkEjuOcjNUG1LS9RstPXVjdxzWKeSfs8ass0YOQMlhtPJGcH1qxY+IbN/Fz6/qhuI5PNLrBBCrgrt2gbi64wMdjnFVLmaafn/wAAzjyJxa8v+D/X5mVp2mNquozR+asMUKvNPMwyI416nHc9gO5Ip19pUMWlQ6lp909zavKYW82Ly3jkAzggMwII5yDVvStZttF1iaS0mu5La5haGSRVEM0YY53LhmGRgEc8+3Wq2rakbyGNP7Z1PUFDZKXi7VU+o/eNz+VVeV1bYl8lm+uv/AMqtq90O306ztmvb2WO4urYXEYFtmIgjIXzN2c4x0UgE9e9YtdLpuv2um2EsIudQuYZIGjOnTIpg3N33bj0PzcID2z1NVPmtoRSUW7SLUljZ3vhXw4t7ftbFzNHGscPmMSZTyRkYUfUn2rL/wCEcNst/Nqtybe3sp/sxeKPzGkk9FGQOgySSO1Nk1eB7DQ4Akm7T2cynAw2ZNw28+nrird5r1hqZ1O2vBcRWtzeG8t5Y41Z426EMpYAgqf73BHes7TW3d/n/kbXpyWu+n5f52GDwt5kpaG9D2r2L3sE3l8uF6oVz8pB4PJ/Gs/+z2g0GDV47gq7XTQqijBUqobcGz71rweJrOC5gtlin/s6Gxksw2B5h38tJtzjOf4c9O9Vb3UtKfQLTSrMXYWK6Mss8iLlwVAJChuDx93Pbrzw053/AK7/AOVhONK2n9aL9bkviS4nu9B8PzXU0k8rwS7pJGLM370jkmtDw/pNvpPiRLe5u5G1FbWVngSEGNCYmO0vuzkA84XGeM96ytVvtJutGsLW1nvTLYxsi+ZaoqybnLckSHb19DWiniXR/wC3pNalhvGuriEo8QVQkTmPaWU7ssPYgYyTzgCokpcjS/vf8AuLj7SMpPbl/C1zkK1NI0Yala311NM8VvZRh5PKh81zk44XIGOpJJGKy6v6Tcw2kzyPeXtjLj5J7MAsPUEbl6+ue3Q546JXtockLc2pd0W00t/FFnDJdSzwNPFsH2UHzCWGUdS2AOxxu/Godbg0yHVrhLS4uOLl1dDaqixruP3cOc47DA/Cp9T8QJdeJrTVYImZrbyi7uqo1wyHJdgvAJ/Gq+rSaTd6lJdWc94q3E5eRJbdcxqTk4If5iPTj61mua6bNny8rS7lrxCJf7L0Zvt8l3atA4t1kt1iaJQ20g7Sc9PWpoLy5ufh/qEdxcSypDdQLEsjlhGMNwAeg+lQatfaTd6LYWtrPemWxjZF8y1RVk3OW5IkO3r6GnWt7o0Xhy406W5vvMuZI5WZbRCEKg8D97yOevHTpU29y3n+v+Q7/vL36d/7tvzJPC13c/Y9ZtPtEv2b+zJ38nedm7jnb0z71zdbuhX2ladDeG7nvPNurWS2KxWysqBsYbJkGenTA+tY04iWZhbO8kQPytIgRiPcAnH5mrXxszl8CXqb3gpBJrF0hdYw1hOC79F+TqfaoJfD6TWMN3o1097HJdfZCJIfKYSHG3A3HIPrx9Kh8PalBpmoSyXYkMU1vJAxiUMy7lxnBIz+Yq0uu2+mWVpa6OJpRFdreSTXCBC7rwqhVY4UD3yc9qUubnuvL82XFwdO0vP8lYSbw7bhb+Kz1H7ReafGZJ4/I2owXh9j7ju2k9wuawa6TVvEAv1uXg1rWVE+T9jl+aMZ6pu8zleuPl6dq5unDmt7xNXkv7hrwaPbR6bbXurXr2sd2xECxQeaxCnDM2WUAA8dSTzxVz/hExbtqZ1HUEgj0/yiXSMyeasmSpXkc8Dg+vUYqumoadfaRZWeqtdQvYllR7aJZPMjY7iCCy4IOeeevTitldSg1vR/EV1eGW1ty1oiLEglZFUsFGCVz065qJOa/rzX6GlONNr5fo7/ACv+nmZP/CMNNfWSWd2slpeQNcLcSRlPLRc79ygnBGD0JzxUZ0O3ns47vTL154PtK20vmwCN4y33WwGYEHnuOlXbbxVFYanY/Y45xY2ls1tncElcPks4xkKcnIGTjA5qtd61vktz/bWrX8aTq7Q3a4UAHOR+8bJ/AU1z3/rv/kJqly6b/wDAX637j9Q8OWFjd3tl/bKtd2iM+14dkb4P3AxbO/HOMEds1X0nRrPVpobOLUXS+nU7ENv+6DYJCl9wIPHZSOe9Vtev4tU1+8vrdXWKeUuocAMAfXGa6XTvGFjZzabL52p28NpCsb2FttWF2GcuTu+bOckFc570vfUE+o/3TqNLZf5+pR0ux0lvCmrSXUs4mjaAO4tEZoSWYYQ7xkHv938az9FS3/4SS3W1v7iA+cgtp/sqs28kAFkL4A/E/SnabqlnHZapY34nSG+2MssKBmRkYkZUkAjk96i0yXTLPWo7ma4uzDbypJHttlLSYIJBHmYXp6mqV7u/9aImfLoo9P8ANk50q51XxTfW8typaKSWS5umTACoTufaP5DuQKT+woLmzS70y9eeEXK28wlgEbxlvutgMwIPPcHjpVhdZ0+28Q3d3Cbme01BZUuUeJY3RJDn5SGYEjg84zjHeo4tXsdO08WWnG5mWW6jnuJpo1jJVDwqqGbuSc59KUeay+X/AARtQu2/P/gfiS3nhe3gm1K1t9T+0XenRtLIvkbY2VWAIDbs7gCOMYzkZPWquk6NZ6tNDZxai6X06nYht/3QbBIUvuBB47KRz3qwdftTrOvXflzeXqUEscI2jKl2BG7njp2zWpp3jCxs5tNl87U7eG0hWN7C22rC7DOXJ3fNnOSCuc96m9RR8ymqLnptd/df1KHg26uotUnsxcSrA1tcF4RIdjMIzyR0J4rma3tB1HTNPv5by8luw7rLGI4rdWGHUjO4uOeemO3WqFq2mQa1C1yLi705XBkUoI3de4wGOP8Avr8q0Xxt+S/Uzlbk5U+r+7T/ACPQ/gv/AMxr/th/7Uoqx8JntZNQ8Qvp8TxWrPCYkc5ZV/eYBoqk7q5i1Z2PJaKKKoQ5H2NnGeKd5i/88xTrRbd7hRdySRx+scYc5+hYfzrX8U22nW+tXiWjyJIsgAgW3VY14HRg3/staezfJzkOaU1ExvMX/nmKPMX/AJ5itG30q1vLe4+x3zPc28BmZHg2owXltrbs9PVRmprLQIJv7PW9vnt5dQP7lUg8wAZ2gsdwxk+mapUZyaSW/miXWglqZHmL/wA8xR5i/wDPMVqJocRjv7iW5mFrZSiJmjtw7kk4yV3YA4PO70qlDa282rw2ovFS3llVPtLqVCKSPmYdsZ557de9Q6cla/UpTi726EHmL/zzFHmL/wA8xVzXdOt9J1y6sbLUItSghYKl3DjbKMA5GCfXHU9Kz6zTurl7E8129xKZJ90shxl3bJPbqaZ5i/8APMVHRT3Ak8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KALEt5JOU88tLsQIm9s7VHQDPQD0oa8ke3SByzQxklIy2VUnqQO2ar0UDuyTzF/55ijzF/wCeYqOigRJ5i/8APMUeYv8AzzFR0UASeYv/ADzFHmL/AM8xUdFAEnmL/wA8xR5i/wDPMVHRQBJ5i/8APMUeYv8AzzFR0UASeYv/ADzFHmL/AM8xUdFAEnmL/wA8xR5i/wDPMVHRQBJ5i/8APMUeYv8AzzFR0UASeYv/ADzFHmL/AM8xUdFAEnmL/wA8xR5i/wDPMVHRQBJ5i/8APMUeYv8AzzFR0UASeYv/ADzFHmL/AM8xUdFAEnmL/wA8xR5i/wDPMVHRQBJ5i/8APMUeYv8AzzFR0UASeYv/ADzFHmL/AM8xUdFAEnmL/wA8xR5i/wDPMVHRQBJ5i/8APMUeYv8AzzFR0UASeYv/ADzFSC8kFsbcFvILbzFu+UtjGcdM+9V6KALEV5JCsiwloxIuxwjY3r6H1HHSo/MX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ijzF/55io6KAJPMX/nmKPMX/nmKjooAk8xf+eYo8xf+eYqOigCTzF/55ipEvJI4ZIULLFLgyIGwr46ZHfFV6KAJPMX/AJ5ijzF/55io6KAJPMX/AJ5ijzF/55io6KAJPMX/AJ5ijzF/55io6KAJPMX/AJ5ijzF/55io6KAJPMX/AJ5ijzF/55io6KAJPMX/AJ5ijzF/55io6KAOr8HeNh4S+2Y04XX2rZ0m8vbt3f7Jz979KK5SigAooooAUHBBHatbWL7T9Rvn1CM3AnlKtJbvEuzOBuw4bOOP7tZFFXGbSsQ4pu51s3ii0Zr1kn1ExXNs8MVnhVhgJTaAAGwQPoMe9SG4+yWOi2guZLWWS3DReRZJOQXY/MHYhlY9wvTHFcdVuDVtRtYRDbX91DEM4SOZlX8ga6I4lv4/61uYPDpL3f60saAVdC1i6gfUru3uIZCnn2ahhIPQgsuOfc/pUN5qNlf+JxfXFs/2NpkaaNMK8ijG48YAZsE8dz+NZVFYOo7cvQ2VNX5nuaGuzaXca5dS6BbS2unMwMEMzZZBgdTk989zWfRRWSVlY0CiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRTopZIJklhdo5I2DI6HBUjkEHsau6hr2r6tCsWqarfXsaNuVLm4eQKfUBieaAKFdedIfVPDGgl5VtrSCK4e4unGViXzT+ZPQL1JrkK6iz8VQW+kadplxBJcWSJLHewNja4Z9wZOfvL2PHNZ1FKy5e/wCjNqTirqW3/BRHpWl2dzp15Lp1t/bF5FMFS2m3Rt5WP9YERsk54wGOOpp8/h21v/FDWGmuIFjtvNuI4yZvKcLl405+cg8dfxqK31XSotFu9KSW+t4pLlZkuYoULyKBwjrvHQ8jDdewpNT1yz1PXYbrfe26wQJEt2hBnZ1HEjDIyT0+8PXPGKj3+bT+tDX93y62/p/ft1Me9htImT7DcyTqR8wlh8t0OehALD8j+VVq2/EGtRarDYxq01zLbRsj3lygWSUE5AIBPAHckk5NYlaxvbU55pKWgUUUVRAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUVvxeH7JdP026vtVMB1EkJGlvvKYcqS3zAbenPXnpxSbS3KjFy2MCityTw59giuZtZumtooLlrVfJi815XHJwCVG3HOSfwp7eFmjvJN94v8AZ6WovPtYjJ3RE4XC/wB4njbnr3qfaR7l+xne1v62MCium11bdPBuhizllli8y4w0sYjY/MOwZv51zNOMuZXJnDkaQUUUVRAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFADopZIJklhdo5I2DI6HBUjkEHsau6hr2r6tCsWqarfXsaNuVLm4eQKfUBieaoUUAFdbcNpsWgeG5tSe5PlxSMIYYlIkAlJwWLDb9cGuSqbzLm68m33SzbfkhiyWxk9FHuT0FTJN28v8AJlwko3ut1+qf6G5c6/a61a3MOsefAz3bXUUlvGsm3cAChUsuRwOc1M3ia0meezljuE0xrFbOMqA0q7DuVyMgEk9RkdevFczJG8UjRyoyOhKsrDBUjqCKbU+zjY09tO9+v/Bv+Zt6vqlhc6Hp2nadHcAWbSFnmAHmbiDnAJxznjtxyetYlPiiknmSKFGkkchVRBksT2A71Jd2N3YSiO+tZraQjcFmjKEj1wapJR0M5Sc9SCiiiqICiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAdFFJPMkUKNJJIwVEQZLE8AAdzV3UNB1fSYVl1TSr6yjdtqvc2zxhj6AsBzVCigArqdK06x0y+0KS9W4mu72WOZFilVEiUvhc5VixOM449K5at+18SQRjTZbvTvtN1poCwyGbajKGyAy7eSOcEEdsg45iV9LGlNxTd/6/pF+Xw8b251fU5LS9vVXUJII7eyHzFtxJYttbAA9uSe1J/willBq91Fey3cNrHp329AUAmQZHyMDxkcjt2PtWa2vw3Md7b6hZNLa3N012ixTbHikJ7MVIIxwQR78Vc8NPZG41pore4W2/suTdG06lz8yZ+fYAP++axtOMfRfp/mdCdOU0rbv9f8ihqOnWQ0S11TTfPjilmeCSKdw5VlAIIYAZBBHbg1Z8TKXg0FV5LabGB+ZqndatbT29pYx2kkWn27tIYxODJIzdWL7cZwAB8vAqXV9ZstStrVILK4t5bSFYYna6VxtBzkgRjJ57EVpaV1fuZ80eWVnq1+N0aC+HdMbX28PiW6N+FKi63L5RlA3bdmM47Z3decVW/4RyO5GiNYPIVv2MM+8g+VIrYfoBgY+bntSt4oh/tFtVTTiuqshBm8/wDdByNpkEe3OcZ/ixnnFW9LurjQ/CN9JfxNFJcuDp4lBDFmQq8ig9tjD5unIqPfir9dPmzRKlJ26a/Jf5/12J9N8LaJqTAxXN4EnvZrW3bcp4VNwc/Lz34HXI6Ypi+D7W6aC5sftslo1q9w8YAeZysmwKuBgFuOxxz1rN0XxR/Y8FlH9j877LcyXGfN27t0ezHQ4x1zT4/Fe21trWSxElultJbToZcGVWffkHHykHHrScaien9aP9bDUqLXvL+rr9LlhvCsZuNId7e+sYb66+zSwXX+tQ5HzK20ZBB/u8EHrUM2j6S1pqklmbwtpciB2kkUCdS21sAL8h9Mlqz7fUbGw1ayvbCzuF+zTLKyTXKvvwQcAhFx+tLHrfl2urw/Z8/2kVOd/wDq8Pu9OfTtV2n/AF6ozUqfX+tH/wAA19bl0r/hHND3Wd4VMEvlAXagp+8P3v3fzc+mP61yda51e0uNFtbHULKWR7PeIZobgR/KxzhgVbODnpisirgrX9X+ZnUkpWa7L8kFFFFWZBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVJNbT2xQXEMkRdQ6iRCu5T0Iz1HvTYjGJVMys8efmVG2kj2ODj8jWtr0KpPp7JNcyJNaRyKLiXzGjBJ+UHA4H0rWMOaN13RDlaSRj0V013oWmR6jqOn20l0ZrSB5hM7LtO0btpXGTxxuyOe1R6folg/8AZSXq3cr6kxw9u6qsQDYxgqdx7nkYFWsPNu39b2M/bw5b/wBbXOdorfGl6Wmm3t9M10Y7e78iOOORT5g2n+IrxyM5x07d6S00Wz1K7lfT2up7WG2E0kKJulDnjywcYJz/ABAYx2qVRk9F/XUftorVmDRW/d+H44v7OkcXGnRXcpikW9HzREEfNnC5GD6Doar65pkemuUWyvrUiQqr3DK6SqO4IUD06Z69eOSVGUU2/wCtv8xxqxk0kZFFb1/otvZaak6QXk6PAsgvomVoQx/hIA45+Xls55x2rBqKlN05csioTU1dD/JlMBm8t/KDbDJtO0NjOM+tMrobH7IPBVw195pRb9CqREAu3ltxuIOB3zg9PeibQLWCW4uXkm+ww2sVyEBHmN5mAqZxgc98dB0rV0Ha68vyv+jM/bK7T/r+rnPUVsS6XaTWdle2cskFvcTm3lFwwbyW4OdwABGDnoOlP1rSoNLlKmyv40WXas0kisk6eqsFABxg/wAXX2qXRkldlKrFuyMSiul1mTTv7I0nNpdc2reV/pS/L87df3fPPpiqOj22hTaZqr61e3FveRQhrCOJMrNJzwxwcDp3H17VFSHJJq97Dpz51e1jIoooqDQKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAHwmJZlNwjvHn5lRwpP0JBx+VaWp6pZ38VsIrOeGS2iWFGa5DgqpJ5Gwc8+v4VnRIHWQnPyJuGPqB/Wo6uNSUVZEuCbuzZk1/frOoX/2bH2yGSLy/M+5uXGc45xW4kdzLpWlW1tFqdzbyWwWR9Pn8qEZY5Djaw3DPJJFcVUk6CK4dFyQrEDNawrtaS1MZUE7culjU1C6gsrW90azYXMH2sSpchhyACMYHXr1zVTTdR+wmdJYfPt7iPy5o920kZyCD2IIB6H6VSorP2kubmNFTjy2ZbkmsBNE1vaTBFP7xJrgPvHsVVcfrVi41aI6OdNsoJYoGlErefP5pyBgbcKoHU54OeKzKKXPJJpdR8kXa/Q1rXWLexguPsVpLHNcQGF91xuiwwwTs259cZY496gGg6uwBGlXxB5BFs/P6VQopufN8X+QuTl+H/M0Zriez0mTSLq0khlNws5MgKsMKRjaR75zVlvEIkYpNab7aS0jtpYhJgts6OGxwc89DWLRT9tNbP+tvyYezi9zRudUikt7a0t7Xy7O3cyGKSQs0rHGSzAL2GBgDFPl1aFNIm06wt5o4p3V5PPn8zBHTaAqge55rLope1nr5h7OJptqdtcaXb2t7aSPJaq6xSxThOCc4YFTnBz0I61Jo+sWem6Zqttd6Rb38t9CI4Z5T81q3PzLweefbpWRRUyk5/EVGKjsFFFFSUFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/wCuf/swqGpoP9XP/wBc/wD2YVDQAVNd/wDH5L/vmoamu/8Aj8l/3zQBDW94Oa3Hia0E0UjSGT92yyBQvBzkbTn8xWDVnTr6TTdSgvIQGeFwwB6H2rWjJQqRk9rozqxc6corqi9YQaTqGsW1r5d1axysUZ3uFfDH7v8AAMDPX69qjOlpb6Pd3N6XSeO4FvCikYLDl8+wGOncimtGmo3yrodhdJKWLeWJfNxzxjCggD1OaveLNQS71COCEoVt0/emM5V5mwZGB78gD8K0932bk9+nn/w2v3ozvL2iitvyt/mWJtB0sa0+kW8l2bkxb0ldl2K2zdtIxkj3yOvTjlln4bBtbF7iz1G5N4N5ktV+SBScAn5TuPfGRgYqfXtSg07xFdSW1tJ9uMSoJnmBVMxqCQgUHOPVjWQdTtbmztodStJZXtkMccsE4jJTOQGBVs4JPIx1rafsYzatqn8t/Qxh7WUE090vyLGl6ZpEPi1tP8U3s1rYQvIks9umWyoO3AweCQOx/qMWQIJWERLICdpIwSO3Fanh/VrLRfEEd/eaTDqlqm8fZLlgQ2QQMnBBIznp+XbLkYPKzKgQMSQo6L7VwvdWO6O2pa0rTpNW1a2sITteeQJuIztHc/gOa3b7wsiabqE8FlqdobHDCS9TCXCZ2kj5RtPIOMtxXPaffTabqEF7bECWBw67hkEjsfarN/d6XdebJa6fcW00jbhm6DxrzyAuwHH/AAL86ykpN6G0HBRfNub0/hrR112TR4Zb1rg25mWZmXYhEe/aV25boeQR1HHGTmHQUurPRptNaRmv5DbyhyCI5gwHYdCCDT28UbvFDax9j6wmLyfN9Y9mc4/HpUWi+I30exuYBb+cznzIHL48iTay7wMHPDe3QVFqiV/T9f8AgGjdJu22/wClvxuUdWhtLfV7mHTneS2jkKRvIwJYDjOQAOTVOiitkrKxzSabbQUUUUxBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/65/wDswqGpoP8AVz/9c/8A2YVDQAVNd/8AH5L/AL5qGprv/j8l/wB80AQ0+OGWbf5MbybFLvtUnao6k+gplb3hW3lu5tSt7dC8sthIiKO5JFa0qftJcvr+RnUnyR5jBordGh2s+t2+jWcsr3QYrczn7gIyWCLjJxjrnkjpUl5oMcemT3q2Wo2a20ih1vBjzUY4yp2jB9uevWq9hO1/68yfbRul/Xkc9RXQPoNpFrVyjyynTYbb7UsoI3OhUbQDjGSxA6VW0e30KbTNVfWb24t7yKENYRxJlZpOeGODgdPT69qznTlT+Lz/AALhOM9vL8TIooqe0upLOfzIlhZsYxNCkq/kwIqCyCiu8eOCb4qRaY9nZizjmwsK2kagjy84OF+bn1zUEOj2t1PqktvbxCC8s1ktyyDELmVVYD0w24cdqxVVWWm50/V3rZ7OxxVFdjeWk41y40bQdO054bM+UUuBD5s5xlm3OQ+Tg/cIwPSrei6e82l+HjbWmnSRymZrzz4YWkkRZDnAILnCg/d9qftVa/8AXV/oL2D5uXt/mlp95wdFdjp1vbPpGu3Gjw2ZEd5GLaS9WIhYyW4zLwOMe9UtL+zHxE415tPWTyCLdlWM24l42F/K+XHXP60/ab6bfftcn2W2u/3b23+RzdFdLc2b22rae/ia1t1095cm6sY0VJo89jFgEcZ6bsH6UviG0vRbTXMdvplxpvmjy7rT4owIu4UlAGBwQMPn+tHOtA9k7PyOZoorqdS0Xz7DQ5bRbKLfZqZfMuIoWdt7ckMwLcd6tySav1IjFyTa6HLUV3XiW1tNEk1K+tLO2M0t8LaFXgVo4EEasxCEbckkdQcVFbW+kSjS9Uvo7W1lvbaZFV0xb/aEYKjso4CkdRjbntislVTV7f1a5q6DUnG/9XscVRW7q8WqabNbXF5Z2ODuMNzBbxNDMvToo2N3PIzzz2xa128aPQ9JaO2sY2vLV2mZLGFSx3sMghcrwO2Krn2t1I9nq79Ff8l+pzFFFFaGQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/65/wDswqGnJIUDgY+ddpz9c/0ptABU13/x+S/75pkkMsIQyxugkXem5SNy+o9RxSSSGWRnbGWOTijYBtXdN1E6d9qxHvNxbtCCGxszjn9KpUVUZOLuhSipKzNp/Ebvd2l/9nX+0IBtknLfLOuMfMuOuOM5qlcvYXB26fY3MUzv8qtcCQc/wgbAf1qCS0nhtILmRMQzlhG2R8204PHbrUNXKpN6SIjCC1idJql1JZeF7TTblNl8/wDrQ330hBLIjDtyxOOuAKpaPrFnpumarbXekW9/LfQiOGeU/Natz8y8Hnn26VkUUqk3Ud36BTgoL8Qqa1e2SbN7DLNHj7sMojbP1Kt/KmRwyzBzFG7iNdzlVJ2j1PoKZWeppc6WTxTa/wDCWRa9Dp0yzLJvkje6DK3y7QB8gI/Wq1l4ka00W/sDbbzdE+XL5mDDkqW7c52r6dPesOnzQy28pjnjeKQYyjqQR36Go9nG2xr7ad9/M6KHxVbDV49YuNNd9SVSHkjuQkcjFSu4oUJzg84YDI7VSTxDNBDo4to/Ll0tnZZN+fM3Pu5GOB296x6KOSK/r+u4nVm1a/8AWn+R0J8Q2MkOqW8mlyrbX86ThIroKYiueAShyMk9hWWJ9NF2x+w3DWzLjY10PMU+ocJj8Cp4z9agFpObE3gT9wsgiL5H3iCcY69Aahp+zUROo5b/ANa3NmbXLZtPttNgsGXT4pjPJHLPukkcjGd4CgYHTA+uadFq0UWn3OnaJYTo+oFI5DLMJmYA8KoVFwST7+1YlFLkiP2kr3NP/hG9c/6A2of+Ar/4Uuq6jJcCwt5rVreTT4RbsrnliGJ5GBjrjFZdP8mUwGby38oNsMm07Q2M4z61STbu+hPMkml1OgvvFUWqTX639gz2l3Ms6xxzhXhkChchypBBAwQV9OmKp3GsW128EM9iwsLaIxwQRz7XTJ3Ft5UgsT1yuOeAOKzktJ3s5LtUzBE6o75HBOcDHXsahpezUbK39f8ADFOtKV7v+tzVvtYjm0eHS7G2a3tI5TOfNl8x3cjGSwCjGOMAVDqGp/brDT7byfL+xQmLduzvyxbOMcdfeqFFHKhc8v0/UKKsnT7oaYNQMX+itL5Qk3D72M4xnPSq1W01uZpp7BRRRSGFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE9ktu9/At87R27SASuo5Vc8mtfWLJbVRcxaZafZBOVjntrlpY5AOdrfMSD0/unrx6YkMnkzLIFR9pztdcqfYirlxqrS2Js7e1gtIGcSOsO872AwMlmY8c8DHWtoyioNPf/hjKUZOaa2NXxBeQfZNMX+zrXMmnqVbdLmPLPwvz44685p9vpFrbWmnNPb2lx9qjEs0k96sLIpOAEXevQDOSDz9KyH1ZptPitLm0t5/IRkimfeHQHnHysAcHkZBoTVybSG3u7O2vFgBETTbwyKeduUZcjPrnGTWzqQc3J9f67GPs5qKiv6/EuQ6asdxe/Z7W2v7aGfykuLm5EURHOMEMoLEc9T9Kt3mi2NlfajcGIyW1tbRzpb+ZkbpMAKWB5UE9jkjHPesm31loLN7R7O2ntjN56RSh8RtjHBDA4x2JPSpX8RXUt5LPNDbus0CwSwlCI3UAY4BGDwDwRSUqSil19PJ/rbv+g3Gq5eX/BX6X7Gur2F1Z+HlvrSOK1leeNkjZ8ISwAYEsT1561lz6bFpuj3bX0e67a6+zwckbdnLtjv1A59ajmvrnXBa2RFpbx227ysuIlRTjjLHnGPqeepqTxNqq6lqEawuJIbeMRhwMCRv4nx7n+Qqqk4ODfXZfcr/AHW/EUIzUlH1b+9tfff8Cg2nTra/aC9ts2hsC6iL/wDfG7dn2xWvpmn2t1pcH2K1tr+9Z3E8EtwY5FHbyxuAPAPPzc9q56r9nqv2Ly2WxtZJoTmOZw25TnIOAwU4PqD+VY05QUtdvv8AuNakZuOm/wDXmanh6eOG11eOSwhZ47NyxkMgZvmX5WwwGPoAfes6zj/tHUGNtpkLKkZYwiVkiUDqzMzZA/4EO1RWeq3FpezXOI5muFdJklXKyBuoOMH8sVJb6wbWadreztlhuIvKlt/nKMPqW3A59DV88JKKl0X+dieSScmupf1WztrC006+Flbbp/MWW3S4MsRKkYIZXJ/i6bu1P8W3EUmvXEC2NushEeJ90m77i+rbfbpWXf6tJf2ltbGC3ghtixjWFSMbsZzknPTqefelvdXbUIx9ptLc3ARU+0rvDkLwMjdtzgYzinKpBppbaflqKNOaalLz/PT8Den0Kwt72XTp0s4o0iI+2vfKJRJjOSm/GM8Y25x3rm7bTprqLzIntlXOMS3UUZ/JmBqxc6x9sXdeWNrPcFNhuD5iucDAJ2sFJHrjtzms2oqyhKWi0+79CqcZpavX+vP+ux0NjLbweC7h7m3Fzi/TZGzlV3eW3LYwSMZ6Ec4qf+yLCXV2s0g2Ne2CzWq72/dSldwUHPIOCOc9awBfyjSm0/anlNMJi2Du3BSPy5rQtLmfU9WtLmWe2tVskjUyNIEwqdCATljx0H5VrGcJ2i12Xys0zOUJRvJPv+lizYaZZE6Lb3UO+4vp/MlJdhiLO1V4PcgnPXikNpp9/aamlnZ/ZnsihilMjMzjfsO/Jx3zwBRHq0V947t75isFsLhdgYhVjjHA9hxzVG+1YulxbWlvb20Msu6Qw7iZcHjJZjx3wMCm501FOytr67K3+YlGo5fc/wAXf/I1V07TG8SHQBaesX2zzG8zzMZ3YztxnjGOnfNMiu4I/Bcm7TrVwt8iFS0uGPlt8xw/X6YHPSqDeIrguZxb24vWj8s3gVvMxjGfvbc44ztz+PNV7LVHtLSa1e3gubeZlZo5g2Aw6EFSCDz61PtYapdb9Pu/r/Ifs52V/Lr95qadPbJ4X1Sae0WRPtMRSAOwQEhsAnO7A+ufep49Cs7jUI5liVIP7OW9a3M2xS3TbvY5Ck8kk596wf7RcWNxZxxRpDcSrKQM/KRnABJ6c98n3qwmvXaTwSBISIbYWpjKkrJHzwwzznPbFEatN25l2/L/ADB06l249f8AgFq/sbFbW0nk+zWkhn8qeG0uRMNnXzB8zEHqMZ7Cna3p0cVtLPYWNs1kkoWO8tbhpOCOA4LHB5HZeaypryOSSN4LG2tjGc/u97BvqHZhU0urE2Mtpa2lvaRTFTL5W8l9pyAS7NjnnjFQ5waat/X9ehajNNP+vz/zLE0NrN4UF4lpHDcJdiEvGzncuwnkMxGc+mKn0ixtbvTV+zW9re6i021re5uDEdmONmGUMeueTjjiqv8Aba/2abH+y7PyS/mdZc78Y3Z8z0/D2qvZ6itoqbrC1uHjbcjyhwV7/wALAHn1zTU6and2tbt6eQnGbjbz/rqWNGfSrLxNEfEljcTadG7Ce1RsSdCAM5XkHGeR0rPumhe8ma0Ro4DIxiRzkqueAT64rR0fxJfaN4nj16ERT3kcjSfv0yrFgQcgEep6YrOurh7u8muZQoeaRpGCDABJycDsK5XvodK21IqKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJYkVklLDO1Mj65FRVNB/q5/8Arn/7MKhoAKluEWO5kRBhVYgCoqmu/wDj8l/3zQBDT4YZbiZYoI3lkY4VEUkn6AUyt7wdMieJrRGt45GeT5XYtlOD0wQPzBrSlBTmovqZ1JOEHJdDBqze6fdae0S3kXlmaISp8wOVPQ8H2p013DJNGyadbRBDlkRpcSexy5P5EVc1uC2tptPltrWOJZ7SOZ4gzlSxJz1JOOPWmoLlbv8A19wOT5kv6/My3hliRHkjdFkG5GZSAw6ZHrViPS7qXT5L2JY2hiGXxMm5RnGSudw59q2tZvYBpGk/8Sy1O+1bb80v7v526fP+POap6N/yBNc/69k/9GLV+yipuN9k/wAE2R7STgpW6/rYxqK3dL0uN9Dl1GSG3uJDOII47m5EKLxksTuUk9AAD6mo7+30yx160YgTWTiOW4ggnEmwZ+eMOD7HBz3H1qZUZRim/L8SlVi5OKMaitDXZtLuNcupdAtpbXTmYGCGZssgwOpye+e5qgrMjhkYqynIIOCDWC1VzUSrE1jcW9pb3U0e2G6DGFtwO7acHjqOfWulbXdW/wCEDS4/tS9846kyGT7Q+7b5QOM5zjPapTNZf8I54ZjvbFb15nlUmSV1CqZucbSDuOepOPY1nzu9rdbfhc39nG179L/jY42iuvPhu2so9Un8u3uzBfGzgju7oQIAOSzHepJxgAA+prH8RWdlaX0J094tk0CyPFFOJhC5+8m4E5Ax696cakZPT+uop0ZQTv0/zsZFFS20TT3UUSRPMzuFEcf3nyeg4PP4V093okLaDqc81haWNzYshQWt75xILbWV18xsH345qpSUdyYU3PY5Oiu3k0nRT4ot9Dj03aLiBWa4Mzlo3aLcCozjGeeQep6cVnmDSdN0LRri40xbu4u2kExeZ1XashHAUj5scZ6cdDUqonol/Wv+RbotJtvb/gf5nMUqqXcKoyWOAK0Nf09NK8QXljCxaOGUqhbrjtmqdtMkE4eW3juVHWOUsFP/AHyQf1q4tSSaMpRcZOL6Euo6ddaVfPZ38XlTx43JuDYyMjkEiqtbfiKwsrDxfNZxKbezV4wQpLFFKqTjOSepq3r+lwQ2c1xpen2z6ekirFfWt00hwR0kUscE5H8K4NQp6JvqaOnrK3Q5mrEtjcw2MF5JHtguCwifcPmKnB46j8ar11zXFnB4J0T7XYreM08wVZJGVVG8ZPykHPpzjrwaqTatYmEVK9+iORors5fDFpZXGszLFDcpa3S29vDdXQhTkbiWYspOBwACM1RutHt31ixXS7aG6aaDzJrKG7DpE4yCDIGOE4B5bODjI61Cqxf9eVy5UJx3/rW35/M5xEMkiouAWIA3MAPxJ4FWr/SrvTVha7SMJOpaJ45kkVwDg4KkjrWvrWlW8fhu21GO2t7W4Ny0EiWl0J42G3cGzvbB7Yz71Hrf/It+He/7iX/0aafPdq3e34XF7Oyd+1/xSMRreZII5nikWKQkJIVIVsdcHvipJbG5hsYLySPbBcFhE+4fMVODx1H4102o6hbL4N0ZzpFmyvJOBGXm2phhyMSZ59yaHuLODwVohu7BbxnnnCq8jKijeM/dIOfTnHXg0udvp1sV7KPfpc5GiurvtCsI28Q2NtGftWnuJ4HLNkw5w6kZxxkHOM1l+ILO102SzsoIttzFbq125YkmRvm246DAIHFONRStb+tP6+ZMqMo3v0/zt/wfQyKKKK0MQooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/AFc//XP/ANmFQ1NB/q5/+uf/ALMKhoAKmu/+PyX/AHzUNTXf/H5L/vmgCGprS6lsbyK6t22yxMGUkZ5FQ0U03F3Qmk1Zl24v4ri6Wb+zbSPDFnSMyBZM+vz8fhipNR1j+0YYkewtYjDGsUbxGTKoOg5cjv3GazqKrndmieRXT7GgNWZtNis7m0t7hIN3kvJvDRhuSAVYA888g0+y1kWVlLbLp1pIsyBJWkMu5wDkZw4A5A6AVmVNPaT28MEsybUuELxnIO4Zxn25FVzz+IThDYs2+qtBDNbta281rM+/7PIG2o3YqQwYHHHXp1zTIdQNtq0F/a20ELQSJIkQDMmVIPO4knp61ToqXOTt5FcqNDXdZuPEOuXWq3qRRz3TBnWFSqg4A4BJ9PWs+iis0rKyK3LZ1KY6KNM2p5K3BuA2Du3FQuOuMYHpUjavcPbadAUj26eWMRwctltx3c+vpiqFFFluVzO1jYbxJcyzXpure2uYb2XzpLeQNsV8/eUhgwPbryOuazbqaO4m3xW0VquMeXEXK/X5mJ/WoaKSilsOU5S3LFjezadfw3lq22aFw6EjIyK0ZvEsslje2sOn2NtHekNMYkfcSGzkFmJH06e1Y1FDinuEZyjszrfEHiBLfWGfS4rNpjaxxi+Rmd1zGAwHzFQeoyBkc1DLrFvZ+G9B8q3s7u5gEzfvWZmhPmEj5VYD3+YGuYoqfZqy/rv/AJmjrSd/67f5ElxcS3dzJcXLmSWVi7ue5PJNOtZ47ebfLaw3S4x5cxcL9flZT+tQ0VdtLGN23dmpquuPq18LyWxtIbncGaSMOd+AAAVdmXHA7UkutsbCe0tLK1so7kqZvI3kyBTkD52bAzzxisyilyq1iueV7hV2XVJ5tMs7FljEVmztGQDuJYgnPPtVKiqJTa2Nl/E11PeX011b208V+wea3dW2bh0IwwYEc9D3qK01x7DUGurGytYVkhaGS3G9o5FPXO5i3p0I6Vl0VPJG1i/aTve5q3GvPcafDYfYLOK0hn88RRq43HGCC27cQfXOfQgAALf68L/T4bNtMsokt1KwtGZd0YLbjjLkHn1BrJoo5UL2kjTt9aaLS10+5s7W8t45DJGJ94MZIwcFGU4OOhzUM2qzT6baWLJGIrR3eMgHJLHJzz7VSop8qvcXPK1jqtG1MzeJpvEmqS2sUK7zNCJBulJTbsWMksQcjk8deeK5y9u5L++nu5zmSaQu3PcnNQUVKgk7/IqVRyjbzv8AMKKKKszCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJoP8AVz/9c/8A2YVDU0H+rn/65/8AswqGgAqa7/4/Jf8AfNQ1Nd/8fkv++aAIa19AtbO4+3yahC0yW9q0yqrlTuDL3/HH41kVs+HrmC1TU2uPKYNZMqxysVEh3L8vBB/I1vQtz69n+TMq1+TTy/MvWGm2GpTaNcfZFhS5uWt54Ed9rYwQQSSw4OOvaqE7aXMZ7OCxa3mEqpbzCRmLc4bzMnHTn5QOajXXriK8s54IYIksmLQwKrbFJ6k5O459zWbJIZJWkPDMxY4q5VIaWXrp5L9bsiNOd7t/j5v/AIB0yadpkviKTQUtMYLRLeeY3meYozuIztxkYxjp3zSzy2Uem6BHd2QujJFtYtIyhU8xs7dpHze5yOOlZj+Ibh3eYW9ut5JH5b3aq3mEYwT97aCRxkDNJDr0kUFqjWdrLJaKRBNIHLJyTnG7acE9wa0VWmtPPt09DN06jt/n1s/6/Q1D4fgsY7+XZBdmG8NrEl1ciFAAMlidyknoMA+pqH+ztITxAkck1usMtt5ixm43RRzEf6tpFJ+XPfOcY5rMh1idI547mOK8iuJPNdLgN9/++CpBB69+9RC9jW6aUWFt5bLtMB3lPrktuB+jfpxUe0p6WS/r+vMpQqa3f9f1/wAOT6xZy2skDS2EdmJY9ymGUyRyDPVTub+Z/CpdauNCnstMXQ7K4triO2C37zPkSy92Xk4HX0+lVL7UpL2KCHyooILcERQxA4XJyTliSSfc1b1rxJea7ZaZa3kVuiaZbC2hMKbSyjuxycnj2Fc1Szl7ux0Qul7xkUUUVJQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAEsIyk2c8R54PuKiqaD/AFc//XP/ANmFQ0AFS3Q23coGeGPU5qKprv8A4/Jf980AQ0UVPZWct/dLBA0KuwJBnnSFeP8AachR+dAEFFWr/TptNmWK4e2dmXcDbXUc6492jZgD7daq0AFFdbcabpR1650qGx2KtqZBMZXLq4j38c42+xBPXnpilo2miVbT7Xplu8FxJtM0935TsM4JjXeucZ9G5/Kun6vPn5f8+9uxz/WI8vNb8v8AM5+iuz0/QNLMiW1zA0ryXtxbebvIIVFyGwDjdkfTk57VH/YVhcRxX8NskcX2HzzbtcbVZ/MKrl2IwOmeR04xmq+qTte6/pX/ACJ+swvb+uxyFFbGsWdrFY2s8ItoLh2ZJre3uRMoxjDD5mIznGCe1JrVxoU9lpi6HZXFtcR2wW/eZ8iWXuy8nA6+n0rmnFwdn/XU6ISUldGRRRXR6FpglhtJLrSbaW3uJ9hnur3yWcZAPljeucZ9G5/KobsjSMXJ2RzlFdbNpOl6Rp2ry3Fob2Sz1D7NB5kjKCMN97aRnpnjByOuOKmh0PSpNTWWW2cWk+jm98iOUgxuByFY5OMjjOetZ+1ja/8AW1zb6vO9uv8AwbfmcZRW7fW1ld+GotUs7NLKQXjWzxpIzKw27gfnJIPbris670yeziEk0lqyk4xDdxSn8kYn8atSTMpQa21KdFdZqcegaTfWVtPpTPDNaRy3EqzOZFLJ1QbgBzz82fwottFtLXStOuZLS0vDeZkkN1frAUjDEAIN684GSTkA9qn2iL9k+/8AX9M5OiumtdM0eLVNXt/tNreNAP8AQftNx5cM3POXUgZx0+YAmpbLRLf/AISG+t9Z0t7RIbB5zbxzE4YAfMjZPB5xksPrS9pG1/mCoybt52OUorqrXT9N1S20u9SwW1EmqrZzQxyuVkQ4OcsSQcZHBoubDS7i215LSw+znTGBhl812d/n2kNk7e+eAMY70/aK9rf1p/mNUW9mv6/4Y52ysbjUbkW9nH5kpVmC7gOFBJ6+wNV67vTbez0jxidIt7ON5ILaUSXju/mM/ksxIAbaBzgDaTjvmsjQ9Ps7zSD9nt7O+1RrgJ9lu7lovkI48vDKGJOc8nGBxzS9prfpZfjcHR031u/wSObp0cbzSpHCjSSOwVUUZLE9AB3NW/7Omm1Ce3jjjtmjY5iurhIinP3SXKgkVf8ADwFh4ssYLi3trlzcxKGExcISw5Vo2wT9cj2rTmRnyO9mYro0cjJIpR1JDKwwQfQim10z29vrvjT+zRZwWYkvXEk8LSF2UEk/eZhnA7Ac0yG30zV4NVjttPWyeyga4glSV2LqpAKvuJBJBByoXkVmqml2jR0XdpPrY5yiriaXcSWf2lZLQR7S2GvIg+B/sFt2fbGa2Ft9MsvBtlqM2nLdXc88kWZJXCYGOSFIJPpgjrzmrckiI03I5uiuqs9L0y9j1PVLG2V7aF40t7W9uVhUMwOdzbwSBg4+YE/gak/sPS3vFuv3XlQ2D3dzZW10JQroQuwOCSFbIPUkDPNQ6iW/9aXLVGT2/rW39dTkaK6dLPT77SdMuxp8Ns82p/ZpFhkkIZMKcfMxx1PSk/smy/tTxLD5P7uxhla3G9vkIkUDvzwe+aftEv6/ruJUZNJp7/rf/I5miu2/4R7TrO8tbC9isvKkhU3F7LqKJLG7LnKoXA2jI4Kkms7R9MsrjTpkt47K/wBUF0I1t7q4aINHjAMeGXcSfc9BxzR7RB7GS/r5nPQ281wzLbxSSsql2CKWIUdTx2FR11/hhks9a1S2l0tI3S1uDiZ3LoAv+rOGAI98Z96xrCTTL7XrQahbw2FkWxL5DSYPXGSzMRk4Bx2oU7vboDp2infW7X5f5mTRW5r2nPa28M39mW1vC8jrHc2VyZoZgPcs2Dwe4+nFYdVGSkroicXB2YUUUVRAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/wCuf/swqGpoP9XP/wBc/wD2YVDQAVNd/wDH5L/vmoamu/8Aj8l/3zQBDRRUpA+xo2BnzGGfwFAEVFFFAGmdeum1eXUTHD50sZjZcHbgps9c5x70+HxBNFHaB7S1nksxiCaVGLKM5xjO0/iMis+e0nt4YJZk2pcIXjOQdwzjPtyKhrX2tRPV6mXs6bWxsxeJ72G4SZYoCyXEtwAVbG6QYI69PSo08QXaJBGY4XihgNuY2UlZUJzhueue4x0rKoo9tU7/ANbfkP2UOxYurmK42+VZwWu3OfJZzu+u5m/Sr+teJLzXbLTLW8it0TTLYW0JhTaWUd2OTk8ewrIorJ6lrQK2LfxJPBa2kMlnZ3LWRb7PLOjFowTnGAwU888g4rHopNJ7lKTWx1Y1yG48N6ncX0FncXN1qKym2d3Ucq2WAVg2B0696boeufaNYv7vUmt1X+zpYooWOyPAACxqAQcdsA5/GuWorP2cbNd/8rG3t5XT7fjrcv32rSXtrDapBDa2sJLJBAG27j1YliWJ6Dk9BxVCrFhZyajqFvZwlVkuJFjUucAEnHNRzwtb3EkLkFo3KEjpkHFaKy0MnzNXZY1PVJtVniluFjVooUhURggFVGB1J5qeHW2GnxWV5ZWt9FASYfPDhowTkgFGU4zzg5rMoo5Vawc0r3LkF9FDLMX0+1mjkORFJvwnptYMG7/3ue+cCt7RNcFxq13caj9mjjTS5IIYSSibQBtjHOT375PrXK0VMoKSsVCpKLTNU+ILhZbI21vb20FlMJ4reINsL5zuYlixJwB16DjFRrrVwq6kAkX/ABMv9dwfl+fd8vPHPrms6inyoXtJdzoI/GN7HcG5W1s/tTxeTNcGNi8y7dvzfNgHocqBnAz6VnWWppZogk02zumjfcjzK4I9vlZQw/3s1Qoo5YrYHUk92TXl3Nf3kt1dPvmmYu7Yxkn6U2CaS2uI54G2yROHRsdCDkGo6KaVlZEttu7NS712S41Bb+CztbO8WbzjPb7wWbrnDMV688CnXWvyzwXMdvZ2ll9rINw9urgyDOcfMxCjPOFx0rJopckSvaS7hV2bVZ5tFt9MZYxDbyNIjAHcS3XPOO3pVKim0mSm1sXtP1aXT4Z4PJhuba4AEsE4JViOhyCCCMnkEVLb621nfG4s7G1gR4mhltx5jRyq3UNuYn8iOlZlFJxTGpyWx017rIn8IWHkm3tpra/ZoreH/lkoRSDgkk/Nk5OearzeLLqWO+VLKyhN+pW5eONt0hJBzkscdOgwOTxWDRU+ziX7aeljVk103MMKX+nWd5JDGIlml8xX2joDsdQcDjJGagstSjtI1WXTrO7KPuRpg4I9vkZcjjoc1RoquVEcze5pQ6/fRa62rMyS3LljIJEG1wwwQQOxHHFQtfxfbI54tOtIlQYaEb2R/XO5ieh7EY6jB5qnRRyofPJ7s0LzV3urBLGG2t7S1WQy+VBuO58Y3EuzHpx1xWfRRTSS2Jbb3CiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/Vz/APXP/wBmFQ1NB/q5/wDrn/7MKhoAKmu/+PyX/fNQ1Nd/8fkv++aAIamP/Hin/XRv5CoamP8Ax4p/10b+QoAhpUYo6sMEqcjcAR+R4NJRQB0us6nP/Y+kkR2pEts+4/ZIuDvYcfL8v4Yp1rYWuqQ6ReCJI4oS0V9sQAYjG/ccdyuefasWPVruOxFpujkgXdsWWBJNm7rtLAlenarsd/Fpvh25s7a7E81+V8wRqwWJF5wSwGWJOOMjA613KrFylJ7b69/8v0ON05Riox3v+DLK3UA8P3upR2Fp50moBYt0KkQqUY4C4wRx0OR361eGnWTXEl+6W0DjTI7ny5Iz5SSMdu4ooPHfGMc+lY9nqqWfhmW2jMTXLXayBJYFkGzYQT8wI6496pLq18uoPei4Y3EgIdmAIYEY2kHgjHGMYpe1hG19dF8tH+r/AAD2U3e2n9Iuaw9jLY2rQzWst6rMsxtIWiRl4Kkgqoz1HA9Km8RXQuNO0VB4eXSPKswvnhCv27p+9+6M/Xnr1rJur2W82+asC7c48m3SL89oGfxqxqWu6lq9tZW+o3TTxWEIgtlKgeWnpwOeg5OTxXLUlzyv/Wx0048qt/W5n11f2iLTvDugPb6bZzXFy0nmyTW6yNIFlIC4IPrjPXpgiuUropPEJtfD+j2+nSw/abYS+aWtlZoiZCVKsynBxzlTWM7u3r+jOim0lK/b9Uat3a2Oj2viR7aytpmtb2OO3M8Yk8rduzjPXHocjgZBxVDTprLVJLu/fTbdZrDT/MMSqPLmlDAeYUAAAweV6HvWCNSuxZ3Fr5xMNzIJJgwBLsM4JJ57mm2V9c6ddC4s5TFIARnAIIPUEHgj2NQqbs7vX/gWNHWTkrLT/gtnW6GItQh0jUpoLeG7i1eO33wRLEJUOG5VQFyD3x0qGV4dWh8RLPZW8KWY82CWKFVZGD7cF8Zbdk5yT04xWBJrmoSz20vnqhtG3wLFEkaRtnOQigLnPtzRea3f30DQzyRrG773WGBIg7erbFG78c0vZu9/66D9tG1v6e51d3b6NpWr/wBm3lxpqafHAEkVrWRrhmKZ8zzBGedxzgNjHGK4U4DHByM8H1rQ/t6/NskErQTrGnlo09rFK6r2AdlLYGeOeO1Z1XCLjuZ1KikrJBRRRWhiFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/AOuf/swqGpoP9XP/ANc//ZhUNABU13/x+S/75qGprv8A4/Jf980AQ1Mf+PFP+ujfyFQ1Mf8AjxT/AK6N/IUAQ0UUqMUdWGCVORuAI/I8GgCWe0nt4YJZk2pcIXjOQdwzjPtyKhrpdZ1Of+x9JIjtSJbZ9x+yRcHew4+X5fwxTZWi0ttJt7ezt51uIEmmMsKyNKXJBAJBKgAYG3Heup0FztJ6XS+851VfLqtdfwMrStLbVrkW8V1BDMxwiS7/AJ+CeCFI7d8VRrp9MtYbL4jC2tjmKKeRU5zgbW4/DpVLw9aW8wv7m4aEG1g3x+epZAxYDcQAcgZ6YPbNSqXMl8/wSYe1s2+ll+NzForp4xp13qOjL5lncXRuglwLeApG6bhtypRRnkjgVT1TUYRc6jY/2darGJCkBijCNEVbruxubIzwTjnjGMUpUVGN7/1ZP9bepSqtu1v6vYxKK6+008CSfTdT/s0OtozfZooT50TBNwPmbOvGSC5HJHtUEckNpp+gCOytGkumYTSSwK5dfNIxyP169Oa0+rPv/V7Ee3XRf1a5y9FdLPa2+lQatdW1tFK8N+bWITJ5iwp8xzhsgngDnNQaHHDqWoXd1eJbIba1aYKYyIywwAWVR0GckAYPp1rNUW5KN9d/1L9qrOVtDBorZ1Z7GXTIGW4tJb9ZCrm0gaJWjxkEgooyDkcDofapfEV0LjTtFQeHl0jyrML54Qr9u6fvfujP1569aynHldr3NIS5le1jBq7aaLqmoWz3Nhpt5cwRkh5YYGdVIGSCQMDg1SrrvBNvdyahb6zfXstto+hv5rzO52qc7vKjHdmPUD156jMN2QSdkczZafealceRp1pPdzbd3lwRl2x64A6UradepqH2B7O4W83BPs5iYSbj0G3Gc13FqbXU/BGt3zXQ063udY8y7KrukaHaWSNVHUljwMgcEk4FdDB5GoaNDe2zDT9SOgSJHLc3BZ44VlCiRmAznZuOQPYDtWbm10/q1xOX9fOx5NfabfaZMsWpWdxZyMu5UuImjJHTOCOnFVq7fVn0+X4Xxx2HnSxWWqeTBc3B+aXdGWkKr/Audvy8+pOTXEVcXcpaq4UUUVQwooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJoP9XP/wBc/wD2YVDU0H+rn/65/wDswqGgAqa7/wCPyX/fNQ1Nd/8AH5L/AL5oAhqY/wDHin/XRv5CoamP/Hin/XRv5CgCGiiigC7Hq13HYi03RyQLu2LLAkmzd12lgSvTtTrfWr+1t44YZV2xEmIvEjtHnrtYglfXgjmqFFX7SfdkckX0Ltlq95p8pltXjEpbd5jwJI4PszAkUiardx3n2qFo4pSuwiKFEVlPUFQNpB9xVOijnltcfJHexcbVLlrqC4XyIpYG3xtDbxx4Oc5IVQD071Wlmeed5pW3SSMWY4xkk5NMqzd2f2RIG+0283nRiTEMm4x/7Leh9qLya3C0Uy3/AMJJqvzEXKhnTy3cQpvkXbtwzYy3HqTVQ6hcslqhk+W0z5I2j5Od3pzz60thYS6hNJHCyKY4nlO8kcKMn8aq1TnU3bZKjC9kkXo9Yvori5mWYFrokzq8askhJzypBXr7cUxNUvI78XkUvlzAYBRFVQMYxtAxj2xiqlFTzy7lckexYur6W8CiVIF29PJt44vz2qM/jVjUtd1LV7ayt9RumnisIRBbKVA8tPTgc9Bycnis+ipbb3GklsFbUPizVoNJh0wSWsllAS0cM9jBKFJzk/Mh55PNYtFJq+4WRpW3iDULOe6kt3gQXYAnh+yxGF8HIzEV2cHpxx+NO/4SXV/7aGq/bW+2BdgcKu0LjGzZjbtxxtxj2rLopWQWRe1HWb7VVgS8lQxW6lYoooUijjycnCIAoJPU4yao0UU9hhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/AOuf/swqGpoP9XP/ANc//ZhUNABU13/x+S/75qGprv8A4/Jf980AQ1Mf+PFP+ujfyFQ1Mf8AjxT/AK6N/IUAQ0UUUAdpOlrL4rl0kWFpFaNAd7LCoYHyt2/d1XB7DA9uTWfPcRab4d0WaGxtHlmEhlklgVy4V+nII/HGfeode197nUbkafNGLaWNULpAqO42jILbQxGR0J/Ssia9uLi1t7eWTdFbhhEu0Dbk5PPfn1rvq14pyUd+/wA/yOOnRk4x5vLT5Gy8ltb6I+p2VlCslzdtGqyoJlgQAHaAwxk56kZwKvGzs7i7S2FrDHLqmnCVFCgeXPkkbf7obb0HrXN2mpXVlHJHA6GOQgtHLEsikjodrAjPvSPqF3JqAvnmY3KuHWT0I6YHQAenSs1Whs12/Kzt67lOlLo/66fcXr8R6fpmmwJFH9pZftUrtGrH5j8inI6YGcdPmqTXESWPSJBHDC1xahpDFEsYJ3sM4UAdKzZ7+4udQN7cMss5IJLxqQccD5cYxx0xiprvWry+t1gufs7Iq7V22sSlBnOAQoIGfSp9pB3v3Vl5ItU5Jp/f8zpYG+zeINT021toY7a2s5lBEClzhPvF8buT745xVSKG007TdLfztOQ3CedP9rt2laQbiNoIRtoAGOCDn8KyT4h1Qqw+0gb08t2ESBpF27cM2Mtx65xUNvq13b2y26tFJCrFlSeBJQpPXG8HGfatPbw/ped+/wDWxkqE+v8AWnobY/s+10bVrqwt4LlEvVS2kni3bFIbs3X6Hj1FY899Fdajazpp8SsoQSwoMLOwPJ2gALkYGB/WoDqFybWa23qIZpBK6KigFhnGMDjr0HFQwzSW86TQsUkjYMjDqCDkGsZVb2S20No07Xb3NbxZcC68UXcw0QaFuK/8S8Jt8n5R2wuM9eg61jVd1fV77XdUl1HVrg3F1NjfIVC5wABwAAOAOlUq51sbvcKKKKYgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJoP9XP/wBc/wD2YVDU0H+rn/65/wDswqGgAqa7/wCPyX/fNQ1Nd/8AH5L/AL5oAhqY/wDHin/XRv5CoamP/Hin/XRv5CgCGpLcBrqIMMguAQe/NR1Lbf8AH3D/AL6/zoAjb7x+tJSt94/WkoAmt7Oe6WZoE3iCMyycgbVBAzz9RUNdF4bvZY7LVY0WAhLJ3XdboxJ3L1JGSPY5FRaRImrXN3Z3UNv5t1AVgZIEj2yL8y42gYzgg465ro9lFqNnq1f8/wDIw9o05XWiMKiuntLa2h1DQNOktonkkdZrksgJbeflQ+wXBx70wmDUdP1hWtLa3S0KG3aOIKY/n24LdWyCepPIqvq72vrr+CTf5i9trt2/F2RzdFdjewaTY6lNp11Pp8dlHF5ewW7m4Dbch/M2dd3ON2McVmaBdC30bW4z4eXVfOtgv2ooW+wdf3mdpx19R061lVp+z633/AunU9or2/pmDVzTdMm1SSdLdo1MEDztvJGVXqBgHmqddH4KdY9R1B5I1lVdOnJjYkBhgcHHNc821FtHTSipTUX1ZzlWL6xudNumtr2Py5lAJXcDwRkcj2Nbt1ciTwzZ6utrZx3a3ksHyWkYRk2AgFNu0kZOCRmpvG2pzjxBLAEtfLMcTBvskRY/Ip+9tzj8enHSp525WL9nFRcrnOTWNxb2lvdTR7YboMYW3A7tpweOo59ar11ur6vcr4V0JxHZ5lScNmxhIGJMcDZhfwx6037RFp3h3QHt9Ns5ri5aTzZJrdZGkCykBcEH1xnr0wRTU3262/P/ACCVOKbs9kn+X+ZylFafiSzgsPEt/a2gxDFMVQZztHp+HSsyqjLmimjKcXCTi+gUUUVRIUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/+uf8A7MKhqaD/AFc//XP/ANmFQ0AFTXf/AB+S/wC+ahqa7/4/Jf8AfNAENTH/AI8U/wCujfyFQ1Mf+PFP+ujfyFAENS23/H3D/vr/ADqKpbb/AI+4f99f50ARt94/WkpW++frSUAWLO+uNPuPOtJNjlSpyoYMp6gg8Eexq7p1zDJqsd/qFzFbC3ZX2QwbGk284UIoUHjGSR1qpZ2Et7HcvEyAW0JmfcTyAQOPfmoIlR5kWV/LRmAZ8Z2jPJx3raMpwcX80ZyjGVzVtdXE3jCLVb5vLVrkSucE7Fz045OBxVbUNWubzzIS8a25kLhIoUiDHsSFAyfrVa7ighu5I7S4+0wqcJLsKbx64PIqGpdSXLyev42/yBQjfmsX31m9lgEUzQzAJ5YeW3jdwvpvKlvpzxS6frupaVZX1pp900MGoR+VcoFB8xeeORx1PTHWs+iplJy+J3LUVHZBVizvrmwaVrSTyzLE0TnaDlG6jmq9T2NnJf38NpCVWSZwilzgAn1pKLm+VdR83L73YVr64bT0sTJ/oySmVU2jhiACc9egFT3GtX13aJb3TxSoiCNXe3jMgUdB5m3d+tUpEMUrI2MqxBx7U2psmVzPuX4NbvrewFkrxSW6sWWOe3jlCE9Su9Tj8K05PEJtfD+j2+nSw/abYS+aWtlZoiZCVKsynBxzlTXO1q6d4c1HVo4208WszyZ2Q/bYVlbHYRlw2ePTmplGO7GqsorczHdpJGeRi7sSWZjkk+pNNpzo0cjJIrI6khlYYII7EU2rICiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/Vz/wDXP/2YVDU0H+rn/wCuf/swqGgAqa7/AOPyX/fNQ1Nd/wDH5L/vmgCGpj/x4p/10b+QqGpj/wAeKf8AXRv5CgCGpbb/AI+4f99f51FUtt/x9w/76/zoAjb7x+tJSt94/WkoA6LwzfXqWmqQW91OoSyeSONJGAVgVJIA6HGeay7fU786nHcm+uTOSEMvnNuK56ZznHtVWCea2mWW2leGRfuvGxVh+IqcatqIujci/uhOy7TKJm3Eemc5xXSq3wXv7v8Anf8A4Bh7PWTSWp0kH/JUJ8gMPOlyD0PyNWg9zJd6UUuX3JLopmk4+8+8AMfXGOPTtXFyatqM0sck1/dSSR52O0zErnrg54zUf267C7ftU23y/Kx5hxs/u/T26VrTxMYR5bX3/FGLw7bTvtb8DrtTv7HTNVls7ie8bT/J2LYpbr5LKV4YHf1z827Gc1Qlurywh0SPRWkjjnhVmEXSeXeQwbH3scDB6D61iJquoR2v2aO/ukgwV8pZmC4PUYzim2+o3tpC0VreXEMbHLJHKyqfqAaX1lOV/wCt9v6+4pUGkuv9bnR63BAulapDp6AxLqyhVjHC/u2GAPTOQKsPPdad4y0eAyy2+6C2jmQMVzxjDAdfxrkrW+u7JmayuprcsMMYpCmfrio5JpZWUyyO5VQqlmJwB0A9qI4lJppdU/uuH1d25W9NfxLmr3l9PfTQ39zcS+TKwCTSFthzjgHpWx4sn16bSfDy67Yw2tvHYhbB4gAZouMM2CeenHHXpzWDdaje3qqt7eXFwE5USys+36ZNNuL67u44Uu7qadLdPLhWWQsI1/uqD0HsK45a/wBeR0xVkQV0Xguawi8SWH2iwurq7+1IYGimGxD/AAkx7cvg84DrnFc7V+LXdXt7A2MGqXsVoVKm3S4cR4PUbQcYOTn60gkrqwuvQyW/iPUYZp1uZI7qRXmUYEh3HLY7Z9Kz6KKUVZWLerCiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAmg/1c/8A1z/9mFQ1NB/q5/8Arn/7MKhoAKmu/wDj8l/3zUNTXf8Ax+S/75oAhqY/8eKf9dG/kKhqY/8AHin/AF0b+QoAhqW2/wCPuH/fX+dRVLbf8fcP++v86AI2+8frSUrfeP1pKACit3SUfVtCutJQbp45Fubcdz/C4/Ig/hWtDNby6rqPlSOP7NsxDaNFGJGUKQGkUZHP3jnPGc9q6VQuk77/AKJ3+61jnlW5W1bb/gW/P8zjKK6m31K2vtW0RFmubq6hu1D3NxGFZkLAhSQzE4OevrVLV9cvGvNTspWWS2eVkWJh8sW1uCgHCnjr3yc0pUoxjzc39WT/AFsONSTla39XMxoLUaak63e66Mm1rbyj8q4+9u6fhU+n6al1Z3V5dXBgtrUKGKR73ZmOAAuR6HvV+5uri68DxG5nkmKX+1TI5baPL6DPQVLp2ozp4R1IhLb91JAq5tYjkZbrlfmPucmrVOCk79r/AIepLnPkuu9vx9DnphEszC3d5I/4WdArH6gE4/OmV0Wmebr2kXelgKblZluoFVQo5O1wABgDBzgelUfEN2lzqzRwEG3tVFtDjuqcZ/E5P41lOmoxU777fr9xcajcuS239fiZdWdRsJdMvntJ2RpECklCSOQD3+tRW9zPaTCW1mkhkHR42KsPxFb/AIvv75tZnt3u7g2siROsRkbYw2Kc46df1pKMXTcut1+o3KSqKPSz/QzptNtxoS6jbXMkn78QPHJCEw23dkEMcj8BWbWyP+RFb/sIj/0Wau6Neh7Gz0yO5u9LuJJiUnhTclwGOBvAIJwRjuOvFaeyUpWWmi+92I9pKMW3rqzmaK6Twn/bWn+PrddBtYLzVYJZFjhfHluQrBu64GMnqKxNRM7apdG8jEVwZnMqAYCvuORjtzXM9GjoWqK1ad3pdtYWsJuruT7VPAJlijhDKA33QWLDBx6A4qhBM1vMssYQsvQSRq6/kwINb/ii/mZ7SEpb7ZLGFiRbRhgSueG25A9gQK3jGPspSe90vvv/AJGMnLnUVsc5Wlp2m29/Z3Ti5kjntoGmMfkgqwXHG7dnPPpXT6daywag+lXl7dXSraHzbVYP9HQFMjndwc4+bbyfrmsDw7/q9W/7B0v9K1VBRlaWuj/C/ZmftuaLcfL8TForY0PUI7C3vPNFzD5yqi3lqBvhbOQOSODjkZBwK2LSx8nxLO93dNeTfYDcW0wh3Ox2ja2wkZcDJwT1Gc1EKHOk0/8Agb/5Fyrcraa/rT/M4+itrVdTtb3SooTcXd7dxyki4uYgrCMj7ud7E8889OaxawnFRdk7msZOSu1YKKKKkoKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/AFc//XP/ANmFQ1NB/q5/+uf/ALMKhoAKmu/+PyX/AHzUNTXf/H5L/vmgCGpj/wAeKf8AXRv5CoamP/Hin/XRv5CgCGpbb/j7h/31/nUVS23/AB9w/wC+v86AI2+8frSUrfeP1pKAJLe5ntZhLazSQyDo8bFSPxFJDNLbzLLBI8UinKujEEfQimUU7sVkWptTv7iWOW4vbmWSI5jd5WYofUEnjpVZ3aR2eRizMcszHJJ9aVAhkUSMypn5iq5IHsMjP51e1TTorBbSS3uHnjuofNUvEEK/MRggMfT1qrSlHm6E3jFqI063qrRmNtTvChG0qbh8EemM1UWaVIXiWR1jkILoGOGI6ZHfFMopOUnuxqMVsjU0rUbfSY5LqFpmv2Ro4xsASPIxuznJOO2BVS1SycN9tuLiE/w+VAsmfrl1xU8el+Z4dm1TzseVcLB5W3rlSc5z7dMVXsLOTUdQt7OEqslxIsalzgAk45o9pfR9P+HH7NrXuPuI9OWEm1urqSTsslqqKfxEh/lTW1G9ezFo95cNbAACEysUGOny5xUU8LW9xJC5BaNyhI6ZBxVjVdMm0jUGs7lo2kVVYmMkjkAjqB60uft1H7N9eg7+3NW8vy/7TvNmNu37Q+MemM1FBqV9awtDa3txDExJZI5WVT9QDVainzy7k8kexNa3dzY3SXNjcS208ZyksLlGXtwRyKid2kdndizMcsxOST60lX9Y0z+yL5bR5fMmWJGmG3HluwyU6nOMjmour2LSbTZQp8s0s5UzSPIVUKpdicAdAPar0+jyQafp8oZnuL8sY7dY8nbnap65JJzgY7VZ1PwzdaTpMN3dywrLJI6tAJoyyhSBnhiTzkEAcY5pc62uV7OW9ih/auoiKOIX915cfCJ5zYXjHAzxwSPxot9W1G0hEVrqF1BGOQkczKo/AGp4NLiOhSand3DxIZTBCkcW8yOF3HOSNo5HPPXpUFjb2k63Bvb37IY4i0Q8kv5r9k46Z9TV+1ldu70I9ktNFqNj1K+huXuIby4jmk+/KsrBm+pzk1Gbmc3X2kzSGfdv80ud271z1zUVFHM+4uVdizdaje3yqL28uLgKcqJZWfH0yarUUUNtu7BJJWQUUUUhhRRRQAUVNZ2/2u+gtt2zzpVj3YzjJxnFSalZ/wBnapc2fmeZ9nlaPftxuwcZx2pXV7D5Xa5VooopiCirmm6ZNqk8sVu0atFC8zbyQCqjJ6A81XgELTqLl3jiz8zRoHYfQEjP5ildXsOztcjoq9rGmHSr/wAgSieN41lilCld6MMg4PQ47Utrpnn6Pe6jLL5UVsURRtz5jseF6jHAJJ5pcytcrklzcvUoUUUVRAUUUUAFFX/7M/4pz+1fO/5e/s3lbf8AY3bs5/DGKoUk0xtNbhRRVy10ya80+9vImjEdmqtIGJydxwMcUNpbgk27Ip0UUUxBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/+uf8A7MKhqaD/AFc//XP/ANmFQ0AFTXf/AB+S/wC+ahqa7/4/Jf8AfNAENTH/AI8U/wCujfyFQ1Mf+PFP+ujfyFAENS23/H3D/vr/ADqKpbb/AI+4f99f50ARt94/WkpW+8frSUAbUSs/giZUUsf7Rj4Az/yzYV0P72y1S43oFmh0EZWRQcMFHUHjr2NcXa313ZMzWV1NblhhjFIUz9cUfbboEkXM2TH5R/eHlP7v09uldkMQorbX/JNfqcsqLk/L/hv8ie81i71C0igvn89onLLNIS0mD/DknpxnFW9d/wCQfov/AF5f+ztWRFLJDKskLtHIhyrocEH1Bq1Pq+pXUJhutQupom6pJOzKfwJrH2l4tS3dvwNeS0ly7I2559ePwxtoJbCFdCGoF47sKPMabaQV65xjPOO2M9q5ipze3TWK2TXMxtFk8xbcyHyw+MbtvTOO9QVj1Neh1GlX9xp3gK+ms5DFKb6NRIv3kyjZKnse2RzgmtA31xb+NNAljuZYje29m10yOV84nAJfHXPvXM2thf3On7Ybq3S3kbcYpNQijyw4yUZwc+5FSS6RqU5Qz3dlIUQIm/VIDtUdAMycAelY8sea7f8AVrHSpy5Eknt+tyTV9Y1iPXLhZdRvlkt55BGDO+Y+SOOeOOOK0fHGp6g2tSW5vbk2c0ETrEZW8twUBzjODz+tUbu11u/RUvtUguVQ5VZtYhcKfbMlDWuuNZCzbVIDagYEB1iHZj02+ZikopW20G5SfNvqdVJfXMnjiDTmbGm/Y1a5iAxGymAbmf17cnpgVymiyanHpusrpdtHPbPBi6kcDMaZPI5HPX1/StPxBLqeq3BS11CJLExRp9nfVoAuVUA/KJSOozWPFpWpwRyJBeWcaTLtkVNVgAcehAk5FKMVboXUk+ZWT/pIXwxaxy6v9quRm2sEN1N7hei/i2B+NV7eK48Q+IVQnM97Pl29MnJP0Ayfwq9BZajb6Xc2MUmmKl0yGV/7Sg3ELnC/6zGMnPSjTrLUdMmlltpNMMkkLRB21GDKBhglcSdcZH41d9W/uMVF8qjZ+f8AX9bjNT1tl8VLfaft8qydEtFblQkfC/gcZ/Guh8QWdnrHh+K6hR7K4s7Nbt4wN0LCVySAx5DE5IHTHArmYdH1G2mWa3u7KKVDlXj1SBWU+xElX9WOu60YxfX9m8caqqx/2rCVyq43YMh+Y9z7molFe7Z7GkZP3uZb9CLUAqeCrFbMmW1N5IzySDa4k2LldoyMYxzk59BUnha7ufses2n2iX7N/Zk7+TvOzdxzt6Z96lhsTJ4ZbTLua1jkjuDcQvFf2rhiVClWBlGOg5Ge/FVraLxBZQCGz1iK3iByI4tZhVR+Akp6NSiLVOMrbEuh3k9j4N1qe0fy5hNbhZAPmTO8ZU9jjjI55rct1SfXNMvrojzf7ENxJdONzI4BAlIwSzDj379q5iTT9Xm87ztQtZPPYNLu1aA+YR0LfvOSPetPQlu9PvWkvrm3cfZXt4Jk1O3aS1z0ZAZB05GARwTzUzindp6/8CxdOTTUWnZf/JXJ111rltA0x9Vk1KaO/WWWbMm3BcbV+cAsRyckcZwKpeIfEN+ms6xYuyS2kkkkK27r8kfz5DKowA2e/fJzmr+oS3UuipZRakt9cC4E63l5qVurw4HAT98xHrnI+lc9Lot/NK0s1zYySOdzO+p25LH1J8yiMYt3fn+gTlNRsvL9dOp1V5qNhod9p8TXV8NM+yRk2cVqphuUZfmJJkAYkk8leD9Ky9F1GGPT106OfUNIe4u98N7bJu81fu7XAIJC+xPJPFU7eHX7S3EFpq8UEIziOLWYVXnrwJMU20tdcsI2jsdUgtkY5ZYdYhQE+pAkp8q11Jc5O1l+Hlb+ti1ZXJ8P6rrEN+JhISYWv7BQGgfJOV6ABsYxleAcVR8TWs9tqMMk999vFxbpNFcMm13QjgsDznjqSeMc0trp2r2MxmstQtbeVhtLw6tAjEemRJU0WiyXs8s2s6pEJWwfMS9tpmf6lp19vWqVk73Jk3JOKT3MzRv+Q7Yf9fMf/oQrrr2/uNQv/FVpdyF7WCGR4oMYSNllGGA7Hk5PU5OaxpfD0ECebYaqjXCEFA89rGM567hcEj8qrf2bqvmTP9utN84Imb+1oMyAnJDfvOefWlLlm73HBzpq1uq/U6X7Rcw+N7DSbHP9jvHEFthzDNCyZd2HRv4iWPOR7Vm6XqFrbWs2nQXF9pgnviYNQtELeYv3drYIYgZzwT97p60FtdbSxNkmqQLakEGAaxCEwTk/L5mOtFpa65p6MlhqkFsrHLCHWIUBPviSlyruNzl2f+WnQ2dCfU9N8WappbXshk8m4Oy3Yqjy7CQwUYAPHpxiuQu767v5BJfXU1y6jaGmkLkD0yavxaPqMM6zQ3dlHKrblkTVIAwPqD5nWrEmm6jqN3G+sapDKoG0ytqcEzqPYNKO/uKqKSd7rYmTlKPKk92/vsO8ThDHpzXBZLz7DADGoDIU2/K27ghsYyuCP9qm69/xLtM0/RRw8afabkf9NZAMA+6rgfiat6vBNe6zBc2o08wWscUUaXGpW+XVAB8wEnfHIBqhfabqWo3895cz6cZZnLtjUrfGT6fvOlKNtL+bHK6vZa6L/P8AyOnjv74eIPDen27EWsljbm4iUDbKhTD7/wC8AoPXpWdPqE2m+CI20mdoA+pzKssRw4TCkAN1AOB060mry6ne21pa2eoRRWsVlFbywHVoFR2UYJ2iXBB96xzpOpNbLbm8sjCrF1iOqQbQx6nHmYzUqKev9blynJaJP+lY1rbVJ7zS9b1mCOOLVAYQZbddrRoch3HcE8ZI9e2a07FReQ6TfX6ibV/sVzLH5qgtNs/1TNn7xABwT1wK5e10zVbKbzrK+tLeXGN8WqwI2PqJKc+n6vJei8k1C1a6BBE7atAXBHQ7vMzTlCL2f9Wt/wAEUaklZyTf663/AOAbIub+58H6fc6rPPNv1hTHJcSFsoFxwT2yD+tTNbTf8JD4yn8p/KW2nVnxwCWBA/EAmsG5sdZvAwu9StpwzB283V4GywGAeZOuOKklg16aMRzavDIgQxhX1mEgKcZXHmdOBx7UOK1s11/G3+QKo1a6fT8L/wCZc1S6v9Ms9Gt9FeSG1uLRJAIOlxKeHDY++c4G054wKPD2p6inhnXIoL25RreGN4kSVh5Q8z5ioB+XrziqNva65aWzW9rqkEED53RR6xCqtkYOQJMVFa6ZqtlN51lfWlvLjG+LVYEbH1ElPlTTV0SpyUk7P+kaeg6neDRfEN887TXSxQETTHewO/AOTnkdj2q0bW81iTw0Xn8vUpIZZJLiZd7+WrEo5B5Y7QcevH1qLTptUtLPVTLqERvrxI1juF1aDcNrZOW83PTisltO1d737Y+oWrXW4N551aAvkdDu8zOaVk23ov8AhrF8zUEtX/w9zemQan4Ut5ZZrzVD/acccM19H5bMGGGRX3t8pIHfg9qm1rXhpsmvWsesPOk2Le2s4lkQW2Dg9QAoABXCk5zzWLEmsNewy6le2uoQpKkkkFxrELLLtPQ5kPbI/Gt+a/kE2oTf2o9+l1G6R2V3qFqsMe48E/vmzt7AKPwqJR+f9I0jK6002/X/AD8yG51Cy0OXSkN1epp7WkbvaRWitDdBl+csTIAxPIJIOOPSuFnMZuJDACsRY7A3ULnjNbltDr9lB5Nnq8VvFkny4tZhVfyElYc0bQzvHIVZlYglHDgn2YEg/UVtBJO9zlqSbSVrDKKKK1MAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAmg/1c//AFz/APZhUNTQf6uf/rn/AOzCoaACprv/AI/Jf981DU13/wAfkv8AvmgCGpj/AMeKf9dG/kKhqY/8eKf9dG/kKAIaltv+PuH/AH1/nUVS23/H3D/vr/OgCNvvH60lK33j9aSgC6un50N9R837twsHl7euVLZzn26VSrobG9nsfBVxJaSGKRr9FEi/eX9233T2PbI7E1r7IW1C4vZGdbv+yYpxJHGHcMQA0gBI+YDvnjk12ewUldO2iv8Ac3+hy+2cW7r+rr/M4eiujlnj12bTLK1uJrm/EpU3V5Eq7lOCAfmbdg56+uKuy4ufDmqC5vb2/S3mjCy3UG0Rtvw2wlmPQ9OO1THD82z/AKsn38ynWta6/q9uxzml6f8A2lcSxeb5flwSTZ25ztXOOvfFUq7lJL1fEOrWcTSpp1rZyqsKMREq+X8px0yeue/Jqml1DpWjaRLBe3dqkimSX7Nbq6zOGOVcl1zgYGCDwfeqdCNk72/4e3chV23tv/lfsclRXWJqCw+H9Yu9IU2yPfJ5OVAaIEN067TjjI6Vn2WuvJrUN/f25nMMPlySRD95gDAlJOcuMjk+grP2UE0nL8DRVJNNqOxh0Vta7HLJZ2V8dRlv4Zw6xvcJtlQqeVOScjkY5I5PTvd8WT69NpPh5ddsYbW3jsQtg8QAM0XGGbBPPTjjr05rGceR2/ra5rCXMrnMUUUVJQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/65/8AswqGpoP9XP8A9c//AGYVDQAVNd/8fkv++ahqa7/4/Jf980AQ1Mf+PFP+ujfyFQ1Mf+PFP+ujfyFAENS23/H3D/vr/Ooqltv+PuH/AH1/nQBG33j9aSlb7x+tJQBJ5sy2/k73ELNv2ZO0npnHTPUZpwvLoTxzC5mEsQCxyCQ7kA6AHtRN/qLf/cP/AKEahp8zFZFqfUL+8dHubu4naHlGklZinuMnjtRPqd/dKy3N7czBgAwklZsgHIByfXmo4P8AVz/9c/8A2YVDT5pdxcsexaOp35iSI3twY41KohlbCgjBAGeBjiktdSvrJWWyvLi3VjlhFKyAn8DVateXQppNM0+40+3ubmS4jd5VjQuFw5UdBx071cfaSvJdCZckbJ9TNa6uHSRHnlZZX3yKXJDt6n1PPWmwzy20yy28rxSLyroxVh9CKfbWdzeyGOzt5bhwMlYkLED1wKT7NP8Aavs3kSefu2eVsO7d6Y65qPe0ZXu6oW5u7m9lEl5cS3EgGA0rljj0yaW4vru7jhS7upp0t08uFZZCwjX+6oPQewp7aXqC3S2rWNyLhl3LEYW3keoGM44NW9Y8PXukXEoaC4kt4wv+kGBlQ5A79Opx1puE2nJoXPBNRTMqip/sV19h+2/ZpvsnmeV9o8s+Xvxnbu6ZxzioKgsKKmtbO5vpvKsrea4kxnZChdseuBWlreiNpl3YWsMdwbi5tY5HidfnEjEgqBjPUdOtJySdilFtNmPRU93Y3dhII761mtnYbgs0ZQkeuDWpqWn6dpVjaJKt1PeXVotxvWVUjj38qNu0lsd+RSckNQbv5GJRVoaXqBsftosbk2uM+eIW2Yzj72Mdaha3nWGOZoZFilJEblTtcjrg96d0TZkdFbGiabb3GvRaXrFtdxyTSrF8kgiaIk85VkOe3HFRWGiXGp659hs45nQTiN5EjL+UpbG5sdh+FLmV7FcjtczKK0NV0W+0meRbu1uI4llaNJpIWRZMHqM+oGaz6aaauhSi4uzCiiimSFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/8Arn/7MKhqWEgJNkgZjwM9+RUVABU13/x+S/75qGpbohruUqQQWOCO9AEVTH/jxT/ro38hUNSkj7Gi5GfMY4/AUARVLbf8fcP++v8AOoqktyFuoixwA4JJ7c0AMb7x+tJSt94/WkoAmm/1Fv8A7h/9CNQ1LKQYYACCQpz7fMaioAmg/wBXP/1z/wDZhUNSwkBJskDMeBnvyKioAK6eSeVdN8MRLIwj8xn2g4G7zcZ+tcxRW1Kr7P8AD8DOpT57f10sddqsE15Z6laaXE8sqarK9xDCpLFc4U7R1UHP0NNnvJ7fX7EQQC9vIbEQXcQf5nPIZQRzvCkDjJGPauTorT6w90u34Kxl7Do33/E2dc0+KytLJoxdW7Shy1ldtl4jkfMOBwfcD7vep/FVncyapLqMdvI9lLHEy3CqShGxR94cdeK5+is3UTTVt7fgjRU2mnfa/wCJ03k69/wrHz/t8P8AYX9o7Psm8eZ52zO7pnGO2ffHeuZoorHrc16HSaTBNeeDNQtdMjea8a6jaWKIEu8QBxwOSAx5+oroEWK1160t5SHuToCw2/kzKpaXkbUcggEjcAf8a87orKVPmb13/wArHRGtypabf53Om1K8vNL0e1tIdL1TSzFcNNDc3Mp3rlcMqEImAevFP8W6rqLLp0DX90YptMgaWMzNtckckjPJPvXLUU/Zrcn2rs0ej6Poq6dr8BSO+ukazIN+9wot5QYj8iqV+YDgABs8ZxgViJYXGq+EdFSxTzRb3EwnfOFhyQcuf4RjnJrk6KSptS5r/wBa/wCZTrJx5baa/jb/ACO6NldXPxbea3tppoob5DLJHGWVBxySOnTvWDFDNpfjS1fUoZLVRepLmZCnyeZ97ntx1rDopxg4212ViZVVK7tu7mx4k0u+sdYvJbu0mihkuX8uVkIR8kkYboeKx6KKqK5YpETkpSbQUUUVRAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAD4oZZ3KwxvIwBYhFJOByTU0um30Ecjz2VxGkRAkZ4mAQnpnI4zkfnWl4Tdo9cZ0OGW2mZT6ERmujlkDaay3JZ4V0a3Zlz6yDJ+vH6V2U8PGdPmbt/T/yOWpXlCfLbt+ZxLafepZi7e0nW2PSYxEIe33sYrQTwzqMmjC+jtLpnaYIsK27EspXO8H07dPxrd1ORrfVNQvoNJv7qCeF0Fwswa3aIrgHiPoBjjdxisiytp7/AMHz29lE9xPHfLK0UY3NtKEZwOcZo9lBNrV6fqL2s3FS2K8WiSzaK08UFxJerefZzAqEkAISflxnIIrPFpcm7+yi3lNxu2+TsO/PpjrmtgPPbeB7iHLxFtRCSocgnCdCPqOntWtdbpZtQgtub+40238sD78gCqXUepKjp3AodGMkmvL8m/0/EPayi3fz/NL9Tkbi0ubObyru3lgkIzslQqcfQ1ovoU1toFxe31vc20qTIkayoUDAg5PI56Ct3Sf9Cj0a01QeVeLcTPCk3DRKUwuQemX5Gaznsruz8IX/ANvRoppLuJiknD9G+Yg84Jzz3wacqEYRb30+7b8dQ9s20vP79Wv0MM2V0tit61tMLRpPLW4MZ8svjO3d0zjtUFdPPBrw+GNtPLfwtoR1ApHaBh5izbSS3TOMZ4z3zjvXMVxdTr6BRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRWwnhnUZNGF9HaXTO0wRYVt2JZSud4Pp26fjVxhKV+VbEynGPxMx6KmltLiBA89vLGpYoGdCBuHUc9x6UosbskAWsxJQSAeWeVJwG+hPGaXK+w+ZdyCiprmzubKUR3lvLbyEbgsqFSR64NOubC8slQ3lpPbh/umWMru+metLlfYOZFeipzZXS2K3rW0wtGk8tbgxnyy+M7d3TOO1QUhhRU9pY3d/IY7G1muXUbisMZcgeuBTWtbhLr7K8Ei3G7Z5JQh93pjrn2pXWw7O1yKirr6Nqcd0lq+nXa3EgJSIwMHYDqQMZNXdd8L3+iXMgNvcy20aqTcm3ZU5A4zyOCcdaXNG9rlezk03bYxaK1LjTVtNBiuLmy1KG6kl+WSWLbbtGRkYJGS36Yqra6Zf38bvY2NzcohwzQws4X6kDinzIXK9CrRVi20+8vMfY7SefLbB5URbLYzjgdcAnHtUc9vNaztDcxSQyocNHIpVl+oNF1ewrO1yOiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAdEYxMhmVnjDDeqNtJHcA4OD74P0q7qE2kSQqNLsb62k3fM1zepMCPQBYkwffJqiATnAJwMnHakoAK3rK2nv8AwfPb2UT3E8d8srRRjc20oRnA5xmsGirhJRvfqROPNa3Q6PQ7Z9UsrrQZgY5VlW4j3/LsKnbIDn/ZJOP9mrmnX8+oaxrc2m+Zu+wtHbLEDuCAqq4HXOP1rAs9SjsLOYW0DC7mQxtcNJkKh6hVxwSOMkmmafqH2GK8TyvM+1W5hzuxtyQc9OenSuqNaKsn2d/uaX3HPKlJuT/rpc6TTWi05tCt9YxFNFPNJslO0wqQNm7P3csM8/WqOoefY6Te202j6jCtxKrNPdy71VweoPlgEnkZzzXOUVnLEOUbW/qyXbyLVC0rt/1dv9Tp54NeHwxtp5b+FtCOoFI7QMPMWbaSW6ZxjPGe+cd65iiiubqdHQ6LQ9GW+0K7udl7esk6J9hsnCt0OJG+VuOSBx6810dydvidUicRX82hqlq7zKzecRgDzBgFiMgMMZrzqispU+Z7/wBWsdEKyglZf1e5cvbHUbCKNNRgnt1ZmZI5wVJPGW2nn05xzj2rb8Y2N1caodUgtpZLCWCJ1uUQmPGwDlhwDkYxXMUVXK7pkc6s13OsOjaoPh95Z027DjUfNK+Q2dnlfexjp70txa3+paX4ffQI5ZIrePaxhziCfflmb+71ByccVyVFLkd7363/AAsP2ita3S343O612/jl0TxBLpkuIJ9TjUtGeJBsOfqCwzWJ4sOZ9KY8k6Xbkk9/lrAopRp8v9eVip1nNar+r3CiiitTnCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJoP9XP/ANc//ZhUNTQf6uf/AK5/+zCoaACrUOmX9yoNvY3MoK7wUhZvlyRngdMg/lVWuoeeUR+FohIwjGHCg8bvNIzW9KnGe/l+JjVm4Wsc9a2V1euy2VtNcMoywijLkD8KWPT7yaZ4orSd5I22uixklTnGCMcHNdHLpK3cuqziO7vCNRaP7JaOF2csfMb5W46gHHrzWpeO0dxqjISrPBYhjvDE5IByw4PHGR1reGFTtzf1o3+hjLENPT+tUv1OHmsrq3jV7i2miRyVVnjKhiOoBPpS3NheWSoby0ntw/3TLGV3fTPWvQZbiFNRklv3GxNaYBnIAUiIheT0wcVzOoefY6Te202j6jCtxKrNPdy71VweoPlgEnkZzzU1MPGEea/9WT/UdOvKbSt/X/AMM2V0tit61tMLRpPLW4MZ8svjO3d0zjtUFdPPBrw+GNtPLfwtoR1ApHaBh5izbSS3TOMZ4z3zjvXMVx9Tr6Gxo3hq+1m3up4YLgRwwNJG6QM4lcEDYD68+/TpVCXTb6G8S0msriO5fGyF4mDtnphcZNa/hJDPNqlrF809zp0scKZ5dsqdo9TgGrXhe1ksb3UrS+tLmG+msWW3hLeRI+SMhSynkgHHHrWUpOLfodEaalGPm/8AI56bTr22u0tbizuIriTGyF4mV2ycDAIycmnSaVqMNuLiWwukhLbRI0LBc5xjOMZzxXTQySQX3h/TpdHvrFIdRV4pL1yzEMy5VfkXjPP1NZ2o6tfJ4r1NRcuRcXLQyhsNuQScDnpjAxjpTjKTaRMoRjFyZmjQ9WLBRpd4WO7A+zvztOG7djwfSp7HTFk0m7vLuy1JkWP/AEee3izEGHXexHTp0r0YXMzaxgyNhvERRhnqohGB9OB+Vcnoel38kfiCSGxuHimtJUhZIWKyN5i8Kccng8D0rFVXKLv2OiWHjGSS11t+ZzFtp95eY+x2k8+W2Dyoi2WxnHA64BOPakayulvfsbW0wudwXyDGd+T0G3rmt+A3Nl4A1OBvMgc38ccqEFTjaSVI+oHFaM2nLqmtafHJNMpGhRyeXAwEtwQh/dqT3Iz2PAPFaupZvt/wLmKo3S7v/OxyjaPqaXaWr6ddrcSDckJgYOw9QuMnoava74Xv9EuZAbe5lto1Um5NuypyBxnkcE461qa/bfZvA9hG1pcWhS9kCw3UwkkQFQccKu3PXaRnv3FQeMbK6uNUOqQW0slhLBE63KITHjYByw4ByMYqVNuSKdKKi++jMJdMv3sTerZXLWo6ziJtg5x97GOtVa9DvZxb65Fq2maLqOoWq2qpDJbz5tzFs2lCoiOMc5UnqK4m2l0xY2+2Wd1K+4kGG6WMAemDG355q4zcuhnOnGNtSG2sbu8/487WafDBf3UZbk5wOO/B/Kh7G7ivBaSWsyXJIUQNGQ5J6Db15rodBjvZ/B2uxaXHcSSSSwKUgUsxT58jjt61rxOVEenq4/tlNFa3UBvmV9+RHn+/s4x17VMqjTa/ra5cKKklrv8A52/4Jw93Y3dhII761mtnYbgs0ZQkeuDWtb+G5xoGo6hqNrd2xt0jaAvGUWTc2D1HPHpW3pATS9O0i18RI0En9qiaKG4+Voo8YLEHlVLY69cE1H/Z+oWmh+KJtVR45pmTAl4aTEvLAd1569D2qZVHt/XQuFFaN/d23/yOLoooroOMKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/Vz/wDXP/2YVDU0H+rn/wCuf/swqGgAoorSg8P6lcQwyx26iOfHlM8qIJDkjAyRk8HjrVRhKXwq5MpRj8TsZtFX7bRdQuoZZYbc+XC/lys7qgjbGfm3EY6dTx2pDot+L37L9n/eeX5uQ67NmM79+du33zin7OfZi54bXKNFaH9haibmGBIFd51ZoikqMsgXrhgcEjHTOarRWc89rPcRJmK3AMjFgNuTgdev4UOEluh88X1IKK1bmy+z+H4ZWso97TY+2R3ayZG3OwopOD39aXR9FmvLuzkmjjFrLMF/ezLH5gyN20Egt17Vaozc1Bb6d+pLqxUXJmTRWlNpM02pX0dlGqwW8zKWkkCIg3EAFmIGfxyaZHoepS30tnHaO1xCm9owRnbxyOeeo6ZzUezm9kP2kOrKFFW7zTLqxjjkuETy5CQrxyrIpI6jKkjPtUupaFqWkW1lcajatBFfwie2YsD5ievB46jg4PNS01uUmnqjPooopDCiiigAooooAKKKKAL9vqf2fQ73TvJ3fapI38zdjbszxjHOc1QoopWSdxttpLsFFFFMQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/+uf8A7MKhqaD/AFc//XP/ANmFQ0AFdVLatNYeH5WuYIIIYiztLOqlcSEkhSdx4HYGuVq3e3k08NtbToii0QxLt6kbieefU1tTqKCfy/AyqQcmrf1obOoajb3mh6o0Uiq1xqYlSIsAxTDc4qtpV39o0/ULC4uQss8CJA88mFARt2zceFB7dBWJRR7Z81/K34WF7JKNvO50Jv8A+xtM06COaOW7gu2uT5UgcRrgALuBIOcEnBo1+aztrP7Jpk0csd3Obt/LYHYvREOO4y2R9K56iqlXcouNv60/yQlRSkpf1/SOiezYeDxbfaLPzluzMUF5ETs2Yz9717dasQm2urrQrw3ttDb2kUccweUBkZXJ+51Ocjkcdc4xXK0VSxFpXt2/DYTotq1+/wCJ1Yu7W5s9RtESynm/tB7hVupzGkiHIyrBlBIz0J6E4pLfUS11fremztjHpL28SwTBlPoA25snn1rlaKX1h9vL8LB7Bdx5mlMAhMj+UG3CPcdoPTOPWtvxFai307RXHiFdX82zDeQHLfYen7r7xx9OOnSsGiuZ6nQtAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCaD/AFc//XP/ANmFQ1NB/q5/+uf/ALMKhoAKmu/+PyX/AHzUNTXf/H5L/vmgCGtTw9pA1jVobeV1SEth8TIj4wfuhuT07A1l1peHbqKy8RWVxcNsiSUbmPYdM/rWtFRdSKltdGdXm9nLl3sNXRL2S6S3hEE0sgYqsV1E+cDJ6Mfy79qrRWVxNaT3MceYbfb5r5A27jgfX8KthJ9B1WC5Sa3lMcu5GgnSQMAe+0nAI9cVp+JxDp9vHY2bfu7qQ3zADorf6tfwG786v2ceRy7f0v1+4h1Jc6iuv9MzZfDmqQK5ltgpRPMKeam8r/eC5yR7gY6+lRWujX17CkkES7ZGKx75UQyEdQoYgt+Ga6e+xYeMJ9Uu54RDFANsfnq0jkxBQuwHcMk9xjFUxdRXWn6XJaW+nTS2sIjdbq6MLxuGJyAZFBBznIzznNbSoU4yau9OnXffYxjWm4p9/wDLbcxdJ0PUtc1VdN0u1ae8bdiLIUjaMnJYgDp3qk6NHIySKVdSQynqCO1dDoAfVvHG+41yLw/JM8rtfJJtWNsEkKwYden3u/foeelULM6hxIAxAcdG964noztjqrsfa2017dxW1sm+aZwiLkDJJwBk8VeufDup2cLyXFuqLGyrIPOQtEW+7vUHKZ9WxTvDH/I2aV/19x/+hCtafbpUPiBr25geW+JihhinSVmPmbizbSduMd8HmspSaaSNqcIyV3/W5iDQ9ROstpX2b/TVzmLevGF3dc46c9a0Lfww0/hmTUPOtxOJ0RAb2FU2FSTuy3DdOCQfata5voz4W/t8v/p1zbDTCO+4fefPvGAPxrJ0sx3nhK/01Z4Irn7THOizzLEJFAKkBmIGRkHGajmk0/K356/I0UKaa63T/LT53HWXh83fhm9lihje8t7xYzKJ12Im0lstu2YyBzn8eazDomo/2mNPFqzXJUNtVgRtIzu3A7duDndnHvWgsqW3gm/snni8/wC3xkxpKrblCtkjB5Gccjitc39nLKtqt3Aj3WgxWyylxtSQYJRj/DnGOenehykm2v60HyQkop6f/tNHNPoGpRzWsfkK/wBrfZA8UySI7ZxgOpK5z2zS3egalY20k9zbhUhZVlAlRmiLdN6gkrn3AroNIuLfSLbSrC8urZpm1aO6cxzq6QIAFyXUlQT9eg5qlDdwf2f4pD3Ee+4ZDEC4zJ+9JOPXjnijnlf+vISpQtr/AFuc1RRRW5yhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUATQf6uf/rn/AOzCoamg/wBXP/1z/wDZhUNABU13/wAfkv8Avmoamu/+PyX/AHzQBDRRVux0u81ISGyi8wRY3kuqhc9M5I9KqMXJ2irsTkoq7IrWdLecSSW0VyB/yzm3bf8Ax0g0t5dzX93Jc3LbpJDkkDAHYADsAOKtXGgapa+WJrNw0khiVVIZt/pgEkHHPuOaju9IvbKEzTxoYw+xnilSQK3o20nB9jVONRKzTsiFKDd09SPUb+XU757udUWRwoIQEDgAd/pVat7SdAd5Jn1GGMILSSVI2nVZMhCVOwNux36YrKOn3QNrmL/j7GYPmHz87fXjn1qp06nxSWrFGcPhXQrUVt6BZwv4gXTNTso5S0jI5Z3DIVByAVYDqPesu1s57248m1jLvgk8gBQOpJPAHuan2bsmupXOrtdhbC8k07ULe8hCtJbyLIocZBIOeaZJcGa8a4lRWLyF2TkKcnJHBzj8akvNPubHy/tKKFlXdG6Orq4zg4ZSQfzqfUtC1LSLayuNRtWgiv4RPbMWB8xPXg8dRwcHms3Gz1LUrrTYbqOqy6hHBEYore3t1KxQQAhFz1PJJJPckmqNFXrPR72+tWuYY0W3VghmmmSJC3XAZyAT7ClpFFe9NlGiuisvDz3Xhm9kW2/063vFjZ3k2LGm1i24khQMgcn+tZUmkXsOoixkhCzlQ2C67duM7t+du3HOc4pKcW2ipU5RSbW/+dilRV660W/tDb+ZBvF0cQNA6yrIc4wChIJz260+80HUbG3knuIU8uJgkpjmSQxMegcKSV9OcUc0e5PJLsZ1FaH9hagLRbhokVXj85EaZBIyc/MIydxGATnHQZ6Vel0X7To+hf2bbNJe3xmVwpJLlXwOpwMDvx6mhySY1Tk1e39f0zBorXttC/0e9udRufIgs2SNzbhZ2Z26AYYKRwcnd+dLeeHZo76yg052vBfQLNB8mxtpzncMkLjB5zjHOaOeN/69R+zna9v6vb89DHoq1eafcWOwz+UVkzteGZJVOOo3ISMjI468iqtNNPYhpp2YUVrv4V1mNSXtAp2GRUMyb3ULuJVc5YYPYHv6VBZaHqF/Cs1vCgjZ/LR5pkiDt/dUuRuPsM0uaPcrkl2M+ir0Gi6hPPcQrbmNrb/XmZliWLnHzMxAH4nmrniXTYdLm0+KBFVpLGKWUpJvDOc5IOSO3bijmV0g9nKzbWxi0UqqzuFRSzMcAAZJNX7nQ7+0tHuZY42ijYJI0M8cvlk9AwViV6Y5xzTbS3JSb2M+itCHQtQntI7lIUWOUkRebMkbS467FYgv1x8oPPHWr9j4aN34dur8zQCaN4hEDeQquGznflvlPAwCQevWk5RRUacpbIwKK19H0x5dbWCS2t74RuA1v9ujjEpPACvu55/u5qoLGe91eS0sbRhK0rBYFbdsGehb0HcnjjNHMrhyO1ynRWhPoeoW5t98KOty/lxSRTJIjNnG3cpIz7ZqS68OarZwzS3NqEFv/rkEqF4xnAJQHcB74weDRzR7hyT7GXRWiug6i9olwIUVJEMkatMiyOozyqE7iOD0FZ1NNPYlxa3QUUUUxBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/wDrn/7MKhqaD/Vz/wDXP/2YVDQAVNd/8fkv++ahqa7/AOPyX/fNAENbmhXMUGl6kkkyRtI1vtDOAWAkyceuBWHRWlKo6c+ZEVIKceVnoDaxYRXN0zXkOJNTk2urhtqtCVD4HVQSOa56HZo+jX8V1NbzSXTRrHFBMsuQrhixKkgegzyc9OtYFFbvFSbTtqlYxjh1HS/9LU7Eta/8JBqepNqFr5FxbS+QPOUs5aPhSucrjpzjngVVtxBdx6DMb22hjs/ln82UBkIk3fd6nII5AI9cVzFFL6x5f1e4ew03/q1jqNL8tvHE1+bm1S2S6lJkkuUXIO7BAJyRyORVfRWjsJNQs7s2jS3NvtjLzgxk7gdpdG4yB6jtmufoqI1uVKy7/irMp0r317fga+rXEwsbeze3sYIY3Z0FpcebycZyd7Y6D0qfxFai307RXHiFdX82zDeQHLfYen7r7xx9OOnSsGispy5nf+trGsY8qsFdFIiav4W0yC0ubaOexaRJoJ50hzvbcHBcgHjg85HHFc7RWclc0jLlv5m+s0Vv4Kv7MXUTym/jIVH++oVvmA6kZxzitJxpOoatp63s8EiRaNGERp9iPMq8Ru4Py9+47CuOoqXC/X+rWNVWtZW/q9zvrXVLDSbTRzObCEw38jyw2UzTeUGjChzlmzjOflJHHrmse3RdD0/Wftd5aztdw/Z4Ut7hZfNJcHeQpO0ADPzY61zNFL2e+u4/bPTTY6+F7a/09R4h/s6SGCz2QXsFyFuFIHyKYwctj7vKe+e5s6ZrFhH4Y03S7i4jgN3FcQyXUbDzLXMgK59EbuOMjvxXD0UOmnv/AFv/AJhGu47b/wDDf5HWaKE0yw1eC3vLNtTysaLLcp9nliPUgsdjnno2cemc1NqWoAeJrK9067s/7RNt/paPMHty5HMYZiVwVOMZ2joCK42ij2d3d/1/wBKtaPKl/V7/AH9L9jd1+HTksrOS3itre/cv9ogtLjzogM/K2csATz8oY9B0qpqWmW1jY2E9vqUN3JdRb5YYxzAePlPJ9fbpWbRVKLXUiU0+h6BegWHjWDV725t47W2tIzsM6GRv3IAURg7uSfTHU1iXEaa3oekx2l1aQNaCSKaKe4SLZucsHG4jcCD2yeKxtU1ObVr37VcrGr7ETEYIGFUKOpPYVTqI02rPr/w/+ZrOsndJaP8A4H+R2+r6jZ6/a6rbafcwRytdQyK88qwi4RU2E5YgdecE5wayPFDWst7pcNreQzxxWEMLTIcqCCQc9x9DzXP0U401Fr+uliZ1nNO6/q9zYu9K06w8TRWL6rHdWO9PNu4AMBTjdjBIyPx/pW/ObCy0TX4YRpdsJVVbdLa9M0kyiQYJ+dh0+h68YriKKbg2kmxRqqMrpHS6vBHrMen3dleWaxR2ccEsctwsbQMgwflJyw7jaDnnvUOimO58N6vp32iCG4laGWITyrGHCk7gGYgZ+YHk1gUU+TS39b3F7T3ua39WsbnhyzaDxRayTT2kcdpcxtK73cQUDdnIJbDdP4c1dszHZ61q1vcXNqn9pW80UE63CSIpZsjcykhQcY56Z5rlqKUoc24Rqcq0XW51dlNDpOk2lhdXNu88upxXBEU6yLCi8FiykqCfTPQc0431u2s+K5GuoitxBKsLGQYkPmLgKe/A7VyVFJ07tv8Arp/kUqzSSS2t+v8AmddYyW1/Y28fiL+zpbSG1KRXkdyEuIRj5V2A5fB4wUPXOcdeRooq1GzbM5T5kkFFFFUQFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/AOuf/swqGpoP9XP/ANc//ZhUNABU13/x+S/75qGprv8A4/Jf980AQ1f0bSptW1GGCOGZ4jIqzPEhby1J6k9u/WqFX9DkSHxBYSSuqIlwhZmOAo3DkmtaKi6sVLa6M6jag3Hcvanpdw+prY2mhm0MkzJAzeYrSge7ttPHPAFZKWc8lpNdImYYGVZGyPlLZxx17GtTS7yC28bR3U0qrALpiZM5ABJ5+nNTeRFp/hfUYJry1e4mliZYoZlc7QW5yDj8Oo74zWihGcXP1/S36mXPKD5fT8XqUZfDuqQCTzbYK0aeYU81N5T+8Fzkj3Ax19KhttJvLu3NxHGiQ7tgkmlSJWb0BYjJ+ldBJe2zeNruf7TEYTaMqyeYNpPkYwD068VQniTVdE01bS5t0ktUaKWCadYsEsTvG4gHI649KuVGmm+XX5+diY1ZtLm62/Io6Voepa3qy6Zpdq0942791kKRtGTksQB071RdGjkZJFKupIZT1BHatrwnaLc+KYIP7fTQxh8ajvKBMKehyuM9OSOv4ViyqFmdQ4kAYgOOje9cb0aOtbD7a3e6nWGIxqzZwZZVjX/vpiAPzrZ8SeHP7HvpVt5Ynt41Q/PdxGTJUE/IDu6n06Vg10nipFv7/wDta0uLWW3khiJUXKCRSFClSmd2QR6VEr8y7GsFFwlpqZo8P6m1p9oFsNvleds81PM8v+/5ed233xjHPSlt/Dup3VlFeRwIttNkJNJMkaEg4xliADnt1POK6fUNWDa02taPbaPKGj3JLNeFJU+TaVMbSjkcjAXB4xmsTVLmGTwXocEc0bSxPOZI1cFky/GR2zWanJ2/ruaOnBX1/rQgi8Ka3N5nl2DZjkaJgXUHeoBKgE8nByMde2ail0K/s76CC8hijaUF18y5jVWAJBG/dgHIIxnOa6nwxrEXkaW+o6inmjUZpJWnnG4DyNoZsn14BNZOrhNT0zQ7e0uLZpYreXzA9yibP3hOCWIAPPShTnz2f9aMbpU3DmV/6aX5Moarp8j+Jm0+00z7DK7pGlp9oEu1iBj5ycHOc9e9RXegalY20k9zbhUhZVlAlRmiLdN6gkrn3ArodSMSfEi11L7XZtaPdwkSx3UbgBQuSQGJUcHk4qjDdwf2f4pD3Ee+4ZDFlxmT96ScevHPFCnLljb+tgdOLlK/f/MzItA1Ga1M8UKOBH5pjEyeaE/veXndjHOcdOelXrbww1x4Yk1ATQCfz0VA17CqbCpJ3ZbhunBIPtXQaVHo+ma1by2b6YtmLY4vJbxvPd2jOQUD4U5OMMoHvnFc/pZjvPCV/pqzwRXP2mOdFnmWISKAVIDMQMjIOM0Ocne3l+Y1ThG3N1v+Wn4mZb6ReXc88dukbfZ+ZZPOQRoM4yZCdvPbnntUV7YXOnXHkXkfluVDjDBgykZBBGQQfUV0GizW8eg6lpUyWEl356SqtzcbI5QuQQJFdQSM5HzYOT1rN168uLh7W3uIbOFbWHZEtnN5qhck8tvfnOeM1ak+a39bGbhFQv1/4O39fcZtvby3d1Fb2675ZnCIuQMsTgDJq/d+HdUsbeWa6tgiwkCVRKjNHnpuUHcoPqRSeHf+Ro0v/r8i/wDQxW7cFdJn8RT31xbyPeF4YYY50lZyZAxLBSduAP4sdaJyaaS/rYKcIyi2zDXw5qj24lW2HMfnCLzUEpT+8I878e+OnNN0/Rru+VJ1SNbbzAhkmnSJWPcAsRk47Cun+0W3/CbjxL9vtRYf67HnL5v3Nvl+XndnPHTGOc4qi32bVtJ0VlvbW0SzeUXKSSgNHmTfuCHl8g4+UHkVMakrq/8Aw25UqUeV2fp57fd3KeraDI3ibU7XSYFW2tJDkvKFSNc4GXc4/M1j3dpNZXBhuVCvgMCrBlYEZBDAkEe4NdTd38j+J9dFhJpt1a3UmHhu5lWOZc8MrllGQfRgeeM44xfEUWmw6oo0jasZiRpI0l81YpMfMqv/ABAevP1pU5Ssk+w60I3k493+fQyqKKK3OUKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAmg/wBXP/1z/wDZhUNTQf6uf/rn/wCzCoaACprv/j8l/wB81DU13/x+S/75oAhooqW2gFxNsaaKBcZMkpIAH4Ak/QAmmlcTdiKitUeH7h7qxignt5kvyVgnRm2Eg4IOQCMfTvTbnQ5re1uJhc20xtSouI4nJaLJwMnG088fKTV+ymlexHtIXtf+tjMorbi8MTu8kUl9ZwzxQ+fJA5kLImM84QgnBBwCTVJtKnU2ALx/6eAYuTx823nj1HvTdKa3QKrB9SjRW5B4Tv7jcI5bfcJ5IFUucu6DJA47jOM46c4qKTw5dR3EaCa3eJ4DcG4Vz5aICQSTjPUdgc5GM03QqJXsL21O9rmRRWoNBne5so4J4Jo719kM6Ftm4HBByAQRx270TaDNBBNIbq1f7M6pcqjMTDuOMn5cEZ4+Uml7Kdr2H7SHcy6K39T0ext9NsJYb+1R5IGdziY+cQxGR8nHTHOP61Qg0hpLKK6nu7a0jnZli84tlyOv3VOBk9TiiVKSk49hKrFq5n0Vq+HfD134m16LSbCS3juJQxDTybU+VSTyAc9OwNZkiGKVo2wSpKnByOPesjUbRRRQAUUUUAFWrO7htt/nWFvebsY85pBt+mx1/XNVaKBrQ1I9ZiguIZ7XSLGCaGVJUdGmJBUg4w0hGOKoXNw11dzXEgAeZ2dgvQEnPFRUUrJajcm1YKKKKZIUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/AOuf/swqGpoP9XP/ANc//ZhUNABU13/x+S/75qGprv8A4/Jf980AQ1qaFNYwzXBvjEshhYW8k8RkjR/VlAOeM9j9Ky6cUIiEnGCxX8sf41cJODuiZR5lY6xdZsI7rQS95FJ9jnke4eG18pFB24woUZHB5xn1FcvL+/vn8rLeZIduO+TxUNOiVnmRUOGLAA+hq5VXNrm6f8BfoRCkobf1q3+p22prJda1dWenSafHfTQ+QQ/m+ewCDKFsGPdgYJH51lW93ps0ejS3V75B0/5ZYvKZnbD7gVwMY57kYx3rPfxDqZZyZ0ErLsadYEWUjp/rAu7t61mVtPELmvFff637mMKDUeWT/q1ux2Vrr2mx6jBK9zhF1C5mJ8tuEdcKeneorfXrJNPtrTzkUtYeS8kkHmLE4kLDcpByPoDXJUVP1qdrf1tb8ivq0L/13b/U6KDVfI1bTDdajZzWkFx5pFrbGMR9MkgRrnPtnpVSC+t00zWomkw900ZhG0/NiTJ+nHrWRRWftpP8fxSX5Iv2Mfy/B3Nm5ltNQ0WwU3sdvcWkbxvFKj/ON25SpVSO5HOOlTaLqCW8EUV3qFs1ksm+Wzu7ZpPXJTCkA4PXK89eOTgUU1Walz2/MHSTjy3NnRYdAvPE+zXLm4sNIZpD5kS7nQYJQdG74HQ/1rIkCCVhESyAnaSMEjtxTaKwepstEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/wCuf/swqGpoP9XP/wBc/wD2YVDQAVNd/wDH5L/vmoamu/8Aj8l/3zQBDUx/48U/66N/IVDUx/48U/66N/IUAQ1Lbf8AH3D/AL6/zqKpbb/j7h/31/nQBG33j9aSlb7x+tJQBoWejy3enSXxuLeC3ikEbvKx4JGRwASfTjJ/DJpLjSZLXUBbXFxbxqYxKJyx2MhGQRxk59MZ9qkW7gHhWSzL/v2vVlCYP3QjDOenUitT+0dKmvkeWSIummxwwyTwl445guDuXBz37EV1qnTa3106+Tb/AERzOdRN/P8AQz08OXU11aRW01vOl4rmGZGbaxX7w5AIP1Henz+F7uG0e4FxayqsHnqI3Yl0BAJHHYnvjPbNa8Wt6fFNo/mXkUhtTcec8Nr5SDcoAwoUZGe+AfUCoY9bsEslTz/nXRzbY2N/rd+dvT079K2VLD21f4+V/wAzL2la60/Dzf6GSfD1yA0fn2/2tYvONnubzduM+m3OOcZzjt2rKrq7/XfPvJNQ0/UbG2eRN3lS2I85WxgrvEZznsd3ftXKVy1lBStA6KUptXmaNno0t5p0l8bi3gt4pBG7zMRgkZHABJ9OMn2xzTbjSZbW/W2nngRWQSLOWPlshGQw4yfpjPtWhZwRz+C51luorYDUEO+UOQf3bcfKpP6VKupaXLqyLMVaG1sfs1tNPEWQyAcOyYJxknAwe2RWns4WXTbr5a/1/Sz9pO7t5mbNoxhW3ma9tja3G4Jcr5hQMvVSNu4Hp271b8Q6TZWOqTR2t5bxouzEGJSy5UZOSuO+evT8qdrN/bT6FaWsV1DPPFM7yeRbeSmCFxgBRnp1IB/Sodfls9Rum1G2vYy0kce62ZHDqwUKRnbtPTPWlNQipKNun5a9e4Rc3JOV+v5q3TsTaho1jDpGnTRahapJLG7O5ExExDEDA2cenOP61StdFkuIIJZbq2tRcsVgE7MDJg4OMA4GeMnAqxNLaahoNhC17HbT2YkRklRzvBbcCpVT6kc4q0mrR3Gl2MaXdlaTWsZiYXdmJdwySGVvLY9+nFW1Sc23tpt/w4r1FGy7v9bdDPttAup0vXlkhthYuEuPPfG3JI7A56dByeMZqSPw1dzXKxQTW0ivbm5SbeVR0BweWAII9wKk/tRJNI1qO7uVlu7uaJlZUIEm1jkjgY/HFVtEu4LRr43D7PNspYk4JyxAwOKjlpXS8u/roVerZv8AT0Ib3THtLWG5SeG5t5iyrJDuwGHUEMAQeR2q1rPhu80PTtLvbuW3ePVIPPhET7mVeOGGODz71HNdwP4YtbRXzPHcyOyYPCkKAc9OxqTWbbQoNO0t9Evbi5upYN1/HKmFhk4+VeBkdfX61hUSUvd8vyu/x/yNqbk173n+ZkVrweHpZdHj1Se9s7W1kdkDTO2dwI42qpJ69gehzisitq71C2l8GafYpLm5huZXkTaeFOMHOMVlK+ljemotvm7EM+hyWepXFnf3dram3xmSRmKvnkbQqljkc9OO+KuWXhwReJLGz1O5thBcNFJGQZCtzG7DhSq5BPTnbTNCuNOh029WeS1g1BinkTXluZowufmAXa2G6ckH8Kuaxrdi2u6Jd2k32mOxjiEpSDyclXJICcAcenFReXMl/Wxoow5XL+t9jL1jTbWz1KaO31C1dPtDJ5aCXMS5P3iyDOPYk/Wptet3g0/SzjTmhaFvKnso3VpQGwS+4Ak5HpUeswWUurTXFnqtvNFc3DMP3cqtGrHOWBTtntk+1W9Zawm0HTILbVbaaaxidHRY5gXLOW+UlAOh74pK9o3/AK0G0rztby+9DF8IXZktoTeWQubuAT28BkbfIpXd/dwD1HzEZI4zVax8PzXltDPNdW1klxN5MBuS48xuhxtU4AJHJwK14db09fGGj3zXGLe2tIo5X2N8rCMqRjGTz6VZjnhtfDGjtcHT0bzpp4TqAmb+MYZBFnC+oYckHg0uaa3/AK3KVOm1p0/4H6mE3hq4S/vraS6tkTTxm4uGLhEOcY+7uJzxwKzbu2FrP5azw3CkBlkhYlWB+oBH0IBreb+0dH8Q36XusQ2l5KN0kkkZlhuFcZOQFbqDkArjr0wM1Nbv7JtYhudIit1ZIVExS3HkvLj5isbj7vTqB0ziqjKV0ROMEn01/r+vxMyytWvr6C1R0jaeRY1aQkKCTgZxnirceh3T3eoW7tHE2no7ztISANpxgYHUk8VWu7+a9ZGlWBCnTyLeOL89ijP410Gt67Z3WkO9nITfakYmv1CkBPLXGB2O5vm4z0pyclaxMFB3v0Ki6Ppz+Fr2/gupprq1aHdhQsY3nlcEZOMdePp3ODXS6c2nReFdQsZdYtEnvWhdAY5iE2kkhiI+vPbIrm2GGIBDAHqO9Eb3d/60QppcsWu36v8AQSiiitDIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJoP9XP/ANc//ZhUNTQf6uf/AK5/+zCoaACpJ5BLcO65wzEjNR1rw+HZpLe0mlvLSBLziDzXbLHJGMBTjp1PHI5q4wlP4UTKcY7mRUhkBt1j5yHLfmB/hVhNOPnTRXdzBZtC/lsJixO4dRhQx7denvU8mg3cV1eQSGINaQ+ezbsh04wVOOc7ge1CpzaukLnina5mU+FxHPG7dFYE4+tW00i6lgsZIgjm+kaOJAedykDnPA6jvTb3T1s87b21uSr7HWEtlT/wJRkcHkZH5ih05JXa/r+mCnFuyKhOWJ96StU+HrkBo/Pt/taxecbPc3m7cZ9Nucc4znHbtUcOjs9lDcz3dtapcMwhExbMmOCflUgDJxliKbpTTs0L2kO5nUVq+HPD134n12LSbCSCOeUMVad9q/KpJ5AJ7dgazJEMUrRtglSVODkce9Zmg2iiigAq+us3KqAIrLAGObCA/wDslUKKpSa2YnFPdFufU7q4t2gkaNYWkEhjjhSMbgMA4UDsaqUUUm29WCSWwUUUUhhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABWjb67f21rFbK8MkUJJiWe2jm8vPXaXUkdM4FZ1FJpPcabWxLdXU97dSXN3K800hy7uckmoqKKa00QNtu7CiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNB/q5/+uf/ALMKhqaD/Vz/APXP/wBmFQ0AFdRPFa/2foM95exwJFAWMex2dwJGPy4Xb7ckVy9Wbu4uJBFb3EgdbVTHGAB8ozn8eT3ranU5E9NdPwMqkHNo3E1Owu1vrgvbWl7cXhk33dt56+Uc/Ko2sAc+wz61Ncaxp9xq15i52w3WnLbrMYSqq4C9VUHAyuOAcVylFUsRJK1l/Sa/Vkewje9/60/yN68urFNP0i0s9QcyWssrSzpGw2FipDLnBI4+vHSl1TULa400faJrW91Hz94uLaAx/LjkOSq7iTjHB6HmsCik68v68rf5FKjFW12/U6u/13z7yTUNP1GxtnkTd5UtiPOVsYK7xGc57Hd37VU0bUIre3hivb+2kslctLZXNs0h752HaQCR0O5eevvz9FP6xLm5v8/8xewjy8v+X+RsaHDoN34lCa9c3FhpLFyZIV3OgwSo6N3wOh/qMmQIJWERLICdpIwSO3FNornN1oFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE0H+rn/65/wDswqGpoP8AVz/9c/8A2YVDQAVNd/8AH5L/AL5qGprv/j8l/wB80AQ1LbQC4m2NNFAuMmSUkAD8ASfoATUVamhTWMM1wb4xLIYWFvJPEZI0f1ZQDnjPY/SrpxUpWZE21G6Gz6JPF9naOe1mhuVZophMEQ7TgjL7cEeh9a1fENo1jJ9jt006G0SOJS2YXlJIBLE8ydT27e1Vddv7a50nTreC5inmgaUymG28lBu24wAACODzgH1FVfEN3Bfa1JPav5kTRxgNgjkRqD19wa6JckIyUfLr5O//AATCPPOUXLz6eat+Bc1PR7G302wlhv7VHkgZ3OJj5xDEZHycdMc4/rVK20SW4ht3kuba2N0SIEmZgZcHGRgEAZ4y2KnuZbTUNFsFN7Hb3FpG8bxSo/zjduUqVUjuRzjpVxdXjudPsBFeWVpNaxeS63dkJScEkMrCNj36cYI96bjSc23t5f8ADiTqKNl5/wBbGdb6BdTW91PLLBbJaS+VOZ3IKHnsAc9MYGT7U1tEuF1WzsVlhc3vl+RMGIjYOcA5IBAzwcjtVmTU0m0HUYbm4Et5cXiS5VCBIAGy3QAdenH0rLsUtpNQt0v5HitWlUTSIMsqZ+YgeuM1jLkVkvLqaxc3dss67o1x4e1y60q9eKSe1YK7QsWUnAPBIHr6Vn1oa7Dpdvrl1FoFzLdacrAQTTLhnGB1GB3z2FZ9YRu0jd7nU6Zo2h63b6jDp51CK5srFrtbid08uQoAWBjC5XOSB87dvpXLV3U9xo1j4XGkeHfEFjG10obUbqaG4WWY/wDPJcRHCD68+3OeFpK92RHYKKKKooKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJIpAiyA5+dNox9Qf6VHRRQAVJPIJbh3XOGYkZqOigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAP/9k=)

Figure 5.13: Sample chaos experiment(.yaml)

What this experiment does is, first as defined in the steady-state-hypothesis it sends a request and checks for a response code of 200. Once it is successful, as mentioned in the method, the terminated-pod action kills an instance and pauses for 2 seconds. Then it again sends a request and expects for 200 response code.

A screenshot of a cell phone

Description automatically generated

Figure 5.14: Failed chaos experiment

If this experiment fails, as shown above. That means there is a threat to the availability of the system. Lack of replicas or higher dependency levels between the instances or some other problem may be causing this issue.

Another experiment was to check the health of the microservices when a random instance is killed. There are actions in chaos toolkits probes modules to check whether the microservices are healthy.

![A close up of text on a black background

Description automatically generated](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAeAB4AAD/4RDoRXhpZgAATU0AKgAAAAgABAE7AAIAAAAKAAAISodpAAQAAAABAAAIVJydAAEAAAAUAAAQzOocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGxha3NoaXRoYQAABZADAAIAAAAUAAAQopAEAAIAAAAUAAAQtpKRAAIAAAADMjAAAJKSAAIAAAADMjAAAOocAAcAAAgMAAAIlgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMjA6MDk6MjEgMDM6MzY6NDUAMjAyMDowOToyMSAwMzozNjo0NQAAAGwAYQBrAHMAaABpAHQAaABhAAAA/+ELHGh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMjAtMDktMjFUMDM6MzY6NDUuMjA0PC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPmxha3NoaXRoYTwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAEfAgcDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDw+iiigC9Do97cWyTxxIEkJEe+VEaTHXapILenAPPFW9N0E32j3t2ZYleJUMQNzGoyXwd4JyvHTOM+9XNLeK6s7aDWRYTWEStiY3AjngBySAMhmweQNrZzxVTR2hksdWsRPHE9xEvktM4QMVcNjJ4BIHeuxU4KS80/y9Pu3OV1JtPya+6/+W5QTTbqW9a1hVJJEXcxSVWRVAySXB2gD1zxRPpd5bzwxPDlpxmIxurq/OOGUkH861NFeKyGp2F19kaa4hUR+ZP+6YghtpkRgBkf7QGRg1KrQ3F7pun6sljaWEcjsPstz5gy2OGbe+0EgenepjSi0u7/AM7W27a/oN1ZJvsv8umv9dzHutLu7O3W4lSNoWbYJIZklUNjOCVJAOOxrS07QHCXr6lFGPLspJUjM6iRWwCpKBtw/EVeee1tNAkR00+F/tkMht7W4MpZRnJOXYfkfr2pxFvHquuX0mo2rR3dvP8AZwswZpNwyBjOVI4GDg56VoqME7/0tDN1ZtW/rdHOSaXeRXVvbPD+9uVVoVDA7w33SCDiq88L29xJBMNskbFGAIOCDg8iup0y6RtATVJWAuNHV4o8jJcv/q/++SSa5u2uY4GczWcN0W/57M4x/wB8sP1rGpThG1nvr8unzNoVJSvdbfn/AFYS0s576byrWPewUs2SFCqOpJPAHuam/sq5F0kDmAF13K/2mPYwzjh920/TNT6TdzRalLLZrZxeYhVre4bETqcZTLn8eWHTr2p+tR2ELWjWaRxTlM3MME3mxo2eMNk9RzjJxThCHKpPuNzlz8oa9on9k6hcJDJG0EbhV3XMbSfioOf0qu2i3y2sk/lIyxrvkVZUZ0HqyA7h+I4q94jhS61ibUYrm3ktJ2VgyToXAIGcpndkfStaNdNsJNSFodOjt2sZI4Jhdl5piU7ruwCT2Kj0FV7GLlK+lr/1sZKrJQj1f/Dee5jx+Hmk8Pi9EsAnNwEAN5EE2Fc85bhs9s59qz7fS7q5abyVj2wnEkrTIsYOcY3khTntzzWhZBLzwtNYxzwR3CXazBJplj3LsK8FiBkHtmrGnywN4dk09orGW5huzIY7m4MauNu3KuHVSR9eh4p+zhJ6dvv/AAH7ScU79/66mDdWs1ldPb3UZjljOGU/55Hv3q94dtIb/wAQ2dtdJ5kMj4ZckZGD3HNO1K/eTU42vLSzfyIViWKKVnj2gcfMrkk8/wB6p9BvbceK7CdorexiR/m2uwUcHkl2P86zpxh7ZK+l/wALlzlL2TfWxSuNFvrWMSTwqqlxGf3qEox5AYA5U/72KaNHvjqj6d5B+1JndGWAxgZPOcYx3zVu0uIx4Z1WOSVfNkmhKqzfM+C2SB3rUu7tD4e/trcBd3kAsGHfK8O/4oFH41apU2r36X/r52XzJlUmnbzt+X/B+4xYPD+pXEMMsduojnx5TPKiCQ5IwMkZPB461Db6VeXPm7IgiwnbI8zrEqHOMFmIGfbrW9LatNYeH5WuYIIIYiztLOqlcSEkhSdx4HYGo7+6h1ywuo7OWGGT+0JLgRzyLF5iMMA5YgZHpnvTlRgr73XTvt/n+BKrTf8AW25U0nw7Nda9HYagPIAYCQeciuQQSCuT831ANR6dpP8AxPrC2vvIlinmCssVykmRnnOxjjr7Vorqdpb+KNGLTq8dhEkE06klSRnJB7gbsZ749Kpaba/2X4nsHubi1MQuAfNjuUdcA9TgnaPrirjCmpxS1963y03E5zalfTT/ADKuoaLeWQmmkgCQpJtIEis0ec7dyg5XIHcCmnRNQFqZzANoj80p5i+YE/vbM7se+OnPSr1tdRDTde82VC8zxFFZ+ZMS5OPXitS/1Ef2rJq2l2+lSh03LLJdFZANu0qYzIOQMjAX0xWUaVN01K7/AKv5eRTqVE+W39aefmc3baReXdus8UcYjdiiNLMke8jsu4jd+GasaFYm51DD2Md6FyGtnulgZjg9MkE49qu6PKJ7O2tdRTT7nT0kLHzrgRSwZ+9j5gx7HGGB479E8OQwReKEuY7mFbKCVwJJ50jYrggHDEE9ugpxpx5o26/8Dy2CdSXLJPp/XfcxLW0nvrlYLWMySN0UHH4kngD3NOurGeyKeeIyHGVaKVZFOOo3KSM+30q5p/2rTNYXyZbMS7TxJMjxSKeqFgSvIz1I+tSa3FYpb2jW0cEF2wb7RDbT+dGOflYNk4J54yeg6VlyL2fN1Ned89uhX1LQtS0i2srjUbVoIr+ET2zFgfMT14PHUcHB5rPre8RWot9O0Vx4hXV/Nsw3kBy32Hp+6+8cfTjp0rBrE1CiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAHOjRuUcYZTgim1Nd/8fkv++ahoAdsbyw+PlJwD7/5NNqY/8eKf9dG/kKhoAKKdGhlkVFKgscAswUfiTwPxrZ1Tw81lb2ssUsB8y1E0oa7izuyc7RnLDAHTNWoScXJLREOcYtJ9Sjc6k89lHaRwxW9ujbykQb53xjcxYkk4/AVSrUgsseH7u5ayjn+4VuFu13QDdjmMHJz05FSaTof9o6feXDSRqYot0Q+0xr824D5gTkDk8nH1q3TnKXna/wBxHPCK+djHoq/bRLaaokN3Bb3QYhSvnb1GSOQ0bdfxpdXslh8RXdlYxNtW4aOKNcseuAB3NRyOyfyL51exn0Vdu9IvbGHzbiNPLD+WzRypIFb+620nafY0+bQtSt9Bt9amtWXT7mQxQz7hhmGcjGcjoeo7VMk47lKSlsZ9FFbGg6RY6zdR2kl9cW9zJvIC2qugCqW+95gPQelS2krsuMXJ2Rj0V0WiaPY6pcahBZC4vWSweSESReUwlDKBgK7Z69z+FZd1o19ZyW6SwhzcnEJhkWUSHOMAoSCc8Y60uZXsU6clHm6FJGCurFQ4ByVbOD7cc1avtRkvhEhjjhhhXbFDECFT1PJJJJ6kkmpb3Q9Q0+3aa5iTy1k8t2imSTY391tpO0+xxWfVKd1ZMzlCzvJFm6v5bu2tYZFQLaxmNCoOSCSefzqtWhZaHf6hGjWscZ8xisavPHG0h/2VZgW9OAeeKW00HUr2GWWC2/dwP5czyOsYibBPzFiNvTqeM8daUppttscabSskZ1FaaeHNWl1CSyis2e4jiExRWU5Q4wwOcMOR0zUF/pV5pqxPdxqI5gTHJHKsiNg4OGUkZB7UuaPcrkla9inRRWxc2H2bwxFPJp8Rd7jAvo71ZOCufLMak4Pfnmm3YSi2Y9FaFpol/e2q3EMcaxM+xHmnSLe3ou4jcfpmqDKyOUdSrKcEEYINF1ewuVpXYlFbfhfTItWvbyCWBp2WylkiRSc+YANuMdfpVO80W/sfJ8+FWE7FIzDIsoZgcFcoTzk9OtLmXNylezly8y2KFFaN5oOo2Nu81xCoSNgkuyZHMTHoHCklTx3xSxaBqM1qZ4oUcCPzTGJk80J/e8vO7GOc46c9KOaNr3Dkne1jNord0WCzvdJ1RLixiMtrZtPHcB5A+7co5G7bjB9KTw74fGs/amllREit5HQC5jRt6gEZVjnbzycY96Tmle/QcacpWt1MOiui0LQBc6ld2l3FHcyCxllhW3uFl+cfd5jY857VRbw5qi3Vtb+RGz3TFISlxGysw6ruDYB9ic0c8b2D2c+XmsZdFWodMu7gXRihJFmheclgNgBx3757DmqtVdMhprcKKKKYgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJrv8A4/Jf981DU13/AMfkv++ahoAmP/Hin/XRv5CoamP/AB4p/wBdG/kKhoAK3dTjXUNL064tp7c/Z7TypY3nRHUqzH7rEE5B4xmsKirjK0XF9SJRu0+x0Gl2p/4R3U42ns0e6WLyke7iUth8nILcceuKg0No1XU7OWaKKS4tmSNnkAUsGDY3dOcHnOKxqKv2qVtNk199/wDMj2bd7vd3/L/I0LSwlXVI42ktQY2V2Y3cW3GR0bdgn2BzWy1xBp/j46jcSwSWstxIyyRTLJgHIDEISR1B9a5ainCryWstncJU+a93urG9fTS2em3VtFa6VHDcMod7W781m2nIIBkYgfh3ovLUJ4G0+5/4SFbgvcuv9kbyTbdf3m3dxnHoOvU1g0VlOXMXCPKFbfhCeG28UW0tzKkMapKC8jBQMxsByfesSiokuaLXc1hLlkpdjb8NXMdsmsebMkRk02VE3OF3MSvyj1PXitfRdXsdPsPD0l1NGRb3VwZVB3NGGUAMVHOM8/hxXG0VEoKT1NIVXBKx0uoTz2OmX1tDaaOkFyyrJJa3vnO+1sqQplYj8u9c1RRVRjYic+ZnX6Nb6XBBpF1CdOkk8zzLua8u2jeBgwwFRXBIwODhuTzgVZvY21HRdf8AsU0BSTVwwd7hI0ZcN/ExAPbvXD1cTU5k0aXTAsfkyzLMWIO7cAQO+Mc+lZyptu9/6umbQrJLla/qzX6nY2s0d3dXdnZTxSvaeHzbPOJAqM4Zc4Y4G0ZxnpXP6nJFaeF7LSzPFNdC4kuJPJkEixAgKF3KSCTjPB4rNsNSm05boQKjfardrd94JwrEEkYPXiqlNU7P+vMUq14+f/DIK6g2LDwP9k+02H2gX/n+X9vhzs8vGfv+vbrXL0VcldGUJKLOo0KYXFha2epppl3pizEsJ7oQS22T8xU7lY9jgBgcY61zt4tul9Otk7SW6yMIncYLLngn8KhooUbO4Od4pG74VuYrW61Bppkh3afMiFnC5YgYA960NC1Wy0/SNIkupI28jVmlkjzllTYo37euAefwrkqKmUFJ39PwKjVcUl6/idTqVzLZWuora22j+Rd/JJNb3pkeRdwIIRpSc55+7kVr6VHo+ma1by2b6YtmLY4vJbxvPd2jOQUD4U5OMMoHvnFef0VLpXja5oq9pc1jpfDdtt03VXkuLOL7VZNFCst5EjM29eCpYEdD1xUPhmSKz1i7tbueGHz7Wa2ErSAxhyOMsOMZHXOKwKKtwve/UzjU5eWy2dzpPD6/2Rf34vLm2jZ9OmCNHdRuCxHADKxGfbrUSX623g6x+zzot3BqTTKgYblwi4bHpkVgVLbypDOskkEdwq9YpSwVvrtIP60uS7u/L8AVSy5V5/idb4pmgtdKL2mFbXnS9kQfwIFB2n/gZY/gK42repajPql4bi52KdoRI412pGo4CqOwFVKKceVBVnzyuv67/iFFFFaGQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE13/x+S/75qGprv8A4/Jf981DQBMf+PFP+ujfyFQ1Mf8AjxT/AK6N/IVDQAAZIA6mtO48O6papKZ7bYYVLunmIXCg43bQclfcDFZyf6xfqK7LU8af4q1XULueHyzE8aRiZWd2ZNoXaCSB9QOldNOnGUOZ/wBaGFSpKMkl/Wxz0Ph7U54YZUt1WO4A8p5JkQSZJAALEZPHTrUEGk3tx5pWIRrC2yRpnWJVb+6SxAz7davazdI2naILedS8NsdwR+Y23k846HpTxIdV8OpbrcxC7iunllFxMqGUOB825iASCCOueaHTp3aV9Px2/wCHJU52TdtfwDTdCllbU7W5tGN5BADEmcYbeozwcEYPXpjms640q8tpIEeHebj/AFJidZBJzjAKkgnPaujN7BObuygu4TJHpaWglaUIsrqwLAMxAxgke+KZYalaaQ+j211NHK1vLLJM0bb1i3rhQGXrjqcVtKjSbSv8+/vNffbqZqrUV3b5fL/MwLvSL2xh824jTyw/ls0cqSBW/uttJ2n2NLNo17b25lmjRQEDshlTzFU9CUzuA5HatC+lls9NuraK20qOG4ZQ72t35rNtOQQDIxA/DvVm4eC+sbmbWhYmdbcC3u7a4HmSsPuhowT1HcqpAHNZeyg07f1v5fdsae0lp/XbzMiw0LUtU0++vbC1aa309BJcuGA8tTnBwTk9D0z0rPre0K1E+g65KfEK6Z5MKH7GXI+38n5MbhnH0PXt1rBrl62OnoFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNd/8fkv++ahqa7/AOPyX/fNQ0ATH/jxT/ro38hUNTH/AI8U/wCujfyFQ0AKDhgR2NWNQvpdS1Ca8nVFkmbcwQEAfTNVqKfM7W6Csr3CiitG00eS60179ri3t7aOXyneVmyDjI4AJP4Z/LmnGLlsKUlHczqKvz6TJa6i1rc3FvEFQP5zMShUgEEYGTnI4Az7dasp4au5rm3itpreZLmN5IZlYhH29RyAQfqBVqlNuyRLqQSu2Y9FbNz4Yu7azkuftFtKiRLMBGzFnjYgBgCOmTjnHQ0yTw9cxiZPPt2uoI/NltAzeYq9T22kgHJAJNDo1Fuv6/pMSqwezMmitfSfDd5rOkarqNrLbpDpUSyzLK+1mDE42jHJ474rIrLrY1CiprW3F1P5bTw264JaSZiFUD6Ak/QAmrl5pk+kpaXqS291bz5aGaNSyMVOCpV1HT0Iwc96V0nYpRbVzNorf8UpHs0iaOGGJ57BJJPJiWMMxJycKAKW4ZbnwHHcSQW6zpqAhEkdukbFBFnBKgZ59ann0v8A1vYt07Stfpf8LnP0UVas7NLreZby3tETHzTluSewCqxPTrjA9eRVmaVyrRW4nhLUJNUmsRJbBorb7UJWlxG8XHzBsdOc846Goz4cuGmsFtrq1uYr+XyYp4mbYHzghsqGHUHp0NTzx7l+zn2Meiti78OXFpbXcourW4eyZRcxQuzNFk45OADzwdpOD1qO40J7S2R7m9tIp3hE62rM3mFCMjnbtyRzjdn8eKOeLB05J2aMuiirVnZpdbzLeW9oiY+actyT2AVWJ6dcYHryKohK5VorbTwpqEmstpqPbmXyDcJJ5n7uRMZBVsd/fHvio5fDlyIYpbK4t79JLn7KDbMxxL2X5lHX1GR71PPHuX7OfYyKK1rrw/Nb2tzNFd2t39kYLcpAzFosnGTlQCM8ZUkVk01JPYmUXHcKK6p9CivfDOgypPZWTzGWNpJshpnMpCj5VJOB3PA9ayIdBunlvVuXitI7FtlxLOTtRs4A+UEkkg9AalTTv/XkW6Ulb+vMzKK0bnRZrS9hgnuLdYpoxNHc7z5bJjO4cZ7EYxnIxilvNKm062tr+Ke3u7aVyEmiBK71PKsrqDnocEYINPmRPJIzaK6DXhHNpGhXBit4JbiGQyvFAsYJEhAJCAdAPSpdR0LToNB0ueLU7OOWZJTJKRORNh8DA2cYHHIH49annVte9vuv/kV7J627J/fb/M5qiupOjQ3fg7SLjzrKyZpZkeefIMh3AKPlUse/OMD1FZd14evLOzvZ5jF/oVwLeeMMSyk9G6Y2n1zTU0DpSSuv6/qxlUVcv9Mm06G0e4eMm6hE6opJZVJ43ccZ61Tqk0zNprcKKKKYgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCa7/AOPyX/fNQ1Nd/wDH5L/vmoaAJj/x4p/10b+QqGpj/wAeKf8AXRv5CoaACtKbXbuew+xvDYCLaF3Jp1ukmB/00VA2eOucnvWfGhkfauM4J59hmm0B5hWmLuD/AIRRrPf/AKQb0S7MH7uwjOenWsyiqjJxvbqTKKlbyOoOo6VPqMkskkW/7DFHBLPCXjSQKAdy4Oe+DgirA1rT0WwVryORoYLpJGitfKXc64XChRwT3wPfFcfRXR9Znduy1v8Ai7mH1eOmr/pWOuOvWKWp2TbpBpkEKqUbmRXyV6enfpUOo6z51zc3un6lYwidWPlPYgTDcOU3iM5PJGd3NcvRSniZz3/rf/MccPCLv/X9aGvpNvoU2karJrF7cW99FEp0+KJMrM+TkMcHA6dx179KyKKK5up0Gv4dn0+C7uG1Lyg5t3Fs88RkiSXsWUA5GM9jz2rR1q/sb/RtLsI9RtmlhlkM0sdoYYk3BcEBUGRwedufauXoqHBOVzWNRxjyo6HxFJY3Vlpxs9Tt53tLRIHjWOUFmBOSNyAY57kU8jT/APhD/wCzv7ZtDcfbPtOPLnxt8vbjPl9c/h71zdFLk0tcPatyvbpb9C5a6pPaQmKKO1ZSc5ls4pW/76ZSa1NFudNi0e6SSW0t9RaZSk15amZPLxyFG1gDn26d65+iqcUyYzcWd8l7Z6tqF99ku08pPD/kvM8BiVWBXOUUHA9lBHpWfpN3aw3nh/SbOcXTR6iLiaZFZU3MVAVdwBPA5yBzXM2t9cWQnFtJsFxEYZflB3IcZHPToOlMtbmayu4rm2fZNC4dGwDgg5BweKhU7P8ArzNXWuttf+GOhuriz0mPW0S8ju7m+YwqkKOBEu/cxYso54AGM96lg1Sz/st4dX1C21K3W1MdvC9q32mJuqgOVwoB/wBsjAwBXLSyPNM8sh3O7FmOOpPWm0KmuWzB1nzXSLlrqc9nCY4Y7VlJzmazilP5upP4VqaLc6bHpF0sslpb6k0ylJry186Py8chRtYA59ulc/RVuKZlGbizt28QaX/wkUdyLvdAukG23i3Mf7zYRjYowvPpwPWuY0LUV0jXrO/dC6QShmUDkjoce+Kz6KUYJf16/wCZUqspW/rt/kdJqepstveLY6vpskFx8pih08QyuhOcEiID3Pzdu9Y/9q3H2P7N5dp5e3bn7HFvx/v7d2ffOap0UKCSsKVSUnc3pdStG03w7EJfnsnkM42n5My7h2549K1H8Q2c82t20dzbwrdXn2m2uLm086NuoIZSrEZByDt9ema42ik6af4/i7lKtJbeX4K35M6i21S1fV0GtXlldxQ2jpaSR2hEEMhyRujCKSM5/hPJFJq2oWd14ds9PW/tZLhbxnkeGzMESKVAzhUGR77c+3TPMUUezVw9tK1jotZawm0HTILbVbaaaxidHRY5gXLOW+UlAOh74pks1jqXhnTbZtQitLmxMqsk8chDhm3AqUVvpzisCinyab9b/wBfeL2jvt0t93/DG1d6hbS+GdHtEkzPbSzNKm0/KGYEc9D07VuWl7ba3451W0imLafqyOrSbSNu1dyvg46Fe/qa4mrcGp3VrZTWtu6xxzArIVjUOynGV343beBxnFTKnpp5/iVGq01fy/C/+ZLruoDU9auLmMbYd2yFc8LGvCj8gKz6KK0irKxlKXNJsKKKKZIUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNd/8AH5L/AL5qGprv/j8l/wB81DQBMf8AjxT/AK6N/IVDUx/48U/66N/IVDQBNa/6/wD4A3/oJqGprX/X/wDAG/8AQTUNABW3o2l2d5pt/Nc3UCyRwbkDeZmI7gNx2rgjHpnr0rErV0S6t4Vvra7l8hLu2MaylSQrZDDOMnHGOAeta0eXmd+z372dvxMqt+XTy/MiXSWlgvJbW6guEtEV32bwWUnGQGUdO+cU+10G6uxYeXJCrX7usKsxB+XqTxwM8VPoZW18RRWyTJdQ3Q+zymENhlcYP3gDxnPTtWlZTpJ8QLC2t33W9mwt4j6hQct+JyfxrenSpy5W+rt+Ov4WMZ1Jx5kuiv8Ah/mYtzos1vZyXCXFvcCFwkyQsWMTHpnjB54ypIzUknh65jEyefbtdQR+bLaBm8xV6nttJAOSASamiu7bSNMuIYLqO9nuZYyfKVwiKjbuSygkk8YAxjNXNR1nzrm5vdP1KxhE6sfKexAmG4cpvEZyeSM7uaXLS5bvf+v66j5qvNZbf8N/wTO0nw3eazpGq6jay26Q6VEssyyvtZgxONoxyeO+KyK19Jt9Cm0jVZNYvbi3voolOnxRJlZnychjg4HTuOvfpWRXJ1OroaGkaNca1PNFavChhhMzmZ9q7QQDz+Oeasjw1cyT2CWt1a3MV/KYYp42bYHBwQ2VDDqD06GrHhFFkOso8qQq2lygyOCVX5k5OAT+QNWrDVtO0uTRbMXYnitr43dzcojhBnAwoIDHAHPHXpWUpS5rL+tzeMY8l35/oZl14buLa2u5Vu7S4eyKi5hhdi0WTjrgKeeDtJxTx4VvDKbb7Ra/2gsZkNhvbzcYzjONu7HO3dnHas27nVtVmuITuUzs6EjqN2RXT/2rpaeKn8SLfh8gyrZeU/m+YVxtJxs2gnOc9B0pNzUUylGm5Neffp3IZ9DivPD+gyRz2VlJOjxlpsq0zmQgfdUngY5PA45rJj0C63XZvHisY7OQRTS3BbaHJwFAUEk8E8DpzWk1xpmoabooutSjtzZB/tEXlyFzmQt8mFK5x6kVbbxRBqUOpRPJb2Uk979rhe7tRPGRjbsI2MQcYOQPUcUrzV7d3+f+RTjTe76L8v8AOxzOpabPpd0IZyjh0EkckbZWRD0YH0NVK0dZvZ7y6jE97b3ghjEcb20PlIq/3QuxemfSs6tY3tqc87c3uhRRRVEBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE13/x+S/75qGprv8A4/Jf981DQBMf+PFP+ujfyFQ1Mf8AjxT/AK6N/IVDQBNa/wCv/wCAN/6Cahqa1/1//AG/9BNQ0AFFFbejaXZ3mm381zdQLJHBuQN5mYjuA3HauCMemevSrhBzdl2b+7Uic1BXZm2mo3NgH+yOsbOCC4jUuBjHDEZXg9iKZaXc9jdx3Nq/lzRnKNgHB+h4qzDpTXE8ywXVu8ECb5bn5ljQfiobOeMAZJ6UXNhNpgtrtJILiGXJimRd6MQeQVYDp6EVVppKT2RN4NtdyhRWz4iVN+myJFFG01jHI4ijVAzEtk4UAUyTw9cxiZPPt2uoI/NltAzeYq9T22kgHJAJNDpSTaXQaqRaTfUyaK1otAlaxtbua8tLeK7JEXmu2SQcYwFJ/Hp71B/ZTRXU8F7dW9m8D+W3mljlvYKCfxxik6U1ugVSL2ZBa31xZCcW0mwXERhl+UHchxkc9Og6VXrWTw3evqFzZloEe2i85naTCNHx8wPpg55xx78VFPotxG1p9mkiu0vCVheAnDMDgrhgCDyOo70exmtbf1e35j9rF6X/AK3/ACM6irt7pws1b/TrWeRG2vHEzEqfqVAP/ASasHw9cgNH59v9rWLzjZ7m83bjPptzjnGc47dqFTk9kHtI9zKorX0nw3eazpGq6jay26Q6VEssyyvtZgxONoxyeO+KyKz62LCitfwzp1rqWtwQ3ssYjZ8GFt4MnB4BUcfiRVcaYst9b2tpfW1w9xIIwUEgCEkAZ3KPXtnpWqpSaTXXT8v8zP2kVJxfT+v0KFFatzoE9vHdEXVrNJZ48+GJyWQZxnONp5xnBJGeaadBul1eXTi8PnRRmRmyduAm/wBM5x7UvZz7f1r/AJMPaQ7/ANf0zMorStdFkuIIJZbq2tRcsVgE7MDJg4OMA4GeMnAqjPBJa3EkE6FJY2Kup7EdaUoSirtFKUW7IjoooqCgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAmu/+PyX/fNQ1Nd/8fkv++ahoAmP/Hin/XRv5CoamP8Ax4p/10b+QqGgCa1/1/8AwBv/AEE1DU1r/r/+AN/6CahoAK1dEureFb62u5fIS7tjGspUkK2QwzjJxxjgHrWVRVwk4O/r+OhMoqSszZsprW3tdQ0ya9j8u6RCl0iOUDKcgEFQ2D0yB1xSXc9qdNstJgu43WOV5Zbko4QFgAAPl3YAHPHWseir9q+Xlt5fK97EezV73/4e1je1ee0P9nT2l/b3D2dvHE0apICzKSSRuQDHPr+FWtR1nzrm5vdP1KxhE6sfKexAmG4cpvEZyeSM7ua5eim68nfz9SVRjp5ehq6le29xoOkW8Mm6W3SUSrtI25fI578elTaVPYR6TIjS2tvfGcEy3Vt5ymLHRRtYA59QM+tYlFL2z53Nrcr2a5eU6m81mwlvtRkjuNyTaYsEZ8opucbeNoGB0PtVex1q2sbfQ35keznmeaNQchW24wTxnGa56ir+sz5ub+vi5vz/AAI+rw5eX+trfkX7u2s7ZjJaajHdDf8Au0WJw2PVtwAH4E1uX+u+feSahp+o2Ns8ibvKlsR5ytjBXeIznPY7u/auUoqFWlFWjp9/+ZbpKTTlr9xr6Tb6FNpGqyaxe3FvfRRKdPiiTKzPk5DHBwOncde/SsiiisepqX9Dvo9N1y0u5gTHFIC2Bk46GrFqLPTfEFlOmoRXNulwrs8aSAooYHJDKO3pmsiitYVXC1ls7/l/kZypqTb7q39feWdRlSfVLqaI7o5JnZTjGQWJFdJ/aWlNrlxqr3+PPtTGkAifcjGLb8xxjGR2J6jpXJUUQquCaS3/AOD/AJinSUuv9f0jpE1aO40uxjS7srSa1jMTC7sxLuGSQyt5bHv04rCvbiW6vpp55VmkdyWkVcBz6gYH8hUFFKdSU9xwpxhsFFFFZmgUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUATXf/AB+S/wC+ahqa7/4/Jf8AfNQ0ATH/AI8U/wCujfyFQ1Mf+PFP+ujfyFQ0ATWv+v8A+AN/6Cahqa1/1/8AwBv/AEE1DQAVo2mjS3emvftcW9vbRy+U7zMRg4yOACT+GT+HNZ1dBaQR3Hgp1luorUDUAd8ocg/uzx8qk1rSipXv2MqknFK3crR+GryW/ntVktwYYPtHmNJhHj4+YMR0wc84ph0C5c232KSG8S6ZkjeEkDcvUHeFIwOfStP+2rEz3yLIwhXS/sUDshzKwxzgdM89e1ZOhX8enask0+7ymVo3KfeUMpGR7jOa3lCipKK2d9b+b/T/ADMlKq4t/wBbf5jpNEcQma3vLW5hSQRyyRM2IiTgFtyg49xkUg0O6Gr3Onu0cclqrvLIxOwKoyW6Zwe3HcVP51ppuj31tBeR3st6UQGJHCxorbsncByfQZ781ZvdYtZdFMsUn/ExuoY7e4XaRhUJy2eh3AIMexqeSla/X/h/+B9/kPmqXsv621/P7kVLC3Y6FqEsRsJsRqZFljczRDdgFDjaM59elVbTTHubR7qWeG1tlcR+bNuwzddoCgknHPSr+kmyi0jUI7jUreKS8hVERklJQhwfmwhHQds02OWyuNDXT7i9SB7e6aRZDG7LKjAA7cDOfl6HHXtQ4xaTdtu/W/8AlqHNJN279ulv6RPrOkef4geCyEMUUVrHLJIBtjVfLXLnjPJPpk56VTXQLiW6soree3mjvWKQzoW2bgeQcgMCOO3etd9esTrF6IJQtvdWkUSTTQCQIyqv3kIORkYOAfUZqC11YW+saYbvUbOa0gn8wi1tjGI+mSQI1zn2z0rWUaMqmr3f/t35W1M4yqqG2y/T87mbc6HNb2txMLm2mNqVFxHE5LRZOBk42nnj5Sakk8N3kXhGLxE0lubOW6NqqCT94GAJyRjGOPXPtWZcOHupXQ5VnJB9s1pyW+hjwjFcR3twdcN0VktSn7tYcHDA465x3/DvXC2mrpW/r+vzOuKa3f8AVv6/IyKKKKRQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAE13/x+S/75qGprv/j8l/3zUNAEx/48U/66N/IVDUx/48U/66N/IVDQBNa/6/8A4A3/AKCahqa1/wBf/wAAb/0E1DQAVZe4nTTUtfMzbyP52zaOGGVznr0qtU03+ot/9w/+hGndrYVkyGiiprRbd7hRdySRx+scYc5+hYfzpxjzSUQbsrkNFdB4ktNLh8Q3MUM0sBEwVo1tVEcY4yQQ/PrjAqBvDzRavf2c9xsiso2laYJncuAVwM/xZHfvVujO7sZRrRcU31MaituPQrRbbT5bzUjEb8fIiQbynzFct8w+Xpz168cVEdEFrHcy6pcG3it5zbfuo/MaSQdcAlRgDnOfSm6NRbr8h+1g+pk0VpzaQtvrdtZTXcaW9y0ZS7YYURuRhyO2B1HsfrTNd0630nXLqxstQi1KCFgqXcONsowDkYJ9cdT0rKScXyvc0i1JXRn0UV1E3hC3j1Q6WmreZftEZYoxbkIfk3bWbd8rHnoCOnPOKiUlHc0jTlP4Tl6K2X8POw0c2k3nrqgCqSm3y33bWU8nOD3rT0jS9HjuNcglupbo21pMA/2NSqhWUeYuX+96Djr1pOokr+v4FRpSbt6ficnRXU+GILOS61iK3vHFu2lyBp7iHZs+ZcnarNn86pnwybptNOkXDXMeoSPGjTReUUZTzuALcY5yD+FLnV7MPZSceZGFRW1JodrNZ3sulag109iA0ySQeVuTOCyHccgHHUA4NXZvCNvFqb6amq+Ze+QZ0QW/yEBN21m3fK2M9AR055wD2kUCozfQ5iiiitDIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCa7/4/Jf8AfNQ1Nd/8fkv++ahoAmP/AB4p/wBdG/kKhqY/8eKf9dG/kKhoAmtf9f8A8Ab/ANBNQ1Na/wCv/wCAN/6CahoAKmm/1Fv/ALh/9CNQ1NN/qLf/AHD/AOhGgCGlBwQR2pKKabTugNbW7yw1O6kv4XuEuJtpeF4l2A4AOH3Z/wDHa0NXvdnhexSRSt7eRKJs9TFGT5Zx75H12iubjkeGRZInZHQ5VlOCp9QadPPNczNNcyvNK33nkYsx+pNbe2fLLu/6/wCB6GHsl7q6I6O5ewh03Qp757gtFAWWKKMEPiRjgsWG3n2NRQ+J3lt7qK4ubyyaa5a5WayPILdVK7lyPxrAeaWVESSR3WMbUVmJCjrgelMqniJcz5dn/X6CVCNveNF7yCfW4JtQnu9QtFdPNMx2yPGD8yj5jjvjmk12bS7jXLqXQLaW105mBghmbLIMDqcnvnuaz6K527u5ulZWCu513ULHR/F01+rXE1+luixw+UqxqzRBdxfcScAk42jnvXDVJPcTXUpluZZJpCAC8jFiccDk1nKHMzaFTkTtvodT4evxY+Eb+5uVwbWbNg5/57SIVYD1wuGx2wKx9B1K3064ulvUla3u7V7eQxYLIGwQwBwDyBxkVRuL26u44kurmaZIV2xLJIWCD0Geg4HSoKXIrtvqHtWlFLobNhf2GlvqKwPczx3Vi9ujPCqEOxB5Ac8cdc/hVix8Spp1jpCwwtJNYXEskitgK6uAMA9c4z24rnqKbgnuEaso7G6NS0zTbLUI9HN3LJfJ5ObiNUEMe7JHDNuJwBnirTeJbM+Mm1YRz+Qbcxbdo3ZMOzpnGM+/SuYopezT3Gq0lt6hRRRWhiFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBNd/8fkv++ahqa7/AOPyX/fNQ0ATH/jxT/ro38hUNTH/AI8U/wCujfyFQ0ATWv8Ar/8AgDf+gmoamtf9f/wBv/QTUNABU03+ot/9w/8AoRqGppv9Rb/7h/8AQjQBDUtvEk0wSS4jt1x/rJAxA/75BP6VFRTQM6nxQ0kE5srfVUS1SKJFsYjIowVU5I2hTyc8nP41nyaBs1nULD7Tn7HDJL5nl/f2rnGM8ZqtrWoRajrD3cCuqFIwA4AOVRVPT3Fa0mu6W19qF+I7s3F9bPFsKqFiZkwec5YZ9hgetds3TqTlJvq/u1t+JxxVSEIpdvx0/wCCVYdBtTDpz3WomNtQ4jRIN5U7ivzfMOOnPXrxxUCaKIku5dRufIgtZvILRp5jSSc8KMj0JySKc+qwM2jEJJ/oAAl4HP7wtxz6HvippNXsr2PULa8WeOCe7N1BLGoZkYkjBUkAgg+vBHeoaou9vO34f8Eq9Xr/AFqZ0NrbT6tBbJeBLeWRENzKm3ywSAWYZ7Z557dak13TrfSdcurGy1CLUoIWCpdw42yjAORgn1x1PSo4W0+LVoGkSeexWRDKpwryJkbsYPBIzjn8ak12bS7jXLqXQLaW105mBghmbLIMDqcnvnua5Hv950rYz62dP0Wz1QNBaai5vhA0oja3xGxUbiofdnOM9VAyOvesau3TxlYpffaFm1SO3Nt5S6dGFWCE+Xt4+b5hn2B79sHOo5Je6b0VBy9/YzfD95cv4e1y1e4la3jstyQlyUU+YvIXoDyab4Fu7mHxXaQQ3EscMznzY0chXwrYyO/41Do19pNlpt9FdT3glvbfyWEdsjLH8wOQTIN3T0HWk8PX2l6Trkd/czXbLbyExpHbqTIpBGTmQbTz05+tTJX5tC4ysoa7P/Ixpf8AXP8A7xq7oel/21rMFgJhCZt37wrnGFJ6ZHpVe9Ft9pJspZpYzzumiEbZ9MBm/nVvw7qUOka9b3tyrtFFu3CMAscqR3I9at35Hbcz0dTXa5rT+DoUsXuINVE3+hteRL5GN6KcNk7uOvHXPOcVWuVceB4mttQlls/tu1raS2VNsuzJYMGJIxx2+lWk8UWS6bHbmKfeukSWJO1ceYzAg9fu/r7VVN7o3/CMf2WLq/3/AGn7Tv8AsaYzs27f9b+v6Vl7/Xv+v+Rs/Z/Z7d/L/PQqw6Rbx6TFqGqXj20dw7Lbxwwea7heGYgsoAB465PpUljoVrdabf38+pCK2s5VTcsBYyhs42jI54HBx16jFA1HT77Q7Sx1M3MEtkzCKaCJZQ6MSSrKWXBB6EH8KbFqlpD4e1LTokmzc3EckJbBwq5+8eOeR0FW+bX+tL/5Ga5Lrtb8bP8AUlTw7DcXWbTU45LJbX7VNOU+aFM4KsgJ+fPQZ59ajfQEntLW60q7+0QXFyLU+fF5TRSHpuALDBHOQah0TUobCS6ivEka1vIDBL5WN68ghhnqQQOMjNT3Gp2MWjQ6TZfaZrc3H2i4llVY2c4wFUAsBgdyTyelD507DXs3G78/+B+JHrOlWmlzz2qXsz3VvJseOa18sN7qdxyOnUDIOauJ4Xja9TTHvyurPD5gt/JzGG27hGX3ZDbf9nGeM0t7r8Enh6bTftd7qReRGie9iVfs23rtO5icjAxwB+NWL7xWdRYXP9s6xYTNGBJbwfPFvAxlT5i4BwDjHBJ61N52KtSv+nz9Siug2cOh2Wp6jqTQJds6rFHbeY4Ktj+8BjueQfQHsy58PpFY6jcW1/FdGwnVGEIyrxt0kDZ9eCO3rUd/qsN14b0vT0WTzrRpTIzAbTvbIwc5pugalBp15Mt+sj2V1A0E6xAFiDyCMkDIYA1Xv2b/AK3J/d3SsOuNLg0yTTze3kqNcQC4cRQBzED9wYLDOQM9sZ71P4ltb6bxjNaT3Jvrt3jjEvliPzCyrj5RwOoFVr6+t9X164u76Sa3gkPyCGISFVHCrgso6D1q7rGtWU3iZNb0t7gyrNHJ5U8KoBsAx8wc5zt9BQr3Tfn+gpcvK1Hy+dinqWm2GnvNbpqTT3cB2uot8RFujKr7snB9VAOD7VdTwvG16mmPfldWeHzBb+TmMNt3CMvuyG2/7OM8Zqnqs2j3U9xd2ZvElnbeLd41CRsTlvnDEsOuPlHb051b7xWdRYXP9s6xYTNGBJbwfPFvAxlT5i4BwDjHBJ61N58qLtT5n+HoZlrokTaGdV1C5mhgM/kKILfzSGAyS2WUKORjkk81kyqqSuqOJFViA4BAYevPNbWg6rDpciTjUdSs5RIGlW2RXSYA5GcsvuOQ3X8KzdSuo77VLm6gt1to5pC6wr0QE9K0XNzamUlHkut/+HNjwUgl1i6QusYawnBd+i/J1OO1QP4eS4t7SbR7prtLm7NoPNh8oiTAIONzfKQev6VBoOpw6Xd3EtwsjLLaywrsAJDMuB1I4q1pniFNM0mziijdrm21H7XzwrLsC7c9c8HtUyUua68vzZcXB01GXn+SGT6Dbm3vjp+oG6n08Bp0aDYrLnazI247gDjqF4OabpWi2erTRWcOout/MhZENv8AutwBO0vuznj+6Rn1qxq2urexXHka3rTLMci0uOYwCeVLeZyB/u1q2PjGwtbqxnEupwQW8CxNp9uFWHcAct975sk5wQDnvxUt1OXz/r+v1K5aXP5f8H1/rsZ3he6uRaa1ZtPL9nGmzv5O87N3Azjpn3pvhC0066uLsXxdpFtJmEZt1dQAn3gSw+Ydhj8RUWiahpVjHfPdzXglvLaS3KxWysqBiMNkyDPTpgfWoNG1K10jWmkPnT2UkbwudgSQo64JxkgEZzjPbrTkm+a3b/MIyjFwvsn+Ghp+FYbNtcuY7K6kaN9PnDSXMIi2Haeys3Hv+lUv7Bs5IrO5ttSdrKe7NpJNJbhDG2AQ23ecrg56j6U3TNQ07SL+eSCS6uIpbOWHLwLGwdlIHG88e+fwqudShPhRNM2v563puN2Bt2lAuOuc5HpRaXNdeX5sV48nK/P8kT/8I68VxrCXk/kJpanc+zPmNu2ooGeN3rWLXXeKr/Gi2EEieXfXkcdxfZ+8Sq7Y8+mRlse9cjVU3JrUisoxaUfX79l9wUUUVoYhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUATXf/H5L/vmoamu/wDj8l/3zUNAEx/48U/66N/IVDUx/wCPFP8Aro38hUNAE1r/AK//AIA3/oJqGprX/X/8Ab/0E1DQAVNN/qLf/cP/AKEahqab/UW/+4f/AEI0AQ0UVe0fTf7W1D7L5ywfu3fewyBtUnn8qqMXN8qJlJRV2UaK6ObwootXktb4zyeRHcRReTtLI7BRk7jg5J456ds1XOgQtdXFjBf+ZqFujM0fk4jdlGWVXzkkc9VAOK1lh6kXZr+v6Rmq9N7MxKK6DSNNgtNQ0ma+uZI5riVJYYYoQ/y7sAsSwxkg9M8VX1bT8rf6j5vTUXg8vb9WznP6YolRkoc39dP8wVWLlymPRWtJBPoWr262t3IryRxuXjJQ4cA7eDVjWLGXUvHF3aW+3zJblgCxwB6k+wHNJ0pbdb2t5j9qr+VrmDRWnPpdu2nz3em3jXKWzhZhJD5ZAJwGX5jkE+uD04qSTR7NPCMWrrq9u95JdGBtOA/eIuCfMPOccemOevas5Rcdy4yUtjIoorS07SUurK4vry5+y2duQjOI97u7ZwqrkAnjuRiobSV2Wk5OyK9pqmoaejLYX1zaqxywhmZAT74NPutZ1S9hMN5qV3cRE5KSzsy5+hNbnhi2tHu9Yihvf9HfS5MzyxFSg3JncoJ5HsT2rLv9Iht7OyvbS8aW0u2dN80PltGykA5UFuMEHI/Ko5o81mv6/pGvJPkumZVFbJ0W2uNKurzSr2W4NmyCWOa3EZIY4BXDNnnscVaHhaI6k2k/2j/xNlQnyfI/dFgM7PM3Zzj/AGcZ4zT9pFCVKbOcorag0KBdEh1PUbuaCGeZok8m283aR13ksu36cnir2i6fPqPhPUrOyAlke9gAIyFxh8sc9BjnJ7UOaSb/AK3CNKTaT63/AATf6HL0V0WnaRpMniFrIXovgkTeXuHkxzzjpGGz90nv8ue3UU/U9Ii+yadE1jHpeq3NwYzbCR8eWSArsGLMvOR15Azil7RXSD2UrN9jmqK1dZ0q00uee1S9me6t5NjxzWvlhvdTuOR06gZBzWVVxkpK6IlFxdmFFb0OgWS6Vp99qGqm3F+zKkaW/mMm1ypJ+YfL3z156GnReFgh1f8AtG+W1GlSIkhEZfeGJHy8jnjgHrnkjrU88f6+4v2U30/rc5+it2Pw7BcyrJZ6nHJZi2NzPK0eJIFBwQyAn5vQZ59RVnStIhj1HR9T0+6a5tW1GKFxJF5bxvuBwQGYYI5yDRzxF7KRzNFdNquh29zeazNYX/n3No7TTQ+TtXaWO7a+eSpIzkD2zUaeF42vU0x78rqzw+YLfycxhtu4Rl92Q23/AGcZ4zUqpFq7KdGalZHO1dtta1SygENnqV5bxA5EcU7Ko/AGrdrokTaGdV1C5mhgM/kKILfzSGAyS2WUKORjkk81kyqqSuqOJFViA4BAYevPNXdPQi0oq5Yu9Uv9QVVv765ulQ5UTTM+36ZNVaKKaSWxLbe4UUUUxBRRRQAVJBcTWs6zW0rwyocrJGxVl+hFR0UAPmmluJmmuJHllc5Z3YszH1JPWmUUUBuFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUATXf8Ax+S/75qGprv/AI/Jf981DQBMf+PFP+ujfyFQ1Mf+PFP+ujfyFQ0ATWv+v/4A3/oJqGprX/X/APAG/wDQTUNABU03+ot/9w/+hGoamm/1Fv8A7h/9CNAENaGi38WnXzTTq7KYZI8IATllIHX61n0VUZOLuiZRUlZnTjxPbxw/uo5vNWwht0JUY8xH3Z69Kg/tjT4NSudVsxc/a51cpC6qEidxhjv3ZYDJwNo7Vz9FbSxFSTu/63/zMlQgtjoINY04yaZdXkdybiwRY/KjC7JArZDbs5BGemOcdRTDqthd215bXn2mKKW+N2jxIrMQcjaQWGOD1yfpWFRSdeb0f9f1YfsYm1f6jp+o6zHct9otoI4Y1VVjWRsqAMcsvHHX9Kmm1y1g8VDWdPM8m+VneKWMR4BGMBgzZ4J5wK5+ij20r83W9/mHsY2t0tb5Gxqep/abd44tY1W5Rm/1N0PlxnPJ8w5I47flSSXGhnwjFbx2VwNcF0Wkui/7tocHCgZ65x2/HtWRRWUpOT1NIxUVoFbGm6naLo13pWpiYQTSLNHLAoZo5ACPukgEEH1HSseioaTVmaRk4u6Nmw1Gw019SSH7TLHc2L28buiqS7FTkrk7Rx6n/CW11yzh0/R7e4tWuBY3TzTRuBtkVivA556dxisGip5Ve5SqNKyOvvPFdvLpmpwC91W8lvHV4TdBQkOH3YC7jj6j2GBUJ8Q6YuvPr8SXX29lLi2KL5SylcFt+7JXknG32zXLUVKpRSLdeb3N/QNah0qaO4N/qNvIJN08EKK8dwM98suOCRyGx19hLYeK/wCzLbUDYQ/Z5rq7SZIlAMQjG7MbdMjDAYx+Vc3RVOEXuSqsla39aWOms9b0bT9envLK3uoIbq2eMhVXfaOw5MZzyByBnacGoL7WLCTQbPSozd3iQ3BmaecLG6qRgogBbAPXk9e1YFFL2aD20rW/rU6K+1+CTw9Npv2u91IvIjRPexKv2YDrtO9icjAxwB+NZ/n6T/wjhh+yzf2r5+7z93yeXjpjPX8Px7Vm0U1BITqNvX0Osn/s5fC/hyTU5LkBBOwigiVvMHmnILFht+uDVOfxGl5Z68LmJln1SWKSMIAVQKxJBPXoQOlYbzzSQxxSSu8cWRGjMSEycnA7ZNR0vZrr/WtynVfT+tLGnompQ2El1FeJI1reQGCXysb15BDDPUggcZGav2+u2Wmw2FpYC4mghvkvLiSVFRnKkYVVDEAADrnkntXO0VTim7kxqSirL+rnQz6xp1suqyab9pmuNS3IWniWMQozbmAw7bieB2q1feKzqLC5/tnWLCZowJLeD54t4GMqfMXAOAcY4JPWuUoqfZxK9tI3NB1WHS5EnGo6lZyiQNKtsiukwByM5Zfcchuv4Vm6ldR32qXN1BbrbRzSF1hXogJ6VVoquVXuRztx5QoooqiAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAmu/+PyX/fNQ1Nd/8fkv++ahoAmP/Hin/XRv5CoamP8Ax4p/10b+QqGgCa1/1/8AwBv/AEE1DU1r/r/+AN/6CahoAKmm/wBRb/7h/wDQjUNTTf6i3/3D/wChGgCGnRqryqruI1JALkEhR68c02ruj3kNhq9tdXUPnxRPlk459+eMjr+FXBJySexMm1FtE0ul276XJfafdyTJDIscqTQiNl3dCMMwI4PpVu88P2VlqEtjJq6/aUj3ruh2x/d3BWYtwT7Ajpz2qS81+GbRrqza81G9kmkR1kusBVwTkBdxx25zz6DHOdr2oRaprc95bq6xybcBwAeFA7E+ldE/YxjorvT8jnj7WUrN2Wv6W/UtWWgQTf2et7fPby6gf3KpB5gAztBY7hjJ9M1Xu9IW30+e6juGdYrz7LtaMKT8pO7hj6Yxz9a3jcfZLHRbQXMlrLJbhovIsknILsfmDsQyse4Xpjis6c2mnw3mh6nLM3k3glE9sgffhSpBBIx9ecGrqU6aVkvn93n69vQiNSbd7/8ADXfl6dxU8Lxl5vOv/LSGGCUt5OSfM7AbuoJx7+1OufCEkcqxWt4s8v2s2smU2qh27s5ycjHXjj3p9x4jspWuvKgnjWaO2RFODt8sgnJzz04Pf2qZvF8EVxJPawzFm1FroK2FyhQqRkE4PNXy4XZ933/m0/Am+J/q3b/Mxp9Lt20+e7028a5S2cLMJIfLIBOAy/Mcgn1wenFXZ/DUEV9NYpqPmXccBmCiDCEBd20tu4bHsR059K+p6n9pt3ji1jVblGb/AFN0PlxnPJ8w5I47flVhtetW8T3GoiObyZYDGq4G7Ji2euMZ96xXstbr+rPz9O5q3V6Pv+nl6ix2uknwj50k04f7YFaUWiFwfLztHz8r3zn8Ko2WlRXVre3jzyraWpUExwb5G3HgldwAGByd3506zvrNtEm02/M8YM6zxywoHwQCpBUsOMH1qPTrmCznkeO+vrRwcRzW6All9GXeMdj1P9aTcJSTaVrf11/yGlNJ663IYbW3n1aG1F4qW8sqIbmRNoRWIyzDtjPPPbr3qXXdOt9J1y6sbLUItSghYKl3DjbKMA5GCfXHU9KmvdSstQ8TJe3Ns5tDKhnRcK8qjG48cBmGTx3PXvUOuzaXca5dS6BbS2unMwMEMzZZBgdTk989zXNOylZeZvG7jr5GfRRRSKCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJrv/j8l/3zUNTXf/H5L/vmoaAJj/x4p/10b+QqGpj/AMeKf9dG/kKhoAmtf9f/AMAb/wBBNQ1Na/6//gDf+gmoaACppv8AUW/+4f8A0I1DU03+ot/9w/8AoRoAhqSJA6yE5+RNwx9QP61HU0H+rn/65/8AswoAhooooAv/ANpahYF7a01C6hhRiAiTMo/IHFUKmu/+PyX/AHzUNNtvcSSWwUVqaJp9rfm9a9kljjtrYzZiAJOCBjB9c1NLpVlKmlTwTSWsF9I0b/aHD+UVYAtuAUEYYdh061rGjOSTXX/O35mbqxTs/wCtL/kYtFa+uaZHprlFsr61IkKq9wyukqjuCFA9OmevXjkkt9DHhGK4jvbg64borJalP3aw4OGBx1zjv+Hes5RcXZlxkpJNGRRRWvZadaLocural50kXni3ihgcIzPjcSWIbAA9uSe2KhtJXNIxcnZGZNBNbsqzxPEWUOodSMqehGex9ajruNR0Vda1uIpHcm2ttJgmMUI8yVxtACA4+8c9cdicdqyNT8PwWVnZ308WoadBNI8UsNxEHlRgMgrnYGUgj0xg9azVRdTWVGS1WxkppeoSWRvI7G5e1AJM6wsUAHX5sYqpXVeMFsd1iq3d0ZI9OgEMRtlCFduck7+CeuADz3pul+GY9TtSBYarATbtLHfSL+4Zgu7G3bwDggHeexxzij2i5XJg6LclCJy9WbTTb7UA5sLK4uRHjeYYmfbn1wOOlaEmkQJYaHOHk3agziUZGFxJtG3j09c1paJZR6b8T47KAs0cFzJGpc5JAVhzinKaSdvP8BRpO+u2n4nKEYODwaK3fCzWy+LrMXMUsjm7TyjHKECnf1IKncPYEfWquuSWLajcCzt7iKQTvvaW4Vw3J6AIuPzNPm1tYTgkm77MzKKKKsyCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAJrv8A4/Jf981DTpJDLIztjLHJxTaAJj/x4p/10b+QqGnGQmIR8YDFvzx/hTaAJrX/AF//AABv/QTUNOjkMb7lxnBHPuMU2gAqab/UW/8AuH/0I1DTmkLIinGEGB+ef60ANqaD/Vz/APXP/wBmFQ05JCgcDHzrtOfrn+lADaKKKAJrv/j8l/3zUNOkkMsjO2MscnFNoAu6fqH2GK8TyvM+1W5hzuxtyQc9OenSntqaSadYWktsHS0eRmy5HmByOOOmMVn0Vp7SVrfL8b/mRyRbv/W1vyNO41aI6OdNsoJYoGlErefP5pyBgbcKoHU54OeKkk1izfwjFpC6RbpeR3RnbUQf3jrgjyzxnHPrjjp3rIoqZSctxxio7BWrY6vbxaQ+m6hZtdW/ni4Ty5vLZXxg87TkEY44+tZVFQ0mrMuMnF3R0U3izz9SeeXT4xbzWa2k9sjlQVGOVOPl5Ax1x71jXkli+z7BbXEOM7vOuFlz9MIuP1qtRSUUtipVJS3L+r6p/as9vJ5PleTbRwY3bt2xcZ6Dr6VtHxfbNqx1WTSma9eDyWJuj5a/Jsyi7fl+hJHX6jlqKThFqz/q41VnF3T/AKWxuWniC3isbCG8077TLpzu1u3nFUO47sOuCWw3PBFS2viO1h8Tza3Np80k7ztLHGlyFVd2eD8hJ69eK56ijkiw9rNK39abF4X8Vrq8N9pkMkXkyLKqTyiT5gc9Qq8e2Pxp2rXlhfXMlxZ2U1rJLIzuHuBIvPOANgI/Ems+inyoXPJ3XcKKKKogKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigD/2Q==)

Figure 5.15: Defining a steady-state to check the health of microservices

Same as above, an instance was killed, and the probe was checked for the health of the microservices. The experiment turned out to be successful indicating that the microservices remained healthy before and after the instance was killed.

![A screenshot of a cell phone

Description automatically generated](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAeAB4AAD/4RDoRXhpZgAATU0AKgAAAAgABAE7AAIAAAAKAAAISodpAAQAAAABAAAIVJydAAEAAAAUAAAQzOocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGxha3NoaXRoYQAABZADAAIAAAAUAAAQopAEAAIAAAAUAAAQtpKRAAIAAAADMTUAAJKSAAIAAAADMTUAAOocAAcAAAgMAAAIlgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMjA6MDk6MjEgMDM6NDA6MjYAMjAyMDowOToyMSAwMzo0MDoyNgAAAGwAYQBrAHMAaABpAHQAaABhAAAA/+ELHGh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMjAtMDktMjFUMDM6NDA6MjYuMTUxPC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPmxha3NoaXRoYTwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAGYBTADASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDw7RrG0vFvJb4zCO2h8zEJAJ5x3FQSW8F3qEcGjpORJhVWcruLfhxirmh/8g/WP+vT/wBmFY4JBBBwR0IrnjzOpLXb7tjmjzSqT1227bGtP4cuYbeaWO4tLg243Sxwy7mQdyRiobDRp7+2e582C2t0baZbh9qlvQVesoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP/CL6Z/afmfZfNl3+V13dqwdaolo762vbyu/8jmlXqRTs762vbyu7fdYxJ9HvINUTT2jBnkI2bW4YHoQfSrM/hy5ht5pY7i0uDbjdLHDLuZB3JGKseITix0Y5O77KCCfvYz8tFlCdG0e7ur0bJr2BoIIT94q3ViOwp+1qOEZJ67W76le2qOnGSer0tbfW39dijYaNPf2z3PmwW1ujbTLcPtUt6CoNQ0+fTbs290oDgBgVOQwPQg1vwfYf+EX0z+0/M+y+bLv8rru7VFrH2Yw6J9uM3lfZfmMYBk2/wAPXj0/WiNebqWe12vuv/l+KFHETdWz2u1t2v8A5fijm60bDRp7+2e582C2t0baZbh9qlvQVMR4d2na2qZ7ZWP/ABrSg+w/8Ivpn9p+Z9l82Xf5XXd2q6taSiuVNa9vV6fcaVsRJRXKmrvt5N6fcYlxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWrc3yadc+HruYMyx2+T/AHth4H6GpNKg06G9v720vXuYxBIzExFBGD2JPU1hLEVFFS/Td3t8jnliqqipfpu72+X/AATj6ltreW7uY7eBd0kjbVGcZNXbUaL9mT7a1+J+d3kqm3rxjJz0xUN7/Z6tGdLa64zuM4UEHtjbXbztvlSf3aHoe0bfKk/u0Lc/hy5ht5pY7i0uDbjdLHDLuZB3JGKbpfh681aMSQNDGjMVVpXxuIGSABk1asoTo2j3d1ejZNewNBBCfvFW6sR2FReEf+Rqs/8Agf8A6A1c0qlRU5yT2628jklVqqlUlGV+Xrbey1/Ex3QxyMh6qSDim1Lc/wDH3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/K67u1VPEJ/0HRzk7vsowT125+X9K4o1pyqcvS7W3a/+Wp58cRUlV5ejbW3a/wB+2vqiCfw5cw2000dzaXH2cZljhl3Mg9SMVkV02nLavo1/FozyG8aAmYXC4zGPvBcHHfvWJpt3DY3gmuLSO7QKR5UnTnv0NaUqk2pX1a+TNaNSo1NPVr5Pb+rENtby3dzHbwLukkbaozjJrSn8OXMNvNLHcWlwbcbpY4ZdzIO5IxWUW+csvy85GO1btlCdG0e7ur0bJr2BoIIT94q3ViOwqq0pxs4v5dyq85ws4v5d/wCkZKWM76fJeqo8iNwjMT3PtTtQ0+XTpYo52RjJEso2Eng9Oo61uR6Ve3Xgy1jsYGkM1w00mCBwPlHWofF9rNBdWTyoVU2qIDn+Jeo/DIrOGI5qvJdbv8P6ZlDFc9bkut366f0znq0rLRJ7y0+1NPbW0G7aJLiTaGPoOtQ3N5DPYWsEdnHDJCCHmXrLn1/yaTT9PudTuBBbKTjlmP3UHck9q2lKXJdvlOicpcl2+X110HXmlXNlqC2cyqZJMbCjZVwehBqQaLdGa9iYxq9lGZJQW7DsMd62Y3t9S8ZadBanzILNEiV/7wjBOfzq1aaRqZm1uWe2ZWu4ZBHlh8xJyB1rklipRS5mk7J/e/8AI4pYuUIpSaTsn97/AMji6kgi8+4SLzEi3nG+Q4Vfcmo6K9B7HpvY2bnw5JaWguJNQsCjIzxhZTmTHZfl5NVv7Huf7E/tQGMwb9hAJ3DnGemMZ96ua1/yANE/65Sf+hCtHS5kXQdPtbg4gvJJoH9s4wfwOK4fa1I01K99X9yv/ked7arGkp3vq/uV/wDIw00S5kuLGEPFuvk3xkk4A9+Pb3qd/D/llg2raYGXIK+ec59Pu1tLA9trvh+CUYeOIow9wWFYmq2enxyXMsOqLNP5hPkeQ687uRuPHH9KUK05ySv9yv1aCFedSaV9+yv1a+RDY6LPe2rXRlgtrcNsEtxJtVm9BTLvTpNL1COHUVPlnDFoWB3pnqpq/qv/ACK+i+V/qsS7sf3t3f8AWjWs/wDCPaH5n+s8qTP+7uG39K0jUm5K+zbX3X/yNI1ZykrvRtq3a1/8vxI72w03+wRqGmm6B+0+QVnZT/DuzwPpWNW1/wAyJ/3Ev/aVYta0b2abvZs2w7dpJu9mzW8NeHrrxTrkelWE1vFcyqzR/aGKq5VSxUEA84BpfDnhu+8T66ulWJihmKu7vcEqkYUEktgEjpjp1NN8M6u2g+KNN1RTgWtwkj4HVc/MPxGRXpl/pY8H3fxC1hAyrIi2ti4OM/aiHYqf9kEc+31rc6Dx8jDEAggHqO9XtGtdPvNSWHWNSbTbUqS1wtuZsHHA2gg813HgrTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNZPxQ0Kw0Dxo9vpUaxW89vHcCJGLIhYchSeduRkfWgCh4y8MQeF77T4rPUjqVvf2Ed9FOYDD8rlsDaWPZc/j0qj4c0iPXvENrpk9/Dp8dwxBuZ/uJhSeeR1xgc9SK6P4l/8AMo/9izZf+z1J8LdRgfxRY6HeaNpN9b3twTJLeWayyqNvRWPQcdMdzQBxd5Atrf3FvHMlwsMrIs0ZysgBxuHsetavhnw5/wAJF/a/+lfZv7N0ybUP9Xv8zy8fJ1GM56849K2fC+gWOufGNNIu4gLJr6fdEg2gqgdgvHQfKBx2rpfDPia11yPxhDD4f03SzF4fvTC9lB5TiPgbJMfeP3eeOQfXgA8lor0fwVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmofG0Nj4F+IjPpGmafc289okotbyLz4ELjnaD2yMj0zQByGu6DfeHNUOn6oipcBFkIRwwwwyOR7U7w5pEeveIbXTJ7+HT47hiDcz/cTCk88jrjA56kV6L8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFYPwt1GB/FFjod5o2k31ve3BMkt5ZrLKo29FY9Bx0x3NAHF3kC2t/cW8cyXCwysizRnKyAHG4ex61BXYeHrK1m+MVvZTW0MlqdVaMwPGDGV3kbdvTHtXUrLpGu3PjPQj4b0q0g0mwu7m0uLeDbOrwsACz98k5I4HbpQB5NRXokE1h4R+GOiapHoWn6nf61NcGSbUbfzlhSJ9gVR2J65+v4UfiZbWEF54el0zT4LCK70K2uWhgUAbnLkkn+I9Bk8nFAHE1pafoN9qml6jqFoitb6aiyXBLgFQxwMDvyKza9X8CeJmT4eeJh/Y+jt/Z1pBjdZA/acuR++/v/AI0Aed+HNH/4SDxJYaT5/wBn+2TCLzdm7ZnvjIz+dV9Vsf7M1m9sPM837LcSQ+Ztxu2sRnHbOK67wtrR134reH7ltP0/TylxHH5Wn24hjOGJ3FR1POM+gFdHJeaZ4m1HxvpNx4e02BdNsry8t7uKHFwZYn6tJ1bcTkjp2oA8jor1Xwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1c38RYNCTUrG40CXTzJPbA3sOmuzQRzA4JTIGAfT2oA46iivVfCei6bp/w3t9bZPD7ahf3Tx+dr4ZoY0TjaqhSNxwTk9j7UAeVUV3fjKbQtK8TaTqmgJpF05hV76ztl82080HDAK4+6w7Y46+9dH4s0XRfC3hafxJp2i7pvEARbe3vLdXj0wMoZ/lPAYnO30HT0IB5DRXo2n3FhoXwisdZ/sPTL+/fVJIBJe24kAXZnkfxdOATgZPFaN74X0bxF4o8FXUVjHpkHiCIvd2lv8kYMfJ2D+EN049u9AHlFFe0alb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPesPwNLptz8OPEcuqaFpt22iiCeCVrcCWQtIzbXfqV+UDHHy5FAHmdbV3oMFt4PsNbXVbWWa7meJrBT+9hCk/MeehwO38Q9a0te8TaPqtro13Z6HaWOrWjsbyOC1VLW4AYFPlB54GCCOcnmtnxZNa6r8KtG1ldI0zT7ye/ljkawtFhDKoOBxz+tAHnVFe1+DdM0iTwp4MS60TTbltU/tCO5lmtVaRgnmMvzdcjYBnqBwMVQvvDeleIdW+H++xtbAaxAzXiWcQhWTbhsYHQnkZ680AeR0V7RqVv4YnXV7DVT4OsrSOKRbM6fvW8hlX7m8lBu6cg965/TrnT9C+ENnrJ0LTNQv5NUkt1kvbcSALtzyP4umACcDJoA83rS13Qb7w5qh0/VEVLgIshCOGGGGRyPaux8YXVl4d8TaPrGl6Hpe3VNEgvJbKe2Elukkmc7UPA+6Mfj61rfFjxU1r4lutMGi6LMJrKNftU1irTpvj6q+cgjPHpxQB5/wCFvDN54u16PSdNlginkRnDXDELhRk8gE/pWNWx4X8R3PhXXo9Us4o5ZEjeMpJnBDKV7fXP4VX0I6cuv2J1wOdOE6G5EfUpnnpz+XPpQBn0V6/4htWv9J1R/CGneC9R02OF2/0K3H22CH++Q3zBgO/r0HavIKACitDQjpy6/YnXA504TobkR9SmeenP5c+len+IbVr/AEnVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdqAPIKK7iPTrXxD8Jxc2FlEuraHdhLgwRASXEEp+VmwMsQ3HOeAfWt290zSbT4qeFPDEdhZutgkEV+fIU/aJmG59/HzcY65xzQB5VWlp+g32qaXqOoWiK1vpqLJcEuAVDHAwO/Ir0dZdI1258Z6EfDelWkGk2F3c2lxbwbZ1eFgAWfvknJHA7dKb4E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f/GgDyiiumguL7xn4y05NN0XSorslUjtLW2WGCTaS5LrnB4zn2GK77VNBsNW8Ga9LfxeE/t2mwCeGTw4SrxsDysgxgg9PzoA8bor0b4caNp/jfT7rwzqFksE0LLcwarBAokjG4Bo3bHzAgnaD3+grnPHF5bXHiae107SotLtLA/ZYoFhCSELwWkPVmJGcn/65AOcooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1NGvrSzW8ivhMY7mHy8wgEjnPc1C1za2epxXGliR0iIYC6UcsPZT06VNo1jaXi3kt8ZhHbQ+ZiEgE847ioJLeC71CODR0nIkwqrOV3Fvw4xXN7ntJb+fbY5Pc9pLfz7bf5F658TSXcjSXOm6dJIwwXaFif8A0KqthrM9hbPbeVBc27tuMVwm5Q3qKmn8OXMNvNLHcWlwbcbpY4ZdzIO5IxUNho09/bPc+bBbW6NtMtw+1S3oKlLD8mm39WIisKqbta2n/AEl1m6n1aPUJhG8sRGxCvyADoMelW7nxNJdyNJc6bp0kjDBdoWJ/wDQqpT6PeQaomntGDPIRs2twwPQg+lWZ/DlzDbzSx3FpcG3G6WOGXcyDuSMUSWH929vL0HJYX3b2209CGw1mewtntvKgubd23GK4Tcob1FQahqE+p3RuLogtgKAowFA6ACp7DRp7+2e582C2t0baZbh9qlvQVBqGnz6bdm3ulAcAMCpyGB6EGtI+x9o7W5jWPsPavltzFWtGw1mewtntvKgubd23GK4Tcob1FZ1aNho09/bPc+bBbW6NtMtw+1S3oKqrycv7zYut7Pl/ebEV5qc9/frd3QR2XACbfkAHRcelS3ut3V7bfZsRW9tnPk28exSff1plxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWd6C5dvIxvh1y7eRkVNaXLWd5FcRqrtEwYK4yCR61DUttby3dzHbwLukkbaozjJrolazvsdMrcr5tjWufE0l3I0lzpunSSMMF2hYn/ANCqDTNck0oKYLO0eVSSJpIyXGRjGQRT5/DlzDbzSx3FpcG3G6WOGXcyDuSMU3S/D15q0YkgaGNGYqrSvjcQMkADJrk/2ZU3/KcX+yKm9uUq3999vmEhtre3IGCIEKhvc8nmqlOdDHIyHqpIOKbXVFKKsjtjFRjaOxo2Gsz2Fs9t5UFzbu24xXCblDeops+r3F1qaXtwsUroAFjZMoAO2PSnWGjT39s9z5sFtbo20y3D7VLegps2j3kGqJp7IDO+NmGGGB6EH0rD9xzva/X9Tn/2fnltfr+v/BJ5fEM7WssFta2dmsw2yNbxbWYemcniqmm6jNpd4Lm3WNnClcSLkc1cn8OXMNtNNHc2lx9nGZY4ZdzIPUjFZFOnGjKLUNuo6caE4tQ1T3J7a6e1vo7pFRnjfeFYfKT9K1LnxNJdyNJc6bp0kjDBdoWJ/wDQqyba3lu7mO3gXdJI21RnGTWlP4cuYbeaWO4tLg243Sxwy7mQdyRiioqPMufcVVUOde03MireoahLqMsUk6opjiWIbARwOnU9aaljO+nyXqqPIjcIzE9z7U7UNPl06WKOdkYyRLKNhJ4PTqOtaXg5Lua81NzXfX/gi3OpzXdha2kixiO2BCFVwTn1NWrDxDcafpzWSW1rNC7FmEqE7vrgismrKWM76fJeqo8iNwjMT3PtUyp0+XlktL/iTOlS5eWS0v8AiOvr8XzIRaWttszxbxld315NFnqEtjFcxxKhFzEYn3A8A+nPWpLjR7qC9t7T5ZZbhFdAh7N0HOKtT+GbuGGdkuLW4e3G6WKGXc6DvkYqeeioqLejIc6CioN6P/P/ADMapIJfIuEl8tJdhzskGVb2IqOpIIvPuEi8xIt5xvkOFX3Jrd2tqdMrWdzVufEcl3aC3k0+wCKjJGViOY891+bg1QfUJX06CzIURwOzqwB3ZNX7nw5JaWguJNQsCjIzxhZTmTHZfl5NVv7Huf7E/tQGMwb9hAJ3DnGemMZ965oOgkuXv+JyU3h0ly7X/Enn8SXlzqVrfSpCZrZcLhThvrzWXLIZpnlbAZ2LHHuavJolzJcWMIeLdfJvjJJwB78e3vU7+H/LLBtW0wMuQV885z6fdpxlRp6R/r+mOM8PSso6f8P/AJ3IbHW57K0NqYbe5ty28RXEe4KfUc8VHd6jJqmoRzaix8sYUrCoGxM9FFPsdFnvbVroywW1uG2CW4k2qzegpl3p0ml6hHDqKnyzhi0LA70z1U017HndviGvYe0fL8Rbvb/Tf7BGn6aLon7T55adVH8O3HB+lY1bN7Yab/YI1DTTdA/afIKzsp/h3Z4H0rGp0OXlfLffqVh+XlfLffr3Cuo17x/q/iLw1ZaJfx2q29mUYSRIwklKJsBcliCcewrI0HRbjxFr1rpNk8Uc90+xGmJCg4J5IBPb0rop/h19meRJfF/hdZIyQ0Zv3DAjqMbOtbnQVtK8fX+maHbaVLpuk6jBaOz2rX9p5rW5Y5bacjqeeQar+JvGd94sgsxqlpYi4tYxGbuGErNOAMfO2Tn14AGSa52igDrP+Fg30ug22l3+k6PqAtbf7Nb3N3ab5oo8YADbscduKb4a8dz+F4YBZaFotxcwOXS8ubZmmBP+0HH0rlaKAOmv/HF7da7Z6xY6fpuk3tpI0gk0+Ap5rN1L5Y7u/wCZq/P8T9Ski1BINH0S0OpW0tvdvbWhRpRIMFid2d3U+mTyDXFUUAdVpXj6/wBM0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g1X8TeM77xZBZjVLSxFxaxiM3cMJWacAY+dsnPrwAMk1R8OaRHr3iG10ye/h0+O4Yg3M/3EwpPPI64wOepFUryBbW/uLeOZLhYZWRZozlZADjcPY9aAOpufiPf3+npb6ro2iajOkH2db26s904XGB8wYDI6jjrUPhrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSuVooA6i58dXM/iSw1u30fSLK6spTMBa27IszEg5k+YlvzHU1Us/Ft/Y6lrd9FFbmXWrae2uAyttRZjlinPBGOM5/GsKigD03wNc3cvhMWd5q/hD+zBOzJaa8+6WBu7onHXPr61i/FDXrDXfE1r/ZVx9qt7CwisvtATYsrIWJYDsMt+nHFc9p+g32qaXqOoWiK1vpqLJcEuAVDHAwO/IrNoAK3PDPiu/8AC09y1jHbXEN3H5VxbXcXmRTL6MvH8+9Yddjong7SNd8P313a+JGGpWOnTX81gbBsBYx93zCwBzlecd+nFAFGTxlMPEmn6zZaPpOnzWDBo4bO3McbkHOXG7J/OobPxbf2Opa3fRRW5l1q2ntrgMrbUWY5YpzwRjjOfxrCooA6Pw/421Hw/ps+mrbWOo6dO4kaz1CDzYw/94DIIPTv2rO1zWP7bvxdDTrDTgsYQQ2EPlR8E84yeeeufSs2tfwtof8Awkviix0f7R9m+1ybPO2b9nBOcZGenrQBkV0fh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftWPqtj/Zms3th5nm/ZbiSHzNuN21iM47ZxVSgDcufE32jxHbauNE0mD7Nt22cFuyW7kEkFlDZJyfXnA7Vdf4ha1czaydQFvfQ6wMT21wrGNCPusgDAqVwADnsM5xXLUUAejaf4otdG+ENjCkWlajc/wBqyGSwvkWXCFOH2ZDDkY3cdSO9cxrXjPWNb1y11SWWO1lslVbSO0Ty47YKcgIvOOawKKAOv1X4h3OtW1yuoaBoEl1cxlJL8WOJySMbt27G73xTtE+I91oWgvpNtoOhzQTIEuGntXZrgAkjzCHAbGT2rjq7HRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OKAOdttUFvrv9pmwsph5rSfZJYiYOc/Ltz90Z4Gewrqpvilcz6WmnSeF/DZs42Lxw/Yn2ox6sB5mAa4atq70GC28H2GtrqtrLNdzPE1gp/ewhSfmPPQ4Hb+IetAGppHxE1LSbXRLZLW1kh0U3BgyGDP5wcNuOccbzjAHSqF94y1S9tdDhHlWzaEm20mgBD9QcsSSCflHQCsCtzxN4c/4R3+yP8ASvtP9paZDqH+r2eX5mfk6nOMdeM+lAGnqvxDudatrldQ0DQJLq5jKSX4scTkkY3bt2N3viseXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KyKKANXXPEF14g/s77ZHCn9nWMVhF5Skbo484LZJ+bnnGB7Vt3PxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj6KACrWm3v9nalBefZre68lt3k3Ue+N/Zl7j2qrRQB2M3xJvxp93aaXo2iaP9siMM02n2ZjkZD1XcWOBXHUUUAWtNvf7O1KC8+zW915LbvJuo98b+zL3HtXTzfEm/Gn3dppejaJo/2yIwzTafZmORkPVdxY4FcdRQB6X8O57LwckniHVde01ra4tWRtKicy3Epz8oKDhDkAgnOAT0zmuPTxTfR+NT4mCxyXn2o3QWXLLnOQDgg4HTtWJRQBu2fi2/sdS1u+iitzLrVtPbXAZW2osxyxTngjHGc/jSeGfFd/4WnuWsY7a4hu4/KuLa7i8yKZfRl4/n3rDooA6U+N7yHxJY63pWm6XpNzZAhEsbbYj5yDuBJzkEjr0rUt/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxXDUUAb8Xi/ULXw5Lo2nx29jDPci4mmtlZZZCDlVLbuFHGAAOn1zB4j8SXPii/jvtRt7ZLsRLHLNAhVrgqMB35ILY7gCseigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA2dD/AOQfrH/Xp/7MKxwSCCDgjoRWno19aWa3kV8JjHcw+XmEAkc57moWubWz1OK40sSOkRDAXSjlh7KenSueN1Ulpv8A5HLHmjUnpv8AdsaNlCdG0e7ur0bJr2BoIIT94q3ViOwq1B9h/wCEX0z+0/M+y+bLv8rru7VRufE0l3I0lzpunSSMMF2hYn/0KqthrM9hbPbeVBc27tuMVwm5Q3qK53SqzXNJa3vv5W09DmdGrOPNJWle+/k1p6F7xCcWOjHJ3fZQQT97GflosoTo2j3d1ejZNewNBBCfvFW6sR2FUJdZup9Wj1CYRvLERsQr8gA6DHpVu58TSXcjSXOm6dJIwwXaFif/AEKq9nVUFC2nX772K9lVUI07abvXzvYvQfYf+EX0z+0/M+y+bLv8rru7VFrH2Yw6J9uM3lfZfmMYBk2/w9ePT9azLDWZ7C2e28qC5t3bcYrhNyhvUVBqGoT6ndG4uiC2AoCjAUDoAKI0Jqpd7Xb++/8An+CCOHmqt3tdvfvf/P8ABF0jw7tO1tUz2ysf+NaUH2H/AIRfTP7T8z7L5su/yuu7tXLVo2Gsz2Fs9t5UFzbu24xXCblDeoq6tGTiuVt69/VafeaVqEnFcrbs+/k1p95t3N8mnXPh67mDMsdvk/3th4H6GpNKg06G9v720vXuYxBIzExFBGD2JPU1zd5qc9/frd3QR2XACbfkAHRcelS3ut3V7bfZsRW9tnPk28exSff1rJ4abil33++/bz8jB4SbiorS+/a179vPyFtRov2ZPtrX4n53eSqbevGMnPTFQ3v9nq0Z0trrjO4zhQQe2NtU6mtLlrO8iuI1V2iYMFcZBI9a6+Rp8ybfkd3s2m5Jt+XQ2bKE6No93dXo2TXsDQQQn7xVurEdhUXhH/karP8A4H/6A1Lc+JpLuRpLnTdOkkYYLtCxP/oVQaZrkmlBTBZ2jyqSRNJGS4yMYyCK5nCrKnNNe9L/ACscjp1pUpqUfel5+VvwKFz/AMfc3++386iq3f332+YSG2t7cgYIgQqG9zyeaqV2Rvyq53wvyq6sdTB9h/4RfTP7T8z7L5su/wArru7VU8Qn/QdHOTu+yjBPXbn5f0qlYazPYWz23lQXNu7bjFcJuUN6imz6vcXWppe3CxSugAWNkygA7Y9K440Zxqc3S7f33/zOCNCpGrzdE29+9/8APX0Rr6ctq+jX8WjPIbxoCZhcLjMY+8Fwcd+9Ymm3cNjeCa4tI7tApHlSdOe/Q1bl8QztaywW1rZ2azDbI1vFtZh6ZyeKqabqM2l3gubdY2cKVxIuRzVwpzUZ8y38/wBTSFKajPmW/nrt3RWLfOWX5ecjHat2yhOjaPd3V6Nk17A0EEJ+8VbqxHYVj2109rfR3SKjPG+8Kw+Un6VqXPiaS7kaS503TpJGGC7QsT/6FVVlOVopadf8iq8akrRitOuv4FyPSr268GWsdjA0hmuGmkwQOB8o61D4vtZoLqyeVCqm1RAc/wAS9R+GRXPVb1DUJdRliknVFMcSxDYCOB06nrUxozjVUr6a9O/zJjQqRqqV01q9u/zFubyGewtYI7OOGSEEPMvWXPr/AJNbcelXt14MtY7GBpDNcNNJggcD5R1rEudTmu7C1tJFjEdsCEKrgnPqap1TpSlFW0s79+/p6lypSlFW0s79+/mvU7DU7K+XxNpHkYhkMKIjvyAyjLDH0NJDNZXNzqUWjo0F9JFJvlkBKuM/MFGflz75rAm1m6mvre7GyKa3RUQoOy+uc+tWZfEt08cwitrS3knUrJNDFtdgevOa5fq9XlS8v1690cf1WtyxXl+t9e6MaiipIJfIuEl8tJdhzskGVb2Ir0nseq9jY1r/AJAGif8AXKT/ANCFaOlzIug6fa3BxBeSTQP7Zxg/gcVl3PiOS7tBbyafYBFRkjKxHMee6/NwaoPqEr6dBZkKI4HZ1YA7smuH2M501GStq399/wDM872E501CStq399/yudQsD22u+H4JRh44ijD3BYViarZ6fHJcyw6os0/mE+R5Drzu5G48cf0on8SXlzqVrfSpCZrZcLhThvrzWXLIZpnlbAZ2LHHuadGjUjJSk7adPVsqhQqxkpSdtOlu7fbzNrVf+RX0Xyv9ViXdj+9u7/rRrWf+Ee0PzP8AWeVJn/d3Db+lVLHW57K0NqYbe5ty28RXEe4KfUc8VHd6jJqmoRzaix8sYUrCoGxM9FFVGnNSV1om363v/mVGlOMldaJt373v/n+Bc/5kT/uJf+0qxa2b2/03+wRp+mi6J+0+eWnVR/DtxwfpWNWtG9m2rXbNsPe0m1a7Z1vwu/5Kfof/AF3P/oLVL4vHg0XWq/2ZJrp1b7S+BcJCIN3mfPyDuxjdj8M1z2g61ceHdetdWskikntX3oswJUnBHIBB7+tdFP8AEX7S8jy+EPC7SSElpDYOWJPU539a3Og0/hxo2n+N9PuvDOoWSwTQstzBqsECiSMbgGjdsfMCCdoPf6CmxPp2qfGbTNNi0S2stNtbtbRbR7dQ0iqcEy8fOxIyc5/qeXtvFmoWPhd9D09YbSKWcTzXEIZZpivKhmz0BwQAB0+tbui+LW1z4naDq2uCxtJIZYluLtR5Ql28eZIS23OO4wKAOk0l9H8S+LNb8IT+GtLtbaNblba7tYNs8LRk4Yv3zjp06DGOKr+E9F03T/hvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rI1z4j30N/rdpo9npFv8AapZYW1K0tgJ5oi5/5aA4ORjkDnr15rE8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP8A3gMgg9O/agDZ8Y3GhaR4l0vVPD0Wi3kjW+68s4VM1mJuQcKwHykHIHYiup8X6r4X8I/EWfSrrwpp0ulTRiS6MdqpmUtGABFkgIAQDxjksa86fxWH8Qx6qfD2hqEi8r7EtoRbt1+YpuyW5657CrHi7x1d+Mtr6lpel29wHDNc2sDLK4AIClmY5HPT2FAGr8MdQtX8WWehT6Ppd/Z3t0d0t9ZrLMq7eAGPTp09zTvA2nWN38cI7C7s7eezN1dqbeWJWjwEkIG0jGBgY+lZXhrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSpR8RLyLxVZa/Z6No1neWhlOLe3dFmMilSZPnyTyccjrQB6VoenaNqyaTBc+HtIUahY6gJXjs1DDyJiiFT2ODy3UnvXN+E9F03T/hvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rnNP+JWqaYNONraWZexiuolMisQ4nk3tkBh0PA5qh4f8AG2o+H9Nn01bax1HTp3EjWeoQebGH/vAZBB6d+1AHX3Gn+G7n4peF/wCyxpdwl4YxqFpZZkthKDg7Qw+6R2x2qdZdI1258Z6EfDelWkGk2F3c2lxbwbZ1eFgAWfvknJHA7dK4Y+Lp18VWevWel6ZYzWZUx29pAY4SVJOSu7JJzyc+lMs/Ft/Y6lrd9FFbmXWrae2uAyttRZjlinPBGOM5/GgDuvAniZk+HniYf2Po7f2daQY3WQP2nLkfvv7/AONed67rR12+S5bT9P08pGI/K0+3EMZwSdxUdTzjPoBVnwz4rv8AwtPctYx21xDdx+VcW13F5kUy+jLx/PvUGva4NduYpRpWm6YI02+Xp0BiVuc5OScmgDKrt/hp/wAzd/2LN7/7JXEVseGvEt94V1Vr/TVhkZ4mhliuI98csbYyrDjI4H5UAT+B9Gt/EPjfS9LvSRb3E2JQDgsoBYrntnGPxrvbR9I8Xav4n8OyeGtL06OwtbiWyurS38uWJomAG9h94HjP/wBevP8AUPFNxd6vaalY2Gn6PPZkNF/Ztv5Q3A5DEEnJ+ta2pfE3V9Rsb63jsdKsZNRXZe3Vna7JrhT1DMSevfAHWgDT01bDwr8K7TxCNH0/VdQ1K+aHdqEPnRwImeAp4ycZz7+wrdttL0+1+KvgnVdLtI7CPWLVLqS0j+7E5Rs7fQHI/KuB0Dxvf6DpMulmz0/U9OllE32XUYPNRHxjcvIIP+fWnSePdYm8Z2viWcW8l3aALBEYyIY0AICBQQcDJ70Ad3eeF7Lw/b+MfFOoyabrbNJNBbW0G24W2klk4eTIwrLxx2yfUVi+BJPDo8LToDoK+ITc5z4hjLQGHbwEP3Qc+v8AhjnNL8b6lpWpaxdRwWk8esq63lrOjNE+5ieAGB4ycc9zSaL4vXRtNWzbw5oOoYcv519ZmSQ57bgw49qAJfH1lqdnr8Y1bTNN09pLdWh/sqJUt5kycOuODn19hXL1seJPE+oeKtQju9TMS+TEsMMMEeyOJB0VV7DmsegDubXTbbxD8JXewsoRq+i3yrK8UQEk8Mxwu4gZYhjgZzgCr/ijRU/4TzQvCfhnTbKe906CJJyYlAuZ8B3Mh43KAOc543CuW8JeMNQ8G6jNd6ZHbzGaLy5IrpC0bDcGBwCOQRwc+tRWnirVLLxh/wAJLBKo1EzvOWZcqS+dwx6EMR9KAPStU0Gw1bwZr0t/F4T+3abAJ4ZPDhKvGwPKyDGCD0/OuS+Gn/M3f9ize/8AslOt/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxWB4e8U33hnWpNS02O3LTRvFLBLHuieNuqFc9OB37UAZVrP9lvIZ/Ljl8qRX8uVdyPg5ww7g9xXoHiya11X4VaNrK6Rpmn3k9/LHI1haLCGVQcDjn9a5m78Ui71u01H+wNEgW2GPskNoVgl6/fXdluvrW1N8UrmfS006Twv4bNnGxeOH7E+1GPVgPMwDQBahmsPCXwz0PU4tD07U7/AFqa4Msuo2/nLEkT7AqjIwT1z9ai+LEsU9/4ZmtoRbwyeHbVo4Qc+WpLkLnvgcVkaN46v9J0P+x5rDTdVsFkMsUOo23miFz1K8jHU/mapeJvFF94rvLS51NLdJLW1S1TyI9gKKWIJGSM/MemB04oAxaKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKANTRrG0vFvJb4zCO2h8zEJAJ5x3FQSW8F3qEcGjpORJhVWcruLfhxirmh/8g/WP+vT/wBmFY4JBBBwR0IrnjzOpLXb7tjmjzSqT1227bGtP4cuYbeaWO4tLg243Sxwy7mQdyRiobDRp7+2e582C2t0baZbh9qlvQVesoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP/CL6Z/afmfZfNl3+V13dqwdaolo762vbyu/8jmlXqRTs762vbyu7fdYxJ9HvINUTT2jBnkI2bW4YHoQfSrM/hy5ht5pY7i0uDbjdLHDLuZB3JGKseITix0Y5O77KCCfvYz8tFlCdG0e7ur0bJr2BoIIT94q3ViOwp+1qOEZJ67W76le2qOnGSer0tbfW39dijYaNPf2z3PmwW1ujbTLcPtUt6CoNQ0+fTbs290oDgBgVOQwPQg1vwfYf+EX0z+0/M+y+bLv8rru7VFrH2Yw6J9uM3lfZfmMYBk2/wAPXj0/WiNebqWe12vuv/l+KFHETdWz2u1t2v8A5fijm60bDRp7+2e582C2t0baZbh9qlvQVMR4d2na2qZ7ZWP/ABrSg+w/8Ivpn9p+Z9l82Xf5XXd2q6taSiuVNa9vV6fcaVsRJRXKmrvt5N6fcYlxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWrc3yadc+HruYMyx2+T/AHth4H6GpNKg06G9v720vXuYxBIzExFBGD2JPU1hLEVFFS/Td3t8jnliqqipfpu72+X/AATj6ltreW7uY7eBd0kjbVGcZNXbUaL9mT7a1+J+d3kqm3rxjJz0xUN7/Z6tGdLa64zuM4UEHtjbXbztvlSf3aHoe0bfKk/u0Lc/hy5ht5pY7i0uDbjdLHDLuZB3JGKbpfh681aMSQNDGjMVVpXxuIGSABk1asoTo2j3d1ejZNewNBBCfvFW6sR2FReEf+Rqs/8Agf8A6A1c0qlRU5yT2628jklVqqlUlGV+Xrbey1/Ex3QxyMh6qSDim1Lc/wDH3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/K67u1VPEJ/0HRzk7vsowT125+X9K4o1pyqcvS7W3a/+Wp58cRUlV5ejbW3a/wB+2vqiCfw5cw2000dzaXH2cZljhl3Mg9SMVkV02nLavo1/FozyG8aAmYXC4zGPvBcHHfvWJpt3DY3gmuLSO7QKR5UnTnv0NaUqk2pX1a+TNaNSo1NPVr5Pb+rENtby3dzHbwLukkbaozjJrSn8OXMNvNLHcWlwbcbpY4ZdzIO5IxWUW+csvy85GO1btlCdG0e7ur0bJr2BoIIT94q3ViOwqq0pxs4v5dyq85ws4v5d/wCkZKWM76fJeqo8iNwjMT3PtTtQ0+XTpYo52RjJEso2Eng9Oo61uR6Ve3Xgy1jsYGkM1w00mCBwPlHWofF9rNBdWTyoVU2qIDn+Jeo/DIrOGI5qvJdbv8P6ZlDFc9bkut366f0znqspYzvp8l6qjyI3CMxPc+1PubyGewtYI7OOGSEEPMvWXPr/AJNbcelXt14MtY7GBpDNcNNJggcD5R1rSpW5EnLS7tqa1a3s1Fy0u7a/12Rj3Gj3UF7b2nyyy3CK6BD2boOcVan8M3cMM7JcWtw9uN0sUMu50HfIxWvqdlfL4m0jyMQyGFER35AZRlhj6Gkhmsrm51KLR0aC+kik3yyAlXGfmCjPy5981y/WZuMZJ9Lv7+vkcf1qo4xlF9Lv77a+XochUkEXn3CReYkW843yHCr7k1HRXovY9V7Gzc+HJLS0FxJqFgUZGeMLKcyY7L8vJqt/Y9z/AGJ/agMZg37CATuHOM9MYz71c1r/AJAGif8AXKT/ANCFaOlzIug6fa3BxBeSTQP7Zxg/gcVw+1qRpqV76v7lf/I8721WNJTvfV/cr/5GGmiXMlxYwh4t18m+MknAHvx7e9Tv4f8ALLBtW0wMuQV885z6fdraWB7bXfD8Eow8cRRh7gsKxNVs9PjkuZYdUWafzCfI8h153cjceOP6UoVpzklf7lfq0EK86k0r79lfq18iGx0We9tWujLBbW4bYJbiTarN6CmXenSaXqEcOoqfLOGLQsDvTPVTV/Vf+RX0Xyv9ViXdj+9u7/rRrWf+Ee0PzP8AWeVJn/d3Db+laRqTclfZtr7r/wCRpGrOUld6NtW7Wv8A5fiR3thpv9gjUNNN0D9p8grOyn+HdngfSsatr/mRP+4l/wC0qxa1o3s03ezZth27STd7Nmn4e0K58S6/a6RYPFHcXTFUaYkIMKW5IBPQeldBP8M9RFneTaZq+i6vJZIZJ7bT7svKqjqdpUZxSfCb/kqei/8AXST/ANFPXYaJp2j+FovEni3StaOuSWsUlu1rDaNH5TytgF955UHuB6+mK3Og8dorttUsLOP4MaHfR2sC3cuozJJcLGBI6gHALdSPaul1bRtMi+Kngizj020S2udOtHngEChJWLPksuMMTgZJ9KAPJKK9ZWXSNdufGehHw3pVpBpNhd3NpcW8G2dXhYAFn75JyRwO3Ss7TrnT9C+ENnrJ0LTNQv5NUkt1kvbcSALtzyP4umACcDJoA83rau9BgtvB9hra6rayzXczxNYKf3sIUn5jz0OB2/iHrW78QYbHTvEOhappum2tst/pdrqUtmqZg8xicrt/u/KBj6+tXvFk1rqvwq0bWV0jTNPvJ7+WORrC0WEMqg4HHP60AedUV6Rp1zp+hfCGz1k6FpmoX8mqSW6yXtuJAF255H8XTABOBk1oy+GNG1r4reE4Rp8Vnaa1pUOo3NrbjbGHMcjlVHZTsA496APJqK9T0XWNL8Vf8JTDL4U0exFlol3PaNBahJIioAG71YZB3cEEHHWvLKACit/wRo1v4g8b6Xpd8SLe4mxKAcFlALFc9s4x+Nek6lb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPegDxeivRvhxo2n+N9PuvDOoWSwTQstzBqsECiSMbgGjdsfMCCdoPf6CmxPp2qfGbTNNi0S2stNtbtbRbR7dQ0iqcEy8fOxIyc5/qQDzuivXdJfR/EvizW/CE/hrS7W2jW5W2u7WDbPC0ZOGL9846dOgxjiq/hPRdN0/4b2+tsnh9tQv7p4/O18M0MaJxtVQpG44Jyex9qAPKqK7zxjcaFpHiXS9U8PRaLeSNb7ryzhUzWYm5BwrAfKQcgdiK6nxfqvhfwj8RZ9KuvCmnS6VNGJLox2qmZS0YAEWSAgBAPGOSxoA8u8OaRHr3iG10ye/h0+O4Yg3M/wBxMKTzyOuMDnqRVK8gW1v7i3jmS4WGVkWaM5WQA43D2PWu2+GOoWr+LLPQp9H0u/s726O6W+s1lmVdvADHp06e5p3gbTrG7+OEdhd2dvPZm6u1NvLErR4CSEDaRjAwMfSgDgKK950PTtG1ZNJgufD2kKNQsdQErx2ahh5ExRCp7HB5bqT3rm/Cei6bp/w3t9bZPD7ahf3Tx+dr4ZoY0TjaqhSNxwTk9j7UAeVUV6lcaf4bufil4X/ssaXcJeGMahaWWZLYSg4O0MPukdsdqnWXSNdufGehHw3pVpBpNhd3NpcW8G2dXhYAFn75JyRwO3SgDzjT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RWbXq/gTxMyfDzxMP7H0dv7OtIMbrIH7TlyP339/8AGvO9d1o67fJctp+n6eUjEflafbiGM4JO4qOp5xn0AoAzKK2tV1uyv9A0qwttFtrK4slYTXkZ+e6J6FuB09yfbHSsWgDX8OeG7zxRfz2enyQJLDbPcHzmIDKmMgYB55/+vUXh/Q7rxLr9rpFg0SXF0xVGmYhRgEnJAJ6A9q6T4RTeX8S7CA42XUc0D5GeDE2P1Ar0zw5pcNpH4UuWt1jn0O2leYgAZMtrv+b1wc9/yoA8g1Hwk2neDk1x71ZGbUZLAwJH8uUBO8PnkHHTArnK9RsdaTR/gnZXk2m2epyvrEiol/H5sakpksV/iOARz6mqnifQRf8Ajrwz/wAIzpFpHcaxpttqBsQuIPMO5mG08BMJyPTPrQB5zWlp+g32qaXqOoWiK1vpqLJcEuAVDHAwO/Ir1LVNBsNW8Ga9LfxeE/t2mwCeGTw4SrxsDysgxgg9Pzql4E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f8AxoA8oorT13Wjrt8ly2n6fp5SMR+Vp9uIYzgk7io6nnGfQCsygDen8M+T4CtvEv2vd9ovmtPs3l/dwpbduzz06Y/GsGvUNP1iPRPghY3T6ZZajIdXkSOO+j8yJDsyW29zgED61V8T6CL/AMdeGf8AhGdItI7jWNNttQNiFxB5h3Mw2ngJhOR6Z9aAPOaK9k1TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT86wdPuLDQvhFY6z/YemX9++qSQCS9txIAuzPI/i6cAnAyeKAPOaK9an0fR73xj4E1aDSba1h1wBrqwWMGHcrAEhDxg56dOB70/SX0fxL4s1vwhP4a0u1to1uVtru1g2zwtGThi/fOOnToMY4oA8ior1Xwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1MuNP8ADdz8UvC/9ljS7hLwxjULSyzJbCUHB2hh90jtjtQB5bRXrKy6Rrtz4z0I+G9KtINJsLu5tLi3g2zq8LAAs/fJOSOB26Vm+BJPDo8LToDoK+ITc5z4hjLQGHbwEP3Qc+v+GADziiuo8fWWp2evxjVtM03T2kt1aH+yolS3mTJw644OfX2FcvQBqeHNIj17xDa6ZPfw6fHcMQbmf7iYUnnkdcYHPUiqV5Atrf3FvHMlwsMrIs0ZysgBxuHsetdp8LdRgfxRY6HeaNpN9b3twTJLeWayyqNvRWPQcdMdzWFJFo0XjS/i1sXcWnJczLt09E3rhjtADYGKANWLwPp1loFjqXinxGukPqMZmtbZLNrh3j7MdpG3P+e+OMr1j4hDwb9m0D7Y+uif/hHrf7D5SQ7TFh/L8zJyGz128eleT0AFFdd8L7e0vPiLptnqNtBc21yJY2jniV1yY22nB4yCBXoej+GtGjtdEuLvS7IvpGnzPqKyQIwkd7ZJUMnYkbmxuzQB4dRXqvhPRdN0/wCG9vrbJ4fbUL+6ePztfDNDGicbVUKRuOCcnsfaub+IsGhJqVjcaBLp5kntgb2HTXZoI5gcEpkDAPp7UAcdWlp+g32qaXqOoWiK1vpqLJcEuAVDHAwO/IrNr1fwJ4mZPh54mH9j6O39nWkGN1kD9py5H77+/wDjQB5RRXY6IYPHvxF0i1v7Cw063lYRSRadAIEdV3OcgfxHpn6eldvqVv4YnXV7DVT4OsrSOKRbM6fvW8hlX7m8lBu6cg96APF6K9M8DS6bc/DjxHLqmhabdtoogngla3AlkLSM2136lflAxx8uRVvwjqXhzxh448LQyeHrO2vV+1LfwxWiLazr5TmMhMnJGO46/hQB5RWp4c0iPXvENrpk9/Dp8dwxBuZ/uJhSeeR1xgc9SK9l0PTtG1ZNJgufD2kKNQsdQErx2ahh5ExRCp7HB5bqT3rgfhbqMD+KLHQ7zRtJvre9uCZJbyzWWVRt6Kx6DjpjuaAOLvIFtb+4t45kuFhlZFmjOVkAONw9j1qCuw8PWVrN8YreymtoZLU6q0ZgeMGMrvI27emPaupWXSNdufGehHw3pVpBpNhd3NpcW8G2dXhYAFn75JyRwO3SgDyaivR/BWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+Oah8bQ2PgX4iM+kaZp9zbz2iSi1vIvPgQuOdoPbIyPTNAHIa7oN94c1Q6fqiKlwEWQhHDDDDI5HtWbXrPxY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cVH4T0XTdP8Ahvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2oA8qorsfiLBoSalY3GgS6eZJ7YG9h012aCOYHBKZAwD6e1cdQAUV6P4K0y9tPDSX93a+EY9PvJm8mbxCvzy7cKwjIyQAQfxzVvUvDOk6Z8c9I0+1tIWsLt4JntmHmRfOOVG7quRnB9aAPLaK9ZWXSNdufGehHw3pVpBpNhd3NpcW8G2dXhYAFn75JyRwO3SvJqACtq70GC28H2GtrqtrLNdzPE1gp/ewhSfmPPQ4Hb+IetZVrP9lvIZ/Ljl8qRX8uVdyPg5ww7g9xXoHiya11X4VaNrK6Rpmn3k9/LHI1haLCGVQcDjn9aAPOqK9I0650/QvhDZ6ydC0zUL+TVJLdZL23EgC7c8j+LpgAnAyah8XWnh+28a+Gb66sUsdM1TTrS/vra0BCLvJ3hQOgwo4HvjmgDz2tLT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RXpviG1a/0nVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdqr+BPEzJ8PPEw/sfR2/s60gxusgftOXI/ff3/xoA8oorpoLi+8Z+MtOTTdF0qK7JVI7S1tlhgk2kuS65weM59hiu+1TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT86APG6K9I0650/QvhDZ6ydC0zUL+TVJLdZL23EgC7c8j+LpgAnAyasap4Z0nWviX4Ut4bSLTrXXdNtr25t7b5UVmDllQfwghAOPXNAHl9Fega34w0q31TVNIbwXoosoWlt4dkJjuEZSVDGUck5GSK1fCei6bp/w3t9bZPD7ahf3Tx+dr4ZoY0TjaqhSNxwTk9j7UAeVUV2PxFg0JNSsbjQJdPMk9sDew6a7NBHMDglMgYB9PauOoAKK9F01bDwr8K7TxCNH0/VdQ1K+aHdqEPnRwImeAp4ycZz7+wpPF+leGbbWNC1W8tbnTtO1jTEuprTTVUtFIR/CHIG08fkaAM6LwPp1loFjqXinxGukPqMZmtbZLNrh3j7MdpG3P+e+OMr1j4hDwb9m0D7Y+uif/hHrf7D5SQ7TFh/L8zJyGz128eleT0AFaWu6DfeHNUOn6oipcBFkIRwwwwyOR7Umi6udF1D7WtjY3x2FfJv4BNHz32nv716R8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFAHCT+GfJ8BW3iX7Xu+0XzWn2by/u4Utu3Z56dMfjWDXqGn6xHonwQsbp9MstRkOryJHHfR+ZEh2ZLbe5wCB9aXU/DOkaz8TPCcEdnFp9rrmm219c29v8qBmDllUfwghAOPXNAHl1Fe0alb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPevF6ACitTw5pt7q/iSxstLtorq6klBjhmAMb7fmO7P8ADgHPtmvUNU0Gw1bwZr0t/F4T+3abAJ4ZPDhKvGwPKyDGCD0/OgDxuivRtPuLDQvhFY6z/YemX9++qSQCS9txIAuzPI/i6cAnAyeK1J9H0e98Y+BNWg0m2tYdcAa6sFjBh3KwBIQ8YOenTge9AHktdjong7SNd8P313a+JGGpWOnTX81gbBsBYx93zCwBzlecd+nFdZpL6P4l8Wa34Qn8NaXa20a3K213awbZ4WjJwxfvnHTp0GMcVzPw0/5m7/sWb3/2SgDiK2rvQYLbwfYa2uq2ss13M8TWCn97CFJ+Y89Dgdv4h61lWs/2W8hn8uOXypFfy5V3I+DnDDuD3FegeLJrXVfhVo2srpGmafeT38scjWFosIZVBwOOf1oA86or0TTItP8AC3wttfEh0ex1XUdRvWgU38XmxW6KDxs6EnaTn39qyPtJ8Z+LdJi8P+HNPs79iBJbwjEE7qdxYoeFXaDkDtnrQByVaWn6Dfappeo6haIrW+moslwS4BUMcDA78ivUtU0Gw1bwZr0t/F4T+3abAJ4ZPDhKvGwPKyDGCD0/OqXgTxMyfDzxMP7H0dv7OtIMbrIH7TlyP339/wDGgDyitq70GC28H2GtrqtrLNdzPE1gp/ewhSfmPPQ4Hb+IetN1PxC2p61baidK0u1NuFH2a0tBHDJtYt86DrnOD6gAV1viya11X4VaNrK6Rpmn3k9/LHI1haLCGVQcDjn9aAPOqK9F01bDwr8K7TxCNH0/VdQ1K+aHdqEPnRwImeAp4ycZz7+wrSu9B0h/iN4KvbbTbe3tNcgguZ9PKBolY9QFPG08cY7UAeUV0mheCb7XNJk1Rr7TtMsEk8oXOo3PlK74ztGAST+Fdqsuka7c+M9CPhvSrSDSbC7ubS4t4Ns6vCwALP3yTkjgdulef+FYdKu/Ellb+JLp7fSt7POyk9lJA9txAXPvQAeJfDGoeFdRjtNS8l/OiWaGa3ffHMh6MrdxWNW/4v8AFL+KtWinW2Szs7SBbaztUJIhiXoPc+/+FYFABRRRQAUUUUAamjX1pZreRXwmMdzD5eYQCRznuaha5tbPU4rjSxI6REMBdKOWHsp6dKm0axtLxbyW+MwjtofMxCQCecdxUElvBd6hHBo6TkSYVVnK7i34cYrm9z2kt/Ptscnue0lv59tv8i9c+JpLuRpLnTdOkkYYLtCxP/oVVbDWZ7C2e28qC5t3bcYrhNyhvUVNP4cuYbeaWO4tLg243Sxwy7mQdyRiobDRp7+2e582C2t0baZbh9qlvQVKWH5NNv6sRFYVU3a1tP8AgCS6zdT6tHqEwjeWIjYhX5AB0GPSrdz4mku5GkudN06SRhgu0LE/+hVSn0e8g1RNPaMGeQjZtbhgehB9Ksz+HLmG3mljuLS4NuN0scMu5kHckYoksP7t7eXoOSwvu3ttp6ENhrM9hbPbeVBc27tuMVwm5Q3qKg1DUJ9TujcXRBbAUBRgKB0AFT2GjT39s9z5sFtbo20y3D7VLegqDUNPn027NvdKA4AYFTkMD0INaR9j7R2tzGsfYe1fLbmKtaNhrM9hbPbeVBc27tuMVwm5Q3qKzq0bDRp7+2e582C2t0baZbh9qlvQVVXk5f3mxdb2fL+82IrzU57+/W7ugjsuAE2/IAOi49Klvdbur22+zYit7bOfJt49ik+/rTLjSLy31NbB490742BTkOD0IPpVm48OXUEMzpcWtw0AzLFDLudAOuRis70Fy7eRjfDrl28jIqa0uWs7yK4jVXaJgwVxkEj1qGpba3lu7mO3gXdJI21RnGTXRK1nfY6ZW5XzbGtc+JpLuRpLnTdOkkYYLtCxP/oVQaZrkmlBTBZ2jyqSRNJGS4yMYyCKfP4cuYbeaWO4tLg243Sxwy7mQdyRim6X4evNWjEkDQxozFVaV8biBkgAZNcn+zKm/wCU4v8AZFTe3KVb+++3zCQ21vbkDBECFQ3ueTzVSnOhjkZD1UkHFNrqilFWR2xioxtHY0bDWZ7C2e28qC5t3bcYrhNyhvUU2fV7i61NL24WKV0ACxsmUAHbHpTrDRp7+2e582C2t0baZbh9qlvQU2bR7yDVE09kBnfGzDDDA9CD6Vh+453tfr+pz/7Pzy2v1/X/AIJPL4hna1lgtrWzs1mG2RreLazD0zk8VU03UZtLvBc26xs4UriRcjmrk/hy5htppo7m0uPs4zLHDLuZB6kYrIp040ZRaht1HTjQnFqGqe5PbXT2t9HdIqM8b7wrD5SfpWpc+JpLuRpLnTdOkkYYLtCxP/oVZNtby3dzHbwLukkbaozjJrSn8OXMNvNLHcWlwbcbpY4ZdzIO5IxRUVHmXPuKqqHOvabmRVvUNQl1GWKSdUUxxLENgI4HTqetNSxnfT5L1VHkRuEZie59qdqGny6dLFHOyMZIllGwk8Hp1HWtLwcl3Neam5rvr/wRbnU5ruwtbSRYxHbAhCq4Jz6mqdFWUsZ30+S9VR5EbhGYnufamlGCtt/wSkoU1bb/AIJPNrN1NfW92NkU1uiohQdl9c59asy+Jbp45hFbWlvJOpWSaGLa7A9ec1VuNHuoL23tPllluEV0CHs3Qc4q1P4Zu4YZ2S4tbh7cbpYoZdzoO+Riud/V9L28jll9V929vL+vUxqkgl8i4SXy0l2HOyQZVvYio6kgi8+4SLzEi3nG+Q4Vfcmup2tqdkrWdzVufEcl3aC3k0+wCKjJGViOY891+bg1QfUJX06CzIURwOzqwB3ZNX7nw5JaWguJNQsCjIzxhZTmTHZfl5NVv7Huf7E/tQGMwb9hAJ3DnGemMZ965oOgkuXv+JyU3h0ly7X/ABJ5/El5c6la30qQma2XC4U4b681lyyGaZ5WwGdixx7mryaJcyXFjCHi3Xyb4yScAe/Ht71O/h/yywbVtMDLkFfPOc+n3acZUaekf6/pjjPD0rKOn/D/AOdyGx1ueytDamG3ubctvEVxHuCn1HPFR3eoyapqEc2osfLGFKwqBsTPRRT7HRZ721a6MsFtbhtgluJNqs3oKZd6dJpeoRw6ip8s4YtCwO9M9VNNex53b4hr2HtHy/EW72/03+wRp+mi6J+0+eWnVR/DtxwfpWNWze2Gm/2CNQ003QP2nyCs7Kf4d2eB9KxqdDl5Xy336lYfl5Xy3369zT8Pa7c+GtftdXsEikuLViyLMCUOVK8gEHofWreheLr/AEC/1C4t4ba4TUYnhuba4RmikVjk8Ag8due5rJsbK41LUILKyiMtxcSLHEg/iYnAFdXf/DPUrG1vJF1bRLuexQvdWlvfAzRAfeyCAOO/NbnQUtF8c3+jaE+jvY6bqVi0vnJDqNv5oifGNy8jH45HX1NW734l6vqGpaLqF1Zaa17o+0RXAgYPMFHAkIbkZycDAyTjFYGn6Dfappeo6haIrW+moslwS4BUMcDA78is2gDds/Ft/Y6lrd9FFbmXWrae2uAyttRZjlinPBGOM5/GoZfEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0rIooA37rxddX2paRd3tjYXA0myjsooJYmaOWOMHG8buT83YgdOK2pvilcz6WmnSeF/DZs42Lxw/Yn2ox6sB5mAa4atzwz4c/4SL+1/8ASvs39m6ZNqH+r3+Z5ePk6jGc9ecelAEUviO7m8IweHWjhFpBdG6Vwp8wuV24JzjGD6Vp2vifVtX8T+HpYrqx0y60y2hsba6kYxxIiZw0hJPXcQT09q5WigD2vU/EFho/h7XZ9S1HwvNqOp2MtokPh2PcZnkGDJI/t17Dk9TivFKKKAJrS7nsLyG7s5WhuIHEkcinlWByCK6nVfiHc61bXK6hoGgSXVzGUkvxY4nJIxu3bsbvfFchWlrug33hzVDp+qIqXARZCEcMMMMjke1AFq28WahY+F30PT1htIpZxPNcQhlmmK8qGbPQHBAAHT61u6L4tbXPidoOra4LG0khliW4u1HlCXbx5khLbc47jArhqKAO+1z4j30N/rdpo9npFv8AapZYW1K0tgJ5oi5/5aA4ORjkDnr15rE8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP8A3gMgg9O/as7XdBvvDmqHT9URUuAiyEI4YYYZHI9qzaAOgfxWH8Qx6qfD2hqEi8r7EtoRbt1+YpuyW5657CrHi7x1d+Mtr6lpel29wHDNc2sDLK4AIClmY5HPT2FcvRQB1Xhrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSpR8RLyLxVZa/Z6No1neWhlOLe3dFmMilSZPnyTyccjrXIUUAdlp/xK1TTBpxtbSzL2MV1EpkViHE8m9sgMOh4HNUPD/jbUfD+mz6attY6jp07iRrPUIPNjD/AN4DIIPTv2rO13Qb7w5qh0/VEVLgIshCOGGGGRyPas2gDoD4unXxVZ69Z6XpljNZlTHb2kBjhJUk5K7sknPJz6Uyz8W39jqWt30UVuZdatp7a4DK21FmOWKc8EY4zn8awqKANzwz4rv/AAtPctYx21xDdx+VcW13F5kUy+jLx/PvUGva4NduYpRpWm6YI02+Xp0BiVuc5OScmmafoN9qml6jqFoitb6aiyXBLgFQxwMDvyKzaANrVfFF7q+gaVpFzFbJb6WrLC0ce12Dddxzz07Y981i0UUAaGhazc+HtctNVsVja4tZN6LKCVJ6YIBBxz6103/C1NcD6yy2unr/AGuipIFifEGIfKBj+fg7fXNcTRQBry+I7ubwjB4daOEWkF0bpXCnzC5XbgnOMYPpV4eO9XTXNF1WAW8N1otlHZW5RDho0DD5wSckhiDjHtiuaooA7m3+Kmo2jzLa6D4fhtbiNo57OOxKwzZIO5gGySMYHOPmPFYnh7xdf+Gry7msYbSWG9Qx3FncQ74ZFznaVz059awaKANXXtcGu3MUo0rTdMEabfL06AxK3OcnJOTWVW54m8Of8I7/AGR/pX2n+0tMh1D/AFezy/Mz8nU5xjrxn0rDoA15fEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0q8PHerprmi6rALeG60Wyjsrcohw0aBh84JOSQxBxj2xVXwp4ZufFmuDT7WWOBVjaaeeX7sMa/eY+vUce9N8QabounPAuha82sbt3mk2bQCPGMY3E7s8+nT3oA6C3+Kmo2jzLa6D4fhtbiNo57OOxKwzZIO5gGySMYHOPmPFaFp4rtdK+E9oiQaRfXLatK8mnXcYlCoUyG2Z3KMjAP4d682ooA7rR/GVzr3xP0HUddmtbO2tJo440QCGC2jHYAnAHuT/IVJrnxHvob/AFu00ez0i3+1SywtqVpbATzRFz/y0BwcjHIHPXrzXIaNa6feaksOsak2m2pUlrhbczYOOBtBB5rT8ZeGIPC99p8VnqR1K3v7CO+inMBh+Vy2BtLHsufx6UAL4f8AG2o+H9Nn01bax1HTp3EjWeoQebGH/vAZBB6d+1MPi6dfFVnr1npemWM1mVMdvaQGOElSTkruySc8nPpVHT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RWbQBu2fi2/sdS1u+iitzLrVtPbXAZW2osxyxTngjHGc/jU2i+L10bTVs28OaDqGHL+dfWZkkOe24MOPaucooA2PEnifUPFWoR3epmJfJiWGGGCPZHEg6Kq9hzWPRRQB1Xhrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSs/xJ4kbxJcRzyaTpmnyKWLmwgMfmliCS+WOTx+prFooA1dc8QXXiD+zvtkcKf2dYxWEXlKRujjzgtkn5uecYHtWVRRQBf0PWLjQNctNVsgjT2sgkRZASpPocEHH410L/ABL1l111Tb2IXW0EcyrEw8kCPy/3fzcZXA5z0FcfRQB0fh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftWdrmsf23fi6GnWGnBYwghsIfKj4J5xk889c+lZtFABW54Z8V3/hae5axjtriG7j8q4truLzIpl9GXj+fesOigDb1PxPNfaraahY6fp+jT2mDF/ZkBiG4HIY5Jya1NV+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98VyFFAHY6J8R7rQtBfSbbQdDmgmQJcNPauzXABJHmEOA2MntWRonie68P+LU8QadbWq3EckjpAUPkrvVlICgg4AY4GewrFooA7LT/iVqmmDTja2lmXsYrqJTIrEOJ5N7ZAYdDwOar+GvHc/heGAWWhaLcXMDl0vLm2ZpgT/tBx9K5WigDqLnx1cz+JLDW7fR9IsrqylMwFrbsizMSDmT5iW/MdTVSz8W39jqWt30UVuZdatp7a4DK21FmOWKc8EY4zn8awqKAOq0rx9f6ZodtpUum6TqMFo7Patf2nmtbljltpyOp55Bqv4m8Z33iyCzGqWliLi1jEZu4YSs04Ax87ZOfXgAZJrnaKAOwufiPf3+npb6ro2iajOkH2db26s904XGB8wYDI6jjrVLw/421Hw/ps+mrbWOo6dO4kaz1CDzYw/wDeAyCD079q5yigDS1zWP7bvxdDTrDTgsYQQ2EPlR8E84yeeeufSs2iigDqtK8fX+maHbaVLpuk6jBaOz2rX9p5rW5Y5bacjqeeQamvPiTqt/qmj6nc2Omtf6UVKXQgYSXG0YHmndz68Y5Jrj6KAN2z8W39jqWt30UVuZdatp7a4DK21FmOWKc8EY4zn8awqKKALWm3o03Uobs2tteCJs+RdJvjfjowyMj8a6+b4pXM+lpp0nhfw2bONi8cP2J9qMerAeZgGuGooA15fEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0qxd+Lbq+1LR7y8srGf+yLOKzihliLRyxx52+YpPzH5ueg9qwKKAOxm+JN+NPu7TS9G0TR/tkRhmm0+zMcjIeq7ixwKyvDPiu/8LT3LWMdtcQ3cflXFtdxeZFMvoy8fz71h0UAdKfG95D4ksdb0rTdL0m5sgQiWNtsR85B3Ak5yCR16VqW/xU1G0eZbXQfD8NrcRtHPZx2JWGbJB3MA2SRjA5x8x4rhqKANm68TXd14Xj0BoLdLOK8a8UopDB2BGOuNuD0x+NO1HxXqWo3mkXeY7a40e0htLWS3BUhYiSrHJPzc89B7ViUUAdjqXxGudXhuP7R8PeH57q4jMcl61iRMcjG7cGxux0OOOPSqPh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftXOUUAaWuax/bd+LoadYacFjCCGwh8qPgnnGTzz1z6Vm0UUAdJoHje/0HSZdLNnp+p6dLKJvsuoweaiPjG5eQQf8+tUfEfiPUPFGrfb9VaMyCMRRpEm1IkHRVHYDJ/OsmigDV1zxBdeIP7O+2Rwp/Z1jFYReUpG6OPOC2Sfm55xge1ZVFFABXYXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj6KANeXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9Kk1HxXqWo3mkXeY7a40e0htLWS3BUhYiSrHJPzc89B7ViUUAdfqvxDudatrldQ0DQJLq5jKSX4scTkkY3bt2N3viuQoooA0NC1u88O65barpjql1bMWQsuQcgggj0IJH411Nv8VNRtHmW10Hw/Da3EbRz2cdiVhmyQdzANkkYwOcfMeK4aigD0m08V2ulfCe0RINIvrltWleTTruMShUKZDbM7lGRgH8O9UNH8ZXOvfE/QdR12a1s7a0mjjjRAIYLaMdgCcAe5P8hXC0UAd9rnxHvob/AFu00ez0i3+1SywtqVpbATzRFz/y0BwcjHIHPXrzXM+GvEt94V1Vr/TVhkZ4mhliuI98csbYyrDjI4H5Vj0UAb934pF3rdpqP9gaJAtsMfZIbQrBL1++u7LdfWtqb4pXM+lpp0nhfw2bONi8cP2J9qMerAeZgGuGooA6Pw/431Hw/pk+mLb2Wo6dcOJHs9Qg82Lf/eAyCDwO/alPjW7h8UWWu6Xp2maVc2a7UjsbfZGwO7O5STkkMQTnOMegrm6KAO5t/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxWJ4e8XX/hq8u5rGG0lhvUMdxZ3EO+GRc52lc9OfWsGigDfvPFQu9atNQ/sDRIBagj7JDaFYJuvLruy3X17Ctqb4pXM+lpp0nhfw2bONi8cP2J9qMerAeZgGuGooA6TQPG9/oOky6WbPT9T06WUTfZdRg81EfGNy8gg/59aLjxzq934wtPElz9nku7Mp5EXl7Yo1X7qBQQdvJ7965uigDds/Ft/Y6lrd9FFbmXWrae2uAyttRZjlinPBGOM5/GovDHiW88Ka0uqadFbyzqjIFuELLhhg8Ag5/GseigB0jmWVnbALEk4GBz7U2iigAooooAKKKKANnQ/wDkH6x/16f+zCscEggg4I6EVp6NfWlmt5FfCYx3MPl5hAJHOe5qFrm1s9TiuNLEjpEQwF0o5Yeynp0rnjdVJab/AORyx5o1J6b/AHbGjZQnRtHu7q9Gya9gaCCE/eKt1YjsKtQfYf8AhF9M/tPzPsvmy7/K67u1UbnxNJdyNJc6bp0kjDBdoWJ/9CqrYazPYWz23lQXNu7bjFcJuUN6iud0qs1zSWt77+VtPQ5nRqzjzSVpXvv5Naehe8QnFjoxyd32UEE/exn5aLKE6No93dXo2TXsDQQQn7xVurEdhVCXWbqfVo9QmEbyxEbEK/IAOgx6VbufE0l3I0lzpunSSMMF2hYn/wBCqvZ1VBQtp1++9ivZVVCNO2m71872L0H2H/hF9M/tPzPsvmy7/K67u1Rax9mMOifbjN5X2X5jGAZNv8PXj0/Wsyw1mewtntvKgubd23GK4Tcob1FQahqE+p3RuLogtgKAowFA6ACiNCaqXe12/vv/AJ/ggjh5qrd7Xb373/z/AARdI8O7TtbVM9srH/jWlB9h/wCEX0z+0/M+y+bLv8rru7Vy1aNhrM9hbPbeVBc27tuMVwm5Q3qKurRk4rlbevf1Wn3mlahJxXK27Pv5NafebdzfJp1z4eu5gzLHb5P97YeB+hqTSoNOhvb+9tL17mMQSMxMRQRg9iT1Nc3eanPf363d0EdlwAm35AB0XHpUt7rd1e232bEVvbZz5NvHsUn39ayeGm4pd9/vv28/IweEm4qK0vv2te/bz8hbUaL9mT7a1+J+d3kqm3rxjJz0xUN7/Z6tGdLa64zuM4UEHtjbVOprS5azvIriNVdomDBXGQSPWuvkafMm35Hd7NpuSbfl0NmyhOjaPd3V6Nk17A0EEJ+8VbqxHYVF4R/5Gqz/AOB/+gNS3PiaS7kaS503TpJGGC7QsT/6FUGma5JpQUwWdo8qkkTSRkuMjGMgiuZwqypzTXvS/wArHI6daVKalH3peflb8Chc/wDH3N/vt/Ooqt3999vmEhtre3IGCIEKhvc8nmqldkb8qud8L8qurHUwfYf+EX0z+0/M+y+bLv8AK67u1VPEJ/0HRzk7vsowT125+X9KpWGsz2Fs9t5UFzbu24xXCblDeops+r3F1qaXtwsUroAFjZMoAO2PSuONGcanN0u399/8zgjQqRq83RNvfvf/AD19Ea+nLavo1/FozyG8aAmYXC4zGPvBcHHfvWJpt3DY3gmuLSO7QKR5UnTnv0NW5fEM7WssFta2dmsw2yNbxbWYemcniqmm6jNpd4Lm3WNnClcSLkc1cKc1GfMt/P8AU0hSmoz5lv567d0Vi3zll+XnIx2rdsoTo2j3d1ejZNewNBBCfvFW6sR2FY9tdPa30d0iozxvvCsPlJ+lalz4mku5GkudN06SRhgu0LE/+hVVZTlaKWnX/IqvGpK0YrTrr+Bcj0q9uvBlrHYwNIZrhppMEDgfKOtQ+L7WaC6snlQqptUQHP8AEvUfhkVz1W9Q1CXUZYpJ1RTHEsQ2AjgdOp61MaM41VK+mvTv8yY0KkaqldNavbv8xbm8hnsLWCOzjhkhBDzL1lz6/wCTW3HpV7deDLWOxgaQzXDTSYIHA+UdaxLnU5ruwtbSRYxHbAhCq4Jz6mqdU6UpRVtLO/fv6epcqUpRVtLO/fv5r1Ow1Oyvl8TaR5GIZDCiI78gMoywx9DSQzWVzc6lFo6NBfSRSb5ZASrjPzBRn5c++awJtZupr63uxsimt0VEKDsvrnPrVmXxLdPHMIra0t5J1KyTQxbXYHrzmuX6vV5UvL9evdHH9VrcsV5frfXujGooqSCXyLhJfLSXYc7JBlW9iK9J7HqvY2Na/wCQBon/AFyk/wDQhWjpcyLoOn2twcQXkk0D+2cYP4HFZdz4jku7QW8mn2ARUZIysRzHnuvzcGqD6hK+nQWZCiOB2dWAO7Jrh9jOdNRkrat/ff8AzPO9hOdNQkrat/ff8rnULA9trvh+CUYeOIow9wWFYmq2enxyXMsOqLNP5hPkeQ687uRuPHH9KJ/El5c6la30qQma2XC4U4b681lyyGaZ5WwGdixx7mnRo1IyUpO2nT1bKoUKsZKUnbTpbu328za1X/kV9F8r/VYl3Y/vbu/60a1n/hHtD8z/AFnlSZ/3dw2/pVSx1ueytDamG3ubctvEVxHuCn1HPFR3eoyapqEc2osfLGFKwqBsTPRRVRpzUldaJt+t7/5lRpTjJXWibd+97/5/gXP+ZE/7iX/tKsWtm9v9N/sEafpouiftPnlp1Ufw7ccH6VjVrRvZtq12zbD3tJtWu2XtG1WfQ9cs9TtQpmtJllUMOGwc4P16V3d3pXhr4hR6lqfho3Ol63FDJe3OnznfFMBy5R+xye/5DrXB6Pqk2i6tBqFtHDLLAxKpOm9GyCMEd+tdHcfEjUG0+6tdM0jRdG+2RmKebTbPypHQ9VyWOAfbFbnQdP4E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f/GuZ0QwePfiLpFrf2Fhp1vKwiki06AQI6ruc5A/iPTP09KyvDPiu/wDC09y1jHbXEN3H5VxbXcXmRTL6MvH8+9Jqfiea+1W01Cx0/T9GntMGL+zIDENwOQxyTk0Aem6lb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPeue8FaZe2nhpL+7tfCMen3kzeTN4hX55duFYRkZIAIP45rH1X4h3OtW1yuoaBoEl1cxlJL8WOJySMbt27G73xUWlePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINAHW3fgfRm+Omm6LFCE028iW6eCNyUH7tnKqeu0lPyNP8M+JrXXI/GEMPh/TdLMXh+9ML2UHlOI+Bskx94/d545B9eOS1L4j6zqV9pWoPDZQalpgUJfQwkTTYGP3hJIYdeMAcmrE/xP1KSLUEg0fRLQ6lbS2929taFGlEgwWJ3Z3dT6ZPINAD49OtfEPwnFzYWUS6tod2EuDBEBJcQSn5WbAyxDcc54B9aseNLTw9pHijSNAvoHitNMsUTUJ9OijE807JuJJOA3OzqeATVv4dz2Xg5JPEOq69prW1xasjaVE5luJTn5QUHCHIBBOcAnpnNcDrGpz61rV5qV0czXUzStznGTnH0HSgDo2X4bbDsl8VbscZitsZ/76rX8CSeHR4WnQHQV8Qm5znxDGWgMO3gIfug59f8ADHnFdHovi9dG01bNvDmg6hhy/nX1mZJDntuDDj2oA1fEd1qnhjxhHdar4e8PBntR5MMNmr2cyEnEiqDgn3610PxY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cV594k8T6h4q1CO71MxL5MSwwwwR7I4kHRVXsOa2Ln4j39/p6W+q6NomozpB9nW9urPdOFxgfMGAyOo460Aa/grTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNQ+NobHwL8RGfSNM0+5t57RJRa3kXnwIXHO0HtkZHpmsjSvH1/pmh22lS6bpOowWjs9q1/aea1uWOW2nI6nnkGq/ibxnfeLILMapaWIuLWMRm7hhKzTgDHztk59eABkmgDt/ix4qa18S3WmDRdFmE1lGv2qaxVp03x9VfOQRnj04qPwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1c1c/Ee/v8AT0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1ql4f8AG2o+H9Nn01bax1HTp3EjWeoQebGH/vAZBB6d+1AF74iwaEmpWNxoEunmSe2BvYdNdmgjmBwSmQMA+ntXHVpa5rH9t34uhp1hpwWMIIbCHyo+CecZPPPXPpWbQB6P4Ek8OjwtOgOgr4hNznPiGMtAYdvAQ/dBz6/4YoeI7rVPDHjCO61Xw94eDPajyYYbNXs5kJOJFUHBPv1rK0Xxeujaatm3hzQdQw5fzr6zMkhz23Bhx7VU8SeJ9Q8VahHd6mYl8mJYYYYI9kcSDoqr2HNAHoPxY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cVS8DS6bc/DjxHLqmhabdtoogngla3AlkLSM2136lflAxx8uRWHc/Ee/v9PS31XRtE1GdIPs63t1Z7pwuMD5gwGR1HHWl0T4j3WhaC+k22g6HNBMgS4ae1dmuACSPMIcBsZPagCzLe2njW/wDD1t4f8PWlt4gWVxcww26R2lwoO5SV3dAqndkcjPXiuq1TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT868w0zxDeaN4nTXdLWG2uY5WlSNE/druyCoX+7gkY9K6S3+Kmo2jzLa6D4fhtbiNo57OOxKwzZIO5gGySMYHOPmPFAG94E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f/ABrmdEMHj34i6Ra39hYadbysIpItOgECOq7nOQP4j0z9PSszw94uv/DV5dzWMNpLDeoY7izuId8Mi5ztK56c+tM1PxPNfaraahY6fp+jT2mDF/ZkBiG4HIY5JyaAPTdSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvXNwTWHhH4Y6Jqkehafqd/rU1wZJtRt/OWFIn2BVHYnrn6/hlar8Q7nWra5XUNA0CS6uYykl+LHE5JGN27djd74re8DXN3L4TFneav4Q/swTsyWmvPulgbu6Jx1z6+tAD9cn0PRfHXg++fRbCLTLvRraa7tTArJiUuGY5HzMAQdx5+UUtr4UtPCWr+M73VLSG6s9JtzHYrcxCSOR5j+5PzZyQMZ+tUPG91YeNvHFnZ6Vq1lFb2OnpaG/vH8iGQx7mLDjjO7AAHOOKm+IPi6Cfwtpfhey1GLU5LVUN7fwKVSYou1FyeWwDy3c4/AA4/wxrFnoWtLe6jpFvrECoym1uD8pJGAeQRkfT/ABrJkYPKzKoQMSQo6L7VreGPEt54U1pdU06K3lnVGQLcIWXDDB4BBz+NZMjmWVnbALEk4GBz7UANr0OGaw8JfDPQ9Ti0PTtTv9amuDLLqNv5yxJE+wKoyME9c/WvPK6fRvHV/pOh/wBjzWGm6rYLIZYodRtvNELnqV5GOp/M0Adr4g0ux8UfEbwLYyxfZrG80O0Ywq33Y/3jbAfoNuaualb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPevN9b8Z6trmsafqk5htrzToI4IJLVNmAjFlbGSM5btge1X9V+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98UAdH8Mh4W/s3Xdz6x9t/sC6+3gJF5Yiyu7yuclsYxu461ysOmabq3i3TLLwJBe3kkjgmHV0jAZlO45CnBTaOc+9Zmh+ILrw//aP2OOF/7RsZbCXzVJ2xyYyVwR83HGcj2qLQtbvPDuuW2q6Y6pdWzFkLLkHIIII9CCR+NAHqmqaDYat4M16W/i8J/btNgE8MnhwlXjYHlZBjBB6fnXI6pYWcfwY0O+jtYFu5dRmSS4WMCR1AOAW6ke1Pt/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxWdpPjy/0rR5tKbTtL1CwknM6W99beasDnugyMfQ5/U0AaXxU0+z07VdCSwtILVZdEt5ZFhiCB3LPljgck4HPXimfEv8A5lH/ALFmy/8AZ6y/E/jW/wDFtrYR6ra2ImsohELqGErLKoHRzkg85OAAMk8VZ/4WDfS6DbaXf6To+oC1t/s1vc3dpvmijxgANuxx24oA6vwJ4mZPh54mH9j6O39nWkGN1kD9py5H77+/+Ned67rR12+S5bT9P08pGI/K0+3EMZwSdxUdTzjPoBVnwz4rv/C09y1jHbXEN3H5VxbXcXmRTL6MvH8+9Qa9rg125ilGlabpgjTb5enQGJW5zk5JyaAMqiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDU0axtLxbyW+MwjtofMxCQCecdxUElvBd6hHBo6TkSYVVnK7i34cYq5of8AyD9Y/wCvT/2YVjgkEEHBHQiuePM6ktdvu2OaPNKpPXbbtsa0/hy5ht5pY7i0uDbjdLHDLuZB3JGKhsNGnv7Z7nzYLa3RtpluH2qW9BV6yhOjaPd3V6Nk17A0EEJ+8VbqxHYVag+w/wDCL6Z/afmfZfNl3+V13dqwdaolo762vbyu/wDI5pV6kU7O+tr28ru33WMSfR7yDVE09owZ5CNm1uGB6EH0qzP4cuYbeaWO4tLg243Sxwy7mQdyRirHiE4sdGOTu+yggn72M/LRZQnRtHu7q9Gya9gaCCE/eKt1YjsKftajhGSeu1u+pXtqjpxknq9LW31t/XYo2GjT39s9z5sFtbo20y3D7VLegqDUNPn027NvdKA4AYFTkMD0INb8H2H/AIRfTP7T8z7L5su/yuu7tUWsfZjDon24zeV9l+YxgGTb/D149P1ojXm6lntdr7r/AOX4oUcRN1bPa7W3a/8Al+KObrRsNGnv7Z7nzYLa3RtpluH2qW9BUxHh3adrapntlY/8a0oPsP8Awi+mf2n5n2XzZd/ldd3arq1pKK5U1r29Xp9xpWxElFcqau+3k3p9xiXGkXlvqa2Dx7p3xsCnIcHoQfSrNx4cuoIZnS4tbhoBmWKGXc6AdcjFatzfJp1z4eu5gzLHb5P97YeB+hqTSoNOhvb+9tL17mMQSMxMRQRg9iT1NYSxFRRUv03d7fI55YqqoqX6bu9vl/wTj6ltreW7uY7eBd0kjbVGcZNXbUaL9mT7a1+J+d3kqm3rxjJz0xUN7/Z6tGdLa64zuM4UEHtjbXbztvlSf3aHoe0bfKk/u0Lc/hy5ht5pY7i0uDbjdLHDLuZB3JGKbpfh681aMSQNDGjMVVpXxuIGSABk1asoTo2j3d1ejZNewNBBCfvFW6sR2FReEf8AkarP/gf/AKA1c0qlRU5yT2628jklVqqlUlGV+Xrbey1/Ex3QxyMh6qSDim1Lc/8AH3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/K67u1VPEJ/0HRzk7vsowT125+X9K4o1pyqcvS7W3a/+Wp58cRUlV5ejbW3a/37a+qIJ/DlzDbTTR3NpcfZxmWOGXcyD1IxWRXTactq+jX8WjPIbxoCZhcLjMY+8Fwcd+9Ymm3cNjeCa4tI7tApHlSdOe/Q1pSqTalfVr5M1o1KjU09Wvk9v6sQ21vLd3MdvAu6SRtqjOMmtKfw5cw280sdxaXBtxuljhl3Mg7kjFZRb5yy/LzkY7Vu2UJ0bR7u6vRsmvYGgghP3irdWI7CqrSnGzi/l3KrznCzi/l3/pGSljO+nyXqqPIjcIzE9z7U7UNPl06WKOdkYyRLKNhJ4PTqOtbkelXt14MtY7GBpDNcNNJggcD5R1qHxfazQXVk8qFVNqiA5/iXqPwyKzhiOaryXW7/AA/pmUMVz1uS63frp/TOeqyljO+nyXqqPIjcIzE9z7U+5vIZ7C1gjs44ZIQQ8y9Zc+v+TW3HpV7deDLWOxgaQzXDTSYIHA+Uda0qVuRJy0u7amtWt7NRctLu2v8AXZGPcaPdQXtvafLLLcIroEPZug5xVqfwzdwwzslxa3D243SxQy7nQd8jFa+p2V8vibSPIxDIYURHfkBlGWGPoaSGayubnUotHRoL6SKTfLICVcZ+YKM/Ln3zXL9Zm4xkn0u/v6+Rx/WqjjGUX0u/vtr5ehyFSQRefcJF5iRbzjfIcKvuTUdFei9j1XsbNz4cktLQXEmoWBRkZ4wspzJjsvy8mq39j3P9if2oDGYN+wgE7hzjPTGM+9XNa/5AGif9cpP/AEIVo6XMi6Dp9rcHEF5JNA/tnGD+BxXD7WpGmpXvq/uV/wDI8721WNJTvfV/cr/5GGmiXMlxYwh4t18m+MknAHvx7e9Tv4f8ssG1bTAy5BXzznPp92tpYHttd8PwSjDxxFGHuCwrE1Wz0+OS5lh1RZp/MJ8jyHXndyNx44/pShWnOSV/uV+rQQrzqTSvv2V+rXyIbHRZ721a6MsFtbhtgluJNqs3oKZd6dJpeoRw6ip8s4YtCwO9M9VNX9V/5FfRfK/1WJd2P727v+tGtZ/4R7Q/M/1nlSZ/3dw2/pWkak3JX2ba+6/+RpGrOUld6NtW7Wv/AJfiR3thpv8AYI1DTTdA/afIKzsp/h3Z4H0rGra/5kT/ALiX/tKsWtaN7NN3s2bYdu0k3ezZp+HtCufEuv2ukWDxR3F0xVGmJCDCluSAT0HpXQT/AAz1EWd5Npmr6Lq8lkhknttPuy8qqOp2lRnFJ8Jv+Sp6L/10k/8ART12Giado/haLxJ4t0rWjrklrFJbtaw2jR+U8rYBfeeVB7gevpitzoPHav6Na6feaksOsak2m2pUlrhbczYOOBtBB5rttNWw8K/Cu08QjR9P1XUNSvmh3ahD50cCJngKeMnGc+/sKofEjS9PtZtE1XS7SOwj1jTo7qS0j+7E567fQHI/KgDL8ZeGIPC99p8VnqR1K3v7CO+inMBh+Vy2BtLHsufx6Vf0TwdpGu+H767tfEjDUrHTpr+awNg2AsY+75hYA5yvOO/TipviX/zKP/Ys2X/s9Hw0/wCZu/7Fm9/9koA5vw5o/wDwkHiSw0nz/s/2yYRebs3bM98ZGfzqvqtj/Zms3th5nm/ZbiSHzNuN21iM47ZxW38Of+SkaF/1+JXeWNzpni7xvr3hu98OaZDaoLplvoYdtzG6Mf3jS98nkjpyB0oA8dor0fwVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmp9a8EaS3xp07Q7ZRBp9+sU8kcTkqoKlmVCecHacemaAPMa6K68K/Zvh/Y+J/tm77XdtbfZvKxswGO7dnn7vTFb2t+MNKt9U1TSG8F6KLKFpbeHZCY7hGUlQxlHJORkitvTvDzeJfgnoVkmo2Gnn+1pDvvZvLDZ3Dav8AebnpQB5JRXoXjGHw/pXxE0rRLmxNvpekpBb30scASS6PBeRsctkEc9euO1bviG1a/wBJ1R/CGneC9R02OF2/0K3H22CH++Q3zBgO/r0HagDyCiitDQjpy6/YnXA504TobkR9SmeenP5c+lAGfWlp+g32qaXqOoWiK1vpqLJcEuAVDHAwO/Ir03xDatf6Tqj+ENO8F6jpscLt/oVuPtsEP98hvmDAd/XoO1V/AniZk+HniYf2Po7f2daQY3WQP2nLkfvv7/40AeUUVvXPilrnxDbasdF0WI28ez7JFZBbeT73Lx5wx+br7D0r0fxfqvhfwj8RZ9KuvCmnS6VNGJLox2qmZS0YAEWSAgBAPGOSxoA8aor0nwdpl1aeH/t81t4STTLy4f7PP4jUeZMF+UhCMkAY/PNV/G0Nj4F+IjPpGmafc289okotbyLz4ELjnaD2yMj0zQByGu6DfeHNUOn6oipcBFkIRwwwwyOR7Vm16z8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFR+E9F03T/AIb2+tsnh9tQv7p4/O18M0MaJxtVQpG44Jyex9qAPKqK9X/4R3wvr3xT8OWlg9hJDeQs+o2+muxgWWNGYhcgEK20cVHousaX4q/4SmGXwpo9iLLRLue0aC1CSRFQAN3qwyDu4IIOOtAHllFdxHp1r4h+E4ubCyiXVtDuwlwYIgJLiCU/KzYGWIbjnPAPrUfxKtbHR9U07QbC2t45NMsY0u5oo1Vpp2AZixHXjHXOOaAOLora1XW7K/0DSrC20W2sriyVhNeRn57onoW4HT3J9sdKxaACtzwz4c/4SL+1/wDSvs39m6ZNqH+r3+Z5ePk6jGc9ecelW/h1otr4h+IOlaZqKl7aV3aRM43BEZ8fQ7cV2fhnxNa65H4whh8P6bpZi8P3pheyg8pxHwNkmPvH7vPHIPrwAeS0V6r4T0XTdP8Ahvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rJ8WW/gxfEmnzmdBaz2mb+LQCHSOccfu/MwAp447YoApxeB9OstAsdS8U+I10h9RjM1rbJZtcO8fZjtI25/z3xxlesfEIeDfs2gfbH10T/8I9b/AGHykh2mLD+X5mTkNnrt49KzvBWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+OaAPOKK9YufC+kad8edJ063s4H0+7VJ2tXHmRAsjZADdVyMjNUPC2l2Fxe/EET2NtKtpp129uHhVhCwLbSmR8pGOCKAMfRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OK46u3+Gn/ADN3/Ys3v/slczournRdQ+1rY2N8dhXyb+ATR899p7+9AC67oN94c1Q6fqiKlwEWQhHDDDDI5HtWbXrPxY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cV5NQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBqaNfWlmt5FfCYx3MPl5hAJHOe5qFrm1s9TiuNLEjpEQwF0o5Yeynp0qbRrG0vFvJb4zCO2h8zEJAJ5x3FQSW8F3qEcGjpORJhVWcruLfhxiub3PaS38+2xye57SW/n22/yL1z4mku5GkudN06SRhgu0LE/+hVVsNZnsLZ7byoLm3dtxiuE3KG9RU0/hy5ht5pY7i0uDbjdLHDLuZB3JGKhsNGnv7Z7nzYLa3RtpluH2qW9BUpYfk02/qxEVhVTdrW0/4Akus3U+rR6hMI3liI2IV+QAdBj0q3c+JpLuRpLnTdOkkYYLtCxP/oVUp9HvINUTT2jBnkI2bW4YHoQfSrM/hy5ht5pY7i0uDbjdLHDLuZB3JGKJLD+7e3l6DksL7t7baehDYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABU9ho09/bPc+bBbW6NtMtw+1S3oKg1DT59Nuzb3SgOAGBU5DA9CDWkfY+0drcxrH2HtXy25irWjYazPYWz23lQXNu7bjFcJuUN6is6tGw0ae/tnufNgtrdG2mW4fapb0FVV5OX95sXW9ny/vNiK81Oe/v1u7oI7LgBNvyADouPSpb3W7q9tvs2Ire2znybePYpPv60y40i8t9TWwePdO+NgU5Dg9CD6VZuPDl1BDM6XFrcNAMyxQy7nQDrkYrO9Bcu3kY3w65dvIyKmtLlrO8iuI1V2iYMFcZBI9ahqW2t5bu5jt4F3SSNtUZxk10StZ32OmVuV82xrXPiaS7kaS503TpJGGC7QsT/6FUGma5JpQUwWdo8qkkTSRkuMjGMginz+HLmG3mljuLS4NuN0scMu5kHckYpul+HrzVoxJA0MaMxVWlfG4gZIAGTXJ/sypv+U4v9kVN7cpVv777fMJDbW9uQMEQIVDe55PNVKc6GORkPVSQcU2uqKUVZHbGKjG0djRsNZnsLZ7byoLm3dtxiuE3KG9RTZ9XuLrU0vbhYpXQALGyZQAdselOsNGnv7Z7nzYLa3RtpluH2qW9BTZtHvINUTT2QGd8bMMMMD0IPpWH7jne1+v6nP/ALPzy2v1/X/gk8viGdrWWC2tbOzWYbZGt4trMPTOTxVTTdRm0u8FzbrGzhSuJFyOauT+HLmG2mmjubS4+zjMscMu5kHqRisinTjRlFqG3UdONCcWoap7k9tdPa30d0iozxvvCsPlJ+lalz4mku5GkudN06SRhgu0LE/+hVk21vLd3MdvAu6SRtqjOMmtKfw5cw280sdxaXBtxuljhl3Mg7kjFFRUeZc+4qqoc69puZFW9Q1CXUZYpJ1RTHEsQ2AjgdOp601LGd9PkvVUeRG4RmJ7n2p2oafLp0sUc7IxkiWUbCTwenUda0vByXc15qbmu+v/AARbnU5ruwtbSRYxHbAhCq4Jz6mqdFWUsZ30+S9VR5EbhGYnufamlGCtt/wSkoU1bb/gk82s3U19b3Y2RTW6KiFB2X1zn1qzL4lunjmEVtaW8k6lZJoYtrsD15zVW40e6gvbe0+WWW4RXQIezdBzirU/hm7hhnZLi1uHtxulihl3Og75GK539X0vbyOWX1X3b28v69TGqSCXyLhJfLSXYc7JBlW9iKjqSCLz7hIvMSLecb5DhV9ya6na2p2StZ3NW58RyXdoLeTT7AIqMkZWI5jz3X5uDVB9QlfToLMhRHA7OrAHdk1fufDklpaC4k1CwKMjPGFlOZMdl+Xk1W/se5/sT+1AYzBv2EAncOcZ6Yxn3rmg6CS5e/4nJTeHSXLtf8SefxJeXOpWt9KkJmtlwuFOG+vNZcshmmeVsBnYsce5q8miXMlxYwh4t18m+MknAHvx7e9Tv4f8ssG1bTAy5BXzznPp92nGVGnpH+v6Y4zw9Kyjp/w/+dyGx1ueytDamG3ubctvEVxHuCn1HPFR3eoyapqEc2osfLGFKwqBsTPRRT7HRZ721a6MsFtbhtgluJNqs3oKZd6dJpeoRw6ip8s4YtCwO9M9VNNex53b4hr2HtHy/EW72/03+wRp+mi6J+0+eWnVR/DtxwfpWNWze2Gm/wBgjUNNN0D9p8grOyn+HdngfSsanQ5eV8t9+pWH5eV8t9+vc0/D2u3PhrX7XV7BIpLi1YsizAlDlSvIBB6H1q3oXi6/0C/1C4t4ba4TUYnhuba4RmikVjk8Ag8due5rJsbK41LUILKyiMtxcSLHEg/iYnAFdXf/AAz1KxtbyRdW0S7nsUL3Vpb3wM0QH3sggDjvzW50FDQPG9/oOky6WbPT9T06WUTfZdRg81EfGNy8gg/59ao+I/EeoeKNW+36q0ZkEYijSJNqRIOiqOwGT+dR6foN9qml6jqFoitb6aiyXBLgFQxwMDvyKzaAOs/4WDfS6DbaXf6To+oC1t/s1vc3dpvmijxgANuxx24rL8NeJb7wrqrX+mrDIzxNDLFcR745Y2xlWHGRwPyrHooA6OTxlP8A8JJYazZaTpOnzWDBo4bO2McbkHOWG7J/Orup/ErVr+xvba0sdL0lb8n7XJp1t5clwDnIZiScHPP/ANc1x9bnhnw5/wAJF/a/+lfZv7N0ybUP9Xv8zy8fJ1GM56849KAL2lePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINN1vx9quuzabc3ENnBqGnBfLv7eIpPIVAwXbJB5GeABkmuXooA7HUviNc6vDcf2j4e8Pz3VxGY5L1rEiY5GN24NjdjocccelY9x4nvbnwfaeG3igFna3DXKOFPmFiCCCc4x8x7VjUUAdLqXji+1jUtLv9UsNOu7jTYhFumhLC6UdPOBbDd+mOpq5N8Sb8afd2ml6Nomj/bIjDNNp9mY5GQ9V3FjgVx1aWu6DfeHNUOn6oipcBFkIRwwwwyOR7UAZtWtNvf7O1KC8+zW915LbvJuo98b+zL3HtVWigDsZviTfjT7u00vRtE0f7ZEYZptPszHIyHqu4scCsrwz4rv/C09y1jHbXEN3H5VxbXcXmRTL6MvH8+9Vdd0G+8OaodP1RFS4CLIQjhhhhkcj2rNoA6SXxgsutQah/wjegIIY2j+yJZkQSZ/iZd2Sw7HNSeLvHV34y2vqWl6Xb3AcM1zawMsrgAgKWZjkc9PYVy9FAHVaV4+v9M0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g1X8TeM77xZBZjVLSxFxaxiM3cMJWacAY+dsnPrwAMk1HP4Z8nwFbeJfte77RfNafZvL+7hS27dnnp0x+NYNAHYXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1ql4f8baj4f02fTVtrHUdOncSNZ6hB5sYf+8BkEHp37VzlFAHT2mv3epeNtOv9NTSPD1zGypG8KeRbxnn5nznrkgk9q9E1PxBYaP4e12fUtR8LzajqdjLaJD4dj3GZ5BgySP7dew5PU4rxSigD0v4dz2Xg5JPEOq69prW1xasjaVE5luJTn5QUHCHIBBOcAnpnNcDrGpz61rV5qV0czXUzStznGTnH0HSpdP0G+1TS9R1C0RWt9NRZLglwCoY4GB35FL4c0f/AISDxJYaT5/2f7ZMIvN2btme+MjP50AT6r4ovdX0DStIuYrZLfS1ZYWjj2uwbruOeenbHvmsWreq2P8AZms3th5nm/ZbiSHzNuN21iM47ZxVSgC5pWqXei6rb6jpsphurd98bgZwfp3Haupn+J+pSRagkGj6JaHUraW3u3trQo0okGCxO7O7qfTJ5BriqKAOj8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP/eAyCD079qztc1j+278XQ06w04LGEENhD5UfBPOMnnnrn0p3hzSI9e8Q2umT38Onx3DEG5n+4mFJ55HXGBz1IqleQLa39xbxzJcLDKyLNGcrIAcbh7HrQBe1zxBdeIP7O+2Rwp/Z1jFYReUpG6OPOC2Sfm55xge1aulePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINcrRQB1eqfETWNVvNKvpYLGHUdM2+XfQwlZptoAHmEkhunTAHJrRi+LWqw31zcxaLoKC8iaK8iWyIS63EZaT5sseo64+ZuOa4OigDa8PeKb7wzrUmpabHblpo3ilglj3RPG3VCuenA79qi13XP7duYpRpem6aI02iPT7fylbnOTySTW1oHw8n8Rw2xsfEOgpcXCsy2ct04mXAJOVCHsCfpTI/Ayt4k0jSV8Q6Tef2lMYvN06Uz+R05YEL1zxzzg0ASXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj6t6rY/wBmaze2Hmeb9luJIfM243bWIzjtnFVKACiiigAooooAKKKKACiiigAorU8OaRHr3iG10ye/h0+O4Yg3M/3EwpPPI64wOepFUryBbW/uLeOZLhYZWRZozlZADjcPY9aAIKKKKACitPw5o/8AwkHiSw0nz/s/2yYRebs3bM98ZGfzqvqtj/Zms3th5nm/ZbiSHzNuN21iM47ZxQBUooooAKKK7HRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OKAOOoorS13Qb7w5qh0/VEVLgIshCOGGGGRyPagDNoren8M+T4CtvEv2vd9ovmtPs3l/dwpbduzz06Y/GsGgAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA2dD/AOQfrH/Xp/7MKxwSCCDgjoRWno19aWa3kV8JjHcw+XmEAkc57moWubWz1OK40sSOkRDAXSjlh7KenSueN1Ulpv8A5HLHmjUnpv8AdsaNlCdG0e7ur0bJr2BoIIT94q3ViOwq1B9h/wCEX0z+0/M+y+bLv8rru7VRufE0l3I0lzpunSSMMF2hYn/0KqthrM9hbPbeVBc27tuMVwm5Q3qK53SqzXNJa3vv5W09DmdGrOPNJWle+/k1p6F7xCcWOjHJ3fZQQT97GflosoTo2j3d1ejZNewNBBCfvFW6sR2FUJdZup9Wj1CYRvLERsQr8gA6DHpVu58TSXcjSXOm6dJIwwXaFif/AEKq9nVUFC2nX772K9lVUI07abvXzvYvQfYf+EX0z+0/M+y+bLv8rru7VFrH2Yw6J9uM3lfZfmMYBk2/w9ePT9azLDWZ7C2e28qC5t3bcYrhNyhvUVBqGoT6ndG4uiC2AoCjAUDoAKI0Jqpd7Xb++/8An+CCOHmqt3tdvfvf/P8ABF0jw7tO1tUz2ysf+NaUH2H/AIRfTP7T8z7L5su/yuu7tXLVo2Gsz2Fs9t5UFzbu24xXCblDeoq6tGTiuVt69/VafeaVqEnFcrbs+/k1p95t3N8mnXPh67mDMsdvk/3th4H6GpNKg06G9v720vXuYxBIzExFBGD2JPU1zd5qc9/frd3QR2XACbfkAHRcelS3ut3V7bfZsRW9tnPk28exSff1rJ4abil33++/bz8jB4SbiorS+/a179vPyFtRov2ZPtrX4n53eSqbevGMnPTFQ3v9nq0Z0trrjO4zhQQe2NtU6mtLlrO8iuI1V2iYMFcZBI9a6+Rp8ybfkd3s2m5Jt+XQ2bKE6No93dXo2TXsDQQQn7xVurEdhUXhH/karP8A4H/6A1Lc+JpLuRpLnTdOkkYYLtCxP/oVQaZrkmlBTBZ2jyqSRNJGS4yMYyCK5nCrKnNNe9L/ACscjp1pUpqUfel5+VvwKFz/AMfc3++386iq3f332+YSG2t7cgYIgQqG9zyeaqV2Rvyq53wvyq6sdTB9h/4RfTP7T8z7L5su/wArru7VU8Qn/QdHOTu+yjBPXbn5f0qlYazPYWz23lQXNu7bjFcJuUN6imz6vcXWppe3CxSugAWNkygA7Y9K440Zxqc3S7f33/zOCNCpGrzdE29+9/8APX0Rr6ctq+jX8WjPIbxoCZhcLjMY+8Fwcd+9Ymm3cNjeCa4tI7tApHlSdOe/Q1bl8QztaywW1rZ2azDbI1vFtZh6ZyeKqabqM2l3gubdY2cKVxIuRzVwpzUZ8y38/wBTSFKajPmW/nrt3RWLfOWX5ecjHat2yhOjaPd3V6Nk17A0EEJ+8VbqxHYVj2109rfR3SKjPG+8Kw+Un6VqXPiaS7kaS503TpJGGC7QsT/6FVVlOVopadf8iq8akrRitOuv4FyPSr268GWsdjA0hmuGmkwQOB8o61D4vtZoLqyeVCqm1RAc/wAS9R+GRXPVb1DUJdRliknVFMcSxDYCOB06nrUxozjVUr6a9O/zJjQqRqqV01q9u/zFubyGewtYI7OOGSEEPMvWXPr/AJNbcelXt14MtY7GBpDNcNNJggcD5R1rEudTmu7C1tJFjEdsCEKrgnPqap1TpSlFW0s79+/p6lypSlFW0s79+/mvU7DU7K+XxNpHkYhkMKIjvyAyjLDH0NJDNZXNzqUWjo0F9JFJvlkBKuM/MFGflz75rAm1m6mvre7GyKa3RUQoOy+uc+tWZfEt08cwitrS3knUrJNDFtdgevOa5fq9XlS8v1690cf1WtyxXl+t9e6MaiipIJfIuEl8tJdhzskGVb2Ir0nseq9jY1r/AJAGif8AXKT/ANCFaOlzIug6fa3BxBeSTQP7Zxg/gcVl3PiOS7tBbyafYBFRkjKxHMee6/NwaoPqEr6dBZkKI4HZ1YA7smuH2M501GStq399/wDM872E501CStq399/yudQsD22u+H4JRh44ijD3BYViarZ6fHJcyw6os0/mE+R5Drzu5G48cf0on8SXlzqVrfSpCZrZcLhThvrzWXLIZpnlbAZ2LHHuadGjUjJSk7adPVsqhQqxkpSdtOlu7fbzNrVf+RX0Xyv9ViXdj+9u7/rRrWf+Ee0PzP8AWeVJn/d3Db+lVLHW57K0NqYbe5ty28RXEe4KfUc8VHd6jJqmoRzaix8sYUrCoGxM9FFVGnNSV1om363v/mVGlOMldaJt373v/n+Bc/5kT/uJf+0qxa2b2/03+wRp+mi6J+0+eWnVR/DtxwfpWNWtG9m2rXbNsPe0m1a7Ze0bVZ9D1yz1O1Cma0mWVQw4bBzg/XpXd3eleGviFHqWp+Gjc6XrcUMl7c6fOd8UwHLlH7HJ7/kOtcHo+qTaLq0GoW0cMssDEqk6b0bIIwR3610dx8SNQbT7q10zSNF0b7ZGYp5tNs/KkdD1XJY4B9sVudB0/gTxMyfDzxMP7H0dv7OtIMbrIH7TlyP339/8a5nRDB49+IukWt/YWGnW8rCKSLToBAjqu5zkD+I9M/T0rK8M+K7/AMLT3LWMdtcQ3cflXFtdxeZFMvoy8fz70mp+J5r7VbTULHT9P0ae0wYv7MgMQ3A5DHJOTQB6bqVv4YnXV7DVT4OsrSOKRbM6fvW8hlX7m8lBu6cg9657wVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmsfVfiHc61bXK6hoGgSXVzGUkvxY4nJIxu3bsbvfFRaV4+v9M0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g0Adbd+B9Gb46abosUITTbyJbp4I3JQfu2cqp67SU/I0/wz4mtdcj8YQw+H9N0sxeH70wvZQeU4j4GyTH3j93njkH145LUviPrOpX2lag8NlBqWmBQl9DCRNNgY/eEkhh14wByasT/E/UpItQSDR9EtDqVtLb3b21oUaUSDBYndnd1Ppk8g0APj0618Q/CcXNhZRLq2h3YS4MEQElxBKflZsDLENxzngH1qP4lWtjo+qadoNhbW8cmmWMaXc0Uaq007AMxYjrxjrnHNa/w7nsvBySeIdV17TWtri1ZG0qJzLcSnPygoOEOQCCc4BPTOa4HWNTn1rWrzUro5mupmlbnOMnOPoOlAFKvR/Aknh0eFp0B0FfEJuc58QxloDDt4CH7oOfX/DHnFdHovi9dG01bNvDmg6hhy/nX1mZJDntuDDj2oA1fEd1qnhjxhHdar4e8PBntR5MMNmr2cyEnEiqDgn3610PxY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cV594k8T6h4q1CO71MxL5MSwwwwR7I4kHRVXsOa2Ln4j39/p6W+q6NomozpB9nW9urPdOFxgfMGAyOo460Aa/grTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNQ+NobHwL8RGfSNM0+5t57RJRa3kXnwIXHO0HtkZHpmsjSvH1/pmh22lS6bpOowWjs9q1/aea1uWOW2nI6nnkGq/ibxnfeLILMapaWIuLWMRm7hhKzTgDHztk59eABkmgDt/ix4qa18S3WmDRdFmE1lGv2qaxVp03x9VfOQRnj04qPwnoum6f8ADe31tk8PtqF/dPH52vhmhjRONqqFI3HBOT2PtXNXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1ql4f8baj4f02fTVtrHUdOncSNZ6hB5sYf+8BkEHp37UAXviLBoSalY3GgS6eZJ7YG9h012aCOYHBKZAwD6e1cdWlrmsf23fi6GnWGnBYwghsIfKj4J5xk889c+lZtAHqGn6xHonwQsbp9MstRkOryJHHfR+ZEh2ZLbe5wCB9aZrUmh6J8Q/DGqy6PYx6dqmmW13e2ZhDQoZdysVUggYABGO4964mXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KuveXXjjUtMtLy60zTfsGnpZRT3Mhhj8uIEgsxz8xyenXsKAOttfClp4S1fxne6paQ3VnpNuY7FbmISRyPMf3J+bOSBjP1qpp9xYaF8IrHWf7D0y/v31SSASXtuJAF2Z5H8XTgE4GTxTviD4ugn8LaX4XstRi1OS1VDe38ClUmKLtRcnlsA8t3OPwbp/ii10b4Q2MKRaVqNz/ashksL5FlwhTh9mQw5GN3HUjvQBo3vhfRvEXijwVdRWMemQeIIi93aW/yRgx8nYP4Q3Tj271LaPpHi7V/E/h2Tw1penR2FrcS2V1aW/lyxNEwA3sPvA8Z/wDr1weseNdY1nXrTVpJY7WaxCLZx2qbI7cKcgIvPf1z6dK0tS+Jur6jY31vHY6VYyaiuy9urO12TXCnqGYk9e+AOtAHS+BPEzJ8PPEw/sfR2/s60gxusgftOXI/ff3/AMawfC2tHXfit4fuW0/T9PKXEcflafbiGM4YncVHU84z6AVheGfFd/4WnuWsY7a4hu4/KuLa7i8yKZfRl4/n3qeTxlMPEmn6zZaPpOnzWDBo4bO3McbkHOXG7J/OgDuZLzTPE2o+N9JuPD2mwLptleXlvdxQ4uDLE/VpOrbickdO1QeE9F03T/hvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rh7Pxbf2Opa3fRRW5l1q2ntrgMrbUWY5YpzwRjjOfxqbw/wCNtR8P6bPpq21jqOnTuJGs9Qg82MP/AHgMgg9O/agDd8UQ+EI/GWh3KSWbWMyxtq0GlMzQowb5tmQCFI7Dng963/ENq1/pOqP4Q07wXqOmxwu3+hW4+2wQ/wB8hvmDAd/XoO1ed3XiX7V4ht9VGiaPAIAALKG1xbvjPLJn5uvPPYVrTfEm/Gn3dppejaJo/wBsiMM02n2ZjkZD1XcWOBQBa+FuowP4osdDvNG0m+t724JklvLNZZVG3orHoOOmO5rC2aVB8QXTV4yulR6iwnSFcYiEhyAB2x6dulXPDXjufwvDALLQtFuLmBy6XlzbM0wJ/wBoOPpUOpeMW1PWrTUpNA0SGS3dpHiitSI7gsc/vQWO7/65oA7vxDatf6Tqj+ENO8F6jpscLt/oVuPtsEP98hvmDAd/XoO1eceGNYs9C1pb3UdIt9YgVGU2twflJIwDyCMj6f41szfEm/Gn3dppejaJo/2yIwzTafZmORkPVdxY4FY3hjxLeeFNaXVNOit5Z1RkC3CFlwwweAQc/jQBkyMHlZlUIGJIUdF9qbTpHMsrO2AWJJwMDn2ptAHZfCj/AJKZpv8A1zuf/SeSqfw5/wCSkaF/1+JWZ4e1258Na5BqtikUk8CuqrMCVO9GQ5AIPRj3qPRdWn0LW7TVLRI3ntJRKiyglSR6gEHH40AemyXmmeJtR8b6TceHtNgXTbK8vLe7ihxcGWJ+rSdW3E5I6dqg8J6Lpun/AA3t9bZPD7ahf3Tx+dr4ZoY0TjaqhSNxwTk9j7Vw9n4tv7HUtbvoorcy61bT21wGVtqLMcsU54IxxnP41N4f8baj4f02fTVtrHUdOncSNZ6hB5sYf+8BkEHp37UAXviLBoSalY3GgS6eZJ7YG9h012aCOYHBKZAwD6e1cdWlrmsf23fi6GnWGnBYwghsIfKj4J5xk889c+lZtAHo/grTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNW9S8M6Tpnxz0jT7W0hawu3gme2YeZF845Ubuq5GcH1rl9K8fX+maHbaVLpuk6jBaOz2rX9p5rW5Y5bacjqeeQa2dI8eT+IPHHhmfxBFptsbCeNZNQCeXJIoGMyuWx79hkmgDa0l9H8S+LNb8IT+GtLtbaNblba7tYNs8LRk4Yv3zjp06DGOKyNPuLDQvhFY6z/YemX9++qSQCS9txIAuzPI/i6cAnAyeKr658R76G/wBbtNHs9It/tUssLalaWwE80Rc/8tAcHIxyBz1681Y0/wAUWujfCGxhSLStRuf7VkMlhfIsuEKcPsyGHIxu46kd6AKXxEsNONj4e17TLCPTTrFm0k9rAu2NXQgEqOwOf0HvXDVs+JfFGoeKr+O51HyY1giEMFvbpsihQfwqvb/PoKxqAO7+FuowP4osdDvNG0m+t724JklvLNZZVG3orHoOOmO5rC2aVB8QXTV4yulR6iwnSFcYiEhyAB2x6dulXPDXjufwvDALLQtFuLmBy6XlzbM0wJ/2g4+lQ6l4xbU9atNSk0DRIZLd2keKK1IjuCxz+9BY7v8A65oA7vxDatf6Tqj+ENO8F6jpscLt/oVuPtsEP98hvmDAd/XoO1eQV2M3xJvxp93aaXo2iaP9siMM02n2ZjkZD1XcWOBXHUAdN8Of+SkaF/1+JXbSXmmeJtR8b6TceHtNgXTbK8vLe7ihxcGWJ+rSdW3E5I6dq8y0XVp9C1u01S0SN57SUSosoJUkeoBBx+NXrPxbf2Opa3fRRW5l1q2ntrgMrbUWY5YpzwRjjOfxoA7jwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1Z3iLRtP1TxvocXguPS7u+u41e5s7Ni1oJkOW+9jCFRkj0B9a57w/wCNtR8P6bPpq21jqOnTuJGs9Qg82MP/AHgMgg9O/akHjK8g8V2mv6XY6dpdzartjisrfZEeCDlSTkkMQTnpQB6Fqmg2GreDNelv4vCf27TYBPDJ4cJV42B5WQYwQen51yXw0/5m7/sWb3/2SnW/xU1G0eZbXQfD8NrcRtHPZx2JWGbJB3MA2SRjA5x8x4rA8PeKb7wzrUmpabHblpo3ilglj3RPG3VCuenA79qAK2i6udF1D7WtjY3x2FfJv4BNHz32nv716R8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFed67rn9u3MUo0vTdNEabRHp9v5StznJ5JJrbufiPf3+npb6ro2iajOkH2db26s904XGB8wYDI6jjrQB0Gn6xHonwQsbp9MstRkOryJHHfR+ZEh2ZLbe5wCB9aZrUmh6J8Q/DGqy6PYx6dqmmW13e2ZhDQoZdysVUggYABGO4964mXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KuveXXjjUtMtLy60zTfsGnpZRT3Mhhj8uIEgsxz8xyenXsKAOttfClp4S1fxne6paQ3VnpNuY7FbmISRyPMf3J+bOSBjP1ry6vSPiD4ugn8LaX4XstRi1OS1VDe38ClUmKLtRcnlsA8t3OPw83oAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1NGsbS8W8lvjMI7aHzMQkAnnHcVBJbwXeoRwaOk5EmFVZyu4t+HGKuaH/yD9Y/69P8A2YVjgkEEHBHQiuePM6ktdvu2OaPNKpPXbbtsa0/hy5ht5pY7i0uDbjdLHDLuZB3JGKhsNGnv7Z7nzYLa3RtpluH2qW9BV6yhOjaPd3V6Nk17A0EEJ+8VbqxHYVag+w/8Ivpn9p+Z9l82Xf5XXd2rB1qiWjvra9vK7/yOaVepFOzvra9vK7t91jEn0e8g1RNPaMGeQjZtbhgehB9Ksz+HLmG3mljuLS4NuN0scMu5kHckYqx4hOLHRjk7vsoIJ+9jPy0WUJ0bR7u6vRsmvYGgghP3irdWI7Cn7Wo4RknrtbvqV7ao6cZJ6vS1t9bf12KNho09/bPc+bBbW6NtMtw+1S3oKg1DT59Nuzb3SgOAGBU5DA9CDW/B9h/4RfTP7T8z7L5su/yuu7tUWsfZjDon24zeV9l+YxgGTb/D149P1ojXm6lntdr7r/5fihRxE3Vs9rtbdr/5fijm60bDRp7+2e582C2t0baZbh9qlvQVMR4d2na2qZ7ZWP8AxrSg+w/8Ivpn9p+Z9l82Xf5XXd2q6taSiuVNa9vV6fcaVsRJRXKmrvt5N6fcYlxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWrc3yadc+HruYMyx2+T/e2Hgfoak0qDTob2/vbS9e5jEEjMTEUEYPYk9TWEsRUUVL9N3e3yOeWKqqKl+m7vb5f8E4+pba3lu7mO3gXdJI21RnGTV21Gi/Zk+2tfifnd5Kpt68Yyc9MVDe/wBnq0Z0trrjO4zhQQe2NtdvO2+VJ/doeh7Rt8qT+7Qtz+HLmG3mljuLS4NuN0scMu5kHckYpul+HrzVoxJA0MaMxVWlfG4gZIAGTVqyhOjaPd3V6Nk17A0EEJ+8VbqxHYVF4R/5Gqz/AOB/+gNXNKpUVOck9utvI5JVaqpVJRlfl623stfxMd0McjIeqkg4ptS3P/H3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/ACuu7tVTxCf9B0c5O77KME9dufl/SuKNacqnL0u1t2v/AJannxxFSVXl6Ntbdr/ftr6ogn8OXMNtNNHc2lx9nGZY4ZdzIPUjFZFdNpy2r6NfxaM8hvGgJmFwuMxj7wXBx371iabdw2N4Jri0ju0CkeVJ0579DWlKpNqV9WvkzWjUqNTT1a+T2/qxDbW8t3cx28C7pJG2qM4ya0p/DlzDbzSx3FpcG3G6WOGXcyDuSMVlFvnLL8vORjtW7ZQnRtHu7q9Gya9gaCCE/eKt1YjsKqtKcbOL+XcqvOcLOL+Xf+kZKWM76fJeqo8iNwjMT3PtTtQ0+XTpYo52RjJEso2Eng9Oo61uR6Ve3Xgy1jsYGkM1w00mCBwPlHWofF9rNBdWTyoVU2qIDn+Jeo/DIrOGI5qvJdbv8P6ZlDFc9bkut366f0znqspYzvp8l6qjyI3CMxPc+1PubyGewtYI7OOGSEEPMvWXPr/k1tx6Ve3Xgy1jsYGkM1w00mCBwPlHWtKlbkSctLu2prVrezUXLS7tr/XZGPcaPdQXtvafLLLcIroEPZug5xVqfwzdwwzslxa3D243SxQy7nQd8jFa+p2V8vibSPIxDIYURHfkBlGWGPoaSGayubnUotHRoL6SKTfLICVcZ+YKM/Ln3zXL9Zm4xkn0u/v6+Rx/WqjjGUX0u/vtr5ehyFSQRefcJF5iRbzjfIcKvuTUdFei9j1XsbNz4cktLQXEmoWBRkZ4wspzJjsvy8mq39j3P9if2oDGYN+wgE7hzjPTGM+9XNa/5AGif9cpP/QhWjpcyLoOn2twcQXkk0D+2cYP4HFcPtakaale+r+5X/yPO9tVjSU731f3K/8AkYaaJcyXFjCHi3Xyb4yScAe/Ht71O/h/yywbVtMDLkFfPOc+n3a2lge213w/BKMPHEUYe4LCsTVbPT45LmWHVFmn8wnyPIded3I3Hjj+lKFac5JX+5X6tBCvOpNK+/ZX6tfIhsdFnvbVroywW1uG2CW4k2qzegpl3p0ml6hHDqKnyzhi0LA70z1U1f1X/kV9F8r/AFWJd2P727v+tGtZ/wCEe0PzP9Z5Umf93cNv6VpGpNyV9m2vuv8A5Gkas5SV3o21bta/+X4kd7Yab/YI1DTTdA/afIKzsp/h3Z4H0rGra/5kT/uJf+0qxa1o3s03ezZth27STd7NmjoOi3HiLXrXSbJ4o57p9iNMSFBwTyQCe3pXRXfwz1OK1vJNP1TR9XlslL3Ftp90XmjUHBOwqDxUPwu/5Kfof/Xc/wDoLV1+l2mn+B/GeqeJ9W8Q6TcCM3Hk2FlciaaZ3JARlH3evOe49q3Og8jor0zwNLptz8OPEcuqaFpt22iiCeCVrcCWQtIzbXfqV+UDHHy5FQafN4e8f+IvDGnnSYdLvWmkTURZQrDBOg+ZQuDkNhcE479elAHnVb0/hnyfAVt4l+17vtF81p9m8v7uFLbt2eenTH4131o+keLtX8T+HZPDWl6dHYWtxLZXVpb+XLE0TADew+8Dxn/69U9P1mPQ/ghY3T6ZZalI2ryJHHfReZEhKZLbO5wCB9aAPL6K9XvPC2ka/wCJvBE/2GLTF1+EyXtpbfJH8nOVH8IYccfzrR1K38MTrq9hqp8HWVpHFItmdP3reQyr9zeSg3dOQe9AHi9FbHhjWLPQtaW91HSLfWIFRlNrcH5SSMA8gjI+n+NZMjB5WZVCBiSFHRfagBtFFej+CtMvbTw0l/d2vhGPT7yZvJm8Qr88u3CsIyMkAEH8c0AcPo1rp95qSw6xqTabalSWuFtzNg44G0EHmtPxl4Yg8L32nxWepHUre/sI76KcwGH5XLYG0sey5/HpV/4oaFYaB40e30qNYree3juBEjFkQsOQpPO3IyPrU3xL/wCZR/7Fmy/9noAh0TwdpGu+H767tfEjDUrHTpr+awNg2AsY+75hYA5yvOO/TiuOrt/hp/zN3/Ys3v8A7JXK6SNMOqQ/26bsWHzeabMKZfunG3dx1xnPbNAFKiuwZfhtsOyXxVuxxmK2xn/vqtfwVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmgDziivUtS8M6Tpnxz0jT7W0hawu3gme2YeZF845Ubuq5GcH1q3pL6P4l8Wa34Qn8NaXa20a3K213awbZ4WjJwxfvnHTp0GMcUAeRUV6Np9xYaF8IrHWf7D0y/v31SSASXtuJAF2Z5H8XTgE4GTxTvFFl4dGoeENfutPGnafq8Qk1C0tVwi7GAYqo5AIPQdhxzQB5vRXr/iG1a/0nVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdq4XSV8DnS4f7dk8QC/+bzRZxwGL7xxt3HPTGc980Ac1RXVxaZpOreJ9KsvAcGoXlxJLl4dXSIIxXDdFOCuA27Pau51TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT86APG6K9M8DS6bc/DjxHLqmhabdtoogngla3AlkLSM2136lflAxx8uRUFhN4e8f+IvDGntpMOl3rTOmoiyhWGCdB8yhQDkHC4Jx369KAPOqK9o1K38MTrq9hqp8HWVpHFItmdP3reQyr9zeSg3dOQe9eeaSvgc6XD/bsniAX/zeaLOOAxfeONu456YznvmgDN8OaP8A8JB4ksNJ8/7P9smEXm7N2zPfGRn86r6rY/2ZrN7YeZ5v2W4kh8zbjdtYjOO2cV2fhgeGx8S/Df8Awi7aoy/ax539orGDnIxt2E++c+1b0l5pnibUfG+k3Hh7TYF02yvLy3u4ocXBlifq0nVtxOSOnagDyOivVfCei6bp/wAN7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1Z3iLRtP1TxvocXguPS7u+u41e5s7Ni1oJkOW+9jCFRkj0B9aAPO67HRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OK7PVNBsNW8Ga9LfxeE/t2mwCeGTw4SrxsDysgxgg9Pzrkvhp/zN3/AGLN7/7JQBxFaWu6DfeHNUOn6oipcBFkIRwwwwyOR7Umi6udF1D7WtjY3x2FfJv4BNHz32nv716R8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFAHCT+GfJ8BW3iX7Xu+0XzWn2by/u4Utu3Z56dMfjWDXqGn6xHonwQsbp9MstRkOryJHHfR+ZEh2ZLbe5wCB9aZrUmh6J8Q/DGqy6PYx6dqmmW13e2ZhDQoZdysVUggYABGO496APMqK9RtfClp4S1fxne6paQ3VnpNuY7FbmISRyPMf3J+bOSBjP1ry6gAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDU0a+tLNbyK+ExjuYfLzCASOc9zULXNrZ6nFcaWJHSIhgLpRyw9lPTpU2jWNpeLeS3xmEdtD5mISATzjuKgkt4LvUI4NHSciTCqs5XcW/DjFc3ue0lv59tjk9z2kt/Ptt/kXrnxNJdyNJc6bp0kjDBdoWJ/wDQqq2Gsz2Fs9t5UFzbu24xXCblDeoqafw5cw280sdxaXBtxuljhl3Mg7kjFQ2GjT39s9z5sFtbo20y3D7VLegqUsPyabf1YiKwqpu1raf8ASXWbqfVo9QmEbyxEbEK/IAOgx6VbufE0l3I0lzpunSSMMF2hYn/ANCqlPo95Bqiae0YM8hGza3DA9CD6VZn8OXMNvNLHcWlwbcbpY4ZdzIO5IxRJYf3b28vQclhfdvbbT0IbDWZ7C2e28qC5t3bcYrhNyhvUVBqGoT6ndG4uiC2AoCjAUDoAKnsNGnv7Z7nzYLa3RtpluH2qW9BUGoafPpt2be6UBwAwKnIYHoQa0j7H2jtbmNY+w9q+W3MVa0bDWZ7C2e28qC5t3bcYrhNyhvUVnVo2GjT39s9z5sFtbo20y3D7VLegqqvJy/vNi63s+X95sRXmpz39+t3dBHZcAJt+QAdFx6VLe63dXtt9mxFb22c+Tbx7FJ9/WmXGkXlvqa2Dx7p3xsCnIcHoQfSrNx4cuoIZnS4tbhoBmWKGXc6AdcjFZ3oLl28jG+HXLt5GRU1pctZ3kVxGqu0TBgrjIJHrUNS21vLd3MdvAu6SRtqjOMmuiVrO+x0ytyvm2Na58TSXcjSXOm6dJIwwXaFif8A0KoNM1yTSgpgs7R5VJImkjJcZGMZBFPn8OXMNvNLHcWlwbcbpY4ZdzIO5IxTdL8PXmrRiSBoY0ZiqtK+NxAyQAMmuT/ZlTf8pxf7Iqb25Srf332+YSG2t7cgYIgQqG9zyeaqU50McjIeqkg4ptdUUoqyO2MVGNo7GjYazPYWz23lQXNu7bjFcJuUN6imz6vcXWppe3CxSugAWNkygA7Y9KdYaNPf2z3PmwW1ujbTLcPtUt6CmzaPeQaomnsgM742YYYYHoQfSsP3HO9r9f1Of/Z+eW1+v6/8Enl8QztaywW1rZ2azDbI1vFtZh6ZyeKqabqM2l3gubdY2cKVxIuRzVyfw5cw2000dzaXH2cZljhl3Mg9SMVkU6caMotQ26jpxoTi1DVPcntrp7W+jukVGeN94Vh8pP0rUufE0l3I0lzpunSSMMF2hYn/ANCrJtreW7uY7eBd0kjbVGcZNaU/hy5ht5pY7i0uDbjdLHDLuZB3JGKKio8y59xVVQ517TcyKt6hqEuoyxSTqimOJYhsBHA6dT1pqWM76fJeqo8iNwjMT3PtTtQ0+XTpYo52RjJEso2Eng9Oo61peDku5rzU3Nd9f+CLc6nNd2FraSLGI7YEIVXBOfU1TorSsNFlvrF7v7Va28KSeWTO5XnGfQ0NwpR7IG6dGOui/wAxs2s3U19b3Y2RTW6KiFB2X1zn1qzL4lunjmEVtaW8k6lZJoYtrsD15zVOXTZF1COzt5oLqSTG1oHyuT2ycVNqehXOlW8M1xJA6zEqPKfdgjrnjFYtUG4p28jBxwzcYu1+hmVJBL5FwkvlpLsOdkgyrexFR1JBF59wkXmJFvON8hwq+5NdLtbU65Ws7mrc+I5Lu0FvJp9gEVGSMrEcx57r83Bqg+oSvp0FmQojgdnVgDuyav3PhyS0tBcSahYFGRnjCynMmOy/Lyarf2Pc/wBif2oDGYN+wgE7hzjPTGM+9c0HQSXL3/E5Kbw6S5dr/iTz+JLy51K1vpUhM1suFwpw315rLlkM0zytgM7Fjj3NXk0S5kuLGEPFuvk3xkk4A9+Pb3qd/D/llg2raYGXIK+ec59Pu04yo09I/wBf0xxnh6VlHT/h/wDO5DY63PZWhtTDb3NuW3iK4j3BT6jnio7vUZNU1CObUWPljClYVA2Jnoop9jos97atdGWC2tw2wS3Em1Wb0FMu9Ok0vUI4dRU+WcMWhYHemeqmmvY87t8Q17D2j5fiLd7f6b/YI0/TRdE/afPLTqo/h244P0rGrZvbDTf7BGoaaboH7T5BWdlP8O7PA+lY1Ohy8r5b79SsPy8r5b79e5o6DrVx4d1611aySKSe1feizAlScEcgEHv61VvLp76+nu5QoknlaVgo4BY5OPbmlsbK41LUILKyiMtxcSLHEg/iYnAFdXf/AAz1KxtbyRdW0S7nsUL3Vpb3wM0QH3sggDjvzW50DdE+I91oWgvpNtoOhzQTIEuGntXZrgAkjzCHAbGT2rmk1O4t9aGqWOyzuFn8+IQLtWJt2QFBzwPT0qbT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RWbQB2WpfE3V9Rsb63jsdKsZNRXZe3Vna7JrhT1DMSevfAHWq+jePrzR/DyaM2kaRqNrHObiP7fbNKUcjGR8wH6VytFAG1qvi3WdY8QRa1d3jC9gKmBogFEAU5UIB0ArV1X4h3OtW1yuoaBoEl1cxlJL8WOJySMbt27G73xXIVueGfDn/CRf2v/pX2b+zdMm1D/V7/ADPLx8nUYznrzj0oAj8MeJbzwprS6pp0VvLOqMgW4QsuGGDwCDn8ayZHMsrO2AWJJwMDn2ptFABXVaV4+v8ATNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINcrRQB0XibxnfeLILMapaWIuLWMRm7hhKzTgDHztk59eABkmrX/Cwb6XQbbS7/SdH1AWtv9mt7m7tN80UeMABt2OO3FcnWlrug33hzVDp+qIqXARZCEcMMMMjke1AE3hrxLfeFdVa/wBNWGRniaGWK4j3xyxtjKsOMjgflTNd1z+3bmKUaXpumiNNoj0+38pW5zk8kk1lUUAFdVpXj6/0zQ7bSpdN0nUYLR2e1a/tPNa3LHLbTkdTzyDWPrug33hzVDp+qIqXARZCEcMMMMjke1ZtAHoekePJ/EHjjwzP4gi022NhPGsmoBPLkkUDGZXLY9+wyTUWufEe+hv9btNHs9It/tUssLalaWwE80Rc/wDLQHByMcgc9evNcDRQB6Np/ii10b4Q2MKRaVqNz/ashksL5FlwhTh9mQw5GN3HUjvXOap411DWfENpquo2tjMtmqpBYGD/AEVEHRfLz0/H07Cop/DPk+ArbxL9r3faL5rT7N5f3cKW3bs89OmPxrBoA7Gb4k340+7tNL0bRNH+2RGGabT7MxyMh6ruLHArjqKKANDQtbvPDuuW2q6Y6pdWzFkLLkHIIII9CCR+NdTb/FTUbR5ltdB8Pw2txG0c9nHYlYZskHcwDZJGMDnHzHiuGooA7TSfiVdaNo82mW3h7QXt7gAXHmWrkzgEkb8OAcZOK5ZdSnh1j+0rLbZzrP58X2cbVibdkBR2A7Cp9P0G+1TS9R1C0RWt9NRZLglwCoY4GB35FL4c0f8A4SDxJYaT5/2f7ZMIvN2btme+MjP50Abmq/EO51q2uV1DQNAkurmMpJfixxOSRjdu3Y3e+K5Creq2P9maze2Hmeb9luJIfM243bWIzjtnFVKAL+i6tPoWt2mqWiRvPaSiVFlBKkj1AIOPxq9Z+Lb+x1LW76KK3MutW09tcBlbaizHLFOeCMcZz+NYVFAHR+H/ABtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftSDxleQeK7TX9LsdO0u5tV2xxWVvsiPBBypJySGIJz0qj4c0iPXvENrpk9/Dp8dwxBuZ/uJhSeeR1xgc9SKpXkC2t/cW8cyXCwysizRnKyAHG4ex60Adlb/FTUbR5ltdB8Pw2txG0c9nHYlYZskHcwDZJGMDnHzHisDw94pvvDOtSalpsduWmjeKWCWPdE8bdUK56cDv2rFooA1dd1z+3bmKUaXpumiNNoj0+38pW5zk8kk1t3PxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj62rvQYLbwfYa2uq2ss13M8TWCn97CFJ+Y89Dgdv4h60AMl8R3c3hGDw60cItILo3SuFPmFyu3BOcYwfSrr3l1441LTLS8utM037Bp6WUU9zIYY/LiBILMc/Mcnp17CubooA9I+IPi6Cfwtpfhey1GLU5LVUN7fwKVSYou1FyeWwDy3c4/DzeiigAooooAKK0tP0G+1TS9R1C0RWt9NRZLglwCoY4GB35FZtABRWvqvhy70jRtJ1K5khaHVY3kgWNiWUKQDuyAB17E1kUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAbOh/8g/WP+vT/ANmFY4JBBBwR0IrT0a+tLNbyK+ExjuYfLzCASOc9zULXNrZ6nFcaWJHSIhgLpRyw9lPTpXPG6qS03/yOWPNGpPTf7tjRsoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP/CL6Z/afmfZfNl3+V13dqo3PiaS7kaS503TpJGGC7QsT/6FVWw1mewtntvKgubd23GK4Tcob1Fc7pVZrmktb338raehzOjVnHmkrSvffya09C94hOLHRjk7vsoIJ+9jPy0WUJ0bR7u6vRsmvYGgghP3irdWI7CqEus3U+rR6hMI3liI2IV+QAdBj0q3c+JpLuRpLnTdOkkYYLtCxP8A6FVezqqChbTr997FeyqqEadtN3r53sXoPsP/AAi+mf2n5n2XzZd/ldd3aotY+zGHRPtxm8r7L8xjAMm3+Hrx6frWZYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABRGhNVLva7f33/z/BBHDzVW72u3v3v/AJ/gi6R4d2na2qZ7ZWP/ABrSg+w/8Ivpn9p+Z9l82Xf5XXd2rlq0bDWZ7C2e28qC5t3bcYrhNyhvUVdWjJxXK29e/qtPvNK1CTiuVt2ffya0+827m+TTrnw9dzBmWO3yf72w8D9DUmlQadDe397aXr3MYgkZiYigjB7Enqa5u81Oe/v1u7oI7LgBNvyADouPSpb3W7q9tvs2Ire2znybePYpPv61k8NNxS77/fft5+Rg8JNxUVpffta9+3n5C2o0X7Mn21r8T87vJVNvXjGTnpiob3+z1aM6W11xncZwoIPbG2qdTWly1neRXEaq7RMGCuMgketdfI0+ZNvyO72bTck2/LobNlCdG0e7ur0bJr2BoIIT94q3ViOwqLwj/wAjVZ/8D/8AQGpbnxNJdyNJc6bp0kjDBdoWJ/8AQqg0zXJNKCmCztHlUkiaSMlxkYxkEVzOFWVOaa96X+VjkdOtKlNSj70vPyt+BQuf+Pub/fb+dRVbv777fMJDbW9uQMEQIVDe55PNVK7I35Vc74X5VdWOpg+w/wDCL6Z/afmfZfNl3+V13dqqeIT/AKDo5yd32UYJ67c/L+lUrDWZ7C2e28qC5t3bcYrhNyhvUU2fV7i61NL24WKV0ACxsmUAHbHpXHGjONTm6Xb++/8AmcEaFSNXm6Jt797/AOevojX05bV9Gv4tGeQ3jQEzC4XGYx94Lg4796xNNu4bG8E1xaR3aBSPKk6c9+hq3L4hna1lgtrWzs1mG2RreLazD0zk8VU03UZtLvBc26xs4UriRcjmrhTmoz5lv5/qaQpTUZ8y389du6Kxb5yy/LzkY7Vu2UJ0bR7u6vRsmvYGgghP3irdWI7Cse2untb6O6RUZ433hWHyk/StS58TSXcjSXOm6dJIwwXaFif/AEKqrKcrRS06/wCRVeNSVoxWnXX8C5HpV7deDLWOxgaQzXDTSYIHA+Udah8X2s0F1ZPKhVTaogOf4l6j8Miueq3qGoS6jLFJOqKY4liGwEcDp1PWpjRnGqpX016d/mTGhUjVUrprV7d/mLc3kM9hawR2ccMkIIeZesufX/Jq9ZX6WehGC90yS5t5p/MVy7RqSBjGQOao3OpzXdha2kixiO2BCFVwTn1NTWWtT2dobVobe5t924R3Ee4KfUdKqVNuFrde7/MqdNunbl633ffuTa7Y21stnd2CtFDeRbxEzZKHuM+nNT6j/wAiXo/+/L/6EaoXWsXF5fxXNykMgiACQlP3YA7Y9KtTeJZZ7NbV9O08RICEURH5M9SPm4NZ8lW0E1ezvv6/5mXs6yVNNXs7vX1X6mLRRUkEvkXCS+Wkuw52SDKt7EV2PY73sbGtf8gDRP8ArlJ/6EK0dLmRdB0+1uDiC8kmgf2zjB/A4rLufEcl3aC3k0+wCKjJGViOY891+bg1QfUJX06CzIURwOzqwB3ZNcPsZzpqMlbVv77/AOZ53sJzpqElbVv77/lc6hYHttd8PwSjDxxFGHuCwrE1Wz0+OS5lh1RZp/MJ8jyHXndyNx44/pRP4kvLnUrW+lSEzWy4XCnDfXmsuWQzTPK2AzsWOPc06NGpGSlJ206erZVChVjJSk7adLd2+3mbWq/8ivovlf6rEu7H97d3/WjWs/8ACPaH5n+s8qTP+7uG39KqWOtz2VobUw29zblt4iuI9wU+o54qO71GTVNQjm1Fj5YwpWFQNiZ6KKqNOakrrRNv1vf/ADKjSnGSutE27973/wA/wLn/ADIn/cS/9pVi1s3t/pv9gjT9NF0T9p88tOqj+Hbjg/SsataN7NtWu2bYe9pNq12y9o2qz6HrlnqdqFM1pMsqhhw2DnB+vSu7u9K8NfEKPUtT8NG50vW4oZL250+c74pgOXKP2OT3/Ida4PR9Um0XVoNQto4ZZYGJVJ03o2QRgjv1ro7j4kag2n3VrpmkaLo32yMxTzabZ+VI6HquSxwD7Yrc6Dp/AniZk+HniYf2Po7f2daQY3WQP2nLkfvv7/41zOiGDx78RdItb+wsNOt5WEUkWnQCBHVdznIH8R6Z+npWV4Z8V3/hae5axjtriG7j8q4truLzIpl9GXj+fek1PxPNfaraahY6fp+jT2mDF/ZkBiG4HIY5JyaAPTdSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvXPeCtMvbTw0l/d2vhGPT7yZvJm8Qr88u3CsIyMkAEH8c1j6r8Q7nWra5XUNA0CS6uYykl+LHE5JGN27djd74qLSvH1/pmh22lS6bpOowWjs9q1/aea1uWOW2nI6nnkGgDrbvwPozfHTTdFihCabeRLdPBG5KD92zlVPXaSn5Gn+GfE1rrkfjCGHw/pulmLw/emF7KDynEfA2SY+8fu88cg+vHJal8R9Z1K+0rUHhsoNS0wKEvoYSJpsDH7wkkMOvGAOTVif4n6lJFqCQaPolodStpbe7e2tCjSiQYLE7s7up9MnkGgB8enWviH4Ti5sLKJdW0O7CXBgiAkuIJT8rNgZYhuOc8A+tR/Eq1sdH1TTtBsLa3jk0yxjS7mijVWmnYBmLEdeMdc45rX+Hc9l4OSTxDquvaa1tcWrI2lROZbiU5+UFBwhyAQTnAJ6ZzXA6xqc+ta1ealdHM11M0rc5xk5x9B0oApV6P4Ek8OjwtOgOgr4hNznPiGMtAYdvAQ/dBz6/4Y84ro9F8Xro2mrZt4c0HUMOX86+szJIc9twYce1AGr4jutU8MeMI7rVfD3h4M9qPJhhs1ezmQk4kVQcE+/Wuh+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTivPvEnifUPFWoR3epmJfJiWGGGCPZHEg6Kq9hzWxc/Ee/v9PS31XRtE1GdIPs63t1Z7pwuMD5gwGR1HHWgDX8FaZe2nhpL+7tfCMen3kzeTN4hX55duFYRkZIAIP45qHxtDY+BfiIz6Rpmn3NvPaJKLW8i8+BC452g9sjI9M1kaV4+v9M0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g1X8TeM77xZBZjVLSxFxaxiM3cMJWacAY+dsnPrwAMk0Adv8AFjxU1r4lutMGi6LMJrKNftU1irTpvj6q+cgjPHpxUfhPRdN0/wCG9vrbJ4fbUL+6ePztfDNDGicbVUKRuOCcnsfauaufiPf3+npb6ro2iajOkH2db26s904XGB8wYDI6jjrVLw/421Hw/ps+mrbWOo6dO4kaz1CDzYw/94DIIPTv2oAvfEWDQk1KxuNAl08yT2wN7Dprs0EcwOCUyBgH09q46tLXNY/tu/F0NOsNOCxhBDYQ+VHwTzjJ55659KzaAPUNP1iPRPghY3T6ZZajIdXkSOO+j8yJDsyW29zgED60zWpND0T4h+GNVl0exj07VNMtru9szCGhQy7lYqpBAwACMdx71xMviO7m8IweHWjhFpBdG6Vwp8wuV24JzjGD6Vde8uvHGpaZaXl1pmm/YNPSyinuZDDH5cQJBZjn5jk9OvYUAdba+FLTwlq/jO91S0hurPSbcx2K3MQkjkeY/uT82ckDGfrVTT7iw0L4RWOs/wBh6Zf376pJAJL23EgC7M8j+LpwCcDJ4p3xB8XQT+FtL8L2WoxanJaqhvb+BSqTFF2ouTy2AeW7nH4N0/xRa6N8IbGFItK1G5/tWQyWF8iy4Qpw+zIYcjG7jqR3oA0b3wvo3iLxR4KuorGPTIPEERe7tLf5IwY+TsH8Ibpx7d6ltH0jxdq/ifw7J4a0vTo7C1uJbK6tLfy5YmiYAb2H3geM/wD164PWPGusazr1pq0ksdrNYhFs47VNkduFOQEXnv659OlaWpfE3V9Rsb63jsdKsZNRXZe3Vna7JrhT1DMSevfAHWgDpfAniZk+HniYf2Po7f2daQY3WQP2nLkfvv7/AONYPhbWjrvxW8P3Lafp+nlLiOPytPtxDGcMTuKjqecZ9AKwvDPiu/8AC09y1jHbXEN3H5VxbXcXmRTL6MvH8+9TyeMph4k0/WbLR9J0+awYNHDZ25jjcg5y43ZP50AdzJeaZ4m1HxvpNx4e02BdNsry8t7uKHFwZYn6tJ1bcTkjp2qDwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1cPZ+Lb+x1LW76KK3MutW09tcBlbaizHLFOeCMcZz+NTeH/G2o+H9Nn01bax1HTp3EjWeoQebGH/ALwGQQenftQBu+KIfCEfjLQ7lJLNrGZY21aDSmZoUYN82zIBCkdhzwe9b/iG1a/0nVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdq87uvEv2rxDb6qNE0eAQAAWUNri3fGeWTPzdeeewrWm+JN+NPu7TS9G0TR/tkRhmm0+zMcjIeq7ixwKALXwt1GB/FFjod5o2k31ve3BMkt5ZrLKo29FY9Bx0x3NYWzSoPiC6avGV0qPUWE6QrjEQkOQAO2PTt0q54a8dz+F4YBZaFotxcwOXS8ubZmmBP8AtBx9Kh1Lxi2p61aalJoGiQyW7tI8UVqRHcFjn96Cx3f/AFzQB3fiG1a/0nVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdq8grsZviTfjT7u00vRtE0f7ZEYZptPszHIyHqu4scCuOoAltZ/st5DP5ccvlSK/lyruR8HOGHcHuK9A8WTWuq/CrRtZXSNM0+8nv5Y5GsLRYQyqDgcc/rXCabejTdShuza214Imz5F0m+N+OjDIyPxrr5vilcz6WmnSeF/DZs42Lxw/Yn2ox6sB5mAaAL3gSTw6PC06A6CviE3Oc+IYy0Bh28BD90HPr/hjA8fWWp2evxjVtM03T2kt1aH+yolS3mTJw644OfX2FRaL4vXRtNWzbw5oOoYcv519ZmSQ57bgw49qqeJPE+oeKtQju9TMS+TEsMMMEeyOJB0VV7DmgDHr2vwbpmkSeFPBiXWiabctqn9oR3Ms1qrSME8xl+brkbAM9QOBivFK67SPiJqWk2uiWyWtrJDopuDBkMGfzg4bcc443nGAOlAHXX3hvSvEOrfD/fY2tgNYgZrxLOIQrJtw2MDoTyM9eaualb+GJ11ew1U+DrK0jikWzOn71vIZV+5vJQbunIPevNr7xlql7a6HCPKtm0JNtpNACH6g5YkkE/KOgFaGq/EO51q2uV1DQNAkurmMpJfixxOSRjdu3Y3e+KAOo8CeJmT4eeJh/Y+jt/Z1pBjdZA/acuR++/v/jXneu60ddvkuW0/T9PKRiPytPtxDGcEncVHU84z6AVZ8M+K7/wtPctYx21xDdx+VcW13F5kUy+jLx/PvUGva4NduYpRpWm6YI02+Xp0BiVuc5OScmgDV8R6tbX/AIF8JWkdyst1YxXSXEYHMeZcoD/wECuVra1XxRe6voGlaRcxWyW+lqywtHHtdg3Xcc89O2PfNYtABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGpo1jaXi3kt8ZhHbQ+ZiEgE847ioJLeC71CODR0nIkwqrOV3Fvw4xVzQ/wDkH6x/16f+zCscEggg4I6EVzx5nUlrt92xzR5pVJ67bdtjWn8OXMNvNLHcWlwbcbpY4ZdzIO5IxUNho09/bPc+bBbW6NtMtw+1S3oKvWUJ0bR7u6vRsmvYGgghP3irdWI7CrUH2H/hF9M/tPzPsvmy7/K67u1YOtUS0d9bXt5Xf+RzSr1Ip2d9bXt5XdvusYk+j3kGqJp7RgzyEbNrcMD0IPpVmfw5cw280sdxaXBtxuljhl3Mg7kjFWPEJxY6Mcnd9lBBP3sZ+WiyhOjaPd3V6Nk17A0EEJ+8VbqxHYU/a1HCMk9drd9SvbVHTjJPV6Wtvrb+uxRsNGnv7Z7nzYLa3RtpluH2qW9BUGoafPpt2be6UBwAwKnIYHoQa34PsP8Awi+mf2n5n2XzZd/ldd3aotY+zGHRPtxm8r7L8xjAMm3+Hrx6frRGvN1LPa7X3X/y/FCjiJurZ7Xa27X/AMvxRzdaNho09/bPc+bBbW6NtMtw+1S3oKmI8O7TtbVM9srH/jWlB9h/4RfTP7T8z7L5su/yuu7tV1a0lFcqa17er0+40rYiSiuVNXfbyb0+4xLjSLy31NbB490742BTkOD0IPpVm48OXUEMzpcWtw0AzLFDLudAOuRitW5vk0658PXcwZljt8n+9sPA/Q1JpUGnQ3t/e2l69zGIJGYmIoIwexJ6msJYiooqX6bu9vkc8sVVUVL9N3e3y/4Jx9S21vLd3MdvAu6SRtqjOMmrtqNF+zJ9ta/E/O7yVTb14xk56YqG9/s9WjOltdcZ3GcKCD2xtrt523ypP7tD0PaNvlSf3aFufw5cw280sdxaXBtxuljhl3Mg7kjFN0vw9eatGJIGhjRmKq0r43EDJAAyatWUJ0bR7u6vRsmvYGgghP3irdWI7CovCP8AyNVn/wAD/wDQGrmlUqKnOSe3W3kckqtVUqkoyvy9bb2Wv4mO6GORkPVSQcU2pbn/AI+5v99v51FXatUd61Ro2GjT39s9z5sFtbo20y3D7VLegps2j3kGqJp7IDO+NmGGGB6EH0rag+w/8Ivpn9p+Z9l82Xf5XXd2qp4hP+g6Ocnd9lGCeu3Py/pXFGtOVTl6Xa27X/y1PPjiKkqvL0ba27X+/bX1RBP4cuYbaaaO5tLj7OMyxwy7mQepGKyK6bTltX0a/i0Z5DeNATMLhcZjH3guDjv3rE027hsbwTXFpHdoFI8qTpz36GtKVSbUr6tfJmtGpUamnq18nt/ViG2t5bu5jt4F3SSNtUZxk1pT+HLmG3mljuLS4NuN0scMu5kHckYrKLfOWX5ecjHat2yhOjaPd3V6Nk17A0EEJ+8VbqxHYVVaU42cX8u5Vec4WcX8u/8ASMlLGd9PkvVUeRG4RmJ7n2p2oafLp0sUc7IxkiWUbCTwenUda3I9KvbrwZax2MDSGa4aaTBA4HyjrUPi+1mgurJ5UKqbVEBz/EvUfhkVnDEc1Xkut3+H9MyhiuetyXW79dP6Zz1aVhost9Yvd/arW3hSTyyZ3K84z6Gobm8hnsLWCOzjhkhBDzL1lz6/5NXrK/Sz0IwXumSXNvNP5iuXaNSQMYyBzWlSVTk91a38jarOpyXirO/l/wAMUpdNkXUI7O3mgupJMbWgfK5PbJxU2p6Fc6VbwzXEkDrMSo8p92COueMVLrtjbWy2d3YK0UN5FvETNkoe4z6c1PqP/Il6P/vy/wDoRrP2snyNPRuz09f8jJVpv2ck9G7PTXZ/5GBUkEXn3CReYkW843yHCr7k1HRXW9jtexs3PhyS0tBcSahYFGRnjCynMmOy/Lyarf2Pc/2J/agMZg37CATuHOM9MYz71c1r/kAaJ/1yk/8AQhWjpcyLoOn2twcQXkk0D+2cYP4HFcPtakaale+r+5X/AMjzvbVY0lO99X9yv/kYaaJcyXFjCHi3Xyb4yScAe/Ht71O/h/yywbVtMDLkFfPOc+n3a2lge213w/BKMPHEUYe4LCsTVbPT45LmWHVFmn8wnyPIded3I3Hjj+lKFac5JX+5X6tBCvOpNK+/ZX6tfIhsdFnvbVroywW1uG2CW4k2qzegpl3p0ml6hHDqKnyzhi0LA70z1U1f1X/kV9F8r/VYl3Y/vbu/60a1n/hHtD8z/WeVJn/d3Db+laRqTclfZtr7r/5Gkas5SV3o21bta/8Al+JHe2Gm/wBgjUNNN0D9p8grOyn+HdngfSsatr/mRP8AuJf+0qxa1o3s03ezZth27STd7NmjoOi3HiLXrXSbJ4o57p9iNMSFBwTyQCe3pXRXfwz1OK1vJNP1TR9XlslL3Ftp90XmjUHBOwqDxUPwu/5Kfof/AF3P/oLV1+l2mn+B/GeqeJ9W8Q6TcCM3Hk2FlciaaZ3JARlH3evOe49q3Og5TRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OK46u3+Gn/M3f8AYs3v/slc54c0291fxJY2Wl20V1dSSgxwzAGN9vzHdn+HAOfbNAGXRXsmqaDYat4M16W/i8J/btNgE8MnhwlXjYHlZBjBB6fnXJx6da+IfhOLmwsol1bQ7sJcGCICS4glPys2BliG45zwD60AcPW1d6DBbeD7DW11W1lmu5niawU/vYQpPzHnocDt/EPWt/4gpY+HvEGkaRYWVm0uj2sP2tjAv+kznDt5mPvDGBg+pFXPFk1rqvwq0bWV0jTNPvJ7+WORrC0WEMqg4HHP60AedUV6Rp1zp+hfCGz1k6FpmoX8mqSW6yXtuJAF255H8XTABOBk1oy+GNG1r4reE4Rp8Vnaa1pUOo3NrbjbGHMcjlVHZTsA496APJqK9T0XWNL8Vf8ACUwy+FNHsRZaJdz2jQWoSSIqABu9WGQd3BBBx1ryygAorb8H6hY6Z4tsLjV7W3u7DzQlxFcRq6bG4LYIPIzn8K7a18KWnhLV/Gd7qlpDdWek25jsVuYhJHI8x/cn5s5IGM/WgDy6ivRdNWw8K/Cu08QjR9P1XUNSvmh3ahD50cCJngKeMnGc+/sK1zoGjyfEvwZeQaZbw2muWiXM+nlA0SuVOcKeNp4wMdqAPI6K9J8LaXYXF78QRPY20q2mnXb24eFWELAttKZHykY4Ip/gaXTbn4ceI5dU0LTbttFEE8ErW4EshaRm2u/Ur8oGOPlyKAPM6K6fxRr+j6/pWmSWejw6ZqsPmLe/Y7dYreVc/IVAOcgdcjvXMUAFFeq+E9F03T/hvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rF8ZTaFpXibSdU0BNIunMKvfWdsvm2nmg4YBXH3WHbHHX3oA4SivXvFmi6L4W8LT+JNO0XdN4gCLb295bq8emBlDP8p4DE52+g6ehx9PuLDQvhFY6z/YemX9++qSQCS9txIAuzPI/i6cAnAyeKAPOaK9XvfC+jeIvFHgq6isY9Mg8QRF7u0t/kjBj5OwfwhunHt3rR1K38MTrq9hqp8HWVpHFItmdP3reQyr9zeSg3dOQe9AHi9FemeBpdNufhx4jl1TQtNu20UQTwStbgSyFpGba79SvygY4+XIrn9e8TaPqtro13Z6HaWOrWjsbyOC1VLW4AYFPlB54GCCOcnmgDNu9BgtvB9hra6rayzXczxNYKf3sIUn5jz0OB2/iHrWLXoviya11X4VaNrK6Rpmn3k9/LHI1haLCGVQcDjn9a6bwbpmkSeFPBiXWiabctqn9oR3Ms1qrSME8xl+brkbAM9QOBigDxSivXL7w3pXiHVvh/vsbWwGsQM14lnEIVk24bGB0J5GevNXNSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvQB4vRXpGnXOn6F8IbPWToWmahfyapJbrJe24kAXbnkfxdMAE4GTUXjC6svDvibR9Y0vQ9L26pokF5LZT2wkt0kkznah4H3Rj8fWgDjtd0G+8OaodP1RFS4CLIQjhhhhkcj2qfwt4ZvPF2vR6TpssEU8iM4a4YhcKMnkAn9K9A+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTivPvC/iO58K69HqlnFHLIkbxlJM4IZSvb65/CgDHorQ0I6cuv2J1wOdOE6G5EfUpnnpz+XPpXp/iG1a/0nVH8Iad4L1HTY4Xb/AEK3H22CH++Q3zBgO/r0HagDyCiiuw+FNla6j8TtJtdQtobq3k87fDPGHRsQuRlTweQD+FAHH0V7zoenaNqyaTBc+HtIUahY6gJXjs1DDyJiiFT2ODy3UnvXN+E9F03T/hvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2oA8qrS13Qb7w5qh0/VEVLgIshCOGGGGRyPauv8V3+h6F4jsdT8PW2g38k9ni9tEiM9pHNnBZFbGM9h2/Gtj4seKmtfEt1pg0XRZhNZRr9qmsVadN8fVXzkEZ49OKAOEn8M+T4CtvEv2vd9ovmtPs3l/dwpbduzz06Y/GsGvUNP1iPRPghY3T6ZZajIdXkSOO+j8yJDsyW29zgED60up+GdI1n4meE4I7OLT7XXNNtr65t7f5EDMHLKo/hBCAcetAHl1FeuWj6R4u1fxP4dk8NaXp0dha3EtldWlv5csTRMAN7D7wPGf/r1jQzWHhL4Z6HqcWh6dqd/rU1wZZdRt/OWJIn2BVGRgnrn60Acx4m8Of8ACO/2R/pX2n+0tMh1D/V7PL8zPydTnGOvGfSsOu++LEsU9/4ZmtoRbwyeHbVo4Qc+WpLkLnvgcVwNABRXpGnXOn6F8IbPWToWmahfyapJbrJe24kAXbnkfxdMAE4GTVnU/DOkaz8TPCcEdnFp9rrmm219c29v8iBmDllUfwghAOPWgDy6ivXLR9I8Xav4n8OyeGtL06OwtbiWyurS38uWJomAG9h94HjP/wBerPg3SdFuNA8L6rqOlWMsKQXUN4XgTEjm5iijLZ+82JOM+lAHjVFdz8QdItdA0Pwxp0VvDHeLbTSXMqRhXlLSYBY9T904yTjtXDUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBqaNfWlmt5FfCYx3MPl5hAJHOe5qFrm1s9TiuNLEjpEQwF0o5Yeynp0qbRrG0vFvJb4zCO2h8zEJAJ5x3FQSW8F3qEcGjpORJhVWcruLfhxiub3PaS38+2xye57SW/n22/yL1z4mku5GkudN06SRhgu0LE/wDoVVbDWZ7C2e28qC5t3bcYrhNyhvUVNP4cuYbeaWO4tLg243Sxwy7mQdyRiobDRp7+2e582C2t0baZbh9qlvQVKWH5NNv6sRFYVU3a1tP+AJLrN1Pq0eoTCN5YiNiFfkAHQY9Kt3PiaS7kaS503TpJGGC7QsT/AOhVSn0e8g1RNPaMGeQjZtbhgehB9Ksz+HLmG3mljuLS4NuN0scMu5kHckYoksP7t7eXoOSwvu3ttp6ENhrM9hbPbeVBc27tuMVwm5Q3qKg1DUJ9TujcXRBbAUBRgKB0AFT2GjT39s9z5sFtbo20y3D7VLegqDUNPn027NvdKA4AYFTkMD0INaR9j7R2tzGsfYe1fLbmKtaNhrM9hbPbeVBc27tuMVwm5Q3qKzq0bDRp7+2e582C2t0baZbh9qlvQVVXk5f3mxdb2fL+82IrzU57+/W7ugjsuAE2/IAOi49Klvdbur22+zYit7bOfJt49ik+/rTLjSLy31NbB490742BTkOD0IPpVm48OXUEMzpcWtw0AzLFDLudAOuRis70Fy7eRjfDrl28jIqa0uWs7yK4jVXaJgwVxkEj1qGpba3lu7mO3gXdJI21RnGTXRK1nfY6ZW5XzbGtc+JpLuRpLnTdOkkYYLtCxP8A6FUGma5JpQUwWdo8qkkTSRkuMjGMginz+HLmG3mljuLS4NuN0scMu5kHckYpul+HrzVoxJA0MaMxVWlfG4gZIAGTXJ/sypv+U4v9kVN7cpVv777fMJDbW9uQMEQIVDe55PNVKc6GORkPVSQcU2uqKUVZHbGKjG0djRsNZnsLZ7byoLm3dtxiuE3KG9RTZ9XuLrU0vbhYpXQALGyZQAdselOsNGnv7Z7nzYLa3RtpluH2qW9BTZtHvINUTT2QGd8bMMMMD0IPpWH7jne1+v6nP/s/PLa/X9f+CTy+IZ2tZYLa1s7NZhtka3i2sw9M5PFVNN1GbS7wXNusbOFK4kXI5q5P4cuYbaaaO5tLj7OMyxwy7mQepGKyKdONGUWobdR040JxahqnuT2109rfR3SKjPG+8Kw+Un6VqXPiaS7kaS503TpJGGC7QsT/AOhVk21vLd3MdvAu6SRtqjOMmtKfw5cw280sdxaXBtxuljhl3Mg7kjFFRUeZc+4qqoc69puZFW9Q1CXUZYpJ1RTHEsQ2AjgdOp601LGd9PkvVUeRG4RmJ7n2p2oafLp0sUc7IxkiWUbCTwenUda0vByXc15qbmu+v/BFudTmu7C1tJFjEdsCEKrgnPqamstans7Q2rQ29zb7twjuI9wU+o6Vm1pWGiy31i939qtbeFJPLJncrzjPoamcaUYWlt+pFSNGMLTWl/xG3WsXF5fxXNykMgiACQlP3YA7Y9KtTeJZZ7NbV9O08RICEURH5M9SPm4NUpdNkXUI7O3mgupJMbWgfK5PbJxU2p6Fc6VbwzXEkDrMSo8p92COueMVm40G4x+4zccO3GP3GZUkEvkXCS+Wkuw52SDKt7EVHUkEXn3CReYkW843yHCr7k10u1tTrlazuatz4jku7QW8mn2ARUZIysRzHnuvzcGqD6hK+nQWZCiOB2dWAO7Jq/c+HJLS0FxJqFgUZGeMLKcyY7L8vJqt/Y9z/Yn9qAxmDfsIBO4c4z0xjPvXNB0Ely9/xOSm8OkuXa/4k8/iS8udStb6VITNbLhcKcN9eay5ZDNM8rYDOxY49zV5NEuZLixhDxbr5N8ZJOAPfj296nfw/wCWWDatpgZcgr55zn0+7TjKjT0j/X9McZ4elZR0/wCH/wA7kNjrc9laG1MNvc25beIriPcFPqOeKju9Rk1TUI5tRY+WMKVhUDYmeiin2Oiz3tq10ZYLa3DbBLcSbVZvQUy706TS9Qjh1FT5ZwxaFgd6Z6qaa9jzu3xDXsPaPl+It3t/pv8AYI0/TRdE/afPLTqo/h244P0rGrZvbDTf7BGoaaboH7T5BWdlP8O7PA+lY1Ohy8r5b79SsPy8r5b79e5o6DrVx4d1611aySKSe1feizAlScEcgEHv61VvLp76+nu5QoknlaVgo4BY5OPbmoK6bXfAeq+HvDdhrd/JbG3vSgWKN2MkRdN6hwVAB29smtzoKPhrxLfeFdVa/wBNWGRniaGWK4j3xyxtjKsOMjgflV0+N7yHxJY63penaXpVzZAiNLG28uNsgg7gSScgkdehrmqKAO5t/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxWp8P7qy8JNP4l1TXNLFtdW7BtIgYyzSEtlVKDhCCBgnOB9c1wmu6DfeHNUOn6oipcBFkIRwwwwyOR7U7w5pEeveIbXTJ7+HT47hiDcz/cTCk88jrjA56kUAPl8QzXHiyXXru1t7yWWdpngulMkTZz8pGRkDP6Cuim+KVzPpaadJ4X8NmzjYvHD9ifajHqwHmYBrjbyBbW/uLeOZLhYZWRZozlZADjcPY9agoA15fEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0rTtfE+rav4n8PSxXVjpl1pltDY211IxjiREzhpCSeu4gnp7VytFAHtep+ILDR/D2uz6lqPhebUdTsZbRIfDse4zPIMGSR/br2HJ6nFeKUUUAX9G0v+2NSW0+3WVhuUsZ76byo1wM8tg8+1dz8QfF0E/hbS/C9lqMWpyWqob2/gUqkxRdqLk8tgHlu5x+Hm9aWu6DfeHNUOn6oipcBFkIRwwwwyOR7UAaWgeN7/QdJl0s2en6np0som+y6jB5qI+Mbl5BB/z61FqHjTWdS8U2/iCadI7212C3ESBUhVTkKq/3eTx7msCigDvIvi1qsN9c3MWi6CgvImivIlsiEutxGWk+bLHqOuPmbjmq+k/Eq60bR5tMtvD2gvb3AAuPMtXJnAJI34cA4ycVxdFAEt1P9pvJp/Kjh82Rn8uJdqJk5wo7AdAKiorau9BgtvB9hra6rayzXczxNYKf3sIUn5jz0OB2/iHrQBZ8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP8A3gMgg9O/aoLnxN9o8R22rjRNJg+zbdtnBbslu5BJBZQ2Scn15wO1YdFAHUv8QtauZtZOoC3vodYGJ7a4VjGhH3WQBgVK4ABz2Gc4rd0/xRa6N8IbGFItK1G5/tWQyWF8iy4Qpw+zIYcjG7jqR3rzmtLT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RQBd1rxnrGt65a6pLLHay2SqtpHaJ5cdsFOQEXnHNaGq/EO51q2uV1DQNAkurmMpJfixxOSRjdu3Y3e+K5CigDsdE+I91oWgvpNtoOhzQTIEuGntXZrgAkjzCHAbGT2rnbbVBb67/aZsLKYea0n2SWImDnPy7c/dGeBnsKoUUAdzN8UrmfS006Twv4bNnGxeOH7E+1GPVgPMwDVTSPiJqWk2uiWyWtrJDopuDBkMGfzg4bcc443nGAOlcjRQBv33jLVL210OEeVbNoSbbSaAEP1ByxJIJ+UdAK0NV+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98VyFbnhnw5/wAJF/a/+lfZv7N0ybUP9Xv8zy8fJ1GM56849KAIpfEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0puueILrxB/Z32yOFP7OsYrCLylI3Rx5wWyT83POMD2rKooA7C5+I9/f6elvqujaJqM6QfZ1vbqz3ThcYHzBgMjqOOtcfRRQBa029/s7UoLz7Nb3Xktu8m6j3xv7Mvce1dPN8Sb8afd2ml6Nomj/bIjDNNp9mY5GQ9V3FjgVx1FABWr4a8QXXhbxDbazp8cMlxbb9izqSh3IVOQCD0Y96yqKAOy0/4lappg042tpZl7GK6iUyKxDieTe2QGHQ8DmqHh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftXOUUAaWuax/bd+LoadYacFjCCGwh8qPgnnGTzz1z6VvXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj6KANeXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9Klv/Fup319o94DHbXGj2kNpayQKQQsRJVjknLc89vasOigDstS+Jur6jY31vHY6VYyaiuy9urO12TXCnqGYk9e+AOtVNG8dX+k6H/Y81hpuq2CyGWKHUbbzRC56leRjqfzNcxRQBteJvFF94rvLS51NLdJLW1S1TyI9gKKWIJGSM/MemB04rFoooA15fEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0qW/wDFup319o94DHbXGj2kNpayQKQQsRJVjknLc89vasOigDstS+Jur6jY31vHY6VYyaiuy9urO12TXCnqGYk9e+AOtULbxvqlp4O/4RyCO2FsJxMs5RjKp3q+Ac4xuQHGK5yigDc8WeK73xhqyahqUNtBJHCIVS2VlQKCT0JPdjTdV8UXur6BpWkXMVslvpassLRx7XYN13HPPTtj3zWLRQBseGPEt54U1pdU06K3lnVGQLcIWXDDB4BBz+NZMjmWVnbALEk4GBz7U2igDa1XxRe6voGlaRcxWyW+lqywtHHtdg3Xcc89O2PfNYtFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGzof8AyD9Y/wCvT/2YVjgkEEHBHQitPRr60s1vIr4TGO5h8vMIBI5z3NQtc2tnqcVxpYkdIiGAulHLD2U9Olc8bqpLTf8AyOWPNGpPTf7tjRsoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP/AAi+mf2n5n2XzZd/ldd3aqNz4mku5GkudN06SRhgu0LE/wDoVVbDWZ7C2e28qC5t3bcYrhNyhvUVzulVmuaS1vffytp6HM6NWceaStK99/JrT0L3iE4sdGOTu+yggn72M/LRZQnRtHu7q9Gya9gaCCE/eKt1YjsKoS6zdT6tHqEwjeWIjYhX5AB0GPSrdz4mku5GkudN06SRhgu0LE/+hVXs6qgoW06/fexXsqqhGnbTd6+d7F6D7D/wi+mf2n5n2XzZd/ldd3aotY+zGHRPtxm8r7L8xjAMm3+Hrx6frWZYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABRGhNVLva7f33/wA/wQRw81Vu9rt797/5/gi6R4d2na2qZ7ZWP/GtKD7D/wAIvpn9p+Z9l82Xf5XXd2rlq0bDWZ7C2e28qC5t3bcYrhNyhvUVdWjJxXK29e/qtPvNK1CTiuVt2ffya0+827m+TTrnw9dzBmWO3yf72w8D9DUmlQadDe397aXr3MYgkZiYigjB7Enqa5u81Oe/v1u7oI7LgBNvyADouPSpb3W7q9tvs2Ire2znybePYpPv61k8NNxS77/fft5+Rg8JNxUVpffta9+3n5C2o0X7Mn21r8T87vJVNvXjGTnpiob3+z1aM6W11xncZwoIPbG2qdTWly1neRXEaq7RMGCuMgketdfI0+ZNvyO72bTck2/LobNlCdG0e7ur0bJr2BoIIT94q3ViOwqLwj/yNVn/AMD/APQGpbnxNJdyNJc6bp0kjDBdoWJ/9CqDTNck0oKYLO0eVSSJpIyXGRjGQRXM4VZU5pr3pf5WOR060qU1KPvS8/K34FC5/wCPub/fb+dRVbv777fMJDbW9uQMEQIVDe55PNVK7I35Vc74X5VdWOpg+w/8Ivpn9p+Z9l82Xf5XXd2qp4hP+g6Ocnd9lGCeu3Py/pVKw1mewtntvKgubd23GK4Tcob1FNn1e4utTS9uFildAAsbJlAB2x6VxxozjU5ul2/vv/mcEaFSNXm6Jt797/56+iNfTltX0a/i0Z5DeNATMLhcZjH3guDjv3rE027hsbwTXFpHdoFI8qTpz36GrcviGdrWWC2tbOzWYbZGt4trMPTOTxVTTdRm0u8FzbrGzhSuJFyOauFOajPmW/n+ppClNRnzLfz127orFvnLL8vORjtW7ZQnRtHu7q9Gya9gaCCE/eKt1YjsKx7a6e1vo7pFRnjfeFYfKT9K1LnxNJdyNJc6bp0kjDBdoWJ/9CqqynK0UtOv+RVeNSVoxWnXX8C5HpV7deDLWOxgaQzXDTSYIHA+Udah8X2s0F1ZPKhVTaogOf4l6j8Miueq3qGoS6jLFJOqKY4liGwEcDp1PWpjRnGqpX016d/mTGhUjVUrprV7d/mLc3kM9hawR2ccMkIIeZesufX/ACavWV+lnoRgvdMkubeafzFcu0akgYxkDmqNzqc13YWtpIsYjtgQhVcE59TU1lrU9naG1aG3ubfduEdxHuCn1HSqlTbha3Xu/wAyp026duXrfd9+5NrtjbWy2d3YK0UN5FvETNkoe4z6c1PqP/Il6P8A78v/AKEaoXWsXF5fxXNykMgiACQlP3YA7Y9KtTeJZZ7NbV9O08RICEURH5M9SPm4NZ8lW0E1ezvv6/5mXs6yVNNXs7vX1X6mLRRUkEvkXCS+Wkuw52SDKt7EV2PY73sbGtf8gDRP+uUn/oQrR0uZF0HT7W4OILySaB/bOMH8Disu58RyXdoLeTT7AIqMkZWI5jz3X5uDVB9QlfToLMhRHA7OrAHdk1w+xnOmoyVtW/vv/med7Cc6ahJW1b++/wCVzqFge213w/BKMPHEUYe4LCsTVbPT45LmWHVFmn8wnyPIded3I3Hjj+lE/iS8udStb6VITNbLhcKcN9eay5ZDNM8rYDOxY49zTo0akZKUnbTp6tlUKFWMlKTtp0t3b7eZtar/AMivovlf6rEu7H97d3/WjWs/8I9ofmf6zypM/wC7uG39KqWOtz2VobUw29zblt4iuI9wU+o54qO71GTVNQjm1Fj5YwpWFQNiZ6KKqNOakrrRNv1vf/MqNKcZK60Tbv3vf/P8C5/zIn/cS/8AaVYtbN7f6b/YI0/TRdE/afPLTqo/h244P0rGrWjezbVrtm2HvaTatds1PDektr3ifTtLQE/arhI2wcYUn5j+Ayfwr2fxHoGv6rY+O49Q06WCwZY7nTWLKw/0cYwoByNyL0x39a8a8NeIbnwtrceq2EMEtzEjLH56lghZSpYAEc4JpfDniS98Ma4mqWAilmCujJcKWSRWBBDAEE9c9eorc6DrdMi0/wALfC218SHR7HVdR1G9aBTfxebFbooPGzoSdpOff2rFufGVo2s2+p2XhbRoJVgMc8D2/mW8rk/fEZ4U/SodA8b6joGnXGmpbWN/ptw/mPZX8HmxBv7wGQQeB37Cs/XdaGuXkdwNL07Tdkfl+Vp8BiRuSckEnJ56+mPSgD0X4seKmtfEt1pg0XRZhNZRr9qmsVadN8fVXzkEZ49OKwfhbqMD+KLHQ7zRtJvre9uCZJbyzWWVRt6Kx6DjpjuaqXPxHv7/AE9LfVdG0TUZ0g+zre3VnunC4wPmDAZHUcdah8NeO5/C8MAstC0W4uYHLpeXNszTAn/aDj6UASaJoNprfxZTR7gCKzl1GVGRPlGxWY7RjpkDHHrXXWj6R4u1fxP4dk8NaXp0dha3EtldWlv5csTRMAN7D7wPGf8A69cJq3jG61PV7TU7XT9O0m8tZDKsunQGMu5IO5sscnI/U1o6l8TdX1GxvreOx0qxk1Fdl7dWdrsmuFPUMxJ698AdaANbTrnT9C+ENnrJ0LTNQv5NUkt1kvbcSALtzyP4umACcDJrJ+JVlYwato97ptjDYLqmj299LbwDEaSPuyFHYcDisSXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KbrniC68Qf2d9sjhT+zrGKwi8pSN0cecFsk/NzzjA9qAJdV1uyv9A0qwttFtrK4slYTXkZ+e6J6FuB09yfbHSsWtrVfFF7q+gaVpFzFbJb6WrLC0ce12Dddxzz07Y981i0AaOi6udF1D7WtjY3x2FfJv4BNHz32nv716R8WPFTWviW60waLoswmso1+1TWKtOm+Pqr5yCM8enFeTV2Fz8R7+/wBPS31XRtE1GdIPs63t1Z7pwuMD5gwGR1HHWgDpfCei6bp/w3t9bZPD7ahf3Tx+dr4ZoY0TjaqhSNxwTk9j7VjeMbjQtI8S6Xqnh6LRbyRrfdeWcKmazE3IOFYD5SDkDsRWN4f8baj4f02fTVtrHUdOncSNZ6hB5sYf+8BkEHp37Ux/FYfxDHqp8PaGoSLyvsS2hFu3X5im7JbnrnsKAPRfF+q+F/CPxFn0q68KadLpU0YkujHaqZlLRgARZICAEA8Y5LGrHhHTNFk8M+Dkl0XT7oamdRjnmubVTK6p5rId3UEbFGew4GK868XeOrvxltfUtL0u3uA4Zrm1gZZXABAUszHI56ewqbSPiJqWk2uiWyWtrJDopuDBkMGfzg4bcc443nGAOlAGr48jsrXSvBuuWml2FvPd2pmnhhtwkMpVlIDIOCOSD6ineLJrXVfhVo2srpGmafeT38scjWFosIZVBwOOf1rnZ/Gl5dR6FFeWGn3MOiRtFBFNEzJKpx/rBu56Dpitab4pXM+lpp0nhfw2bONi8cP2J9qMerAeZgGgC/p1zp+hfCGz1k6FpmoX8mqSW6yXtuJAF255H8XTABOBk03xPoIv/HXhn/hGdItI7jWNNttQNiFxB5h3Mw2ngJhOR6Z9a5CXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KvDx3q6a5ouqwC3hutFso7K3KIcNGgYfOCTkkMQcY9sUAd/qmg2GreDNelv4vCf27TYBPDJ4cJV42B5WQYwQen51S8CeJmT4eeJh/Y+jt/Z1pBjdZA/acuR++/v/jWDb/FTUbR5ltdB8Pw2txG0c9nHYlYZskHcwDZJGMDnHzHisTw94uv/AA1eXc1jDaSw3qGO4s7iHfDIuc7SuenPrQBp6IYPHvxF0i1v7Cw063lYRSRadAIEdV3OcgfxHpn6eldvqVv4YnXV7DVT4OsrSOKRbM6fvW8hlX7m8lBu6cg968y1PxPNfaraahY6fp+jT2mDF/ZkBiG4HIY5Jya1NV+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98UAVdJXwOdLh/t2TxAL/wCbzRZxwGL7xxt3HPTGc981qaBa+FLv4heHrfQo9QubaW6C3UWrRRFWGRgAKSCOuc+1cNXQ+ArmCz+IGi3F3NHBBHdozyyuFVB6kngCgDvNJfR/EvizW/CE/hrS7W2jW5W2u7WDbPC0ZOGL9846dOgxjisfTVsPCvwrtPEI0fT9V1DUr5od2oQ+dHAiZ4CnjJxnPv7CoNc+I99Df63aaPZ6Rb/apZYW1K0tgJ5oi5/5aA4ORjkDnr15rF0Dxvf6DpMulmz0/U9OllE32XUYPNRHxjcvIIP+fWgDuH8IaLrHxH8INHYpZ2Wu2IvbixiJCqyxs5A9FO0D8/Wm+GfE1rrkfjCGHw/pulmLw/emF7KDynEfA2SY+8fu88cg+vHDX3jfW77xVb+IXuEivrUKtv5UYVIkXOEVf7vJ49zWpP8AE/UpItQSDR9EtDqVtLb3b21oUaUSDBYndnd1Ppk8g0AcVRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAamjWNpeLeS3xmEdtD5mISATzjuKgkt4LvUI4NHSciTCqs5XcW/DjFXND/AOQfrH/Xp/7MKxwSCCDgjoRXPHmdSWu33bHNHmlUnrtt22Nafw5cw280sdxaXBtxuljhl3Mg7kjFQ2GjT39s9z5sFtbo20y3D7VLegq9ZQnRtHu7q9Gya9gaCCE/eKt1YjsKtQfYf+EX0z+0/M+y+bLv8rru7Vg61RLR31te3ld/5HNKvUinZ31te3ld2+6xiT6PeQaomntGDPIRs2twwPQg+lWZ/DlzDbzSx3FpcG3G6WOGXcyDuSMVY8QnFjoxyd32UEE/exn5aLKE6No93dXo2TXsDQQQn7xVurEdhT9rUcIyT12t31K9tUdOMk9Xpa2+tv67FGw0ae/tnufNgtrdG2mW4fapb0FQahp8+m3Zt7pQHADAqchgehBrfg+w/wDCL6Z/afmfZfNl3+V13dqi1j7MYdE+3GbyvsvzGMAybf4evHp+tEa83Us9rtfdf/L8UKOIm6tntdrbtf8Ay/FHN1o2GjT39s9z5sFtbo20y3D7VLegqYjw7tO1tUz2ysf+NaUH2H/hF9M/tPzPsvmy7/K67u1XVrSUVyprXt6vT7jStiJKK5U1d9vJvT7jEuNIvLfU1sHj3TvjYFOQ4PQg+lWbjw5dQQzOlxa3DQDMsUMu50A65GK1bm+TTrnw9dzBmWO3yf72w8D9DUmlQadDe397aXr3MYgkZiYigjB7EnqawliKiipfpu72+RzyxVVRUv03d7fL/gnH1LbW8t3cx28C7pJG2qM4yau2o0X7Mn21r8T87vJVNvXjGTnpiob3+z1aM6W11xncZwoIPbG2u3nbfKk/u0PQ9o2+VJ/doW5/DlzDbzSx3FpcG3G6WOGXcyDuSMU3S/D15q0YkgaGNGYqrSvjcQMkADJq1ZQnRtHu7q9Gya9gaCCE/eKt1YjsKi8I/wDI1Wf/AAP/ANAauaVSoqc5J7dbeRySq1VSqSjK/L1tvZa/iY7oY5GQ9VJBxTaluf8Aj7m/32/nUVdq1R3rVGjYaNPf2z3PmwW1ujbTLcPtUt6CmzaPeQaomnsgM742YYYYHoQfStqD7D/wi+mf2n5n2XzZd/ldd3aqniE/6Do5yd32UYJ67c/L+lcUa05VOXpdrbtf/LU8+OIqSq8vRtrbtf79tfVEE/hy5htppo7m0uPs4zLHDLuZB6kYrIrptOW1fRr+LRnkN40BMwuFxmMfeC4OO/esTTbuGxvBNcWkd2gUjypOnPfoa0pVJtSvq18ma0alRqaerXye39WIba3lu7mO3gXdJI21RnGTWlP4cuYbeaWO4tLg243Sxwy7mQdyRisot85Zfl5yMdq3bKE6No93dXo2TXsDQQQn7xVurEdhVVpTjZxfy7lV5zhZxfy7/wBIyUsZ30+S9VR5EbhGYnufanahp8unSxRzsjGSJZRsJPB6dR1rcj0q9uvBlrHYwNIZrhppMEDgfKOtQ+L7WaC6snlQqptUQHP8S9R+GRWcMRzVeS63f4f0zKGK563Jdbv10/pnPVpWGiy31i939qtbeFJPLJncrzjPoahubyGewtYI7OOGSEEPMvWXPr/k1esr9LPQjBe6ZJc280/mK5do1JAxjIHNaVJVOT3VrfyNqs6nJeKs7+X/AAxQuLBoLxLaKeC5aTG1oH3LknGM4HNTDRbozXsTGNXsozJKC3YdhjvW3BpNqfEOjz2UbRwXS+d5TNu2Feevp0qxaaRqZm1uWe2ZWu4ZBHlh8xJyB1rmliklv06+tv8AM5JYxRW/Trvvb9GcXUkEXn3CReYkW843yHCr7k1HRXoPY9N7Gzc+HJLS0FxJqFgUZGeMLKcyY7L8vJqt/Y9z/Yn9qAxmDfsIBO4c4z0xjPvVzWv+QBon/XKT/wBCFaOlzIug6fa3BxBeSTQP7Zxg/gcVw+1qRpqV76v7lf8AyPO9tVjSU731f3K/+RhpolzJcWMIeLdfJvjJJwB78e3vU7+H/LLBtW0wMuQV885z6fdraWB7bXfD8Eow8cRRh7gsKxNVs9PjkuZYdUWafzCfI8h153cjceOP6UoVpzklf7lfq0EK86k0r79lfq18iGx0We9tWujLBbW4bYJbiTarN6CmXenSaXqEcOoqfLOGLQsDvTPVTV/Vf+RX0Xyv9ViXdj+9u7/rRrWf+Ee0PzP9Z5Umf93cNv6VpGpNyV9m2vuv/kaRqzlJXejbVu1r/wCX4kd7Yab/AGCNQ003QP2nyCs7Kf4d2eB9Kxq2v+ZE/wC4l/7SrFrWjezTd7Nm2HbtJN3s2aOg6LceItetdJsnijnun2I0xIUHBPJAJ7eldFd/DPU4rW8k0/VNH1eWyUvcW2n3ReaNQcE7CoPFQ/C7/kp+h/8AXc/+gtXX6Xaaf4H8Z6p4n1bxDpNwIzceTYWVyJppnckBGUfd6857j2rc6DyOivR/BWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+Oa0bnwvpGnfHnSdOt7OB9Pu1SdrVx5kQLI2QA3VcjIzQB5PRXpPhbS7C4vfiCJ7G2lW0067e3DwqwhYFtpTI+UjHBFN8CSeHR4WnQHQV8Qm5znxDGWgMO3gIfug59f8ADAB5xW1d6DBbeD7DW11W1lmu5niawU/vYQpPzHnocDt/EPWtPxpDqek+K7WfVtH0i1ZY45YY7CBRa3KBiQ2AcMD0PqK2PFk1rqvwq0bWV0jTNPvJ7+WORrC0WEMqg4HHP60AedUV6Rp1zp+hfCGz1k6FpmoX8mqSW6yXtuJAF255H8XTABOBk1oy+GNG1r4reE4Rp8Vnaa1pUOo3NrbjbGHMcjlVHZTsA496APJqK9T0XWNL8Vf8JTDL4U0exFlol3PaNBahJIioAG71YZB3cEEHHWvLKACitTw5pt7q/iSxstLtorq6klBjhmAMb7fmO7P8OAc+2a9Q1TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT86APNvCnhm58Wa4NPtZY4FWNpp55fuwxr95j69Rx703xBpui6c8C6Frzaxu3eaTZtAI8YxjcTuzz6dPeu5+GQ8Lf2bru59Y+2/wBgXX28BIvLEWV3eVzktjGN3HWuSfVtB0TWYrvwvZyahD5RWSLX7aKRdxPUKpx07mgDM13Qb7w5qh0/VEVLgIshCOGGGGRyPas2vWfix4qa18S3WmDRdFmE1lGv2qaxVp03x9VfOQRnj04qPwnoum6f8N7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1AHlVFd54xuNC0jxLpeqeHotFvJGt915ZwqZrMTcg4VgPlIOQOxFdT4v1Xwv4R+Is+lXXhTTpdKmjEl0Y7VTMpaMACLJAQAgHjHJY0AeNUU6TZ5jeVuKZO3cOcds1peHNNvdX8SWNlpdtFdXUkoMcMwBjfb8x3Z/hwDn2zQBl0V7Jqmg2GreDNelv4vCf27TYBPDJ4cJV42B5WQYwQen51z+mRaf4W+Ftr4kOj2Oq6jqN60Cm/i82K3RQeNnQk7Sc+/tQB53Wlrug33hzVDp+qIqXARZCEcMMMMjke1bFz4ytG1m31Oy8LaNBKsBjnge38y3lcn74jPCn6V1/xY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cUAedeHNIj17xDa6ZPfw6fHcMQbmf7iYUnnkdcYHPUiqV5Atrf3FvHMlwsMrIs0ZysgBxuHsetdp8LdRgfxRY6HeaNpN9b3twTJLeWayyqNvRWPQcdMdzWXYXdho3xOM1/Z20+nRahJHLbzRK0YjLlT8pBHAORx2FAHMVqeHNIj17xDa6ZPfw6fHcMQbmf7iYUnnkdcYHPUivQYvCtl4S1bxrqWp2cFzZ6ZF5VhHcRCSN5JyDEQCDnaCPzrF+FuowP4osdDvNG0m+t724JklvLNZZVG3orHoOOmO5oA4u8gW1v7i3jmS4WGVkWaM5WQA43D2PWreu6DfeHNUOn6oipcBFkIRwwwwyOR7VdfU18P+MtRmg07T7tEuJo1t7y2EsSjecYTpxjiu6+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTigDyaiu4j0618Q/CcXNhZRLq2h3YS4MEQElxBKflZsDLENxzngH1qP4lWtjo+qadoNhbW8cmmWMaXc0Uaq007AMxYjrxjrnHNAHF1t+FPDNz4s1wafayxwKsbTTzy/dhjX7zH16jj3rEr1L4ZDwt/Zuu7n1j7b/YF19vASLyxFld3lc5LYxjdx1oA4bxBpui6c8C6Frzaxu3eaTZtAI8YxjcTuzz6dPesauz0XRfC/iD4gaNpejPqZsLiTFz/aARHOMttUoehAx6811No+keLtX8T+HZPDWl6dHYWtxLZXVpb+XLE0TADew+8Dxn/69AHkdFemeBpdNufhx4jl1TQtNu20UQTwStbgSyFpGba79SvygY4+XIrmvFGv6Pr+laZJZ6PDpmqw+Yt79jt1it5Vz8hUA5yB1yO9AHMV1vhT4b634utlubCWytoHkaON7ufb5rqMkKoBY4HPSuSruPg6Sfixo2e3n4/78SUAclHpt1Pqy6bbRme6ebyERP43zgAfjXTap8M9Y0vTr26F5pl6+nqGvbW0uvMmth6uuB+hPQ1Z+Hu3/hdNh5mMfbZuvrtfH611/hL+wv8AhJr37Abv+0/7Pv8A+2hcY8vO4f1/+vQB4tRXo/gSTw6PC06A6CviE3Oc+IYy0Bh28BD90HPr/hjA8fWWp2evxjVtM03T2kt1aH+yolS3mTJw644OfX2FAHL0UUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAamjX1pZreRXwmMdzD5eYQCRznuaha5tbPU4rjSxI6REMBdKOWHsp6dKm0axtLxbyW+MwjtofMxCQCecdxUElvBd6hHBo6TkSYVVnK7i34cYrm9z2kt/Ptscnue0lv59tv8i9c+JpLuRpLnTdOkkYYLtCxP8A6FVWw1mewtntvKgubd23GK4Tcob1FTT+HLmG3mljuLS4NuN0scMu5kHckYqGw0ae/tnufNgtrdG2mW4fapb0FSlh+TTb+rERWFVN2tbT/gCS6zdT6tHqEwjeWIjYhX5AB0GPSrdz4mku5GkudN06SRhgu0LE/wDoVUp9HvINUTT2jBnkI2bW4YHoQfSrM/hy5ht5pY7i0uDbjdLHDLuZB3JGKJLD+7e3l6DksL7t7baehDYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABU9ho09/bPc+bBbW6NtMtw+1S3oKg1DT59Nuzb3SgOAGBU5DA9CDWkfY+0drcxrH2HtXy25irWjYazPYWz23lQXNu7bjFcJuUN6is6tGw0ae/tnufNgtrdG2mW4fapb0FVV5OX95sXW9ny/vNiK81Oe/v1u7oI7LgBNvyADouPSpb3W7q9tvs2Ire2znybePYpPv60y40i8t9TWwePdO+NgU5Dg9CD6VZuPDl1BDM6XFrcNAMyxQy7nQDrkYrO9Bcu3kY3w65dvIyKmtLlrO8iuI1V2iYMFcZBI9ahqW2t5bu5jt4F3SSNtUZxk10StZ32OmVuV82xrXPiaS7kaS503TpJGGC7QsT/AOhVBpmuSaUFMFnaPKpJE0kZLjIxjIIp8/hy5ht5pY7i0uDbjdLHDLuZB3JGKbpfh681aMSQNDGjMVVpXxuIGSABk1yf7Mqb/lOL/ZFTe3KVb+++3zCQ21vbkDBECFQ3ueTzVSnOhjkZD1UkHFNrqilFWR2xioxtHY0bDWZ7C2e28qC5t3bcYrhNyhvUU2fV7i61NL24WKV0ACxsmUAHbHpTrDRp7+2e582C2t0baZbh9qlvQU2bR7yDVE09kBnfGzDDDA9CD6Vh+453tfr+pz/7Pzy2v1/X/gk8viGdrWWC2tbOzWYbZGt4trMPTOTxVTTdRm0u8FzbrGzhSuJFyOauT+HLmG2mmjubS4+zjMscMu5kHqRisinTjRlFqG3UdONCcWoap7k9tdPa30d0iozxvvCsPlJ+lalz4mku5GkudN06SRhgu0LE/wDoVZNtby3dzHbwLukkbaozjJrSn8OXMNvNLHcWlwbcbpY4ZdzIO5IxRUVHmXPuKqqHOvabmRVvUNQl1GWKSdUUxxLENgI4HTqetT2Giy31i939qtbeFJPLJncrzjPoaq3tp9jnEYuILj5c74H3L9M4HNXzQlO3VGinTlO3VElzqc13YWtpIsYjtgQhVcE59TU1lrU9naG1aG3ubfduEdxHuCn1HSs2tGw0ae/tnufNgtrdG2mW4fapb0FKcaUYWlt+oqkaMYWnt+pFqOpXGpzrJclQEUKiIuFQegFJZ6hLYxXMcSoRcxGJ9wPAPpz1pbvS7qy1BbOZB5rEbNpyGz0INSjRbozXsTGNXsozJKC3YdhjvSvS5EtLCvRUFHS39fqZ1SQS+RcJL5aS7DnZIMq3sRUdSQRefcJF5iRbzjfIcKvuTWztbU3lazuatz4jku7QW8mn2ARUZIysRzHnuvzcGqD6hK+nQWZCiOB2dWAO7Jq/c+HJLS0FxJqFgUZGeMLKcyY7L8vJqt/Y9z/Yn9qAxmDfsIBO4c4z0xjPvXNB0Ely9/xOSm8OkuXa/wCJPP4kvLnUrW+lSEzWy4XCnDfXmsuWQzTPK2AzsWOPc1eTRLmS4sYQ8W6+TfGSTgD349vep38P+WWDatpgZcgr55zn0+7TjKjT0j/X9McZ4elZR0/4f/O5DY63PZWhtTDb3NuW3iK4j3BT6jnio7vUZNU1CObUWPljClYVA2Jnoop9jos97atdGWC2tw2wS3Em1Wb0FMu9Ok0vUI4dRU+WcMWhYHemeqmmvY87t8Q17D2j5fiLd7f6b/YI0/TRdE/afPLTqo/h244P0rGrZvbDTf7BGoaaboH7T5BWdlP8O7PA+lY1Ohy8r5b79SsPy8r5b79e5o6DrVx4d1611aySKSe1feizAlScEcgEHv61VvLp76+nu5QoknlaVgo4BY5OPbmlsbK41LUILKyiMtxcSLHEg/iYnAFdXf8Awz1KxtbyRdW0S7nsUL3Vpb3wM0QH3sggDjvzW50FbSvH1/pmh22lS6bpOowWjs9q1/aea1uWOW2nI6nnkGl1T4iaxqt5pV9LBYw6jpm3y76GErNNtAA8wkkN06YA5NY2n6Dfappeo6haIrW+moslwS4BUMcDA78is2gDvIvi1qsN9c3MWi6CgvImivIlsiEutxGWk+bLHqOuPmbjmsjSvGS6XZm3Phrw/fZkaTzLyyLuMn7uQw4HYVzVFAHRal401DWPEVrq2qWtjc/ZIxFDZPB/o6oM4XYD059f5VrzfFK5n0tNOk8L+GzZxsXjh+xPtRj1YDzMA1w1bnhnw5/wkX9r/wClfZv7N0ybUP8AV7/M8vHydRjOevOPSgCKXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9K07XxPq2r+J/D0sV1Y6ZdaZbQ2NtdSMY4kRM4aQknruIJ6e1crRQB7XqfiCw0fw9rs+paj4Xm1HU7GW0SHw7HuMzyDBkkf269hyepxXilFFAGhoWt3nh3XLbVdMdUurZiyFlyDkEEEehBI/Gupt/ipqNo8y2ug+H4bW4jaOezjsSsM2SDuYBskjGBzj5jxXDVpa7oN94c1Q6fqiKlwEWQhHDDDDI5HtQBLo/iO60SXVHsobf8A4mdlLZSq6nCRyYztwRgjAxnI9jWRRRQB2Fz8R7+/09LfVdG0TUZ0g+zre3VnunC4wPmDAZHUcdapeH/G2o+H9Nn01bax1HTp3EjWeoQebGH/ALwGQQenftWdrug33hzVDp+qIqXARZCEcMMMMjke1ZtAHQP4rD+IY9VPh7Q1CReV9iW0It26/MU3ZLc9c9hVjxd46u/GW19S0vS7e4DhmubWBllcAEBSzMcjnp7CuXooAK0NC1u88O65barpjql1bMWQsuQcgggj0IJH41en8M+T4CtvEv2vd9ovmtPs3l/dwpbduzz06Y/GsGgDubf4qajaPMtroPh+G1uI2jns47ErDNkg7mAbJIxgc4+Y8VmaH461HQ7G6sFtLC+066k817G9g8yFX9VGQR279hXM0UAamu60NcvI7gaXp2m7I/L8rT4DEjck5IJOTz19Melblz8R7+/09LfVdG0TUZ0g+zre3VnunC4wPmDAZHUcda4+igDqvDXjufwvDALLQtFuLmBy6XlzbM0wJ/2g4+lZ/iTxI3iS4jnk0nTNPkUsXNhAY/NLEEl8scnj9TVfT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RS+HNH/4SDxJYaT5/2f7ZMIvN2btme+MjP50Aauu+P9Y8Q+GrPRL5bZbe1KHzIkYSTFE2KXJYg8ewp3hrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSsDVbH+zNZvbDzPN+y3EkPmbcbtrEZx2ziqlAG14k8SN4kuI55NJ0zT5FLFzYQGPzSxBJfLHJ4/U1rXPxHv7/AE9LfVdG0TUZ0g+zre3VnunC4wPmDAZHUcda4+igD0v4dz2Xg5JPEOq69prW1xasjaVE5luJTn5QUHCHIBBOcAnpnNcDrGpz61rV5qV0czXUzStznGTnH0HSp/DmkR694htdMnv4dPjuGINzP9xMKTzyOuMDnqRVK8gW1v7i3jmS4WGVkWaM5WQA43D2PWgCCtXQ/EF14f8A7R+xxwv/AGjYy2EvmqTtjkxkrgj5uOM5HtWVRQBPZXtxp19BeWUrQ3Fu4kikXqrA5Brq9S+Jur6jY31vHY6VYyaiuy9urO12TXCnqGYk9e+AOtcbRQB2OifEe60LQX0m20HQ5oJkCXDT2rs1wASR5hDgNjJ7Vyd1P9pvJp/Kjh82Rn8uJdqJk5wo7AdAK6rQPh5P4jhtjY+IdBS4uFZls5bpxMuAScqEPYE/SmR+BlbxJpGkr4h0m8/tKYxebp0pn8jpywIXrnjnnBoA5Ouq8LePLnwkkbafo2jz3UTsyXlzbs0y7hggMHHGMj8TWBqtj/Zms3th5nm/ZbiSHzNuN21iM47ZxVSgDd1XxVcajrVtqlpYWGkXVswdG06ExguG3bzknJzWrqnxO1jU9PvbZbLS7KTUF2Xt1aWuya5Ho7ZPX2A6muNooA6PRfF66Npq2beHNB1DDl/OvrMySHPbcGHHtVTxJ4n1DxVqEd3qZiXyYlhhhgj2RxIOiqvYc1j0UAbWq+KL3V9A0rSLmK2S30tWWFo49rsG67jnnp2x75pvhjxLeeFNaXVNOit5Z1RkC3CFlwwweAQc/jWPRQA6RzLKztgFiScDA59q2NV8UXur6BpWkXMVslvpassLRx7XYN13HPPTtj3zWLRQAUVqeHNIj17xDa6ZPfw6fHcMQbmf7iYUnnkdcYHPUiqV5Atrf3FvHMlwsMrIs0ZysgBxuHsetAEFFFFABRWn4c0f/hIPElhpPn/Z/tkwi83Zu2Z74yM/nVfVbH+zNZvbDzPN+y3EkPmbcbtrEZx2zigCpRRRQAUUV2OieDtI13w/fXdr4kYalY6dNfzWBsGwFjH3fMLAHOV5x36cUAcdRRWlrug33hzVDp+qIqXARZCEcMMMMjke1AGbRW9P4Z8nwFbeJfte77RfNafZvL+7hS27dnnp0x+NYNABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBs6H/wAg/WP+vT/2YVjgkEEHBHQitPRr60s1vIr4TGO5h8vMIBI5z3NQtc2tnqcVxpYkdIiGAulHLD2U9Olc8bqpLTf/ACOWPNGpPTf7tjRsoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP/CL6Z/afmfZfNl3+V13dqo3PiaS7kaS503TpJGGC7QsT/wChVVsNZnsLZ7byoLm3dtxiuE3KG9RXO6VWa5pLW99/K2noczo1Zx5pK0r338mtPQveITix0Y5O77KCCfvYz8tFlCdG0e7ur0bJr2BoIIT94q3ViOwqhLrN1Pq0eoTCN5YiNiFfkAHQY9Kt3PiaS7kaS503TpJGGC7QsT/6FVezqqChbTr997FeyqqEadtN3r53sXoPsP8Awi+mf2n5n2XzZd/ldd3aotY+zGHRPtxm8r7L8xjAMm3+Hrx6frWZYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABRGhNVLva7f33/z/AAQRw81Vu9rt797/AOf4IukeHdp2tqme2Vj/AMa0oPsP/CL6Z/afmfZfNl3+V13dq5atGw1mewtntvKgubd23GK4Tcob1FXVoycVytvXv6rT7zStQk4rlbdn38mtPvNu5vk0658PXcwZljt8n+9sPA/Q1JpUGnQ3t/e2l69zGIJGYmIoIwexJ6mubvNTnv79bu6COy4ATb8gA6Lj0qW91u6vbb7NiK3ts58m3j2KT7+tZPDTcUu+/wB9+3n5GDwk3FRWl9+1r37efkLajRfsyfbWvxPzu8lU29eMZOemKhvf7PVozpbXXGdxnCgg9sbap1NaXLWd5FcRqrtEwYK4yCR6118jT5k2/I7vZtNyTb8uhs2UJ0bR7u6vRsmvYGgghP3irdWI7CovCP8AyNVn/wAD/wDQGpbnxNJdyNJc6bp0kjDBdoWJ/wDQqg0zXJNKCmCztHlUkiaSMlxkYxkEVzOFWVOaa96X+VjkdOtKlNSj70vPyt+BQuf+Pub/AH2/nUVW7+++3zCQ21vbkDBECFQ3ueTzVSuyN+VXO+F+VXVjqYPsP/CL6Z/afmfZfNl3+V13dqqeIT/oOjnJ3fZRgnrtz8v6VSsNZnsLZ7byoLm3dtxiuE3KG9RTZ9XuLrU0vbhYpXQALGyZQAdselccaM41Obpdv77/AOZwRoVI1ebom3v3v/nr6I19OW1fRr+LRnkN40BMwuFxmMfeC4OO/esTTbuGxvBNcWkd2gUjypOnPfoaty+IZ2tZYLa1s7NZhtka3i2sw9M5PFVNN1GbS7wXNusbOFK4kXI5q4U5qM+Zb+f6mkKU1GfMt/PXbuisW+csvy85GO1btlCdG0e7ur0bJr2BoIIT94q3ViOwrHtrp7W+jukVGeN94Vh8pP0rUufE0l3I0lzpunSSMMF2hYn/ANCqqynK0UtOv+RVeNSVoxWnXX8BLK/Sz0IwXumSXNvNP5iuXaNSQMYyBzTNdsbW3WzurFGihu4t4iZtxQjrz6c1FZa1PZ2htWht7m33bhHcR7gp9R0qHUdSuNTnWS5KgIoVERcKg9AKmNOaq8y0Wt9d/kTGlNVuZaLW+r1+XcLm8hnsLWCOzjhkhBDzL1lz6/5NbsH2H/hF9M/tPzPsvmy7/K67u1YVzqc13YWtpIsYjtgQhVcE59TUthrM9hbPbeVBc27tuMVwm5Q3qKKlKUoJJWs77+vX53CrRlKCUVZp339evzudCluLrVPDaMCcQb/m67V+Zc/lTrTSNTM2tyz2zK13DII8sPmJOQOtcrqGoT6ndG4uiC2AoCjAUDoAKWz1CWxiuY4lQi5iMT7geAfTnrWLw1Tl0av/AMG/cweFq8mjV+1vO+91/SKlFFSQS+RcJL5aS7DnZIMq3sRXoPY9N7GxrX/IA0T/AK5Sf+hCtHS5kXQdPtbg4gvJJoH9s4wfwOKy7nxHJd2gt5NPsAioyRlYjmPPdfm4NUH1CV9OgsyFEcDs6sAd2TXD7Gc6ajJW1b++/wDmed7Cc6ahJW1b++/5XOoWB7bXfD8Eow8cRRh7gsKxNVs9PjkuZYdUWafzCfI8h153cjceOP6UT+JLy51K1vpUhM1suFwpw315rLlkM0zytgM7Fjj3NOjRqRkpSdtOnq2VQoVYyUpO2nS3dvt5m1qv/Ir6L5X+qxLux/e3d/1o1rP/AAj2h+Z/rPKkz/u7ht/Sqljrc9laG1MNvc25beIriPcFPqOeKju9Rk1TUI5tRY+WMKVhUDYmeiiqjTmpK60Tb9b3/wAyo0pxkrrRNu/e9/8AP8C5/wAyJ/3Ev/aVYtbN7f6b/YI0/TRdE/afPLTqo/h244P0rGrWjezbVrtm2HvaTatdsvaNqs+h65Z6nahTNaTLKoYcNg5wfr0ru7vSvDXxCj1LU/DRudL1uKGS9udPnO+KYDlyj9jk9/yHWuD0fVJtF1aDULaOGWWBiVSdN6NkEYI79a6O4+JGoNp91a6ZpGi6N9sjMU82m2flSOh6rkscA+2K3Og6fwJ4mZPh54mH9j6O39nWkGN1kD9py5H77+/+Nczohg8e/EXSLW/sLDTreVhFJFp0AgR1Xc5yB/Eemfp6VleGfFd/4WnuWsY7a4hu4/KuLa7i8yKZfRl4/n3pNT8TzX2q2moWOn6fo09pgxf2ZAYhuByGOScmgD03UrfwxOur2GqnwdZWkcUi2Z0/et5DKv3N5KDd05B71z3grTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNY+q/EO51q2uV1DQNAkurmMpJfixxOSRjdu3Y3e+Ki0rx9f6ZodtpUum6TqMFo7Patf2nmtbljltpyOp55BoA6278D6M3x003RYoQmm3kS3TwRuSg/ds5VT12kp+Rp/hnxNa65H4whh8P6bpZi8P3pheyg8pxHwNkmPvH7vPHIPrxyWpfEfWdSvtK1B4bKDUtMChL6GEiabAx+8JJDDrxgDk1Yn+J+pSRagkGj6JaHUraW3u3trQo0okGCxO7O7qfTJ5BoAfHp1r4h+E4ubCyiXVtDuwlwYIgJLiCU/KzYGWIbjnPAPrUfxKtbHR9U07QbC2t45NMsY0u5oo1Vpp2AZixHXjHXOOa1/h3PZeDkk8Q6rr2mtbXFqyNpUTmW4lOflBQcIcgEE5wCemc1wOsanPrWtXmpXRzNdTNK3OcZOcfQdKAKVej+BJPDo8LToDoK+ITc5z4hjLQGHbwEP3Qc+v+GPOK6PRfF66Npq2beHNB1DDl/OvrMySHPbcGHHtQBq+I7rVPDHjCO61Xw94eDPajyYYbNXs5kJOJFUHBPv1rofix4qa18S3WmDRdFmE1lGv2qaxVp03x9VfOQRnj04rz7xJ4n1DxVqEd3qZiXyYlhhhgj2RxIOiqvYc1sXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1oA1/BWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+Oah8bQ2PgX4iM+kaZp9zbz2iSi1vIvPgQuOdoPbIyPTNZGlePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINV/E3jO+8WQWY1S0sRcWsYjN3DCVmnAGPnbJz68ADJNAHb/ABY8VNa+JbrTBouizCayjX7VNYq06b4+qvnIIzx6cVH4T0XTdP8Ahvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rmrn4j39/p6W+q6NomozpB9nW9urPdOFxgfMGAyOo461S8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP/eAyCD079qAL3xFg0JNSsbjQJdPMk9sDew6a7NBHMDglMgYB9PauOrS1zWP7bvxdDTrDTgsYQQ2EPlR8E84yeeeufSs2gD1DT9Yj0T4IWN0+mWWoyHV5Ejjvo/MiQ7Mltvc4BA+tM1qTQ9E+IfhjVZdHsY9O1TTLa7vbMwhoUMu5WKqQQMAAjHce9cTL4ju5vCMHh1o4RaQXRulcKfMLlduCc4xg+lXXvLrxxqWmWl5daZpv2DT0sop7mQwx+XECQWY5+Y5PTr2FAHW2vhS08Jav4zvdUtIbqz0m3MditzEJI5HmP7k/NnJAxn61U0+4sNC+EVjrP8AYemX9++qSQCS9txIAuzPI/i6cAnAyeKd8QfF0E/hbS/C9lqMWpyWqob2/gUqkxRdqLk8tgHlu5x+DdP8UWujfCGxhSLStRuf7VkMlhfIsuEKcPsyGHIxu46kd6ANG98L6N4i8UeCrqKxj0yDxBEXu7S3+SMGPk7B/CG6ce3epbR9I8Xav4n8OyeGtL06OwtbiWyurS38uWJomAG9h94HjP8A9euD1jxrrGs69aatJLHazWIRbOO1TZHbhTkBF57+ufTpWlqXxN1fUbG+t47HSrGTUV2Xt1Z2uya4U9QzEnr3wB1oA6XwJ4mZPh54mH9j6O39nWkGN1kD9py5H77+/wDjWD4W1o678VvD9y2n6fp5S4jj8rT7cQxnDE7io6nnGfQCsLwz4rv/AAtPctYx21xDdx+VcW13F5kUy+jLx/PvU8njKYeJNP1my0fSdPmsGDRw2duY43IOcuN2T+dAHcyXmmeJtR8b6TceHtNgXTbK8vLe7ihxcGWJ+rSdW3E5I6dqg8J6Lpun/De31tk8PtqF/dPH52vhmhjRONqqFI3HBOT2PtXD2fi2/sdS1u+iitzLrVtPbXAZW2osxyxTngjHGc/jU3h/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/wC8BkEHp37UAbviiHwhH4y0O5SSzaxmWNtWg0pmaFGDfNsyAQpHYc8HvW/4htWv9J1R/CGneC9R02OF2/0K3H22CH++Q3zBgO/r0HavO7rxL9q8Q2+qjRNHgEAAFlDa4t3xnlkz83XnnsK1pviTfjT7u00vRtE0f7ZEYZptPszHIyHqu4scCgC18LdRgfxRY6HeaNpN9b3twTJLeWayyqNvRWPQcdMdzWFs0qD4gumrxldKj1FhOkK4xEJDkADtj07dKueGvHc/heGAWWhaLcXMDl0vLm2ZpgT/ALQcfSodS8YtqetWmpSaBokMlu7SPFFakR3BY5/egsd3/wBc0Ad34htWv9J1R/CGneC9R02OF2/0K3H22CH++Q3zBgO/r0HavOPDGsWeha0t7qOkW+sQKjKbW4PykkYB5BGR9P8AGtmb4k340+7tNL0bRNH+2RGGabT7MxyMh6ruLHArG8MeJbzwprS6pp0VvLOqMgW4QsuGGDwCDn8aAMmRg8rMqhAxJCjovtTadI5llZ2wCxJOBgc+1NoA7L4Uf8lM03/rnc/+k8lU/hz/AMlI0L/r8Sszw9rtz4a1yDVbFIpJ4FdVWYEqd6MhyAQejHvUei6tPoWt2mqWiRvPaSiVFlBKkj1AIOPxoA9NkvNM8Taj430m48PabAum2V5eW93FDi4MsT9Wk6tuJyR07VB4T0XTdP8Ahvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2rh7Pxbf2Opa3fRRW5l1q2ntrgMrbUWY5YpzwRjjOfxqbw/421Hw/ps+mrbWOo6dO4kaz1CDzYw/94DIIPTv2oAvfEWDQk1KxuNAl08yT2wN7Dprs0EcwOCUyBgH09q46tLXNY/tu/F0NOsNOCxhBDYQ+VHwTzjJ55659KzaAPR/BWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+Oat6l4Z0nTPjnpGn2tpC1hdvBM9sw8yL5xyo3dVyM4PrXL6V4+v9M0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g1s6R48n8QeOPDM/iCLTbY2E8ayagE8uSRQMZlctj37DJNAG1pL6P4l8Wa34Qn8NaXa20a3K213awbZ4WjJwxfvnHTp0GMcVkafcWGhfCKx1n+w9Mv799UkgEl7biQBdmeR/F04BOBk8VX1z4j30N/rdpo9npFv9qllhbUrS2AnmiLn/loDg5GOQOevXmrGn+KLXRvhDYwpFpWo3P9qyGSwvkWXCFOH2ZDDkY3cdSO9AFL4iWGnGx8Pa9plhHpp1izaSe1gXbGroQCVHYHP6D3rhq2fEvijUPFV/Hc6j5MawRCGC3t02RQoP4VXt/n0FY1AHd/C3UYH8UWOh3mjaTfW97cEyS3lmssqjb0Vj0HHTHc1hbNKg+ILpq8ZXSo9RYTpCuMRCQ5AA7Y9O3Srnhrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSodS8YtqetWmpSaBokMlu7SPFFakR3BY5/egsd3/1zQB3fiG1a/0nVH8Iad4L1HTY4Xb/AEK3H22CH++Q3zBgO/r0HavIK7Gb4k340+7tNL0bRNH+2RGGabT7MxyMh6ruLHArjqAOm+HP/JSNC/6/ErtpLzTPE2o+N9JuPD2mwLptleXlvdxQ4uDLE/VpOrbickdO1eZaLq0+ha3aapaJG89pKJUWUEqSPUAg4/Gr1n4tv7HUtbvoorcy61bT21wGVtqLMcsU54IxxnP40Adx4T0XTdP+G9vrbJ4fbUL+6ePztfDNDGicbVUKRuOCcnsfas7xFo2n6p430OLwXHpd3fXcavc2dmxa0EyHLfexhCoyR6A+tc94f8baj4f02fTVtrHUdOncSNZ6hB5sYf8AvAZBB6d+1IPGV5B4rtNf0ux07S7m1XbHFZW+yI8EHKknJIYgnPSgD0LVNBsNW8Ga9LfxeE/t2mwCeGTw4SrxsDysgxgg9Pzrkvhp/wAzd/2LN7/7JTrf4qajaPMtroPh+G1uI2jns47ErDNkg7mAbJIxgc4+Y8VgeHvFN94Z1qTUtNjty00bxSwSx7onjbqhXPTgd+1AFbRdXOi6h9rWxsb47Cvk38Amj577T3969I+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTivO9d1z+3bmKUaXpumiNNoj0+38pW5zk8kk1t3PxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1oA6DT9Yj0T4IWN0+mWWoyHV5Ejjvo/MiQ7Mltvc4BA+tM1qTQ9E+IfhjVZdHsY9O1TTLa7vbMwhoUMu5WKqQQMAAjHce9cTL4ju5vCMHh1o4RaQXRulcKfMLlduCc4xg+lXXvLrxxqWmWl5daZpv2DT0sop7mQwx+XECQWY5+Y5PTr2FAHW2vhS08Jav4zvdUtIbqz0m3MditzEJI5HmP7k/NnJAxn615dXpHxB8XQT+FtL8L2WoxanJaqhvb+BSqTFF2ouTy2AeW7nH4eb0AFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAamjWNpeLeS3xmEdtD5mISATzjuKgkt4LvUI4NHSciTCqs5XcW/DjFXND/5B+sf9en/swrHBIIIOCOhFc8eZ1Ja7fdsc0eaVSeu23bY1p/DlzDbzSx3FpcG3G6WOGXcyDuSMVDYaNPf2z3PmwW1ujbTLcPtUt6Cr1lCdG0e7ur0bJr2BoIIT94q3ViOwq1B9h/4RfTP7T8z7L5su/wArru7Vg61RLR31te3ld/5HNKvUinZ31te3ld2+6xiT6PeQaomntGDPIRs2twwPQg+lWZ/DlzDbzSx3FpcG3G6WOGXcyDuSMVY8QnFjoxyd32UEE/exn5aLKE6No93dXo2TXsDQQQn7xVurEdhT9rUcIyT12t31K9tUdOMk9Xpa2+tv67FGw0ae/tnufNgtrdG2mW4fapb0FQahp8+m3Zt7pQHADAqchgehBrfg+w/8Ivpn9p+Z9l82Xf5XXd2qLWPsxh0T7cZvK+y/MYwDJt/h68en60RrzdSz2u191/8AL8UKOIm6tntdrbtf/L8Uc3WjYaNPf2z3PmwW1ujbTLcPtUt6CpiPDu07W1TPbKx/41pQfYf+EX0z+0/M+y+bLv8AK67u1XVrSUVyprXt6vT7jStiJKK5U1d9vJvT7jEuNIvLfU1sHj3TvjYFOQ4PQg+lWbjw5dQQzOlxa3DQDMsUMu50A65GK1bm+TTrnw9dzBmWO3yf72w8D9DUmlQadDe397aXr3MYgkZiYigjB7EnqawliKiipfpu72+RzyxVVRUv03d7fL/gnH1LbW8t3cx28C7pJG2qM4yau2o0X7Mn21r8T87vJVNvXjGTnpiob3+z1aM6W11xncZwoIPbG2u3nbfKk/u0PQ9o2+VJ/doW5/DlzDbzSx3FpcG3G6WOGXcyDuSMU3S/D15q0YkgaGNGYqrSvjcQMkADJq1ZQnRtHu7q9Gya9gaCCE/eKt1YjsKi8I/8jVZ/8D/9AauaVSoqc5J7dbeRySq1VSqSjK/L1tvZa/iY7oY5GQ9VJBxTaluf+Pub/fb+dRV2rVHetUaNho09/bPc+bBbW6NtMtw+1S3oKbNo95BqiaeyAzvjZhhhgehB9K2oPsP/AAi+mf2n5n2XzZd/ldd3aqniE/6Do5yd32UYJ67c/L+lcUa05VOXpdrbtf8Ay1PPjiKkqvL0ba27X+/bX1RBP4cuYbaaaO5tLj7OMyxwy7mQepGKyK6bTltX0a/i0Z5DeNATMLhcZjH3guDjv3rE027hsbwTXFpHdoFI8qTpz36GtKVSbUr6tfJmtGpUamnq18nt/ViG2t5bu5jt4F3SSNtUZxk1pT+HLmG3mljuLS4NuN0scMu5kHckYrKLfOWX5ecjHat2yhOjaPd3V6Nk17A0EEJ+8VbqxHYVVaU42cX8u5Vec4WcX8u/9IpWGiy31i939qtbeFJPLJncrzjPoaq3tp9jnEYuILj5c74H3L9M4HNaVlfpZ6EYL3TJLm3mn8xXLtGpIGMZA5pmu2NrbrZ3VijRQ3cW8RM24oR159OamNSfteWWz22/4cmNSftuWezvba3+ZkVo2GjT39s9z5sFtbo20y3D7VLegqK5vIZ7C1gjs44ZIQQ8y9Zc+v8Ak1uwfYf+EX0z+0/M+y+bLv8AK67u1OtUnGKsrNu3fv8A5Dr1ZwgrKzbt37/nYwrvS7qy1BbOZB5rEbNpyGz0INSjRbozXsTGNXsozJKC3YdhjvXQpbi61Tw2jAnEG/5uu1fmXP5U600jUzNrcs9sytdwyCPLD5iTkDrXM8W0tWk7frb9GcrxrUdWk7f+3W/RnF1JBF59wkXmJFvON8hwq+5NR0V6L2PUexs3PhyS0tBcSahYFGRnjCynMmOy/Lyarf2Pc/2J/agMZg37CATuHOM9MYz71c1r/kAaJ/1yk/8AQhWjpcyLoOn2twcQXkk0D+2cYP4HFcPtakaale+r+5X/AMjzvbVY0lO99X9yv/kYaaJcyXFjCHi3Xyb4yScAe/Ht71O/h/yywbVtMDLkFfPOc+n3a2lge213w/BKMPHEUYe4LCsTVbPT45LmWHVFmn8wnyPIded3I3Hjj+lKFac5JX+5X6tBCvOpNK+/ZX6tfIhsdFnvbVroywW1uG2CW4k2qzegpl3p0ml6hHDqKnyzhi0LA70z1U1f1X/kV9F8r/VYl3Y/vbu/60a1n/hHtD8z/WeVJn/d3Db+laRqTclfZtr7r/5Gkas5SV3o21bta/8Al+JHe2Gm/wBgjUNNN0D9p8grOyn+HdngfSsatr/mRP8AuJf+0qxa1o3s03ezZth27STd7NmjoOi3HiLXrXSbJ4o57p9iNMSFBwTyQCe3pXRXfwz1OK1vJNP1TR9XlslL3Ftp90XmjUHBOwqDxUPwu/5Kfof/AF3P/oLV1+l2mn+B/GeqeJ9W8Q6TcCM3Hk2FlciaaZ3JARlH3evOe49q3Og8jor0zwNLptz8OPEcuqaFpt22iiCeCVrcCWQtIzbXfqV+UDHHy5FQafN4e8f+IvDGnnSYdLvWmkTURZQrDBOg+ZQuDkNhcE479elAHnVb0/hnyfAVt4l+17vtF81p9m8v7uFLbt2eenTH4131o+keLtX8T+HZPDWl6dHYWtxLZXVpb+XLE0TADew+8Dxn/wCvVPT9Zj0P4IWN0+mWWpSNq8iRx30XmRISmS2zucAgfWgDy+ivV7zwtpGv+JvBE/2GLTF1+EyXtpbfJH8nOVH8IYccfzrR1K38MTrq9hqp8HWVpHFItmdP3reQyr9zeSg3dOQe9AHi9FbHhjWLPQtaW91HSLfWIFRlNrcH5SSMA8gjI+n+NZMjB5WZVCBiSFHRfagBtFFej+CtMvbTw0l/d2vhGPT7yZvJm8Qr88u3CsIyMkAEH8c0AcPo1rp95qSw6xqTabalSWuFtzNg44G0EHmtPxl4Yg8L32nxWepHUre/sI76KcwGH5XLYG0sey5/HpV/4oaFYaB40e30qNYree3juBEjFkQsOQpPO3IyPrU3xL/5lH/sWbL/ANnoAh0TwdpGu+H767tfEjDUrHTpr+awNg2AsY+75hYA5yvOO/TiuOrt/hp/zN3/AGLN7/7JXK6SNMOqQ/26bsWHzeabMKZfunG3dx1xnPbNAFKiuwZfhtsOyXxVuxxmK2xn/vqtfwVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmgDziivUtS8M6Tpnxz0jT7W0hawu3gme2YeZF845Ubuq5GcH1q3pL6P4l8Wa34Qn8NaXa20a3K213awbZ4WjJwxfvnHTp0GMcUAeRUV6Np9xYaF8IrHWf7D0y/v31SSASXtuJAF2Z5H8XTgE4GTxTvFFl4dGoeENfutPGnafq8Qk1C0tVwi7GAYqo5AIPQdhxzQB5vRXr/AIhtWv8ASdUfwhp3gvUdNjhdv9Ctx9tgh/vkN8wYDv69B2rhdJXwOdLh/t2TxAL/AObzRZxwGL7xxt3HPTGc980Ac1RXVxaZpOreJ9KsvAcGoXlxJLl4dXSIIxXDdFOCuA27Pau51TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT86APG6K9M8DS6bc/DjxHLqmhabdtoogngla3AlkLSM2136lflAxx8uRUFhN4e8f8AiLwxp7aTDpd60zpqIsoVhgnQfMoUA5BwuCcd+vSgDzqivaNSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvXnmkr4HOlw/27J4gF/wDN5os44DF94427jnpjOe+aAM3w5o//AAkHiSw0nz/s/wBsmEXm7N2zPfGRn86r6rY/2ZrN7YeZ5v2W4kh8zbjdtYjOO2cV2fhgeGx8S/Df/CLtqjL9rHnf2isYOcjG3YT75z7VvSXmmeJtR8b6TceHtNgXTbK8vLe7ihxcGWJ+rSdW3E5I6dqAPI6K9V8J6Lpun/De31tk8PtqF/dPH52vhmhjRONqqFI3HBOT2PtWd4i0bT9U8b6HF4Lj0u7vruNXubOzYtaCZDlvvYwhUZI9AfWgDzuux0TwdpGu+H767tfEjDUrHTpr+awNg2AsY+75hYA5yvOO/Tiuz1TQbDVvBmvS38XhP7dpsAnhk8OEq8bA8rIMYIPT865L4af8zd/2LN7/AOyUAcRWlrug33hzVDp+qIqXARZCEcMMMMjke1JournRdQ+1rY2N8dhXyb+ATR899p7+9ekfFjxU1r4lutMGi6LMJrKNftU1irTpvj6q+cgjPHpxQBwk/hnyfAVt4l+17vtF81p9m8v7uFLbt2eenTH41g16hp+sR6J8ELG6fTLLUZDq8iRx30fmRIdmS23ucAgfWma1JoeifEPwxqsuj2Menappltd3tmYQ0KGXcrFVIIGAARjuPegDzKivUbXwpaeEtX8Z3uqWkN1Z6TbmOxW5iEkcjzH9yfmzkgYz9a8uoAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1NGvrSzW8ivhMY7mHy8wgEjnPc1C1za2epxXGliR0iIYC6UcsPZT06VNo1jaXi3kt8ZhHbQ+ZiEgE847ioJLeC71CODR0nIkwqrOV3Fvw4xXN7ntJb+fbY5Pc9pLfz7bf5F658TSXcjSXOm6dJIwwXaFif/Qqq2Gsz2Fs9t5UFzbu24xXCblDeoqafw5cw280sdxaXBtxuljhl3Mg7kjFQ2GjT39s9z5sFtbo20y3D7VLegqUsPyabf1YiKwqpu1raf8ASXWbqfVo9QmEbyxEbEK/IAOgx6VbufE0l3I0lzpunSSMMF2hYn/0KqU+j3kGqJp7RgzyEbNrcMD0IPpVmfw5cw280sdxaXBtxuljhl3Mg7kjFElh/dvby9ByWF929ttPQhsNZnsLZ7byoLm3dtxiuE3KG9RUGoahPqd0bi6ILYCgKMBQOgAqew0ae/tnufNgtrdG2mW4fapb0FQahp8+m3Zt7pQHADAqchgehBrSPsfaO1uY1j7D2r5bcxVrRsNZnsLZ7byoLm3dtxiuE3KG9RWdWjYaNPf2z3PmwW1ujbTLcPtUt6Cqq8nL+82Lrez5f3mxFeanPf363d0EdlwAm35AB0XHpUt7rd1e232bEVvbZz5NvHsUn39aZcaReW+prYPHunfGwKchwehB9Ks3Hhy6ghmdLi1uGgGZYoZdzoB1yMVneguXbyMb4dcu3kZFTWly1neRXEaq7RMGCuMgketQ1LbW8t3cx28C7pJG2qM4ya6JWs77HTK3K+bY1rnxNJdyNJc6bp0kjDBdoWJ/9CqDTNck0oKYLO0eVSSJpIyXGRjGQRT5/DlzDbzSx3FpcG3G6WOGXcyDuSMU3S/D15q0YkgaGNGYqrSvjcQMkADJrk/2ZU3/KcX+yKm9uUq3999vmEhtre3IGCIEKhvc8nmqlOdDHIyHqpIOKbXVFKKsjtjFRjaOxo2Gsz2Fs9t5UFzbu24xXCblDeops+r3F1qaXtwsUroAFjZMoAO2PSnWGjT39s9z5sFtbo20y3D7VLegps2j3kGqJp7IDO+NmGGGB6EH0rD9xzva/X9Tn/wBn55bX6/r/AMEnl8QztaywW1rZ2azDbI1vFtZh6ZyeKqabqM2l3gubdY2cKVxIuRzVyfw5cw2000dzaXH2cZljhl3Mg9SMVkU6caMotQ26jpxoTi1DVPcntrp7W+jukVGeN94Vh8pP0rUufE0l3I0lzpunSSMMF2hYn/0Ksm2t5bu5jt4F3SSNtUZxk1pT+HLmG3mljuLS4NuN0scMu5kHckYoqKjzLn3FVVDnXtNyKy1qeztDatDb3Nvu3CO4j3BT6jpUOo6lcanOslyVARQqIi4VB6AVNYaLLfWL3f2q1t4Uk8smdyvOM+hqre2n2OcRi4guPlzvgfcv0zgc04+y9o+X4hxVH2r5fiJLnU5ruwtbSRYxHbAhCq4Jz6mpbDWZ7C2e28qC5t3bcYrhNyhvUVnVo2GjT39s9z5sFtbo20y3D7VLegpzjSjC0tiqkaUYWnt+pBqGoT6ndG4uiC2AoCjAUDoAKWz1CWxiuY4lQi5iMT7geAfTnrSX+n3GnXhtrlRvwCu05DA9CKtT6DdWlmZ7yS3t227lhklAkYey0ualyqOlnsLmoqEY6Wexl1JBL5FwkvlpLsOdkgyrexFR1JBF59wkXmJFvON8hwq+5NbO1tTeVrO5q3PiOS7tBbyafYBFRkjKxHMee6/NwaoPqEr6dBZkKI4HZ1YA7smr9z4cktLQXEmoWBRkZ4wspzJjsvy8mq39j3P9if2oDGYN+wgE7hzjPTGM+9c0HQSXL3/E5Kbw6S5dr/iTz+JLy51K1vpUhM1suFwpw315rLlkM0zytgM7Fjj3NXk0S5kuLGEPFuvk3xkk4A9+Pb3qd/D/AJZYNq2mBlyCvnnOfT7tOMqNPSP9f0xxnh6VlHT/AIf/ADuQ2Otz2VobUw29zblt4iuI9wU+o54qO71GTVNQjm1Fj5YwpWFQNiZ6KKfY6LPe2rXRlgtrcNsEtxJtVm9BTLvTpNL1COHUVPlnDFoWB3pnqppr2PO7fENew9o+X4i3e3+m/wBgjT9NF0T9p88tOqj+Hbjg/Ssatm9sNN/sEahppugftPkFZ2U/w7s8D6VjU6HLyvlvv1Kw/Lyvlvv17mjoOtXHh3XrXVrJIpJ7V96LMCVJwRyAQe/rVW8unvr6e7lCiSeVpWCjgFjk49uaWxsrjUtQgsrKIy3FxIscSD+JicAV1d/8M9SsbW8kXVtEu57FC91aW98DNEB97IIA4781udA3RPiPdaFoL6TbaDoc0EyBLhp7V2a4AJI8whwGxk9q5pNTuLfWhqljss7hZ/PiEC7VibdkBQc8D09Km0/Qb7VNL1HULRFa301FkuCXAKhjgYHfkVm0AdlqXxN1fUbG+t47HSrGTUV2Xt1Z2uya4U9QzEnr3wB1qvo3j680fw8mjNpGkajaxzm4j+32zSlHIxkfMB+lcrRQBtar4t1nWPEEWtXd4wvYCpgaIBRAFOVCAdAK1dV+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98VyFbnhnw5/wAJF/a/+lfZv7N0ybUP9Xv8zy8fJ1GM56849KAI/DHiW88Ka0uqadFbyzqjIFuELLhhg8Ag5/GsmRzLKztgFiScDA59qbRQAV1WlePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINcrRQB0XibxnfeLILMapaWIuLWMRm7hhKzTgDHztk59eABkmrX/Cwb6XQbbS7/SdH1AWtv8AZre5u7TfNFHjAAbdjjtxXJ1pa7oN94c1Q6fqiKlwEWQhHDDDDI5HtQBN4a8S33hXVWv9NWGRniaGWK4j3xyxtjKsOMjgflTNd1z+3bmKUaXpumiNNoj0+38pW5zk8kk1lUUAFdVpXj6/0zQ7bSpdN0nUYLR2e1a/tPNa3LHLbTkdTzyDWPrug33hzVDp+qIqXARZCEcMMMMjke1ZtAHoekePJ/EHjjwzP4gi022NhPGsmoBPLkkUDGZXLY9+wyTUWufEe+hv9btNHs9It/tUssLalaWwE80Rc/8ALQHByMcgc9evNcDRQB6Np/ii10b4Q2MKRaVqNz/ashksL5FlwhTh9mQw5GN3HUjvXOap411DWfENpquo2tjMtmqpBYGD/RUQdF8vPT8fTsKin8M+T4CtvEv2vd9ovmtPs3l/dwpbduzz06Y/GsGgDsZviTfjT7u00vRtE0f7ZEYZptPszHIyHqu4scCuOoooA0NC1u88O65barpjql1bMWQsuQcgggj0IJH411Nv8VNRtHmW10Hw/Da3EbRz2cdiVhmyQdzANkkYwOcfMeK4aigDtNJ+JV1o2jzaZbeHtBe3uABceZauTOASRvw4Bxk4rll1KeHWP7SsttnOs/nxfZxtWJt2QFHYDsKn0/Qb7VNL1HULRFa301FkuCXAKhjgYHfkUvhzR/8AhIPElhpPn/Z/tkwi83Zu2Z74yM/nQBuar8Q7nWra5XUNA0CS6uYykl+LHE5JGN27djd74rkKt6rY/wBmaze2Hmeb9luJIfM243bWIzjtnFVKAL+i6tPoWt2mqWiRvPaSiVFlBKkj1AIOPxq9Z+Lb+x1LW76KK3MutW09tcBlbaizHLFOeCMcZz+NYVFAHR+H/G2o+H9Nn01bax1HTp3EjWeoQebGH/vAZBB6d+1IPGV5B4rtNf0ux07S7m1XbHFZW+yI8EHKknJIYgnPSqPhzSI9e8Q2umT38Onx3DEG5n+4mFJ55HXGBz1IqleQLa39xbxzJcLDKyLNGcrIAcbh7HrQB2Vv8VNRtHmW10Hw/Da3EbRz2cdiVhmyQdzANkkYwOcfMeKwPD3im+8M61JqWmx25aaN4pYJY90Txt1QrnpwO/asWigDV13XP7duYpRpem6aI02iPT7fylbnOTySTW3c/Ee/v9PS31XRtE1GdIPs63t1Z7pwuMD5gwGR1HHWuPrau9BgtvB9hra6rayzXczxNYKf3sIUn5jz0OB2/iHrQAyXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KuveXXjjUtMtLy60zTfsGnpZRT3Mhhj8uIEgsxz8xyenXsK5uigD0j4g+LoJ/C2l+F7LUYtTktVQ3t/ApVJii7UXJ5bAPLdzj8PN6KKACiiigAorS0/Qb7VNL1HULRFa301FkuCXAKhjgYHfkVm0AFFa+q+HLvSNG0nUrmSFodVjeSBY2JZQpAO7IAHXsTWRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBs6H/yD9Y/69P/AGYVjgkEEHBHQitPRr60s1vIr4TGO5h8vMIBI5z3NQtc2tnqcVxpYkdIiGAulHLD2U9Olc8bqpLTf/I5Y80ak9N/u2NGyhOjaPd3V6Nk17A0EEJ+8VbqxHYVag+w/wDCL6Z/afmfZfNl3+V13dqo3PiaS7kaS503TpJGGC7QsT/6FVWw1mewtntvKgubd23GK4Tcob1Fc7pVZrmktb338raehzOjVnHmkrSvffya09C94hOLHRjk7vsoIJ+9jPy0WUJ0bR7u6vRsmvYGgghP3irdWI7CqEus3U+rR6hMI3liI2IV+QAdBj0q3c+JpLuRpLnTdOkkYYLtCxP/AKFVezqqChbTr997FeyqqEadtN3r53sXoPsP/CL6Z/afmfZfNl3+V13dqi1j7MYdE+3GbyvsvzGMAybf4evHp+tZlhrM9hbPbeVBc27tuMVwm5Q3qKg1DUJ9TujcXRBbAUBRgKB0AFEaE1Uu9rt/ff8Az/BBHDzVW72u3v3v/n+CLpHh3adrapntlY/8a0oPsP8Awi+mf2n5n2XzZd/ldd3auWrRsNZnsLZ7byoLm3dtxiuE3KG9RV1aMnFcrb17+q0+80rUJOK5W3Z9/JrT7zbub5NOufD13MGZY7fJ/vbDwP0NSaVBp0N7f3tpevcxiCRmJiKCMHsSeprm7zU57+/W7ugjsuAE2/IAOi49Klvdbur22+zYit7bOfJt49ik+/rWTw03FLvv99+3n5GDwk3FRWl9+1r37efkLajRfsyfbWvxPzu8lU29eMZOemKhvf7PVozpbXXGdxnCgg9sbap1NaXLWd5FcRqrtEwYK4yCR6118jT5k2/I7vZtNyTb8uhs2UJ0bR7u6vRsmvYGgghP3irdWI7CovCP/I1Wf/A//QGpbnxNJdyNJc6bp0kjDBdoWJ/9CqDTNck0oKYLO0eVSSJpIyXGRjGQRXM4VZU5pr3pf5WOR060qU1KPvS8/K34FC5/4+5v99v51FVu/vvt8wkNtb25AwRAhUN7nk81UrsjflVzvhflV1Y6mD7D/wAIvpn9p+Z9l82Xf5XXd2qp4hP+g6Ocnd9lGCeu3Py/pVKw1mewtntvKgubd23GK4Tcob1FNn1e4utTS9uFildAAsbJlAB2x6VxxozjU5ul2/vv/mcEaFSNXm6Jt797/wCevojX05bV9Gv4tGeQ3jQEzC4XGYx94Lg4796xNNu4bG8E1xaR3aBSPKk6c9+hq3L4hna1lgtrWzs1mG2RreLazD0zk8VU03UZtLvBc26xs4UriRcjmrhTmoz5lv5/qaQpTUZ8y389du6Kxb5yy/LzkY7Vu2UJ0bR7u6vRsmvYGgghP3irdWI7Cse2untb6O6RUZ433hWHyk/StS58TSXcjSXOm6dJIwwXaFif/QqqspytFLTr/kVXjUlaMVp11/ASyv0s9CMF7pklzbzT+Yrl2jUkDGMgc0zXbG1t1s7qxRoobuLeImbcUI68+nNRWWtT2dobVobe5t924R3Ee4KfUdKh1HUrjU51kuSoCKFREXCoPQCpjTmqvMtFrfXf5ExpTVbmWi1vq9fl3C5vIZ7C1gjs44ZIQQ8y9Zc+v+TW7B9h/wCEX0z+0/M+y+bLv8rru7VhXOpzXdha2kixiO2BCFVwTn1NS2Gsz2Fs9t5UFzbu24xXCblDeooqUpSgklazvv69fncKtGUoJRVmnff16/O50UaJLqvhoSjd+43Dd1wASufyqqqadrl9fW7WsqXSq8gujKSWK+q9APasO61a7utRW9eTbNHjyygwEA6AD0q3N4lu5YZlSC1gknXbLNDFtdx3yc96w+r1FZre3fbW/wAzn+q1VZx3t321b+a1/Ax6KKkgl8i4SXy0l2HOyQZVvYivRex6j2NjWv8AkAaJ/wBcpP8A0IVo6XMi6Dp9rcHEF5JNA/tnGD+BxWXc+I5Lu0FvJp9gEVGSMrEcx57r83Bqg+oSvp0FmQojgdnVgDuya4fYznTUZK2rf33/AMzzvYTnTUJK2rf33/K51CwPba74fglGHjiKMPcFhWJqtnp8clzLDqizT+YT5HkOvO7kbjxx/SifxJeXOpWt9KkJmtlwuFOG+vNZcshmmeVsBnYsce5p0aNSMlKTtp09WyqFCrGSlJ206W7t9vM2tV/5FfRfK/1WJd2P727v+tGtZ/4R7Q/M/wBZ5Umf93cNv6VUsdbnsrQ2pht7m3LbxFcR7gp9RzxUd3qMmqahHNqLHyxhSsKgbEz0UVUac1JXWibfre/+ZUaU4yV1om3fve/+f4Fz/mRP+4l/7SrFrZvb/Tf7BGn6aLon7T55adVH8O3HB+lY1a0b2batds2w97SbVrtl7RtVn0PXLPU7UKZrSZZVDDhsHOD9eld3d6V4a+IUepan4aNzpetxQyXtzp853xTAcuUfscnv+Q61wej6pNourQahbRwyywMSqTpvRsgjBHfrXR3HxI1BtPurXTNI0XRvtkZinm02z8qR0PVcljgH2xW50HT+BPEzJ8PPEw/sfR2/s60gxusgftOXI/ff3/xrmdEMHj34i6Ra39hYadbysIpItOgECOq7nOQP4j0z9PSsrwz4rv8AwtPctYx21xDdx+VcW13F5kUy+jLx/PvSan4nmvtVtNQsdP0/Rp7TBi/syAxDcDkMck5NAHpupW/hiddXsNVPg6ytI4pFszp+9byGVfubyUG7pyD3rnvBWmXtp4aS/u7XwjHp95M3kzeIV+eXbhWEZGSACD+Oax9V+IdzrVtcrqGgaBJdXMZSS/FjickjG7duxu98VFpXj6/0zQ7bSpdN0nUYLR2e1a/tPNa3LHLbTkdTzyDQB1t34H0ZvjppuixQhNNvIlungjclB+7ZyqnrtJT8jT/DPia11yPxhDD4f03SzF4fvTC9lB5TiPgbJMfeP3eeOQfXjktS+I+s6lfaVqDw2UGpaYFCX0MJE02Bj94SSGHXjAHJqxP8T9Ski1BINH0S0OpW0tvdvbWhRpRIMFid2d3U+mTyDQA+PTrXxD8Jxc2FlEuraHdhLgwRASXEEp+VmwMsQ3HOeAfWo/iVa2Oj6pp2g2FtbxyaZYxpdzRRqrTTsAzFiOvGOucc1r/Duey8HJJ4h1XXtNa2uLVkbSonMtxKc/KCg4Q5AIJzgE9M5rgdY1OfWtavNSujma6maVuc4yc4+g6UAUq9H8CSeHR4WnQHQV8Qm5znxDGWgMO3gIfug59f8MecV0ei+L10bTVs28OaDqGHL+dfWZkkOe24MOPagDV8R3WqeGPGEd1qvh7w8Ge1Hkww2avZzIScSKoOCffrXQ/FjxU1r4lutMGi6LMJrKNftU1irTpvj6q+cgjPHpxXn3iTxPqHirUI7vUzEvkxLDDDBHsjiQdFVew5rYufiPf3+npb6ro2iajOkH2db26s904XGB8wYDI6jjrQBr+CtMvbTw0l/d2vhGPT7yZvJm8Qr88u3CsIyMkAEH8c1D42hsfAvxEZ9I0zT7m3ntElFreRefAhcc7Qe2RkemayNK8fX+maHbaVLpuk6jBaOz2rX9p5rW5Y5bacjqeeQar+JvGd94sgsxqlpYi4tYxGbuGErNOAMfO2Tn14AGSaAO3+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTio/Cei6bp/wAN7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1c1c/Ee/v9PS31XRtE1GdIPs63t1Z7pwuMD5gwGR1HHWqXh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftQBe+IsGhJqVjcaBLp5kntgb2HTXZoI5gcEpkDAPp7Vx1aWuax/bd+LoadYacFjCCGwh8qPgnnGTzz1z6Vm0AeoafrEeifBCxun0yy1GQ6vIkcd9H5kSHZktt7nAIH1pmtSaHonxD8MarLo9jHp2qaZbXd7ZmENChl3KxVSCBgAEY7j3riZfEd3N4Rg8OtHCLSC6N0rhT5hcrtwTnGMH0q695deONS0y0vLrTNN+waellFPcyGGPy4gSCzHPzHJ6dewoA6218KWnhLV/Gd7qlpDdWek25jsVuYhJHI8x/cn5s5IGM/Wqmn3FhoXwisdZ/sPTL+/fVJIBJe24kAXZnkfxdOATgZPFO+IPi6Cfwtpfhey1GLU5LVUN7fwKVSYou1FyeWwDy3c4/Bun+KLXRvhDYwpFpWo3P9qyGSwvkWXCFOH2ZDDkY3cdSO9AGje+F9G8ReKPBV1FYx6ZB4giL3dpb/JGDHydg/hDdOPbvUto+keLtX8T+HZPDWl6dHYWtxLZXVpb+XLE0TADew+8Dxn/AOvXB6x411jWdetNWkljtZrEItnHapsjtwpyAi89/XPp0rS1L4m6vqNjfW8djpVjJqK7L26s7XZNcKeoZiT174A60AdL4E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f8AxrB8La0dd+K3h+5bT9P08pcRx+Vp9uIYzhidxUdTzjPoBWF4Z8V3/hae5axjtriG7j8q4truLzIpl9GXj+fep5PGUw8SafrNlo+k6fNYMGjhs7cxxuQc5cbsn86AO5kvNM8Taj430m48PabAum2V5eW93FDi4MsT9Wk6tuJyR07VB4T0XTdP+G9vrbJ4fbUL+6ePztfDNDGicbVUKRuOCcnsfauHs/Ft/Y6lrd9FFbmXWrae2uAyttRZjlinPBGOM5/GpvD/AI21Hw/ps+mrbWOo6dO4kaz1CDzYw/8AeAyCD079qAN3xRD4Qj8ZaHcpJZtYzLG2rQaUzNCjBvm2ZAIUjsOeD3rf8Q2rX+k6o/hDTvBeo6bHC7f6Fbj7bBD/AHyG+YMB39eg7V53deJftXiG31UaJo8AgAAsobXFu+M8smfm6889hWtN8Sb8afd2ml6Nomj/AGyIwzTafZmORkPVdxY4FAFr4W6jA/iix0O80bSb63vbgmSW8s1llUbeiseg46Y7msLZpUHxBdNXjK6VHqLCdIVxiISHIAHbHp26Vc8NeO5/C8MAstC0W4uYHLpeXNszTAn/AGg4+lQ6l4xbU9atNSk0DRIZLd2keKK1IjuCxz+9BY7v/rmgDu/ENq1/pOqP4Q07wXqOmxwu3+hW4+2wQ/3yG+YMB39eg7V5BXYzfEm/Gn3dppejaJo/2yIwzTafZmORkPVdxY4FcdQBLaz/AGW8hn8uOXypFfy5V3I+DnDDuD3FegeLJrXVfhVo2srpGmafeT38scjWFosIZVBwOOf1rhNNvRpupQ3Ztba8ETZ8i6TfG/HRhkZH41183xSuZ9LTTpPC/hs2cbF44fsT7UY9WA8zANAF7wJJ4dHhadAdBXxCbnOfEMZaAw7eAh+6Dn1/wxgePrLU7PX4xq2mabp7SW6tD/ZUSpbzJk4dccHPr7CotF8Xro2mrZt4c0HUMOX86+szJIc9twYce1VPEnifUPFWoR3epmJfJiWGGGCPZHEg6Kq9hzQBj17X4N0zSJPCngxLrRNNuW1T+0I7mWa1VpGCeYy/N1yNgGeoHAxXilddpHxE1LSbXRLZLW1kh0U3BgyGDP5wcNuOccbzjAHSgDrr7w3pXiHVvh/vsbWwGsQM14lnEIVk24bGB0J5GevNXNSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvXm194y1S9tdDhHlWzaEm20mgBD9QcsSSCflHQCtDVfiHc61bXK6hoGgSXVzGUkvxY4nJIxu3bsbvfFAHUeBPEzJ8PPEw/sfR2/s60gxusgftOXI/ff3/xrzvXdaOu3yXLafp+nlIxH5Wn24hjOCTuKjqecZ9AKs+GfFd/4WnuWsY7a4hu4/KuLa7i8yKZfRl4/n3qDXtcGu3MUo0rTdMEabfL06AxK3OcnJOTQBq+I9Wtr/wAC+ErSO5WW6sYrpLiMDmPMuUB/4CBXK1tar4ovdX0DStIuYrZLfS1ZYWjj2uwbruOeenbHvmsWgAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDU0axtLxbyW+MwjtofMxCQCecdxUElvBd6hHBo6TkSYVVnK7i34cYq5of8AyD9Y/wCvT/2YVjgkEEHBHQiuePM6ktdvu2OaPNKpPXbbtsa0/hy5ht5pY7i0uDbjdLHDLuZB3JGKhsNGnv7Z7nzYLa3RtpluH2qW9BV6yhOjaPd3V6Nk17A0EEJ+8VbqxHYVag+w/wDCL6Z/afmfZfNl3+V13dqwdaolo762vbyu/wDI5pV6kU7O+tr28ru33WMSfR7yDVE09owZ5CNm1uGB6EH0qzP4cuYbeaWO4tLg243Sxwy7mQdyRirHiE4sdGOTu+yggn72M/LRZQnRtHu7q9Gya9gaCCE/eKt1YjsKftajhGSeu1u+pXtqjpxknq9LW31t/XYo2GjT39s9z5sFtbo20y3D7VLegqDUNPn027NvdKA4AYFTkMD0INb8H2H/AIRfTP7T8z7L5su/yuu7tUWsfZjDon24zeV9l+YxgGTb/D149P1ojXm6lntdr7r/AOX4oUcRN1bPa7W3a/8Al+KObrRsNGnv7Z7nzYLa3RtpluH2qW9BUxHh3adrapntlY/8a0oPsP8Awi+mf2n5n2XzZd/ldd3arq1pKK5U1r29Xp9xpWxElFcqau+3k3p9xiXGkXlvqa2Dx7p3xsCnIcHoQfSrNx4cuoIZnS4tbhoBmWKGXc6AdcjFatzfJp1z4eu5gzLHb5P97YeB+hqTSoNOhvb+9tL17mMQSMxMRQRg9iT1NYSxFRRUv03d7fI55YqqoqX6bu9vl/wTj6ltreW7uY7eBd0kjbVGcZNXbUaL9mT7a1+J+d3kqm3rxjJz0xUN7/Z6tGdLa64zuM4UEHtjbXbztvlSf3aHoe0bfKk/u0Lc/hy5ht5pY7i0uDbjdLHDLuZB3JGKbpfh681aMSQNDGjMVVpXxuIGSABk1asoTo2j3d1ejZNewNBBCfvFW6sR2FReEf8AkarP/gf/AKA1c0qlRU5yT2628jklVqqlUlGV+Xrbey1/Ex3QxyMh6qSDim1Lc/8AH3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/K67u1VPEJ/0HRzk7vsowT125+X9K4o1pyqcvS7W3a/+Wp58cRUlV5ejbW3a/37a+qIJ/DlzDbTTR3NpcfZxmWOGXcyD1IxWRXTactq+jX8WjPIbxoCZhcLjMY+8Fwcd+9Ymm3cNjeCa4tI7tApHlSdOe/Q1pSqTalfVr5M1o1KjU09Wvk9v6sQ21vLd3MdvAu6SRtqjOMmtKfw5cw280sdxaXBtxuljhl3Mg7kjFZRb5yy/LzkY7Vu2UJ0bR7u6vRsmvYGgghP3irdWI7CqrSnGzi/l3KrznCzi/l3/pFKw0WW+sXu/tVrbwpJ5ZM7lecZ9DVW9tPsc4jFxBcfLnfA+5fpnA5rSsr9LPQjBe6ZJc280/mK5do1JAxjIHNM12xtbdbO6sUaKG7i3iJm3FCOvPpzUxqT9ryy2e23/DkxqT9tyz2d7bW/zMitGw0ae/tnufNgtrdG2mW4fapb0FRXN5DPYWsEdnHDJCCHmXrLn1/ya3YPsP8Awi+mf2n5n2XzZd/ldd3anWqTjFWVm3bv3/yHXqzhBWVm3bv3/OxgX+n3GnXhtrlRvwCu05DA9CKtT6DdWlmZ7yS3t227lhklAkYey1vxokuq+GhKN37jcN3XABK5/Kqqpp2uX19btaypdKryC6MpJYr6r0A9q5/rM9L9N/vt38vM5vrc9L7JXb+bXfy8zlqkgi8+4SLzEi3nG+Q4Vfcmo6K9B7HpvY2bnw5JaWguJNQsCjIzxhZTmTHZfl5NVv7Huf7E/tQGMwb9hAJ3DnGemMZ96ua1/wAgDRP+uUn/AKEK0dLmRdB0+1uDiC8kmgf2zjB/A4rh9rUjTUr31f3K/wDked7arGkp3vq/uV/8jDTRLmS4sYQ8W6+TfGSTgD349vep38P+WWDatpgZcgr55zn0+7W0sD22u+H4JRh44ijD3BYViarZ6fHJcyw6os0/mE+R5Drzu5G48cf0pQrTnJK/3K/VoIV51JpX37K/Vr5ENjos97atdGWC2tw2wS3Em1Wb0FMu9Ok0vUI4dRU+WcMWhYHemeqmr+q/8ivovlf6rEu7H97d3/WjWs/8I9ofmf6zypM/7u4bf0rSNSbkr7Ntfdf/ACNI1ZykrvRtq3a1/wDL8SO9sNN/sEahppugftPkFZ2U/wAO7PA+lY1bX/Mif9xL/wBpVi1rRvZpu9mzbDt2km72bNHQdFuPEWvWuk2TxRz3T7EaYkKDgnkgE9vSqt5avY309pKVMkErRMVPBKnBx7cV03wu/wCSn6H/ANdz/wCgtWH4h/5GfVP+vyX/ANDNbnQZ1Feq+E9F03T/AIb2+tsnh9tQv7p4/O18M0MaJxtVQpG44Jyex9qy/Fd/oeheI7HU/D1toN/JPZ4vbRIjPaRzZwWRWxjPYdvxoA5DXdBvvDmqHT9URUuAiyEI4YYYZHI9qn8LeGbzxdr0ek6bLBFPIjOGuGIXCjJ5AJ/SvQPix4qa18S3WmDRdFmE1lGv2qaxVp03x9VfOQRnj04rz7wv4jufCuvR6pZxRyyJG8ZSTOCGUr2+ufwoAx6K0NCOnLr9idcDnThOhuRH1KZ56c/lz6V6f4htWv8ASdUfwhp3gvUdNjhdv9Ctx9tgh/vkN8wYDv69B2oA8gooq5peoHS9ThvBa2t2YiT5N3F5kT5BHzKevXP1oAp0V7L4v1Xwv4R+Is+lXXhTTpdKmjEl0Y7VTMpaMACLJAQAgHjHJY1g2C6b4V+GFt4hh0ix1W91K/eFW1KASrDGm7A2ZwGOM59/YUAcPo1rp95qSw6xqTabalSWuFtzNg44G0EHmtPxl4Yg8L32nxWepHUre/sI76KcwGH5XLYG0sey5/HpWp8SNL0+1m0TVdLtI7CPWNOjupLSP7sTnrt9Acj8qX4l/wDMo/8AYs2X/s9AEOieDtI13w/fXdr4kYalY6dNfzWBsGwFjH3fMLAHOV5x36cVg+HNH/4SDxJYaT5/2f7ZMIvN2btme+MjP510nw0/5m7/ALFm9/8AZKzvhz/yUjQv+vxKAMTVbH+zNZvbDzPN+y3EkPmbcbtrEZx2ziqlexWNzpni7xvr3hu98OaZDaoLplvoYdtzG6Mf3jS98nkjpyB0rE8FaZe2nhpL+7tfCMen3kzeTN4hX55duFYRkZIAIP45oA84or07WvBGkt8adO0O2UQaffrFPJHE5KqCpZlQnnB2nHpmqOt+MNKt9U1TSG8F6KLKFpbeHZCY7hGUlQxlHJORkigDBuvCv2b4f2Pif7Zu+13bW32bysbMBju3Z5+70xXO163p3h5vEvwT0KyTUbDTz/a0h33s3lhs7htX+83PSuX+J0FhpniSDQ9MsUtk0m1jt5ZvJEb3UmMmVsdc5HJ96AOMooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1NGvrSzW8ivhMY7mHy8wgEjnPc1C1za2epxXGliR0iIYC6UcsPZT06VNo1jaXi3kt8ZhHbQ+ZiEgE847ioJLeC71CODR0nIkwqrOV3Fvw4xXN7ntJb+fbY5Pc9pLfz7bf5F658TSXcjSXOm6dJIwwXaFif/AEKqthrM9hbPbeVBc27tuMVwm5Q3qKmn8OXMNvNLHcWlwbcbpY4ZdzIO5IxUNho09/bPc+bBbW6NtMtw+1S3oKlLD8mm39WIisKqbta2n/AEl1m6n1aPUJhG8sRGxCvyADoMelW7nxNJdyNJc6bp0kjDBdoWJ/8AQqpT6PeQaomntGDPIRs2twwPQg+lWZ/DlzDbzSx3FpcG3G6WOGXcyDuSMUSWH929vL0HJYX3b2209CGw1mewtntvKgubd23GK4Tcob1FQahqE+p3RuLogtgKAowFA6ACp7DRp7+2e582C2t0baZbh9qlvQVBqGnz6bdm3ulAcAMCpyGB6EGtI+x9o7W5jWPsPavltzFWtGw1mewtntvKgubd23GK4Tcob1FZ1aNho09/bPc+bBbW6NtMtw+1S3oKqrycv7zYut7Pl/ebEV5qc9/frd3QR2XACbfkAHRcelS3ut3V7bfZsRW9tnPk28exSff1plxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWd6C5dvIxvh1y7eRkVNaXLWd5FcRqrtEwYK4yCR61DUttby3dzHbwLukkbaozjJrolazvsdMrcr5tjWufE0l3I0lzpunSSMMF2hYn/wBCqDTNck0oKYLO0eVSSJpIyXGRjGQRT5/DlzDbzSx3FpcG3G6WOGXcyDuSMU3S/D15q0YkgaGNGYqrSvjcQMkADJrk/wBmVN/ynF/sipvblKt/ffb5hIba3tyBgiBCob3PJ5qpTnQxyMh6qSDim11RSirI7YxUY2jsaNhrM9hbPbeVBc27tuMVwm5Q3qKbPq9xdaml7cLFK6ABY2TKADtj0p1ho09/bPc+bBbW6NtMtw+1S3oKbNo95BqiaeyAzvjZhhhgehB9Kw/cc72v1/U5/wDZ+eW1+v6/8Enl8QztaywW1rZ2azDbI1vFtZh6ZyeKqabqM2l3gubdY2cKVxIuRzVyfw5cw2000dzaXH2cZljhl3Mg9SMVkU6caMotQ26jpxoTi1DVPcntrp7W+jukVGeN94Vh8pP0rUufE0l3I0lzpunSSMMF2hYn/wBCrJtreW7uY7eBd0kjbVGcZNaU/hy5ht5pY7i0uDbjdLHDLuZB3JGKKio8y59xVVQ517Tcistans7Q2rQ29zb7twjuI9wU+o6VDqOpXGpzrJclQEUKiIuFQegFTWGiy31i939qtbeFJPLJncrzjPoaq3tp9jnEYuILj5c74H3L9M4HNOPsvaPl+IcVR9q+X4iS51Oa7sLW0kWMR2wIQquCc+pqWw1mewtntvKgubd23GK4Tcob1FZ1aNho09/bPc+bBbW6NtMtw+1S3oKc40owtLYqpGlGFp7fqR3WrXd1qK3rybZo8eWUGAgHQAelW5vEt3LDMqQWsEk67ZZoYtruO+TnvVG/0+4068NtcqN+AV2nIYHoRVqfQbq0szPeSW9u23csMkoEjD2WoaoWje3kZtYe0b28jLqSCXyLhJfLSXYc7JBlW9iKjqSCLz7hIvMSLecb5DhV9ya6Ha2p1StZ3NW58RyXdoLeTT7AIqMkZWI5jz3X5uDVB9QlfToLMhRHA7OrAHdk1fufDklpaC4k1CwKMjPGFlOZMdl+Xk1W/se5/sT+1AYzBv2EAncOcZ6Yxn3rmg6CS5e/4nJTeHSXLtf8SefxJeXOpWt9KkJmtlwuFOG+vNZcshmmeVsBnYsce5q8miXMlxYwh4t18m+MknAHvx7e9Tv4f8ssG1bTAy5BXzznPp92nGVGnpH+v6Y4zw9Kyjp/w/8AnchsdbnsrQ2pht7m3LbxFcR7gp9RzxUd3qMmqahHNqLHyxhSsKgbEz0UU+x0We9tWujLBbW4bYJbiTarN6CmXenSaXqEcOoqfLOGLQsDvTPVTTXsed2+Ia9h7R8vxFu9v9N/sEafpouiftPnlp1Ufw7ccH6VjVs3thpv9gjUNNN0D9p8grOyn+HdngfSsanQ5eV8t9+pWH5eV8t9+vc0dB1q48O69a6tZJFJPavvRZgSpOCOQCD39a6Kf4i/aXkeXwh4XaSQktIbByxJ6nO/rXO6Dotx4i1610myeKOe6fYjTEhQcE8kAnt6VqL4F1U+KtS0B3to7zToZJpWZ22MqKGyp25OQQRkDr2rc6Bvh/xtqPh/TZ9NW2sdR06dxI1nqEHmxh/7wGQQenftWdrmsf23fi6GnWGnBYwghsIfKj4J5xk889c+lZtFAHYXPxHv7/T0t9V0bRNRnSD7Ot7dWe6cLjA+YMBkdRx1rj6KKALWm3v9nalBefZre68lt3k3Ue+N/Zl7j2rp5viTfjT7u00vRtE0f7ZEYZptPszHIyHqu4scCsrxN4c/4R3+yP8ASvtP9paZDqH+r2eX5mfk6nOMdeM+lYdABV/RtUGj6kt21hZagFUjyL6IyRnI6kAjkfWqFX9GtdPvNSWHWNSbTbUqS1wtuZsHHA2gg80AbPi7x1d+Mtr6lpel29wHDNc2sDLK4AIClmY5HPT2FR6B43v9B0mXSzZ6fqenSyib7LqMHmoj4xuXkEH/AD603xl4Yg8L32nxWepHUre/sI76KcwGH5XLYG0sey5/HpXO0Aa3iPxHqHijVvt+qtGZBGIo0iTakSDoqjsBk/nWt/wsG+l0G20u/wBJ0fUBa2/2a3ubu03zRR4wAG3Y47cVydFAGx4a8S33hXVWv9NWGRniaGWK4j3xyxtjKsOMjgflVuTxlP8A8JJYazZaTpOnzWDBo4bO2McbkHOWG7J/OucooA7DU/iVq1/Y3ttaWOl6St+T9rk0628uS4BzkMxJODnn/wCuah0rx9f6ZodtpUum6TqMFo7Patf2nmtbljltpyOp55Bqj4Z8Of8ACRf2v/pX2b+zdMm1D/V7/M8vHydRjOevOPSsOgDqNb8farrs2m3NxDZwahpwXy7+3iKTyFQMF2yQeRngAZJqzqXxGudXhuP7R8PeH57q4jMcl61iRMcjG7cGxux0OOOPSuOooA2bjxPe3Pg+08NvFALO1uGuUcKfMLEEEE5xj5j2p/iTxXfeKjYvqkVv9os4BB9pjQiSdR0MhJIJ68gDqaw6v6Na6feaksOsak2m2pUlrhbczYOOBtBB5oAt6r4ovdX0DStIuYrZLfS1ZYWjj2uwbruOeenbHvmm+GPEt54U1pdU06K3lnVGQLcIWXDDB4BBz+NWvGXhiDwvfafFZ6kdSt7+wjvopzAYflctgbSx7Ln8elX9E8HaRrvh++u7XxIw1Kx06a/msDYNgLGPu+YWAOcrzjv04oA5CRzLKztgFiScDA59q2NV8UXur6BpWkXMVslvpassLRx7XYN13HPPTtj3zUHhzR/+Eg8SWGk+f9n+2TCLzdm7ZnvjIz+dV9Vsf7M1m9sPM837LcSQ+Ztxu2sRnHbOKAKlFFFABRRXRXXhX7N8P7HxP9s3fa7trb7N5WNmAx3bs8/d6YoA52iiigAooooAKKK7HRPB2ka74fvru18SMNSsdOmv5rA2DYCxj7vmFgDnK8479OKAOOooooAKK0tP0G+1TS9R1C0RWt9NRZLglwCoY4GB35FZtABRWzq3hm80fQdI1a5lgeDV0keBY2JZQhAO4EAD7w6E1jUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAbOh/8g/WP+vT/wBmFY4JBBBwR0IrT0a+tLNbyK+ExjuYfLzCASOc9zULXNrZ6nFcaWJHSIhgLpRyw9lPTpXPG6qS03/yOWPNGpPTf7tjRsoTo2j3d1ejZNewNBBCfvFW6sR2FWoPsP8Awi+mf2n5n2XzZd/ldd3aqNz4mku5GkudN06SRhgu0LE/+hVVsNZnsLZ7byoLm3dtxiuE3KG9RXO6VWa5pLW99/K2noczo1Zx5pK0r338mtPQveITix0Y5O77KCCfvYz8tFlCdG0e7ur0bJr2BoIIT94q3ViOwqhLrN1Pq0eoTCN5YiNiFfkAHQY9Kt3PiaS7kaS503TpJGGC7QsT/wChVXs6qgoW06/fexXsqqhGnbTd6+d7F6D7D/wi+mf2n5n2XzZd/ldd3aotY+zGHRPtxm8r7L8xjAMm3+Hrx6frWZYazPYWz23lQXNu7bjFcJuUN6ioNQ1CfU7o3F0QWwFAUYCgdABRGhNVLva7f33/AM/wQRw81Vu9rt797/5/gi6R4d2na2qZ7ZWP/GtKD7D/AMIvpn9p+Z9l82Xf5XXd2rlq0bDWZ7C2e28qC5t3bcYrhNyhvUVdWjJxXK29e/qtPvNK1CTiuVt2ffya0+827m+TTrnw9dzBmWO3yf72w8D9DUmlQadDe397aXr3MYgkZiYigjB7Enqa5u81Oe/v1u7oI7LgBNvyADouPSpb3W7q9tvs2Ire2znybePYpPv61k8NNxS77/fft5+Rg8JNxUVpffta9+3n5C2o0X7Mn21r8T87vJVNvXjGTnpiob3+z1aM6W11xncZwoIPbG2qdTWly1neRXEaq7RMGCuMgketdfI0+ZNvyO72bTck2/LobNlCdG0e7ur0bJr2BoIIT94q3ViOwqLwj/yNVn/wP/0BqW58TSXcjSXOm6dJIwwXaFif/Qqg0zXJNKCmCztHlUkiaSMlxkYxkEVzOFWVOaa96X+VjkdOtKlNSj70vPyt+BQuf+Pub/fb+dRVbv777fMJDbW9uQMEQIVDe55PNVK7I35Vc74X5VdWOpg+w/8ACL6Z/afmfZfNl3+V13dqqeIT/oOjnJ3fZRgnrtz8v6VSsNZnsLZ7byoLm3dtxiuE3KG9RTZ9XuLrU0vbhYpXQALGyZQAdselccaM41Obpdv77/5nBGhUjV5uibe/e/8Anr6I19OW1fRr+LRnkN40BMwuFxmMfeC4OO/esTTbuGxvBNcWkd2gUjypOnPfoaty+IZ2tZYLa1s7NZhtka3i2sw9M5PFVNN1GbS7wXNusbOFK4kXI5q4U5qM+Zb+f6mkKU1GfMt/PXbuisW+csvy85GO1btlCdG0e7ur0bJr2BoIIT94q3ViOwrHtrp7W+jukVGeN94Vh8pP0rUufE0l3I0lzpunSSMMF2hYn/0KqrKcrRS06/5FV41JWjFaddfwEsr9LPQjBe6ZJc280/mK5do1JAxjIHNM12xtbdbO6sUaKG7i3iJm3FCOvPpzUVlrU9naG1aG3ubfduEdxHuCn1HSodR1K41OdZLkqAihURFwqD0AqY05qrzLRa313+RMaU1W5lotb6vX5dwubyGewtYI7OOGSEEPMvWXPr/k1uwfYf8AhF9M/tPzPsvmy7/K67u1YVzqc13YWtpIsYjtgQhVcE59TUthrM9hbPbeVBc27tuMVwm5Q3qKKlKUoJJWs77+vX53CrRlKCUVZp339evzudFGiS6r4aEo3fuNw3dcAErn8qqqmna5fX1u1rKl0qvILoyklivqvQD2rDutWu7rUVvXk2zR48soMBAOgA9KtzeJbuWGZUgtYJJ12yzQxbXcd8nPesPq9RWa3t321v8AM5/qtVWcd7d9tW/mtfwMeiipIJfIuEl8tJdhzskGVb2Ir0Xseo9jY1r/AJAGif8AXKT/ANCFaOlzIug6fa3BxBeSTQP7Zxg/gcVl3PiOS7tBbyafYBFRkjKxHMee6/NwaoPqEr6dBZkKI4HZ1YA7smuH2M501GStq399/wDM872E501CStq399/yudQsD22u+H4JRh44ijD3BYViarZ6fHJcyw6os0/mE+R5Drzu5G48cf0on8SXlzqVrfSpCZrZcLhThvrzWXLIZpnlbAZ2LHHuadGjUjJSk7adPVsqhQqxkpSdtOlu7fbzNrVf+RX0Xyv9ViXdj+9u7/rRrWf+Ee0PzP8AWeVJn/d3Db+lVLHW57K0NqYbe5ty28RXEe4KfUc8VHd6jJqmoRzaix8sYUrCoGxM9FFVGnNSV1om363v/mVGlOMldaJt373v/n+Bc/5kT/uJf+0qxa2b2/03+wRp+mi6J+0+eWnVR/DtxwfpWNWtG9m2rXbNsPe0m1a7Z1vwu/5Kfof/AF3P/oLV6Ro+NdZ/Eac3Fvpt9pV9zyWRSYm/FOp9q8b0HWrjw7r1rq1kkUk9q+9FmBKk4I5AIPf1rV0Dx5q3hxNXSxS3ePVkKzpMrELndyuGGD8x65rc6Df01bDwr8K7TxCNH0/VdQ1K+aHdqEPnRwImeAp4ycZz7+wqh8SNL0+1m0TVdLtI7CPWNOjupLSP7sTnrt9Acj8qzdA8b3+g6TLpZs9P1PTpZRN9l1GDzUR8Y3LyCD/n1qj4j8R6h4o1b7fqrRmQRiKNIk2pEg6Ko7AZP50AZNehwzWHhL4Z6HqcWh6dqd/rU1wZZdRt/OWJIn2BVGRgnrn6155XT6N46v8ASdD/ALHmsNN1WwWQyxQ6jbeaIXPUryMdT+ZoA7XxBpdj4o+I3gWxli+zWN5odoxhVvux/vG2A/Qbc1c1K38MTrq9hqp8HWVpHFItmdP3reQyr9zeSg3dOQe9eb634z1bXNY0/VJzDbXmnQRwQSWqbMBGLK2MkZy3bA9qv6r8Q7nWra5XUNA0CS6uYykl+LHE5JGN27djd74oA1dMi0/wt8LbXxIdHsdV1HUb1oFN/F5sVuig8bOhJ2k59/auV8Sa3Z67cW9xaaLaaTKsW2dbPKxyvn7wTov0FWfD/jfUfD+mT6YtvZajp1w4kez1CDzYt/8AeAyCDwO/aqGu60NcvI7gaXp2m7I/L8rT4DEjck5IJOTz19MelAHR/Ev/AJlH/sWbL/2etDwVpl7aeGkv7u18Ix6feTN5M3iFfnl24VhGRkgAg/jmsT/hYN9LoNtpd/pOj6gLW3+zW9zd2m+aKPGAA27HHbim6V4+v9M0O20qXTdJ1GC0dntWv7TzWtyxy205HU88g0AaXjyxsfBfxHSXSbGzmt2gS5FpcJ50GXUgjB6rnkZrqfF+q+F/CPxFn0q68KadLpU0YkujHaqZlLRgARZICAEA8Y5LGuKvviNe6rd2F1q2i6JfT2cXlGS4tWY3A24zJ83JHUYwASeKr+LvHV34y2vqWl6Xb3AcM1zawMsrgAgKWZjkc9PYUAdf4X0XStO+HkOtougveX95JGs3iFWaOONCQFVQpG84z+PtR/wjvhfXvin4ctLB7CSG8hZ9Rt9NdjAssaMxC5AIVto4ri/D/jbUfD+mz6attY6jp07iRrPUIPNjD/3gMgg9O/aoZ/Fl2fEltrem2dhpFzageWmnweXGCM8lSTknJBz1FAHe+GfE1rrkfjCGHw/pulmLw/emF7KDynEfA2SY+8fu88cg+vHktdrP8T9Ski1BINH0S0OpW0tvdvbWhRpRIMFid2d3U+mTyDXFUAXNL1A6XqcN4LW1uzESfJu4vMifII+ZT165+tes+L9V8L+EfiLPpV14U06XSpoxJdGO1UzKWjAAiyQEAIB4xyWNeU6Nqg0fUlu2sLLUAqkeRfRGSM5HUgEcj61s+LvHV34y2vqWl6Xb3AcM1zawMsrgAgKWZjkc9PYUAb9gum+FfhhbeIYdIsdVvdSv3hVtSgEqwxpuwNmcBjjOff2FZ3xI0vT7WbRNV0u0jsI9Y06O6ktI/uxOeu30ByPyrN0Dxvf6DpMulmz0/U9OllE32XUYPNRHxjcvIIP+fWqPiPxHqHijVvt+qtGZBGIo0iTakSDoqjsBk/nQB0PxL/5lH/sWbL/2ej4af8zd/wBize/+yVU/4WDfS6DbaXf6To+oC1t/s1vc3dpvmijxgANuxx24rL8NeJb7wrqrX+mrDIzxNDLFcR745Y2xlWHGRwPyoAvfDn/kpGhf9fiV3ljc6Z4u8b694bvfDmmQ2qC6Zb6GHbcxujH940vfJ5I6cgdK4CTxlP8A8JJYazZaTpOnzWDBo4bO2McbkHOWG7J/Orup/ErVr+xvba0sdL0lb8n7XJp1t5clwDnIZiScHPP/ANc0Aa/grTL208NJf3dr4Rj0+8mbyZvEK/PLtwrCMjJABB/HNT614I0lvjTp2h2yiDT79Yp5I4nJVQVLMqE84O049M1zelePr/TNDttKl03SdRgtHZ7Vr+081rcscttOR1PPINN1vx9quuzabc3ENnBqGnBfLv7eIpPIVAwXbJB5GeABkmgDY1vxhpVvqmqaQ3gvRRZQtLbw7ITHcIykqGMo5JyMkVt6d4ebxL8E9Csk1Gw08/2tId97N5YbO4bV/vNz0rldS+I1zq8Nx/aPh7w/PdXEZjkvWsSJjkY3bg2N2Ohxxx6Vj3Hie9ufB9p4beKAWdrcNco4U+YWIIIJzjHzHtQB1PjGHw/pXxE0rRLmxNvpekpBb30scASS6PBeRsctkEc9euO1bviG1a/0nVH8Iad4L1HTY4Xb/QrcfbYIf75DfMGA7+vQdq4XUvHF9rGpaXf6pYadd3GmxCLdNCWF0o6ecC2G79MdTVyb4k340+7tNL0bRNH+2RGGabT7MxyMh6ruLHAoA46iu0+GMGnvr2pXWr21vc21jpVxdGO4jV1JXGPlPU81xdABXb/DT/mbv+xZvf8A2SuIrY8NeJb7wrqrX+mrDIzxNDLFcR745Y2xlWHGRwPyoAn8EaNb+IPG+l6XfEi3uJsSgHBZQCxXPbOMfjXpOpW/hiddXsNVPg6ytI4pFszp+9byGVfubyUG7pyD3rzLUvE899q1rqFlYafo89oQYv7Mg8oBgchjycnPrWpqvxDudatrldQ0DQJLq5jKSX4scTkkY3bt2N3vigDqPAniZk+HniYf2Po7f2daQY3WQP2nLkfvv7/4153rutHXb5LltP0/TykYj8rT7cQxnBJ3FR1POM+gFWfDPiu/8LT3LWMdtcQ3cflXFtdxeZFMvoy8fz71Br2uDXbmKUaVpumCNNvl6dAYlbnOTknJoAfqviO51fQdH0u4ijWPSY5I4nXOXDtu5+mAK6/wJJ4dHhadAdBXxCbnOfEMZaAw7eAh+6Dn1/wx5xXR6L4vXRtNWzbw5oOoYcv519ZmSQ57bgw49qAJfH1lqdnr8Y1bTNN09pLdWh/sqJUt5kycOuODn19hXL1seJPE+oeKtQju9TMS+TEsMMMEeyOJB0VV7DmsegD2vwbpmkSeFPBiXWiabctqn9oR3Ms1qrSME8xl+brkbAM9QOBiqN94b0rxDq/w/wB9ja2A1iBmvEs4hCsm3DYwOhPIz15rkNI+ImpaTa6JbJa2skOim4MGQwZ/ODhtxzjjecYA6VRvPGeq3dvoUaGG2fQk22k0CkP1By2SQT8o7AUAd5aPpHi7V/E/h2Tw1penR2FrcS2V1aW/lyxNEwA3sPvA8Z/+vXOWum23iH4Su9hZQjV9FvlWV4ogJJ4ZjhdxAyxDHAznAFQal8TdX1GxvreOx0qxk1Fdl7dWdrsmuFPUMxJ698AdazPCXjDUPBuozXemR28xmi8uSK6QtGw3BgcAjkEcHPrQB2mqeHdHuvid4c8GRwQRQ2UMcV/NCgR7iXbvfcwGTkAD2ya1dSt/DE66vYaqfB1laRxSLZnT963kMq/c3koN3TkHvXk8+t38/iGTW/PaO/e4Nz5qcbXLbsj6Gt/VfiHc61bXK6hoGgSXVzGUkvxY4nJIxu3bsbvfFAHIVv8AgfRrfxD430vS70kW9xNiUA4LKAWK57Zxj8awKnsr2406+gvLKVobi3cSRSL1Vgcg0Aeq2j6R4u1fxP4dk8NaXp0dha3EtldWlv5csTRMAN7D7wPGf/r1l6dc6foXwhs9ZOhaZqF/Jqklusl7biQBdueR/F0wATgZNZOpfE3V9Rsb63jsdKsZNRXZe3Vna7JrhT1DMSevfAHWsSXxHdzeEYPDrRwi0gujdK4U+YXK7cE5xjB9KANv4lWVjBq2j3um2MNguqaPb30tvAMRpI+7IUdhwOK42tXXPEF14g/s77ZHCn9nWMVhF5Skbo484LZJ+bnnGB7VLqvii91fQNK0i5itkt9LVlhaOPa7Buu4556dse+aAMWiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1NGsbS8W8lvjMI7aHzMQkAnnHcVBJbwXeoRwaOk5EmFVZyu4t+HGKuaH/yD9Y/69P8A2YVjgkEEHBHQiuePM6ktdvu2OaPNKpPXbbtsa0/hy5ht5pY7i0uDbjdLHDLuZB3JGKhsNGnv7Z7nzYLa3RtpluH2qW9BV6yhOjaPd3V6Nk17A0EEJ+8VbqxHYVag+w/8Ivpn9p+Z9l82Xf5XXd2rB1qiWjvra9vK7/yOaVepFOzvra9vK7t91jEn0e8g1RNPaMGeQjZtbhgehB9Ksz+HLmG3mljuLS4NuN0scMu5kHckYqx4hOLHRjk7vsoIJ+9jPy0WUJ0bR7u6vRsmvYGgghP3irdWI7Cn7Wo4RknrtbvqV7ao6cZJ6vS1t9bf12KNho09/bPc+bBbW6NtMtw+1S3oKg1DT59Nuzb3SgOAGBU5DA9CDW/B9h/4RfTP7T8z7L5su/yuu7tUWsfZjDon24zeV9l+YxgGTb/D149P1ojXm6lntdr7r/5fihRxE3Vs9rtbdr/5fijm60bDRp7+2e582C2t0baZbh9qlvQVMR4d2na2qZ7ZWP8AxrSg+w/8Ivpn9p+Z9l82Xf5XXd2q6taSiuVNa9vV6fcaVsRJRXKmrvt5N6fcYlxpF5b6mtg8e6d8bApyHB6EH0qzceHLqCGZ0uLW4aAZlihl3OgHXIxWrc3yadc+HruYMyx2+T/e2Hgfoak0qDTob2/vbS9e5jEEjMTEUEYPYk9TWEsRUUVL9N3e3yOeWKqqKl+m7vb5f8E4+pba3lu7mO3gXdJI21RnGTV21Gi/Zk+2tfifnd5Kpt68Yyc9MVDe/wBnq0Z0trrjO4zhQQe2NtdvO2+VJ/doeh7Rt8qT+7Qtz+HLmG3mljuLS4NuN0scMu5kHckYpul+HrzVoxJA0MaMxVWlfG4gZIAGTVqyhOjaPd3V6Nk17A0EEJ+8VbqxHYVF4R/5Gqz/AOB/+gNXNKpUVOck9utvI5JVaqpVJRlfl623stfxMd0McjIeqkg4ptS3P/H3N/vt/Ooq7VqjvWqNGw0ae/tnufNgtrdG2mW4fapb0FNm0e8g1RNPZAZ3xswwwwPQg+lbUH2H/hF9M/tPzPsvmy7/ACuu7tVTxCf9B0c5O77KME9dufl/SuKNacqnL0u1t2v/AJannxxFSVXl6Ntbdr/ftr6ogn8OXMNtNNHc2lx9nGZY4ZdzIPUjFZFdNpy2r6NfxaM8hvGgJmFwuMxj7wXBx371iabdw2N4Jri0ju0CkeVJ0579DWlKpNqV9WvkzWjUqNTT1a+T2/qxDbW8t3cx28C7pJG2qM4ya0p/DlzDbzSx3FpcG3G6WOGXcyDuSMVlFvnLL8vORjtW7ZQnRtHu7q9Gya9gaCCE/eKt1YjsKqtKcbOL+XcqvOcLOL+Xf+kUrDRZb6xe7+1WtvCknlkzuV5xn0NVb20+xziMXEFx8ud8D7l+mcDmtKyv0s9CMF7pklzbzT+Yrl2jUkDGMgc0zXbG1t1s7qxRoobuLeImbcUI68+nNTGpP2vLLZ7bf8OTGpP23LPZ3ttb/MyK0bDRp7+2e582C2t0baZbh9qlvQVFc3kM9hawR2ccMkIIeZesufX/ACa3YPsP/CL6Z/afmfZfNl3+V13dqdapOMVZWbdu/f8AyHXqzhBWVm3bv3/OxgX+n3GnXhtrlRvwCu05DA9CKtT6DdWlmZ7yS3t227lhklAkYey1vxokuq+GhKN37jcN3XABK5/Kqqpp2uX19btaypdKryC6MpJYr6r0A9q5/rM9L9N/vt38vM5vrc9L7JXb+bXfy8zlqkgi8+4SLzEi3nG+Q4Vfcmo6K9B7HpvY2bnw5JaWguJNQsCjIzxhZTmTHZfl5NVv7Huf7E/tQGMwb9hAJ3DnGemMZ96ua1/yANE/65Sf+hCtHS5kXQdPtbg4gvJJoH9s4wfwOK4fa1I01K99X9yv/ked7arGkp3vq/uV/wDIw00S5kuLGEPFuvk3xkk4A9+Pb3qd/D/llg2raYGXIK+ec59Pu1tLA9trvh+CUYeOIow9wWFYmq2enxyXMsOqLNP5hPkeQ687uRuPHH9KUK05ySv9yv1aCFedSaV9+yv1a+RDY6LPe2rXRlgtrcNsEtxJtVm9BTLvTpNL1COHUVPlnDFoWB3pnqpq/qv/ACK+i+V/qsS7sf3t3f8AWjWs/wDCPaH5n+s8qTP+7uG39K0jUm5K+zbX3X/yNI1ZykrvRtq3a1/8vxI72w03+wRqGmm6B+0+QVnZT/DuzwPpWNW1/wAyJ/3Ev/aVYta0b2abvZs2w7dpJu9mzR0HRbjxFr1rpNk8Uc90+xGmJCg4J5IBPb0rop/h19meRJfF/hdZIyQ0Zv3DAjqMbOtQ/C7/AJKfof8A13P/AKC1S+Lx4NF1qv8AZkmunVvtL4FwkIg3eZ8/IO7GN2PwzW50HG0V6N8ONG0/xvp914Z1CyWCaFluYNVggUSRjcA0btj5gQTtB7/QU2J9O1T4zaZpsWiW1lptrdraLaPbqGkVTgmXj52JGTnP9SAed0V67pL6P4l8Wa34Qn8NaXa20a3K213awbZ4WjJwxfvnHTp0GMcVX8J6Lpun/De31tk8PtqF/dPH52vhmhjRONqqFI3HBOT2PtQB5VRXeeMbjQtI8S6Xqnh6LRbyRrfdeWcKmazE3IOFYD5SDkDsRXU+L9V8L+EfiLPpV14U06XSpoxJdGO1UzKWjAAiyQEAIB4xyWNAHl3hzSI9e8Q2umT38Onx3DEG5n+4mFJ55HXGBz1IqleQLa39xbxzJcLDKyLNGcrIAcbh7HrXbfDHULV/FlnoU+j6Xf2d7dHdLfWayzKu3gBj06dPc07wNp1jd/HCOwu7O3nszdXam3liVo8BJCBtIxgYGPpQBwFFe86Hp2jasmkwXPh7SFGoWOoCV47NQw8iYohU9jg8t1J71zfhPRdN0/4b2+tsnh9tQv7p4/O18M0MaJxtVQpG44Jyex9qAPKqK9SuNP8ADdz8UvC/9ljS7hLwxjULSyzJbCUHB2hh90jtjtU6y6Rrtz4z0I+G9KtINJsLu5tLi3g2zq8LAAs/fJOSOB26UAecafoN9qml6jqFoitb6aiyXBLgFQxwMDvyKza9X8CeJmT4eeJh/Y+jt/Z1pBjdZA/acuR++/v/AI153rutHXb5LltP0/TykYj8rT7cQxnBJ3FR1POM+gFAGZRRXqvhPRdN0/4b2+tsnh9tQv7p4/O18M0MaJxtVQpG44Jyex9qAPKqK9SuNP8ADdz8UvC/9ljS7hLwxjULSyzJbCUHB2hh90jtjtU6y6Rrtz4z0I+G9KtINJsLu5tLi3g2zq8LAAs/fJOSOB26UAeTVueJvDn/AAjv9kf6V9p/tLTIdQ/1ezy/Mz8nU5xjrxn0rp4ZrDwl8M9D1OLQ9O1O/wBamuDLLqNv5yxJE+wKoyME9c/WtnxBpdj4o+I3gWxli+zWN5odoxhVvux/vG2A/Qbc0AeR0V7RqVv4YnXV7DVT4OsrSOKRbM6fvW8hlX7m8lBu6cg965qGaw8JfDPQ9Ti0PTtTv9amuDLLqNv5yxJE+wKoyME9c/WgDmPE3hz/AIR3+yP9K+0/2lpkOof6vZ5fmZ+Tqc4x14z6Vh133xYlinv/AAzNbQi3hk8O2rRwg58tSXIXPfA4rgaACivZfBuk6LcaB4X1XUdKsZYUguobwvAmJHNzFFGWz95sScZ9K5jxvp9r4X0/wlaxWVqby3hkuLkvAP8ASCZePM7sPlIwT0yBQBzd3oMFt4PsNbXVbWWa7meJrBT+9hCk/MeehwO38Q9ar6foN9qml6jqFoitb6aiyXBLgFQxwMDvyK7PxZNa6r8KtG1ldI0zT7ye/ljkawtFhDKoOBxz+taXgTxMyfDzxMP7H0dv7OtIMbrIH7TlyP339/8AGgDzvw5o/wDwkHiSw0nz/s/2yYRebs3bM98ZGfzqvqtj/Zms3th5nm/ZbiSHzNuN21iM47ZxXXeFtaOu/Fbw/ctp+n6eUuI4/K0+3EMZwxO4qOp5xn0Aro5LzTPE2o+N9JuPD2mwLptleXlvdxQ4uDLE/VpOrbickdO1AHkdFFaGhHTl1+xOuBzpwnQ3Ij6lM89Ofy59KAM+tLT9BvtU0vUdQtEVrfTUWS4JcAqGOBgd+RXpviG1a/0nVH8Iad4L1HTY4Xb/AEK3H22CH++Q3zBgO/r0Haq/gTxMyfDzxMP7H0dv7OtIMbrIH7TlyP339/8AGgDyiiumguL7xn4y05NN0XSorslUjtLW2WGCTaS5LrnB4zn2GK77VNBsNW8Ga9LfxeE/t2mwCeGTw4SrxsDysgxgg9PzoA8t0/Qb7VNL1HULRFa301FkuCXAKhjgYHfkVm16v4E8TMnw88TD+x9Hb+zrSDG6yB+05cj99/f/ABrC8K38Hiv4p6J9v0fSoIGbyntbWzWOGQAMcsnIJ56+w9KAOFor0nwtpdhcXvxBE9jbSraaddvbh4VYQsC20pkfKRjgim+BJPDo8LToDoK+ITc5z4hjLQGHbwEP3Qc+v+GADziiuo8fWWp2evxjVtM03T2kt1aH+yolS3mTJw644OfX2FUdV1uyv9A0qwttFtrK4slYTXkZ+e6J6FuB09yfbHSgDFoore8E6LB4h8a6Xpd4xW3uJsSYOCVALEA9s4x+NAGDRXoGt+MNKt9U1TSG8F6KLKFpbeHZCY7hGUlQxlHJORkipdNWw8K/Cu08QjR9P1XUNSvmh3ahD50cCJngKeMnGc+/sKAPOqK9msfDuiz/ABU8H3celWsVnrmnNdT6c8YeJH8lzwp4xnBHHUZrT0PTtG1ZNJgufD2kKNQsdQErx2ahh5ExRCp7HB5bqT3oA8Gq/o1rp95qSw6xqTabalSWuFtzNg44G0EHmu30+4sNC+EVjrP9h6Zf376pJAJL23EgC7M8j+LpwCcDJ4ql8RLDTjY+Hte0ywj006xZtJPawLtjV0IBKjsDn9B70AZHjLwxB4XvtPis9SOpW9/YR30U5gMPyuWwNpY9lz+PSudrt/iX/wAyj/2LNl/7PW94T0XTdP8Ahvb62yeH21C/unj87XwzQxonG1VCkbjgnJ7H2oA8qrS13Qb7w5qh0/VEVLgIshCOGGGGRyPauv8AFd/oeheI7HU/D1toN/JPZ4vbRIjPaRzZwWRWxjPYdvxrY+LHiprXxLdaYNF0WYTWUa/aprFWnTfH1V85BGePTigDyaivVfCei6bp/wAN7fW2Tw+2oX908fna+GaGNE42qoUjccE5PY+1O/4R3wvr3xT8OWlg9hJDeQs+o2+muxgWWNGYhcgEK20cUAcJ4Z8Of8JF/a/+lfZv7N0ybUP9Xv8AM8vHydRjOevOPSsOvWvDPia11yPxhDD4f03SzF4fvTC9lB5TiPgbJMfeP3eeOQfXjyWgAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDU0a+tLNbyK+ExjuYfLzCASOc9zULXNrZ6nFcaWJHSIhgLpRyw9lPTpRRWXs1zOXcy9lHmcu+5dufE0l3I0lzpunSSMMF2hYn/0KqthrM9hbPbeVBc27tuMVwm5Q3qKKKSoU1HlS0JWHpKPKloJLrN1Pq0eoTCN5YiNiFfkAHQY9Kt3PiaS7kaS503TpJGGC7QsT/wChUUUOhTdtNgeHpO2mxVsNZnsLZ7byoLm3dtxiuE3KG9RUGoahPqd0bi6ILYCgKMBQOgAooqlTgpcyWpapQU+dLUq1o2Gsz2Fs9t5UFzbu24xXCblDeoooqpQjNWkhzhGatJXIrzU57+/W7ugjsuAE2/IAOi49Klvdbur22+zYit7bOfJt49ik+/rRRU+yhpptsT7GnpptsZ1TWly1neRXEaq7RMGCuMgketFFW0mrM0aTVmatz4mku5GkudN06SRhgu0LE/8AoVQaZrkmlBTBZ2jyqSRNJGS4yMYyCKKKy9hT5eW2hh9WpKPJbQrX999vmEhtre3IGCIEKhvc8nmqlFFaxioqyNoxUVZGjYazPYWz23lQXNu7bjFcJuUN6imz6vcXWppe3CxSugAWNkygA7Y9KKKj2UOZytqyPY0+ZytqyeXxDO1rLBbWtnZrMNsjW8W1mHpnJ4qppuozaXeC5t1jZwpXEi5HNFFJUoKLjbRgqNNRcUtHuR2109rfR3SKjPG+8Kw+Un6VqXPiaS7kaS503TpJGGC7QsT/AOhUUUSpQm7tainRpzfNJalay1qeztDatDb3Nvu3CO4j3BT6jpUOo6lcanOslyVARQqIi4VB6AUUU1TgpcyWo1SpqXOlqFzqc13YWtpIsYjtgQhVcE59TUthrM9hbPbeVBc27tuMVwm5Q3qKKKHTg48ttAdKm48rWhHdatd3WorevJtmjx5ZQYCAdAB6Vbm8S3csMypBawSTrtlmhi2u475Oe9FFJ0abtpsJ0KTteOxj1JBL5FwkvlpLsOdkgyrexFFFaNXVjVq6szVufEcl3aC3k0+wCKjJGViOY891+bg1QfUJX06CzIURwOzqwB3ZNFFZxpQjsjKNGnDSK8y7P4kvLnUrW+lSEzWy4XCnDfXmsuWQzTPK2AzsWOPc0UU404Q+FWKhShT+FWL9jrc9laG1MNvc25beIriPcFPqOeKju9Rk1TUI5tRY+WMKVhUDYmeiiiij2UFLmS1F7GmpOSWpbvb/AE3+wRp+mi6J+0+eWnVR/DtxwfpWNRRThBQVkOnTVNWRo6DrVx4d1611aySKSe1feizAlScEcgEHv610U/xF+0vI8vhDwu0khJaQ2DliT1Od/WiirNDItvFmoWPhd9D09YbSKWcTzXEIZZpivKhmz0BwQAB0+tbui+LW1z4naDq2uCxtJIZYluLtR5Ql28eZIS23OO4wKKKAJdc+I99Df63aaPZ6Rb/apZYW1K0tgJ5oi5/5aA4ORjkDnr15rE8P+NtR8P6bPpq21jqOnTuJGs9Qg82MP/eAyCD079qKKAGP4rD+IY9VPh7Q1CReV9iW0It26/MU3ZLc9c9hVjxd46u/GW19S0vS7e4DhmubWBllcAEBSzMcjnp7CiigB3hrx3P4XhgFloWi3FzA5dLy5tmaYE/7QcfSpR8RLyLxVZa/Z6No1neWhlOLe3dFmMilSZPnyTyccjrRRQA/T/iVqmmDTja2lmXsYrqJTIrEOJ5N7ZAYdDwOaoeH/G2o+H9Nn01bax1HTp3EjWeoQebGH/vAZBB6d+1FFADD4unXxVZ69Z6XpljNZlTHb2kBjhJUk5K7sknPJz6Uyz8W39jqWt30UVuZdatp7a4DK21FmOWKc8EY4zn8aKKAE8M+K7/wtPctYx21xDdx+VcW13F5kUy+jLx/PvUGva4NduYpRpWm6YI02+Xp0BiVuc5OScmiigDKro/D/jbUfD+mz6attY6jp07iRrPUIPNjD/3gMgg9O/aiigBh8XTr4qs9es9L0yxmsypjt7SAxwkqScld2STnk59KZZ+Lb+x1LW76KK3MutW09tcBlbaizHLFOeCMcZz+NFFAFrRvHV/pOh/2PNYabqtgshlih1G280QuepXkY6n8zUGt+M9W1zWNP1Scw215p0EcEElqmzARiytjJGct2wPaiigC/qvxDudatrldQ0DQJLq5jKSX4scTkkY3bt2N3viq+jeOr/SdD/seaw03VbBZDLFDqNt5ohc9SvIx1P5miigCl4m8UX3iu8tLnU0t0ktbVLVPIj2AopYgkZIz8x6YHTisWiigDo7bxvqlp4O/4RyCO2FsJxMs5RjKp3q+Ac4xuQHGKfrPji91/wAUWut6np+myvbRiJbUwsYGUFjgqWJ6sT1oooA05vilcz6WmnSeF/DZs42Lxw/Yn2ox6sB5mAawvDPiu/8AC09y1jHbXEN3H5VxbXcXmRTL6MvH8+9FFAE8njKYeJNP1my0fSdPmsGDRw2duY43IOcuN2T+dQ2fi2/sdS1u+iitzLrVtPbXAZW2osxyxTngjHGc/jRRQBhVa029/s7UoLz7Nb3Xktu8m6j3xv7Mvce1FFAHTzfEm/Gn3dppejaJo/2yIwzTafZmORkPVdxY4FZXhnxXf+Fp7lrGO2uIbuPyri2u4vMimX0ZeP596KKALJ8b3kPiSx1vStN0vSbmyBCJY22xHzkHcCTnIJHXpWpb/FTUbR5ltdB8Pw2txG0c9nHYlYZskHcwDZJGMDnHzHiiigDE8PeLr/w1eXc1jDaSw3qGO4s7iHfDIuc7SuenPrS3fi25m1yy1XTtO03SLiyIaMadb+WpIOcsCTn0+lFFAG7F8WtVhvrm5i0XQUF5E0V5EtkQl1uIy0nzZY9R1x8zcc1kaV4yXS7M258NeH77MjSeZeWRdxk/dyGHA7CiigCl4k8T6h4q1CO71MxL5MSwwwwR7I4kHRVXsOadqvii91fQNK0i5itkt9LVlhaOPa7Buu4556dse+aKKAMWprS7nsLyG7s5WhuIHEkcinlWByCKKKAOr1L4jXOrw3H9o+HvD891cRmOS9axImORjduDY3Y6HHHHpVLQPG9/oOky6WbPT9T06WUTfZdRg81EfGNy8gg/59aKKAJl+IetDxvbeKJRay3lrGYoIWjIhjQoy7QqkHADk9etWNP+JWqaYNONraWZexiuolMisQ4nk3tkBh0PA5oooA1NP8UWujfCGxhSLStRuf7VkMlhfIsuEKcPsyGHIxu46kd65LxL4o1DxVfx3Oo+TGsEQhgt7dNkUKD+FV7f59BRRQBp/wDCwb6XQbbS7/SdH1AWtv8AZre5u7TfNFHjAAbdjjtxVbw/421Hw/ps+mrbWOo6dO4kaz1CDzYw/wDeAyCD079qKKAM7XNY/tu/F0NOsNOCxhBDYQ+VHwTzjJ55659K3rn4j39/p6W+q6NomozpB9nW9urPdOFxgfMGAyOo460UUAUvD/jbUfD+mz6attY6jp07iRrPUIPNjD/3gMgg9O/aoZ/Fl2fEltrem2dhpFzageWmnweXGCM8lSTknJBz1FFFAGxP8T9Ski1BINH0S0OpW0tvdvbWhRpRIMFid2d3U+mTyDXFUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAf//Z)

Figure 5.16: Experiment successfully executed

In the same way by creating different environments in the system, we can analyze and recognize the thresholds, failures, and possible failures of the application and take necessary actions to avoid them.

Furthermore, these experimental results can be obtained as a report in pdf, HTML, or other formats as we prefer.

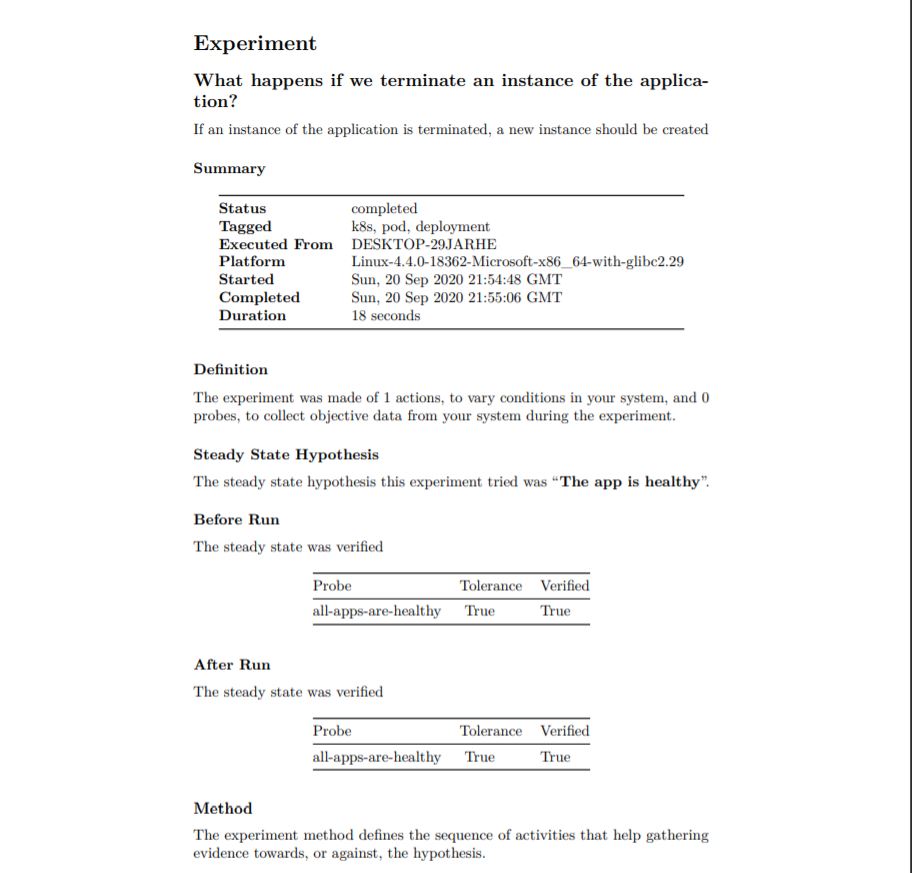


Figure 5.17: Section of the pdf report of an experiment

**5.1.4 Optimization Algorithm**

The developed optimization model was evaluated on a sample microservice cluster dataset containing 3 nodes and 6 microservices. For evaluation purposes, the JSON (JavaScript Object Notation) representation of this cluster dataset, along with the additional information required by the optimization algorithm which includes the node latency map, predicted inter-microservice dependency measures as well as the required number of microservice instances, is provided to the developed optimization algorithm in order to compute the optimized solutions. In this regard, Fig. 5.18 below depicts the structure of the sample input JSON provided to the optimization algorithm whereas Table 5.3 depicts the measurement units for the metrics depicted in Fig 5.18.

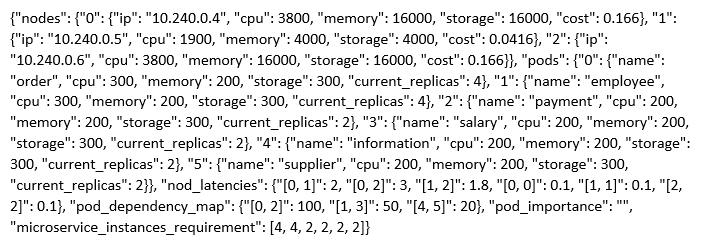


Figure 5.18: Structure of sample JSON input

Table 5.3: Metric measurement units

|  |  |
| --- | --- |
| Latencies | Milliseconds |
| Dependency | Number of requests per minute |
| CPU | Milli cores |
| Memory, storage | Megabytes |

Figures 5.19 and 5.20 depict the existing cluster deployment views.



Figure 5.19: Existing performance deployment view

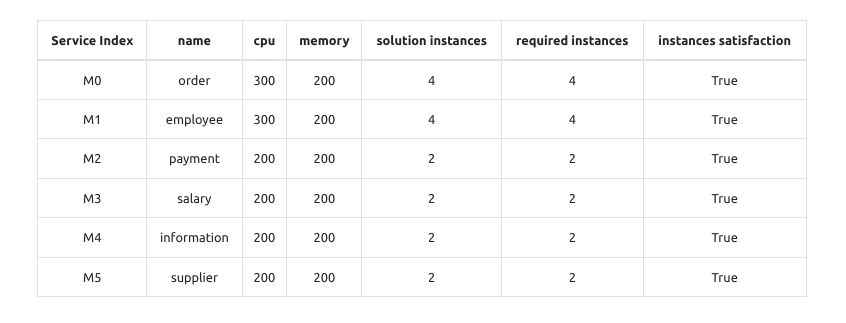


Figure 5.20 Existing performance instances table

After running the optimization algorithm, 4 optimal solutions which represent the deployment solutions pertaining to the best performance, best availability, overall optimal cluster, and highest cost-effectiveness, are generated.

The parameters for the initialization of the NSGA II algorithm is as depicted in Table 5.4 below.

Table 5.4: NSGA II algorithm initialization parameters

|  |  |
| --- | --- |
| Initial Population size | 1000 |
| Number of generations | 1200 |
| Number of solutions for the generation | 300 |

**5.1.4.1 Best Performance Deployment Strategy**

The resulting output which represents the solution pertaining to the best performance of the cluster is as depicted in Figs. 5.21 – 5.23 below.



Figure 5.21: Best performance deployment view

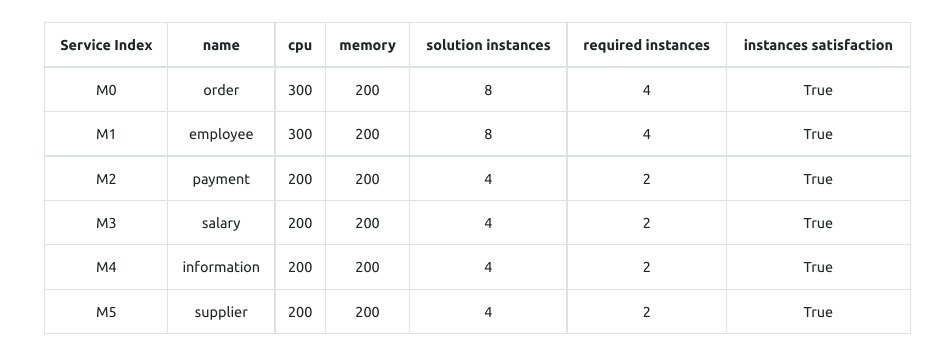


Figure 5.22: Best performance instances table

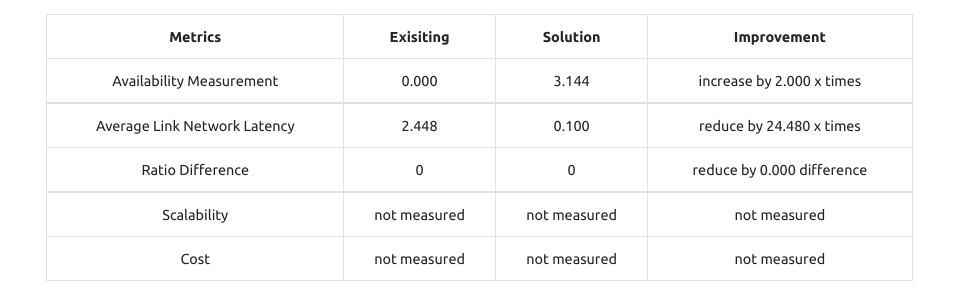


Figure 5.23: Best performance metrics improvement table

As depicted by Fig 5.18 above, according to the sample dependency map, between the microservice at index 0 and microservice at index 2 microservice, 1000 requests per minute have been sent. The requests per minute represent the microservice dependency level between the payment and order microservices. Likewise, between employee and salary microservices, 500 requests per minute have been recorded and between the information and supplier microservices have 200 requests per minute have been recorded. More as evident in the diagram, there are only 3 dependencies between each of the microservices.

As depicted in Fig. 5.21 it is evident all dependent services are deployed on the same node. Hence, as a result of this optimization process, the latency has been minimized by 24 times. Moreover, in the cluster, there is enough space to deploy all dependent services on the same nodes, otherwise, the algorithm selects nearby nodes to deploy the highly dependent services while also maintaining the ratio between the desired replicas.

Furthermore, the memory and CPU margins are set as 10% of the resources available. Hence, each generated solution always keeps more than 10% of resources free. As evident in Fig. 5.23 this solution increases availability by maximizing the number of instances 2 times more than the required instances.

**5.1.4.2 Best Availability Deployment Strategy**

As evident by Figs. 5.24 – 5. 26, this solution has 2.125 times more instances than the existing deployment. Also, it keeps a good ratio between instances and keeps the 10% resource margins.



Figure 5.24 Best availability deployment view

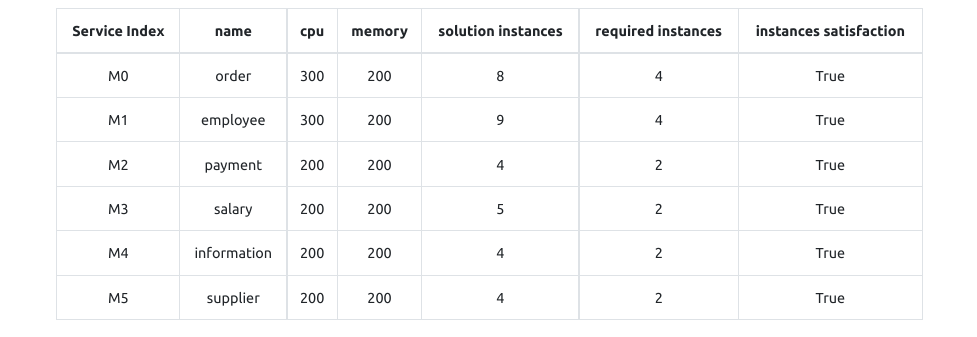


Figure 5.25 Best availability instances table

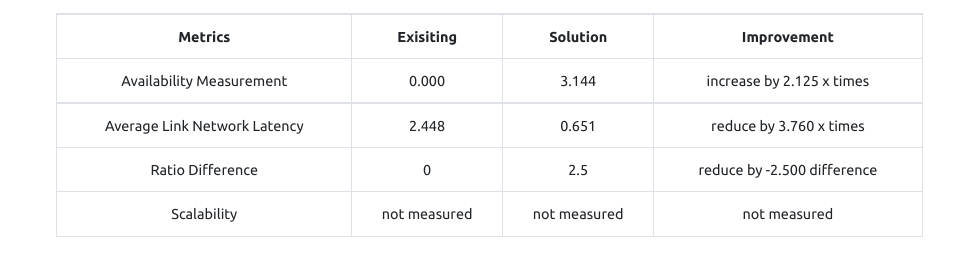


Figure 5.26 Best availability metric table

**5.1.4.3 Cost-effective Deployment Strategy**

This option keeps good availability and reduces the total cost. In this example, as depicted by Figs 5.27 – 5.29, it only deploys over the 2 nodes and it selects a cluster with a lower budget.



Figure 5.27: Cost-effective deployment view.

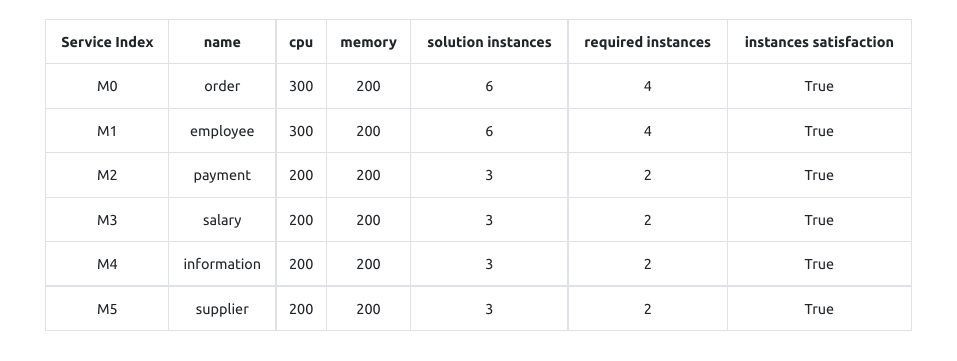


Figure 5.28: Cost-effective instances table

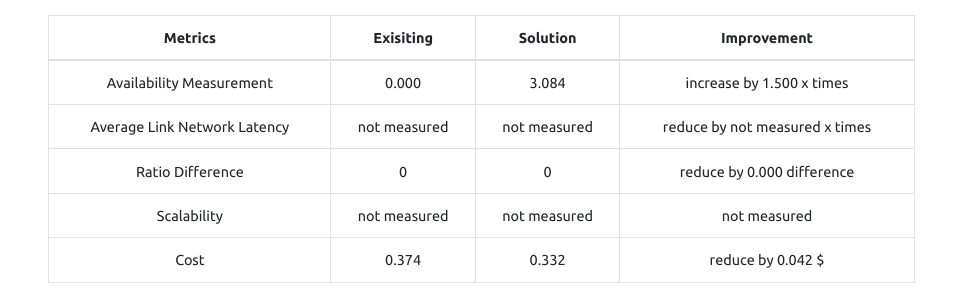


Figure 5.29: Cost-effective metric improvement table.

**5.1.4.4 Optimal Deployment Strategy**

This option generates the same solution as the performance-optimized solution delivered. The only difference is the scale value. The scale values determine the distribution of microservices throughout the cluster

Moreover, the primary reason for that creation of the optimal deployment strategy solution is because, in deployment strategies pertaining to the best performance, multiple services may be converged into a single node, which in turn may reduce fault tolerance within the cluster. Moreover, the developed optimization algorithm allows users to configure the minimal scale values (number of instances of a particular microservice deployed in a given node) such that the optimal deployment strategy could be created as per user requirements.

**5.2 Research Findings and Discussion**

Through analysis of the test results, several key findings were revealed. A key finding obtained in this regard is the fact that the developed governance model performs as expected and through the utilization of the developed optimization algorithm, optimal placement of microservices could be determined. Moreover, the evaluation of the test results also proves, the developed optimization algorithm could effectively determine optimal cluster deployment representation with respect to the given optimization objectives. However, as per the results obtained, it is evident there also exists the potential for improvements as well. In this regard, the following are some of the key potential improvements that could be addressed in the current iteration of the developed governance model.

* Inclusion of additional infrastructure level and service level metrics to facilitate the improvement of an increased holistic perspective.
* Improvements to the prediction models to increase accuracy.
* Improvements to resiliency evaluation component to facilitate the evaluation of increased resiliency measures
* Improvements to optimization algorithm pertaining to facilitate the inclusion of increased centrality evaluation measures in the determination of optimized deployment policies.

Moreover, another key constraint that was apparent in the development of the developed governance model was the inability to effectively evaluate the developed governance model on an increased number of nodes due to budgetary constraints. Hence in the future additional testing is expected to be performed on larger clusters to further validate the scalability aspects of the developed governance model

**5.4 Summary of Student Contribution**

**5.4.1 IT17016230 - Saranga S.A.G**

**5.4.1.1 Development of Sample Cluster**

As fundamental research is done on Kubernetes, a sample cluster was needed to run the application and test the findings. However, there were several options available when it comes to deploying a Kubernetes cluster.

Mini Kube, AWS, Azure, and GCP were considered and tested to find the best approach and decided to go with Azure because of the simplicity and the availability of the cluster.

However, it was significantly expensive to maintain a cluster for an extended period of time. Therefore, a bash script was written to set up the cluster in AKS using the command line quickly and take down the cluster when not using to reduce the cost.

**5.4.1.2 Development of Sample Microservices**

Continuous testing is a vital process for running any good research. In order to verify the installation and the results, a set of sample microservices were created with having interdependencies.

All the created microservices were containerized using docker, and a YAML file was created to deploy them in Kubernetes directly.

**5.4.1.3 Configuration of Istio and Metric Servers**

A set of metric servers such as Kiali, Prometheus, Jaeger, and Grafana, which were exposed from Istio, were used to collect metrics. Therefore, istio was needed to install and configured in the deployed cluster. And auto-injection was enabled as a sidecar proxy needed to add for each newly deployed service.

**5.4.1.4 Development of the Middle Tier Node Server**

Even though Kiali and Istio directly expose several APIs to query data, a middle-tier server was needed to gather metrics from several endpoints, then process and save in a database. A server was developed using Node Js to serve that purpose. Node JS was chosen to keep the simplicity and the performance of the server.

The developed server exposes several endpoints to add database records, check the health, and generate datasets.

**5.4.1.5 Deployment of the Middle Tier Node server**

The developed middle-tier server should be accessed from the modules developed for the other components of the research. Therefore, the developed server needed to be deployed in the AKS cluster. The Node JS server is containerized using the NODE base image, and all the necessary command-line libraries installed at the image build time using a Dockerfile.

The containerized server was then deployed to the cluster with a written YAML configuration.

**5.4.2 IT1700680 - De Silva N.**

**5.4.2.1 Selection of Optimum Prediction Model for Utilization in Time Series Prediction**

In order to perform the prediction process for load-based metrics as efficiently and as accurately as possible, a key step in the development of the load prediction and centrality analysis component was the selection of the optimum prediction model to be utilized for the time series prediction of load-based metrics (resource utilization and microservice link dependency measure). In this regard, a multitude of statistical and machine learning time-series prediction models were evaluated on a sample dataset, and the MAPE, RMSE, SMAPE, and MASE performance scores of the developed prediction models were recorded for evaluation.

The prediction model evaluated in this regard, range from statistical time-series prediction models such as ARIMA and Holt-Winters Exponential Smoothing to others machine learning-based approaches such as XGBoost, LSTM as well as the TPOT AutoML prediction model. Lastly, through performing an in-depth analysis of the performance scores of the above - stated prediction models, the LSTM prediction model was selected as the optimum prediction model to be utilized in the prediction process as per the functional and non - functional requirements of the proposed solution.

**5.4.2.2 Development of Time series Prediction Model to Forecast Load-based Metrics**

Once the optimum prediction model (LSTM) was selected, implementation was carried out such that the predictions could be effectively and efficiently performed. In this regard, the selected optimum prediction model, LSTM, was evaluated by experimenting on various implementations of the LSTM model architecture through varying the number of layers as well as other additional parameters until the optimum architecture of the LSTM model was achieved.

**5.4.2.3 Preparation and Manipulation of Gathered data for Time -Series Prediction**

A key task required in the development the prediction of load-based metrics was the implementation of a solution to read the load-based metric data gathered in the form of CSV files and apply the necessary data manipulation and transformation techniques to the gathered data such that it could be effectively utilized to perform the necessary predictions. In this regard, necessary utility functions were developed to facilitate the required data manipulation functionalities required.

**5.4.2.4 Development of a Solution to Perform Centrality Evaluation on Microservice Co – dependency networks.**

Implementation was also performed to facilitate the development of a solution to visualize current and predicted microservice co-dependency networks through the utilization of the predicted load-based microservice link dependency measures derived through the prediction process. In addition, necessary functionalities were also implemented to facilitate the evaluation of centrality measures in the thus obtained co-dependency networks to aid in the determination of the global importance of a microservice in a Kubernetes deployment.

**5.4.2.5 Integration of the Developed Component with the Final Developed Solution**

On completion of the developed functionalities of the load prediction and centrality analysis component, additional functionalities were also required to be implemented such that the resulting outputs could be communicated to other required components of the developed governance model. In this regard, additional servers such as Flask servers were required to be implemented to facilitate the communication of the processed data via API.

**5.4.3 IT17012966 - L.S Jayasinghe**

**5.4.3.1 Selection of Optimization Algorithm**

There are a variety of optimization algorithms are available for any optimization problem. However, it was quite difficult to find the most suitable optimization algorithm for the optimization problem addressed in this research.

The Optimal microservice deployment is N-P hard Problem. If this kind of problem is solved by regular mathematical algorithms, it takes a very long time. Also, the developed governance model should predict results before the required deployment time comes. Hence the algorithm needs to be run within a relatively small time period than the existing time period. On another hand this optimization problem is a multi-objective optimization problem, hence it needs to support multiple objective functions. In this regard, the NSGA II was chosen to implement this governance model, since it is multi-objective heuristic algorithms that fulfilled the optimization problem requirement of this research.

**5.4.3.2 Identification Objective Functions**

Before going through to the optimization, sufficient research was required in order to clarify how to optimize the microservices. Afterward, the necessary objective functions needed to be identified.

In this regard, there are 3 main objective functions for the developed optimization algorithm. They are latency, availability, and cost. For ease of development, the availability objective is further broken down to 3 sub-objective functions known as instances availability, instances ratio, instances scale.

**5.4.3.3 Identification of Requirement Metrics**

Objectives functions are not just raw data. These objective values are calculated by using several metrics values such as dependency map, centrality node latency, and resource metrics. Hence, these metrics highly affect the final optimal solution.

**5.4.3.4 Algorithm Implementation**

This optimization problem is fully implemented by using the NSGA II algorithm. This algorithm is completely modified according to the microservice optimal deployment problem. All fitness functions as well as the chromosome design was completely unique.

**5.4.3.5 API Server Implementation**

The developed governance model is essentially a microservice model. Hence API is required to facilitate the communication processes among other components of the developed model.

In the case of the optimization algorithm component, a Flask API server was implemented to facilitate this communication process. In this regard, the developed API server can be primarily utilized to retrieve the optimal deployment solutions pertaining to the best cluster performance, highest cluster availability, most cost-effective deployment, as well as the overall optimal cluster deployment plan.

**5.4.3.6 Implementation of UI to Visualize the Optimal Deployment Strategies**

If all the solutions are given by the JSON format, the user would not understand what is going on in the cluster. Hence a UI to visualize the optimal deployment strategies was required. In this regard, ReactJS was used for implementing this UI. This UI can be utilized by users such as DevOps engineers to visualize where the services are deployed, the number of service instances, node resource power utilization as well as other results of the optimization process.

**5.4.4 IT17410250 - Lakshitha M.V**

**5.4.4.1 Identifying the Importance of Resiliency Evaluation and Selecting a Tool**

The concept of resiliency evaluation came into discussion in the industry after Netflix introduced chaos monkey in 2012, but it was not very popular for the last few years. Still, the concept is new and not being used by vividly, it seems to be an interesting field of study.

Researching about resiliency measures, depicted that it is useful and important to maintain a better microservice governance. As the community of resiliency evaluation is considerably low, it is quite hard to find platforms to seek for help to solve problems that engineers undergo when performing chaos experiments.

Tools like Simian Army, Gremlin, Fault Injection Tool, Chaos Toolkit can be found as chaos experimenting tools and the most recent and user-friendly tool is known to be Chaos Toolkit. It is an open-source tool with considerably better documentation, and it has a variety of plugins that provides you with several options to experiment with.

**5.4.4.2 Performing Chaos Experiments And Generating Reports**

To performing chaos experiments on Kubernetes clusters, configuring the chaos toolkit, background software and required plugins had to be done. The limitation of documentation and resources made this process harder.

After configuring the Chaos Toolkit, the experiments were conducted on the Kubernetes cluster by creating different conditions on the application. The behavior of the application in chaos was examined on different perspectives to identify any weaknesses. Health checks, latency checks, HTTP responses, and dependency levels were checked and examined.

The results of the experiments were generated into pdf or HTML reports to get a summary of the experiment. The engineers are responsible for finding out the reasons for the failures of experiments and to develop the application as needed.

**5.4.4.3 Creating a Dashboard**

A dashboard was created using React Js, to output the results of the whole research and the individual components. Therefore, the user can experience an all in one user interface to get a clear idea about their Kubernetes cluster and to obtain an optimal deployment plan.

**6.0 CONCLUSION**

The research discussed in this publication attempts to address the issue concerning the lack of optimized deployment policies in orchestration tools such as Kubernetes caused as a result of the disjoint monitoring solutions employed in Kubernetes deployments. In response to this issue, the research conducted discusses the development of a network science-based governance model to facilitate the creation of a holistic perspective on Kubernetes deployments. The governance model developed in this regard incorporates the use of dependency analysis, load prediction, centrality analysis, and resiliency evaluation to effectively capture key dimensions of a Kubernetes microservice deployment and optimize the placement of microservices through the utilization of a developed optimization algorithm.

In this regard, this publication provides key insight into the methodologies adopted in the development of the governance model, along with an in-depth review and discussion pertaining to the results obtained through the application of the developed governance model on a sample Kubernetes cluster. Analysis of results reveals the developed governance model proved effective in the creation of optimized microservice deployment policies. However, as discussed in the sections above, the analysis of results also suggests potential improvements to the developed governance model as well. Hence, in future work, a key focus will be provided to the improvement of the developed governance model.

**References**

[1]"Benefits of Microservices Architecture Implementation - DZone Microservices", dzone.com, 2020. [Online]. Available: <https://dzone.com/articles/benefits-amp-examples-of-microservices-architectur>. [Accessed: 15-Feb-2020].

[2]"Microservices in Practice: From Architecture to Deployment - DZone Microservices", dzone.com, 2020. [Online]. Available: [https://dzone.com/articles/microservices-in-practice-1](https://dzone.com/articles/microservices-in-practice-1%20). [Accessed: 15-Feb-2020].

[3]"What is a Container? | Docker", Docker, 2020. [Online]. Available: <https://www.docker.com/resources/what-container>. [Accessed: 15-Feb-2020].

[4]"What is Docker?", Opensource.com, 2020. [Online]. Available: <https://opensource.com/resources/what-docker>. [Accessed: 15-Feb-2020].

[5]"What is Kubernetes", Kubernetes.io, 2020. [Online]. Available: <https://kubernetes.io/docs/concepts/overview/what-is-kubernetes/>. [Accessed: 15-Feb-2020].

[6]"Kubernetes", En.wikipedia.org, 2020. [Online]. Available: <https://en.wikipedia.org/wiki/Kubernetes>. [Accessed: 15-Feb-2020].

[7] “Microservices,” *Wikipedia*, 13-Feb-2020. [Online]. Available: <https://en.wikipedia.org/wiki/Microservices> [Accessed: 15-Feb-2020].

[8] Jamshidi, P., Pahl, C., Mendonca, N. C., Lewis, J., & Tilkov, S. (2018). Microservices: The Journey So Far and Challenges Ahead. IEEE Software.

[9] M. Kalske, N. Mäkitalo, and T. Mikkonen, “Challenges When Moving from Monolith to Microservice Architecture,” *Current Trends in Web Engineering Lecture Notes in Computer Science*, pp. 32–47, 2018.

[10] G. K. Behara, “Microservices Governance: A Detailed Guide,” *Enterprise Architecture Management*, 31-Jan-2019. [Online]. Available: <https://www.leanix.net/en/blog/microservices-governance>. [Accessed: 15-Feb-2020].

[11] D. Kim, H. Muhammad, E. Kim, S. Helal, and C. Lee, “TOSCA-Based and Federation-Aware Cloud Orchestration for Kubernetes Container Platform,” *Applied Sciences*, vol. 9, no. 1, p. 191, Jul. 2019.

[12] A. Jindal, V. Podolskiy, and M. Gerndt, “Performance Modeling for Cloud Microservice Applications,” *Proceedings of the 2019 ACM/SPEC International Conference on Performance Engineering - ICPE 19*, 2019.

[13] V. Medel, O. Rana, J. Á. Bañares, and U. Arronategui, “Modelling performance & resource management in Kubernetes,” *Proceedings of the 9th International Conference on Utility and Cloud Computing - UCC 16*, 2016.

[14] T. F. Düllmann and A. V. Hoorn, “Model-driven Generation of Microservice Architectures for Benchmarking Performance and Resilience Engineering Approaches,” *Proceedings of the 8th ACM/SPEC on International Conference on Performance Engineering Companion - ICPE 17 Companion*, 2017.

[15] Heinrich, Robert & van Hoorn, André & Knoche, Holger & Li, Fei & Lwakatare, Lucy Ellen & Pahl, Claus & Schulte, Stefan & Wettinger, Johannes. (2017). “Performance Engineering for Microservices: Research Challenges and Directions”.

[16] Fazio, Maria & Celesti, Antonio & Ranjan, R. & Liu, Chang & Chen, Lydia & Villari, Massimo. (2016). “Open Issues in Scheduling Microservices in the Cloud. IEEE Cloud Computing”.

[17]"DataDog/the-monitor", GitHub, 2020. [Online]. Available: <https://github.com/DataDog/themonitor/blob/master/kubernetes/monitoring-kubernetes-performance-metrics.md>. [Accessed: 15-Feb-2020].

[18]"Resource Usage Monitoring in Kubernetes", Kubernetes.io, 2020. [Online]. Available: <https://kubernetes.io/blog/2015/05/resource-usage-monitoring-kubernetes/>. [Accessed: 15-Feb-2020].

[19] D. Snyder, "How to Overcome Kubernetes Monitoring Challenges", OverOps Blog, 2020. [Online]. Available: <https://blog.overops.com/how-to-overcome-monitoring-challenges-with-kubernetes/>. [Accessed: 15-Feb-2020].

[20]"Monitoring Kubernetes (Part 1): The Challenges and Data Sources - DZone Performance", dzone.com, 2020. [Online]. Available: <https://dzone.com/articles/monitoring-kubernetes-part-1-the-challenges-and-da>. [Accessed: 15-Feb-2020].

[21]"Challenges of Monitoring and Troubleshooting in Kubernetes Environments | Sumo Logic", Sumo Logic, 2020. [Online]. Available: <https://www.sumologic.com/blog/troubleshooting-kubernetes>. [Accessed: 15-Feb-2020].

[22]"Pricing - Container Service | Microsoft Azure", Azure.microsoft.com, 2020. [Online]. Available: <https://azure.microsoft.com/en-us/pricing/details/kubernetes-service/>. [Accessed: 15-Feb-2020].

[23]"Amazon EKS Pricing - Managed Kubernetes Service", Amazon Web Services, Inc., 2020. [Online]. Available: <https://aws.amazon.com/eks/pricing/>. [Accessed: 15-Feb-2020].

[24]"Pricing | Kubernetes Engine Documentation | Google Cloud", Google Cloud, 2020. [Online]. Available: <https://cloud.google.com/kubernetes-engine/pricing>. [Accessed: 15-Feb-2020].

[25]"Which One Should You Prioritize? Kubernetes Performance, Cluster Utilization, or Cost Optimization?", Medium, 2020. [Online]. Available: <https://medium.com/@Mohamed.ahmed/which-one-should-you-prioritize-kubernetes-performance-cluster-utilization-or-cost-optimization-21469263b6a7> . [Accessed: 15-Feb-2020].

[26]"Kubernetes: The Challenge of Deploying & Maintaining", Techolution, 2020. [Online]. Available: [https://techolution.com/kubernetes-challenges/](https://techolution.com/kubernetes-challenges/%20). [Accessed: 15-Feb-2020].

[27] L. Hecht, L. Hecht, and L. Hecht, "The Top Challenges Kubernetes Users Face with Deployment - The New Stack", The New Stack, 2020. [Online]. Available: <https://thenewstack.io/top-challenges-kubernetes-users-face-deployment/>. [Accessed: 15-Feb-2020].

[28] M. Vizard, "Running Kubernetes at Scale Top 2020 Challenge - Container Journal", Container Journal, 2020. [Online]. Available: <https://containerjournal.com/topics/container-management/running-kubernetes-at-scale-top-2020-challenge>. [Accessed: 15-Feb-2020].

[29] “Generalised logistic function – Wikipedia.” https://en.wikipedia.org/wiki/Generalised\_logistic\_function (accessed Jul. 14, 2020).

**Appendix**

**Appendix A: Overview of Developed Governance Model**

