which is recharged through the skin from an external battery. Today, the service life of AbioCor is 18 months and this device is intended only for men (due to weight and height requirements). Scientists are now developing the next generation of artificial hearts. They are expected to function for up to 5 years and will be intended for both men and women. Today, AbioCor is worth $25,000.

Memory reprogramming The experiment was successfully conducted: 2014. Scientists Xu Liu and Steve Ramirez conducted an experiment on laboratory mice. They were able to replace the rodents' negative memories with positive ones and vice versa. For this, light-sensitive proteins were implanted in the brains of mice. Negative memories were completely replaced by positive ones. They firmly penetrated the memory of mice. What is the importance of this discovery? Just think how many people in the world are unsuccessfully trying to cope with post-traumatic syndrome, cannot survive the grief of losing a loved one. Such reprogramming can restore the joy of life, help people survive terrible tragedies.

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THE PROBLEM OF MAKING LOGS IN E-COMMERCE

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E-commerce has become an integral part of modern-day business, with more and more consumers opting to shop online. As the number of online transactions increases, so does the volume of data generated by e-commerce applications. Logging is a crucial aspect of e-commerce application development as it enables developers to record critical information, which is used for debugging, performance analysis, and security auditing. However, logging can be a challenging process, and improper logging practices can lead to severe consequences, including data breaches, system crashes, and poor system performance. In this article, the problem of making logs in e-commerce applications will be considered and provide some solutions to address this issue.

The Problem

E-commerce applications generate a huge amount of data, which needs to be logged to enable developers to identify issues, analyse performance, and troubleshoot. However, improper logging practices can lead to several problems, including performance degradation, security risks, difficulties in debugging, and increased storage costs.

Performance degradation is a common problem with logging, especially when logging is done excessively or inefficiently. Logging can impact the performance of the e-commerce application, causing delays in processing user requests, which can result in a poor user experience. To minimize this impact, developers should use efficient logging mechanisms, such as asynchronous logging, which enables the application to continue processing user requests while logging is performed in the background.

Security risks are also a concern when logging, especially when logs are not managed correctly. Improperly managed logs can lead to security vulnerabilities, such as the exposure of sensitive data or the ability for attackers to use logs to gain unauthorized access to the system. To prevent this, developers should implement secure logging mechanisms, such as encrypting log data and limiting access to logs to authorized personnel.

Difficulties in debugging can arise when the logging process is not well-designed. Developers may find it challenging to identify the source of problems when errors occur, leading to delays in resolving issues. To overcome this, developers should determine the appropriate level of logging required for the application and use efficient logging mechanisms.

Increased storage costs can be a significant challenge for smaller e-commerce businesses. The volume of data generated by logging can be significant, leading to increased storage costs. To reduce storage costs, developers should implement log rotation, which involves archiving and deleting logs after a specified time period.

Solutions to the Problem

To address the problem of making logs in e-commerce applications, developers should adopt best practices, such as determining the appropriate level of logging, using

efficient and secure logging mechanisms, and implementing log rotation. These best practices help minimize the impact on system performance, prevent security vulnerabilities, and reduce storage costs.

Determining the appropriate level of logging is crucial to minimize the impact on system performance. Developers should identify the types of data that need to be logged, such as user interactions, system events, and error messages.

This helps developers to focus on logging only the relevant information required to identify and resolve issues. Using efficient and secure logging mechanisms is also essential to prevent security vulnerabilities and minimize the impact on system performance. Developers should use efficient logging mechanisms, such as asynchronous logging, which enables the application to continue processing user requests while logging is performed in the background. Secure logging mechanisms, such as encrypting log data and limiting access to logs to authorized personnel, help to prevent unauthorized access to log data.

Implementing log rotation is crucial to minimize storage costs and ensure that only relevant data is retained. Log rotation involves archiving and deleting logs after a specified time period. This helps to prevent the accumulation of outdated data and reduces the storage requirements for log data.

Conclusion

Logging is a critical aspect of e-commerce application development, and developers must adopt best practices to ensure that logging is done efficiently and securely. By using efficient and secure logging mechanisms, developers can minimize the impact on system performance, prevent security vulnerabilities, and reduce storage costs. By implementing best practices, such as determining the appropriate level of logging, using efficient and secure logging mechanisms, and implementing log rotation, developers can ensure that logging is performed effectively and efficiently, helping to improve the overall quality and security of e-commerce applications.

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DEVELOPMENT OF SOFTWARE FOR RISK MANAGEMENT IN DERIVATIVES TRADING

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In recent years the development of software for risk management in derivatives trading has been an important aspect of financial technology (fintech) advancements. These software solutions play a huge role in assisting financial institutions, investment firms, and traders to effectively manage and reduce the risks associated with derivatives trading.

As derivatives markets have become increasingly complex, with a wide range of instruments and strategies, software solutions have started helping traders and risk managers to handle the complexity by providing sophisticated tools and analytics to assess, monitor, and manage the risks associated with derivatives trading.

Derivatives trading involves inherent risks, such as market volatility, counterparty risk, and operational risk. Risk management software helps to identify, measure, and mitigate these risks effectively by providing real-time data analysis, risk models, and scenario simulations. Real-time data integration, advanced analytics, and visualization tools enable quick decision-making regarding risk exposure, portfolio adjustments, and hedging strategies. Software solutions also allow scalability and automation in risk management processes. They can handle large volumes of data, perform complex calculations, and generate risk reports efficiently. Automation reduces manual errors, improves operational speed, and frees up resources for more