SIT323/SIT737- Cloud Native Application Development
Data management of cloud-native application

Overview

Data management for cloud-native applications involves the storage, retrieval, and processing of data in a distributed and scalable environment. Cloud-native applications typically use microservices architecture, which requires a flexible and dynamic approach to data management. This includes the use of modern databases such as NoSQL databases, data caching, data partitioning, and event sourcing, among other techniques. The goal of data management in a cloud-native environment is to ensure high availability, scalability, and reliability of data, as well as efficient and effective processing of data to support the needs of the application. In this task we aim to compare and contrast the performance of event sourcing and traditional database approaches for data management in a cloud-native application that uses MongoDB.

Instructions

Compare and contrast the performance of event sourcing and traditional database approaches for data management in a cloud-native application that uses MongoDB. You can follow the below steps:

- Understand the concepts of event sourcing, traditional database approaches, and MongoDB database management in the context of cloud-native applications.
- Conduct research on the advantages and disadvantages of event sourcing and traditional database approaches for data management in cloud-native applications that use MongoDB.
- Analyze the impact of factors such as data volume, data structure, and data access patterns on application performance for both approaches.
- Research and explore different data management techniques, such as data caching, data partitioning, and data replication, and their impact on application performance in a cloud-native environment.
- Compare and contrast the performance, scalability, reliability, and maintainability of event sourcing and traditional database approaches for data management in cloud-native applications that use MongoDB.
- Discuss the best practices for data management in cloud-native environments, including the trade-offs between different techniques.

Submission Details

Once you are done, write a maximum 2-page including references (.pdf) report that summarizes your findings, including a clear explanation of your analysis, the advantages and disadvantages of each approach, and your recommendations for the best approach based on your analysis.