

SIT323/SIT737- Cloud Native Application Development

Best practices of CI/CD in cloud native application

Overview

The objective of this task is to research and write a report on the best practices for implementing CI/CD pipelines in cloud-native application development, including an explanation of the benefits, challenges, and common tools and technologies used.

Instructions

Write a report on the best practices for implementing CI/CD pipelines in cloud-native application development by following the below steps:

- Research and explain the benefits of implementing CI/CD pipelines in cloud-native application development, including faster release cycles, increased quality and reliability, and reduced manual error-prone processes.
- Discuss the challenges of implementing CI/CD pipelines in cloud-native application development, such as handling dependencies, testing in complex environments, and ensuring security and compliance.
- Describe the common tools and technologies used in implementing CI/CD pipelines in cloud-native application development, such as Git, Jenkins, Kubernetes, Helm, and Istio.
- Discuss the best practices for designing and implementing CI/CD pipelines in cloud-native application development, such as using infrastructure-as-code, automating tests and deployments, incorporating security and compliance, and using monitoring and analytics to improve the pipeline over time.
- Provide real-world examples of organizations that have successfully implemented CI/CD pipelines in cloud-native application development and how they have benefited from it.

Submission Details

Once you are done, submit a pdf document (2 pages limitation including references).