



SIT223-SIT753

Pass Task:

Building a Jenkins Continuous
Delivery Pipeline

Building a Jenkins Continuous Delivery Pipeline

This is an individual Pass task.

Overview

The objective of this assignment is to design and implement a generic Jenkins pipeline that can be used to automate the continuous delivery of software applications.

Task Instructions

1. Create a new Jenkins pipeline job.
2. Define the pipeline script in the Jenkinsfile.
3. The pipeline must have six stages with the following names:
 - a. Build
 - b. Test
 - c. Code Quality Check
 - d. Deploy
 - e. Approval
 - f. Deploy to Production
4. Define and use environment variables for the pipeline. The following environment variables must be included:
 - a. DIRECTORY_PATH: The path of the code directory being fetched.
 - b. TESTING_ENVIRONMENT: The name of the testing environment.
 - c. PRODUCTION_ENVIRONMENT: The name of the production environment. Use your name as the name of production environment.
5. Configure the pipeline stages.
 - a. In the **Build** stage, configure the pipeline to **print a message** that shows "fetch the source code from the directory path specified by the environment variable". Add another build step to the job to **print** this message "compile the code and generate any necessary artifacts". You don't need to implement this only print a message.
 - b. In the **Test** stage, add steps to **print** "unit tests" and "integration tests" messages.
 - c. In the **Code** Quality Check stage, **add a message** showing that "check the quality of the code".
 - d. In the **Deploy** stage, **print** "deploy the application to a testing environment specified by the environment variable".

- e. In the **Approval** stage, add a sleep command to simulate manual approval. The pipeline must pause for 10 seconds before continuing.
- f. In the **Deploy to Production** stage, add one step to show the related message to deploy the code to the production environment using the environment variable specifying the environment name.

Note: Actual implementation of the steps is not required; only the specified messages should be printed.

- 6. Run the pipeline and verify that it executes successfully.

Task Submission Instructions:

You must submit the following files to OnTrack:

- 1. Submit the Jenkinsfile including the pipeline script.
- 2. Submit the console output log as a PDF document.
- 3. Submit the link to your demo video which shows that your pipeline functions as described above and completes all stages successfully.