Experiment 2: Creating a Jenkins Pipeline with a Jenkinsfile

Objective: Create a Jenkins pipeline using a Jenkinsfile that builds a

simple project, runs tests, and deploys the project to a designated Environment.

Prerequisites:

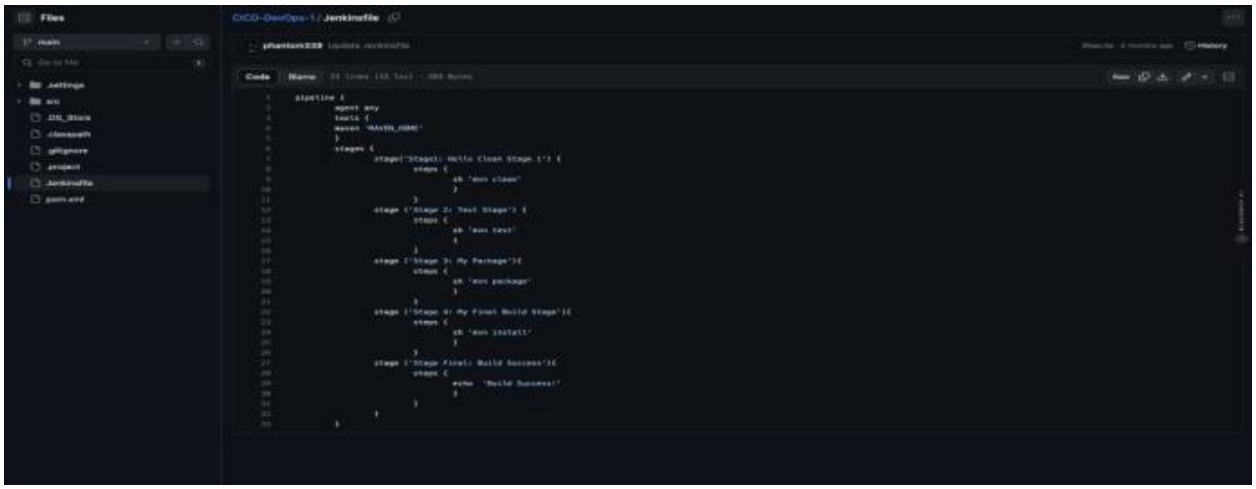
1. Jenkins server up and running.
2. A sample project hosted in a version control repository (e.g., Git).

Steps:

Jenkins Configuration:

- Ensure that Jenkins is installed and accessible.
- Install necessary plugins: Pipeline and any plugins specific to your version control system (e.g., Git Plugin).
- Setting Up the Project:
  Create a sample project (e.g., a simple web application) and host it on a version control repository (e.g., GitHub).
- Creating a Jenkinsfile: In the root of your project repository, create a file named Jenkinsfile.
- Defining the Pipeline:
  Open the Jenkinsfile and define the pipeline stages using the declarative pipeline syntax.

Here's an example Jenkinsfile with basic stages:

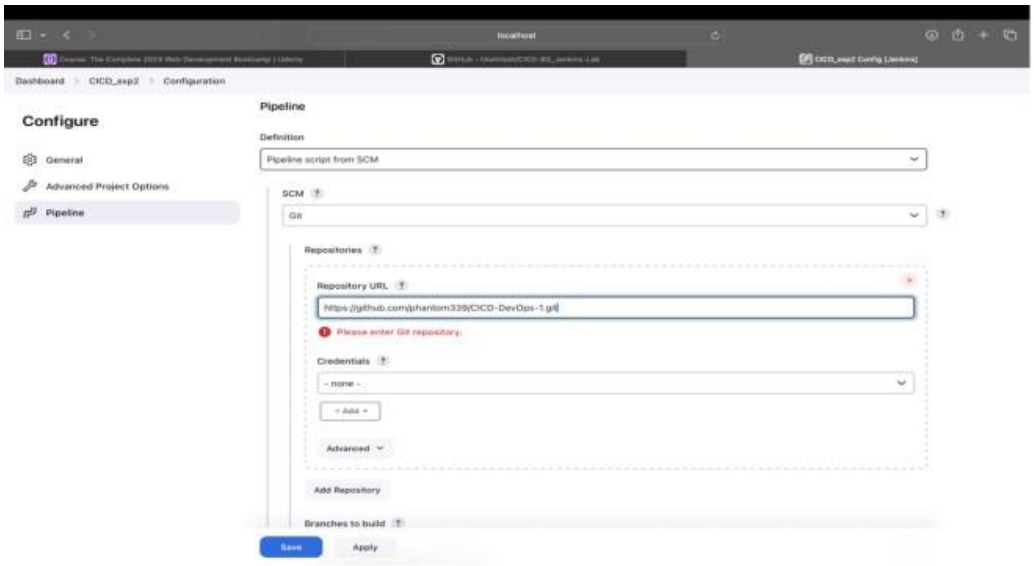


pipeline { agent
any stages {

```
stage('Checkout') {
steps { checkout
scm
}
}
stage('Build') {
steps {
sh 'your-build-command-here'
}
}
stage('Test') {
steps {
sh 'your-test-command-here'
}
}
stage('Deploy') { steps { sh 'your-
deployment-command-here'
}
}
}
post { success { echo 'Pipeline succeeded! Project
built and deployed.'
} failure { echo 'Pipeline failed! Check logs
for details.'
}
}
}
```

Configuring the Pipeline in Jenkins:

- In Jenkins, create a new pipeline job.
- Link the job to your version control repository (e.g., provide the repository URL).
- Choose the option to use a Jenkinsfile from the repository and specify the path to your Jenkinsfile (usually the root directory).



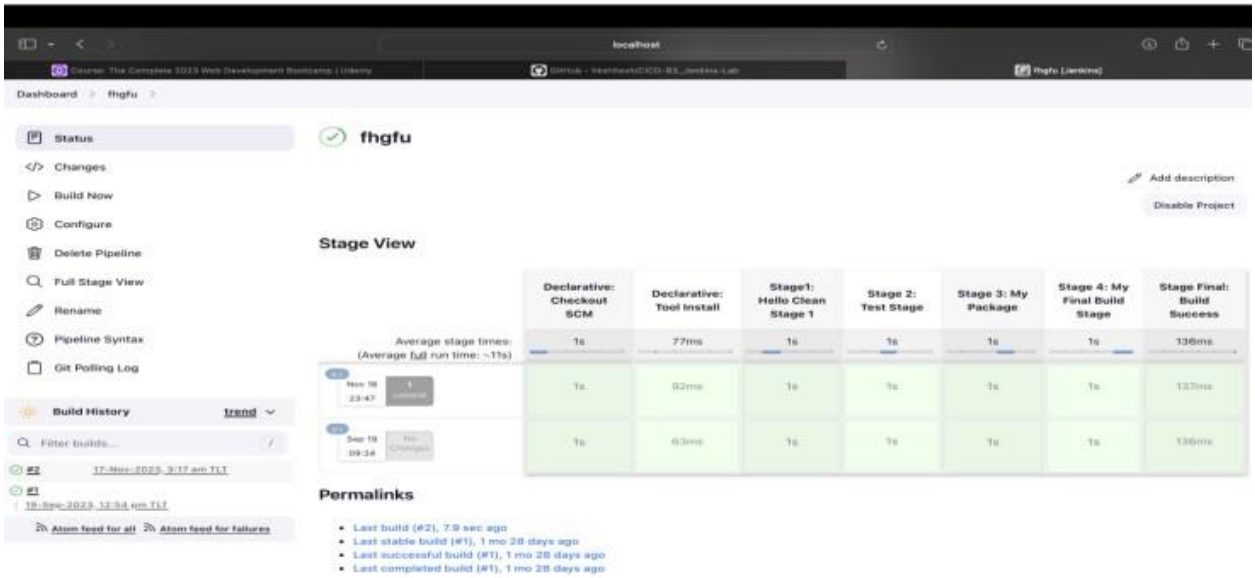
Running the Pipeline:

- Trigger the pipeline manually or set up a webhook to trigger it automatically on repository changes.

Observing the Results:

- Observe the pipeline execution on the Jenkins dashboard.
- Check the console output of each stage for any errors or issues.

This lab experiment will give you hands-on experience in creating a Jenkins pipeline using a Jenkinsfile. You can extend this experiment by adding more stages, integrating with other tools, and handling more complex build and deployment scenarios.


localhost
Dashboard
fhgfu
Status
Changes
Build Now
Configure
Delete Pipeline
Full Stage View
Rename
Pipeline Syntax
Git Polling Log
Build History
trend
Filter builds...
#2
17-Nov-2023, 3:17 am TLT
#1
19-Sep-2023, 12:34 pm TLT
Atom feed for all
Atom feed for failures
fhgfu
Add description
Disable Project
Stage View
Declarative: Checkout SCM
Declarative: Tool Install
Stage1: Hello Clean Stage 1
Stage 2: Test Stage
Stage 3: My Package
Stage 4: My Final Build Stage
Stage Final: Build Success
Average stage times:
(Average full run time: ~11s)
1s
77ms
1s
1s
1s
1s
136ms
Permalinks
Last build (#2), 7.9 sec ago
Last stable build (#1), 1 mo 28 days ago
Last successful build (#1), 1 mo 28 days ago
Last completed build (#1), 1 mo 28 days ago