Day 4

10/15/2023

CI and CD

Creating Jenkin job to run node js program

Creating Jenkin job to run python program

Installing python in unix or linux os

sudo apt-get install python3

Jenkin pipeline: Jenkin pipeline is a collection of events or jobs which are interconnected to each others to perform a specific task.

```
pipeline {
    agent any
    stages {
        stage('Verification') {
            steps {
                echo 'All software version verify'
            }
        }
        stage('Compile the programs') {
            steps {
                echo 'Compile the programs using few commands'
            }
        }
}
```

```
stage('Run the application') {
      steps {
         echo 'Run all application and create execute file like jar file, exe file or object file'
      }
    }
stage('Test the application and generate the report') {
      steps {
         echo 'Test the application and generate the report'
      }
    }
  }
}
We execute one simple Jenkin pipeline job to display echo message.
Creating pipeline job to build java project using maven build tools.
pipeline {
  agent any
  tools {
    // Install the Maven version configured as "M3" and add it to the path.
    maven "M3"
  }
  stages {
    stage('Build') {
      steps {
         // Get some code from a GitHub repository
         git 'https://github.com/jglick/simple-maven-project-with-tests.git'
```

```
// Run Maven on a Unix agent.
         sh "mvn -Dmaven.test.failure.ignore=true clean package"
         // To run Maven on a Windows agent, use
         // bat "mvn -Dmaven.test.failure.ignore=true clean package"
      }
       post {
         // If Maven was able to run the tests, even if some of the test
         // failed, record the test results and archive the jar file.
         success {
           junit '**/target/surefire-reports/TEST-*.xml'
           archiveArtifacts 'target/*.jar'
         }
      }
    }
  }
}
```

Creating maven project and push this project in git hub and creating job in Jenkin

to build the java project.

- 1. Open terminal in desktop
- 2. Write the command to check maven mvn --version
- 3. To create simple maven project you need to write the command as mvn archetype:generate
- 4. It will project version
- 5. Please hit enter key.
- 6. It will ask choose the number: hit enter key.
- 7. Group Id: groupName
- 8. artifactId: project name
- 9. snapshot: hit enter key
- 10. package name : hit enter key
- 11. it will provide all configuration details please select Y.
- 12. then it will create sample project for us.

Using cd command please move inside a project. mvn command must be execute inside project folder ie pom.xml file must be present. pom : project object model.

Maven goal.

mvn compile: it compile the project
mvn clean: it will remove target folder.

mvn test: it will test all test file present inside a project.

mvn package it will create jar or war file.

Please login to git hub account.

And create remote repository.

And clone your repository in your local VM with token

Then copy and paste your maven project in repository

Then move inside repository folder using cd command

git add .

git commit -m "message"

git push -u origin HEAD

please check your project in remote repository.