ASSIGNMENT 2

CI/CD Pipeline Setup Using Jenkins

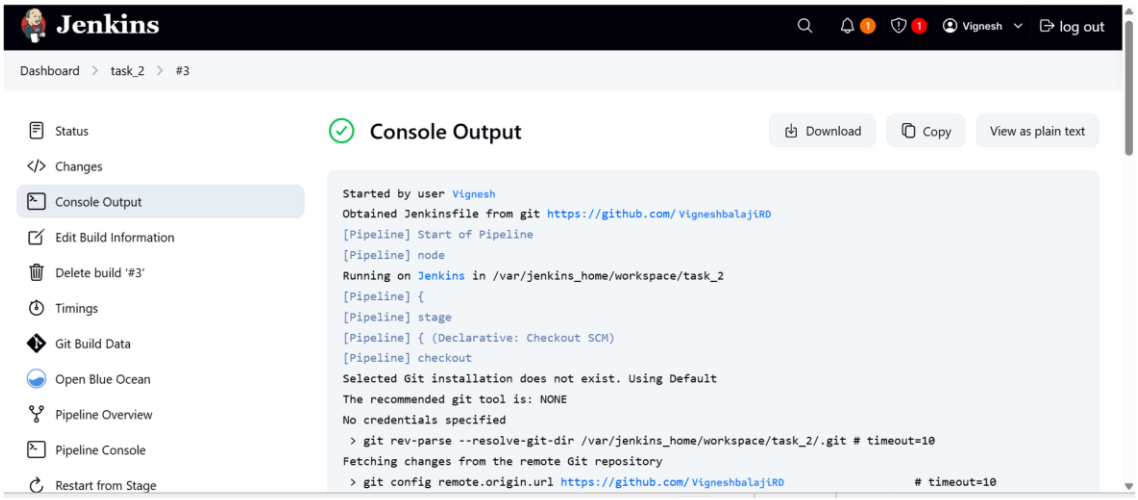
Task Description:

This task involves setting up a Continuous Integration and Continuous Deployment (CI/CD) pipeline using Jenkins to automate the build, test, and push process of a containerized web application. The pipeline integrates GitHub for source code management, Docker for containerization, and a container registry (such as Docker Hub) for storing the container image.

Steps to Set Up the CI/CD Pipeline:

1. **Install Jenkins:**
    - Ensure Jenkins is running and install necessary plugins (Git, Docker).
2. **Create a New Pipeline Job:**
    - Create a new Pipeline job in Jenkins to automate the build, test, and deployment process.
3. **Configure the GitHub Repository:**
    - Link your GitHub repository to Jenkins to automatically pull the latest code.
4. **Write the Pipeline Script (Jenkinsfile):**
    - Define stages in the Jenkinsfile:
        - **Clone Repository**: Pull the latest code from GitHub.
        - **Build Docker Image**: Build the image using Docker.
        - **Push Docker Image**: Push the image to a container registry (e.g., Docker Hub).
5. **Add Docker Credentials (if needed):**
    - Add Docker credentials to Jenkins if using a private registry for authentication.
6. **Trigger the Pipeline:**
    - Trigger the pipeline manually or set up GitHub webhooks for automatic triggers on code changes.

OUTPUT:


Jenkins
Vignesh
log out
Dashboard
task_2
#3
Status
Changes
Console Output
Edit Build Information
Delete build '#3'
Timings
Git Build Data
Open Blue Ocean
Pipeline Overview
Pipeline Console
Restart from Stage
Console Output
Download
Copy
View as plain text
Started by user Vignesh
Obtained Jenkinsfile from git https://github.com/VigneshbalajiRD
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/jenkins_home/workspace/task_2
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/task_2/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/VigneshbalajiRD # timeout=10