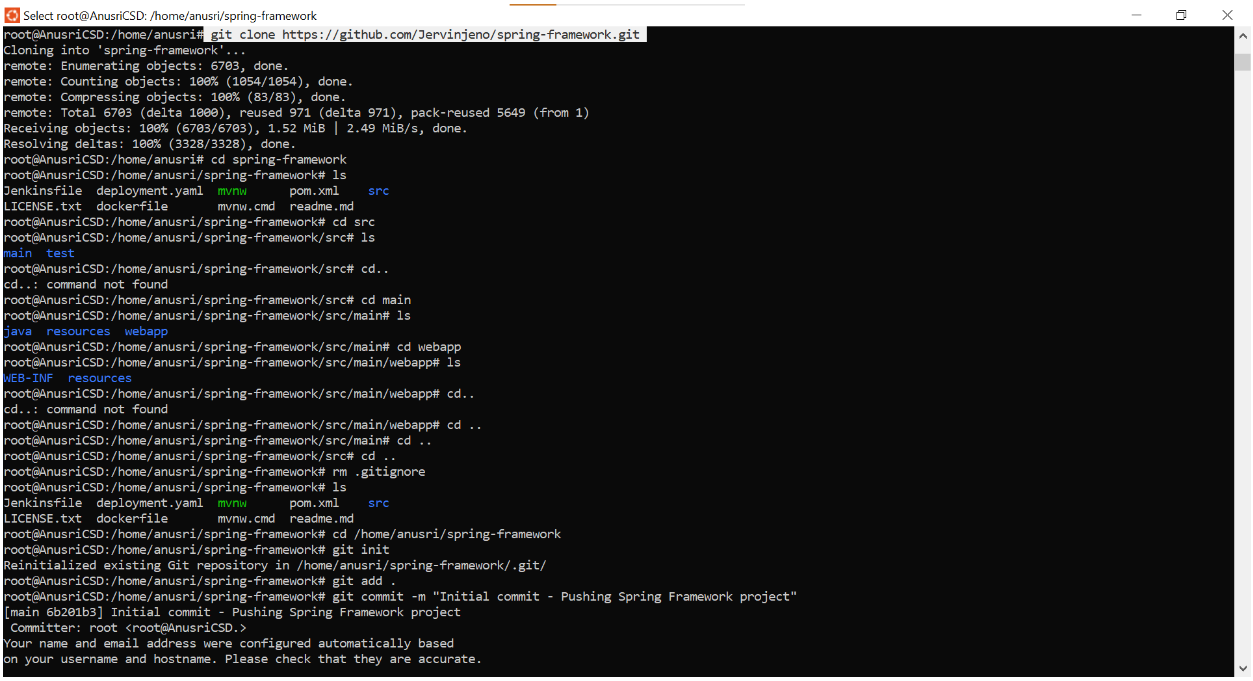
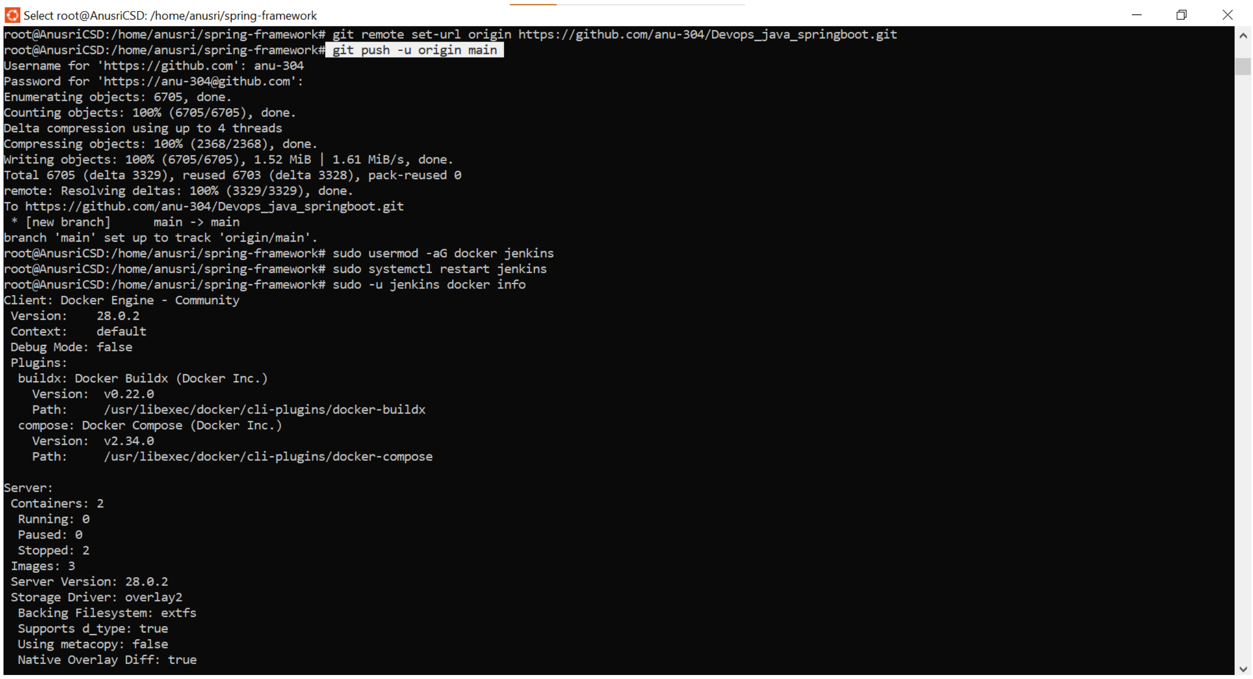
DEVOPS TASK 5

Step 1: Clone the repository in ubuntu using the url : https://github.com/Jervinjeno/spring-framework.git

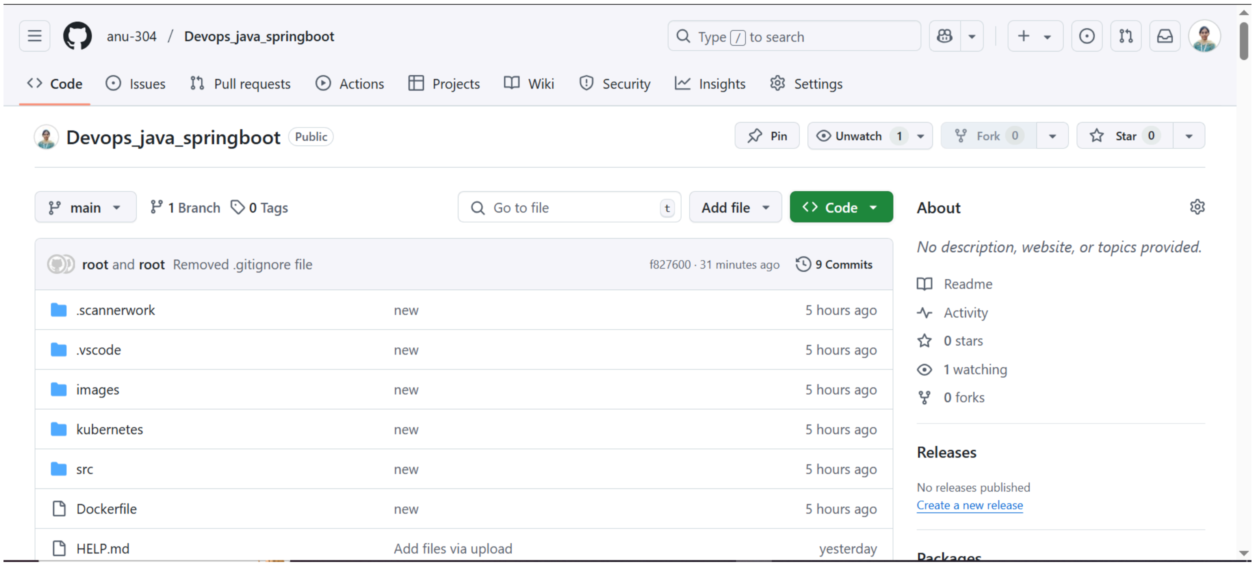


```
root@AnusriCSD:/home/anusri# git clone https://github.com/Jervinjeno/spring-framework.git
Cloning into 'spring-framework'...
remote: Enumerating objects: 6703, done.
remote: Counting objects: 100% (1054/1054), done.
remote: Compressing objects: 100% (83/83), done.
remote: Total 6703 (delta 1000), reused 971 (delta 971), pack-reused 5649 (from 1)
Receiving objects: 100% (6703/6703), 1.52 MiB | 2.49 MiB/s, done.
Resolving deltas: 100% (3328/3328), done.
root@AnusriCSD:/home/anusri# cd spring-framework
root@AnusriCSD:/home/anusri/spring-framework# ls
Jenkinsfile  deployment.yaml  mvnw      pom.xml    src
LICENSE.txt  dockerfile       mvnw.cmd  readme.md
root@AnusriCSD:/home/anusri/spring-framework# cd src
root@AnusriCSD:/home/anusri/spring-framework/src# ls
main  test
root@AnusriCSD:/home/anusri/spring-framework/src# cd..
cd..: command not found
root@AnusriCSD:/home/anusri/spring-framework/src# cd main
root@AnusriCSD:/home/anusri/spring-framework/src/main# ls
java  resources  webapp
root@AnusriCSD:/home/anusri/spring-framework/src/main# cd webapp
root@AnusriCSD:/home/anusri/spring-framework/src/main/webapp# ls
WEB-INF  resources
root@AnusriCSD:/home/anusri/spring-framework/src/main/webapp# cd..
cd..: command not found
root@AnusriCSD:/home/anusri/spring-framework/src/main/webapp# cd ..
root@AnusriCSD:/home/anusri/spring-framework/src/main# cd ..
root@AnusriCSD:/home/anusri/spring-framework/src# cd ..
root@AnusriCSD:/home/anusri/spring-framework# rm .gitignore
root@AnusriCSD:/home/anusri/spring-framework# ls
Jenkinsfile  deployment.yaml  mvnw      pom.xml    src
LICENSE.txt  dockerfile       mvnw.cmd  readme.md
root@AnusriCSD:/home/anusri/spring-framework# cd /home/anusri/spring-framework
root@AnusriCSD:/home/anusri/spring-framework# git init
Reinitialized existing Git repository in /home/anusri/spring-framework/.git/
root@AnusriCSD:/home/anusri/spring-framework# git add .
root@AnusriCSD:/home/anusri/spring-framework# git commit -m "Initial commit - Pushing Spring Framework project"
[main 6b201b3] Initial commit - Pushing Spring Framework project
 Committer: root <root@AnusriCSD.>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
```

Step 2: After deleting the .gitignore file , Push this cloned repository into our newly created repository : **Devops_java_springboot ,** using tokens(instead of password) in github.



```
root@AnusriCSD:/home/anusri/spring-framework# git remote set-url origin https://github.com/anu-304/Devops_java_springboot.git
root@AnusriCSD:/home/anusri/spring-framework# git push -u origin main
Username for 'https://github.com': anu-304
Password for 'https://anu-304@github.com':
Enumerating objects: 6705, done.
Counting objects: 100% (6705/6705), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2368/2368), done.
Writing objects: 100% (6705/6705), 1.52 MiB | 1.61 MiB/s, done.
Total 6705 (delta 3329), reused 6703 (delta 3328), pack-reused 0
remote: Resolving deltas: 100% (3329/3329), done.
To https://github.com/anu-304/Devops_java_springboot.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
root@AnusriCSD:/home/anusri/spring-framework# sudo usermod -aG docker jenkins
root@AnusriCSD:/home/anusri/spring-framework# sudo systemctl restart jenkins
root@AnusriCSD:/home/anusri/spring-framework# sudo -u jenkins docker info
Client: Docker Engine - Community
 Version:    28.0.2
 Context:    default
 Debug Mode: false
 Plugins:
  buildx: Docker Buildx (Docker Inc.)
    Version:  v0.22.0
    Path:     /usr/libexec/docker/cli-plugins/docker-buildx
  compose: Docker Compose (Docker Inc.)
    Version:  v2.34.0
    Path:     /usr/libexec/docker/cli-plugins/docker-compose

Server:
 Containers: 2
  Running: 0
  Paused: 0
  Stopped: 2
 Images: 3
 Server Version: 28.0.2
 Storage Driver: overlay2
  Backing Filesystem: extfs
  Supports d_type: true
  Using metacopy: false
  Native Overlay Diff: true
```



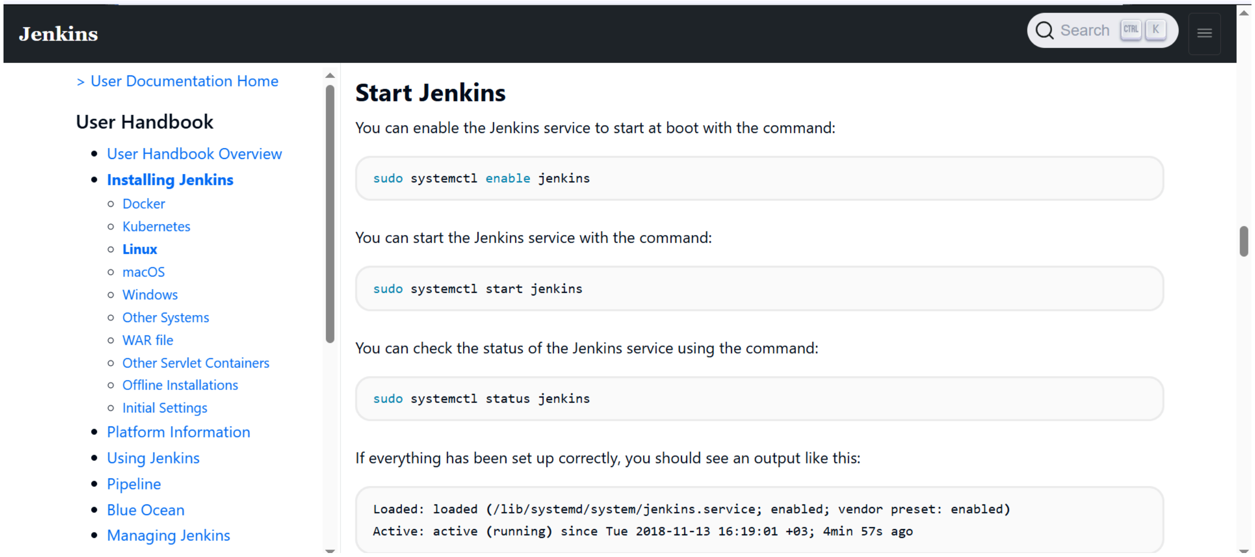
No description, website, or topics provided.

No releases published

root and root Removed .gitignore file f827600 · 31 minutes ago 9 Commits

.scannerwork	new	5 hours ago
.vscode	new	5 hours ago
images	new	5 hours ago
kubernetes	new	5 hours ago
src	new	5 hours ago
Dockerfile	new	5 hours ago
HELP.md	Add files via upload	yesterday

Step 3: In a new ubuntu terminal , start jenkins using the following 3 commands:



Start Jenkins

You can enable the Jenkins service to start at boot with the command:

```
sudo systemctl enable jenkins
```

You can start the Jenkins service with the command:

```
sudo systemctl start jenkins
```

You can check the status of the Jenkins service using the command:

```
sudo systemctl status jenkins
```

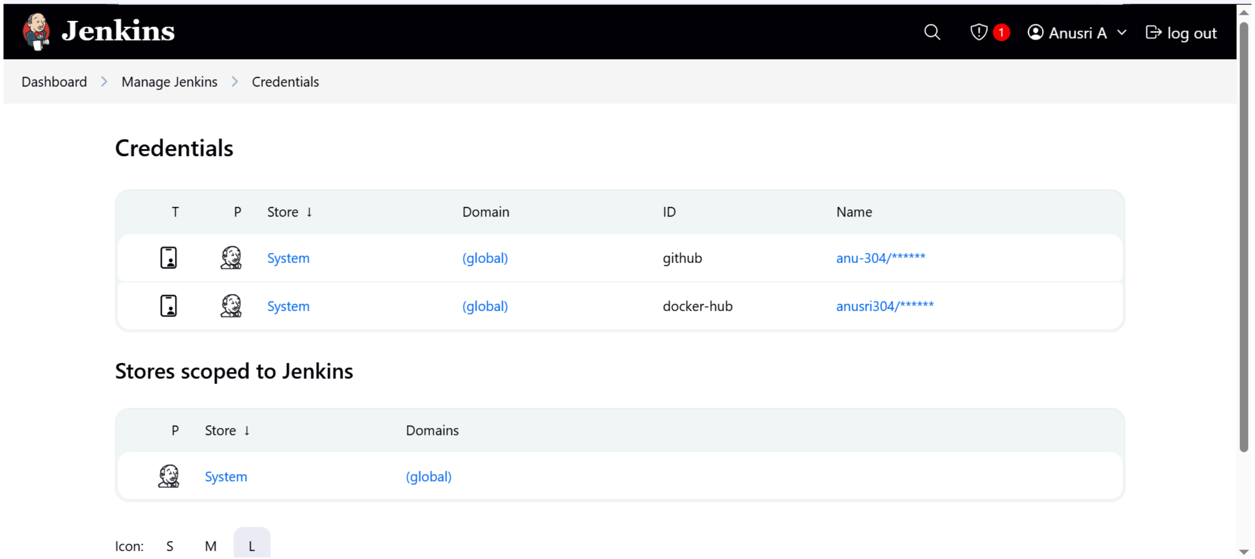
If everything has been set up correctly, you should see an output like this:

```
Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
Active: active (running) since Tue 2018-11-13 16:19:01 +03; 4min 57s ago
```

Step 4: In chrome type **localhost:8080** and enter .Then give the username and password to login into jenkins.

Step 5: Go to Manage Jenkins and choose **Credentials** from Security.

Step 6: Add new credentials for github & docker-hub.



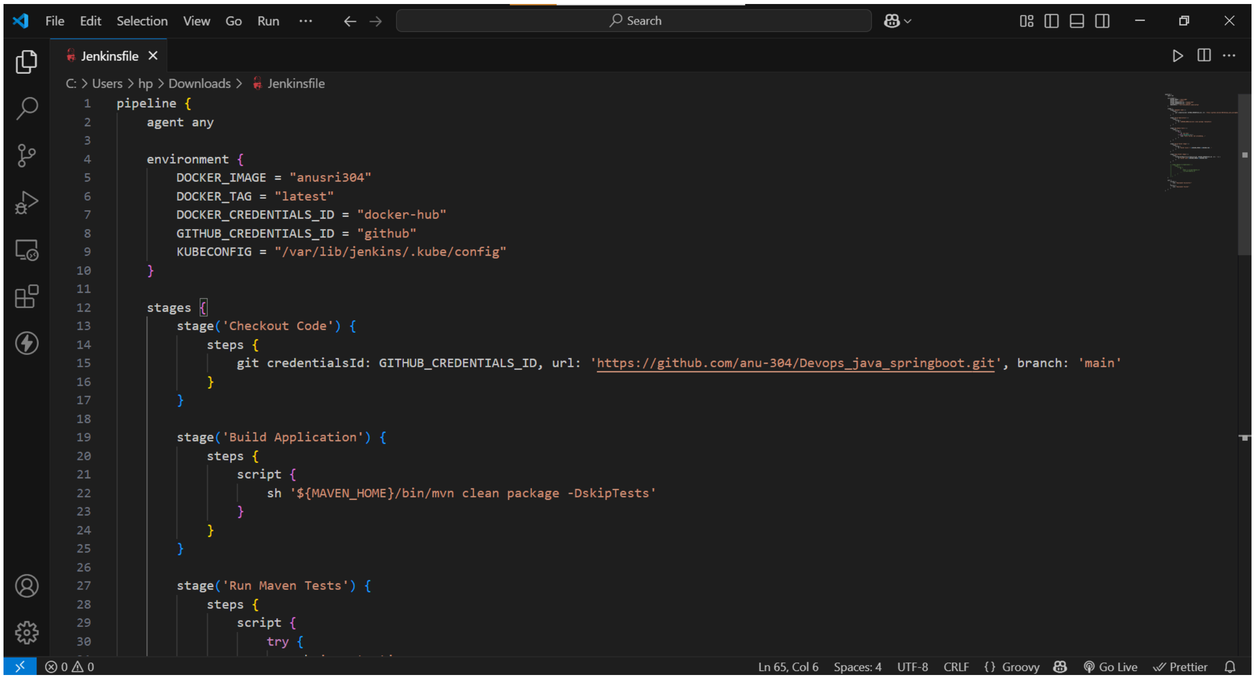
Credentials

T	P	Store ↓	Domain	ID	Name
		System	(global)	github	anu-304/******
		System	(global)	docker-hub	anusri304/******

Stores scoped to Jenkins

P	Store ↓	Domains
	System	(global)

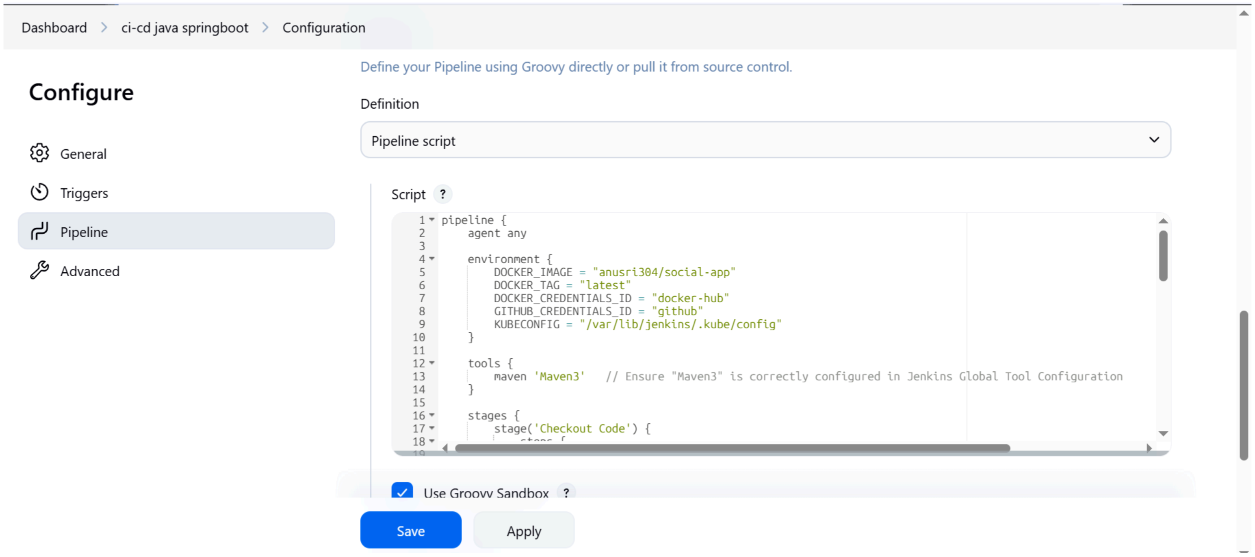
Step 7: Download the given jenkins file, add modify it.


File Edit Selection View Go Run ···
Search
Jenkinsfile
C: > Users > hp > Downloads > Jenkinsfile
Ln 65, Col 6 Spaces: 4 UTF-8 CRLF {} Groovy Go Live Prettier
⊗ 0 ⚠ 0

```groovy
pipeline {
    agent any

    environment {
        DOCKER_IMAGE = "anusri304"
        DOCKER_TAG = "latest"
        DOCKER_CREDENTIALS_ID = "docker-hub"
        GITHUB_CREDENTIALS_ID = "github"
        KUBECONFIG = "/var/lib/jenkins/.kube/config"
    }

    stages {
        stage('Checkout Code') {
            steps {
                git credentialsId: GITHUB_CREDENTIALS_ID, url: 'https://github.com/anu-304/Devops_java_springboot.git', branch: 'main'
            }
        }

        stage('Build Application') {
            steps {
                script {
                    sh '${MAVEN_HOME}/bin/mvn clean package -DskipTests'
                }
            }
        }

        stage('Run Maven Tests') {
            steps {
                script {
                    try {
```

Step 8: Create a new item ci-cd java , pipeline project in jenkins.

Step 9: Go to **Configure** in ci-cd java item, and paste the edited jenkins file in the script with proper indentation.



Define your Pipeline using Groovy directly or pull it from source control.

Definition: Pipeline script

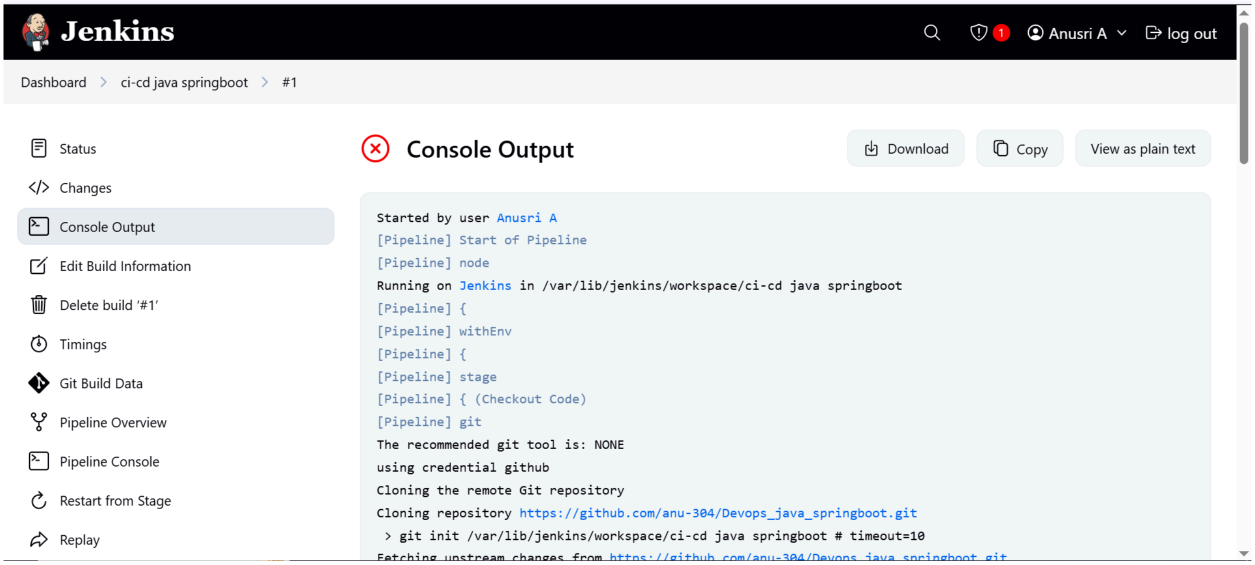
Script

```
pipeline {
    agent any

    environment {
        DOCKER_IMAGE = "anusri304/social-app"
        DOCKER_TAG = "latest"
        DOCKER_CREDENTIALS_ID = "docker-hub"
        GITHUB_CREDENTIALS_ID = "github"
        KUBECONFIG = "/var/lib/jenkins/.kube/config"
    }

    tools {
        maven 'Maven3'   // Ensure "Maven3" is correctly configured in Jenkins Global Tool Configuration
    }

    stages {
        stage('Checkout Code') {
            steps {
```

☑ Use Groovy Sandbox

Step 10: Click on Save and Build now.

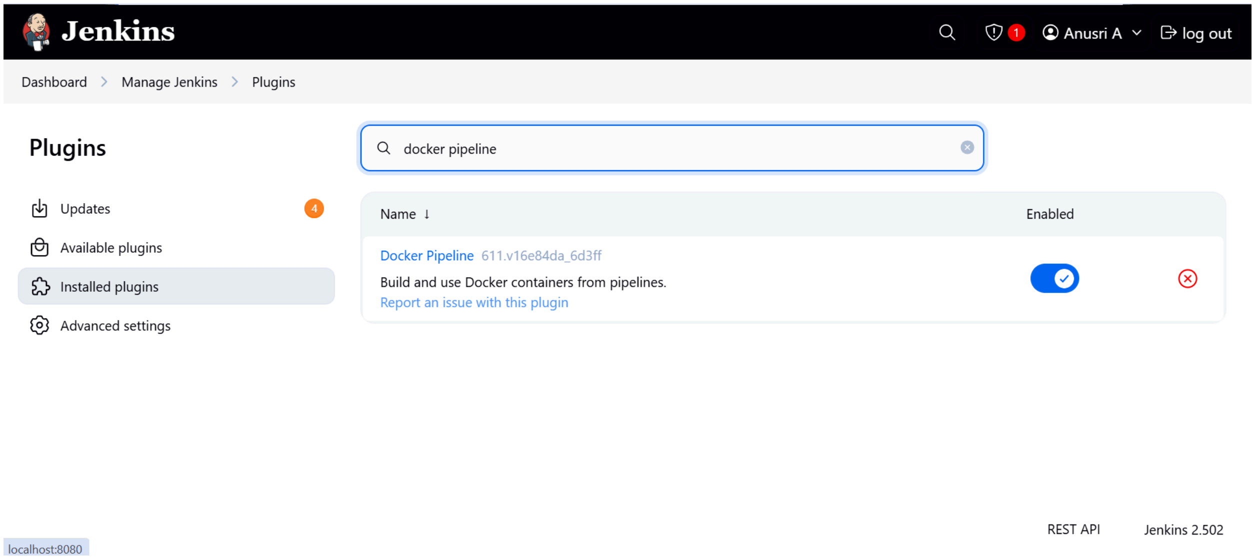
Step 11: This gives an error message and we need to install maven to overcome this error



Console Output

```
Started by user Anusri A
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/ci-cd java springboot
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout Code)
[Pipeline] git
The recommended git tool is: NONE
using credential github
Cloning the remote Git repository
Cloning repository https://github.com/anu-304/Devops_java_springboot.git
 > git init /var/lib/jenkins/workspace/ci-cd java springboot # timeout=10
Fetching upstream changes from https://github.com/anu-304/Devops_java_springboot.git
```

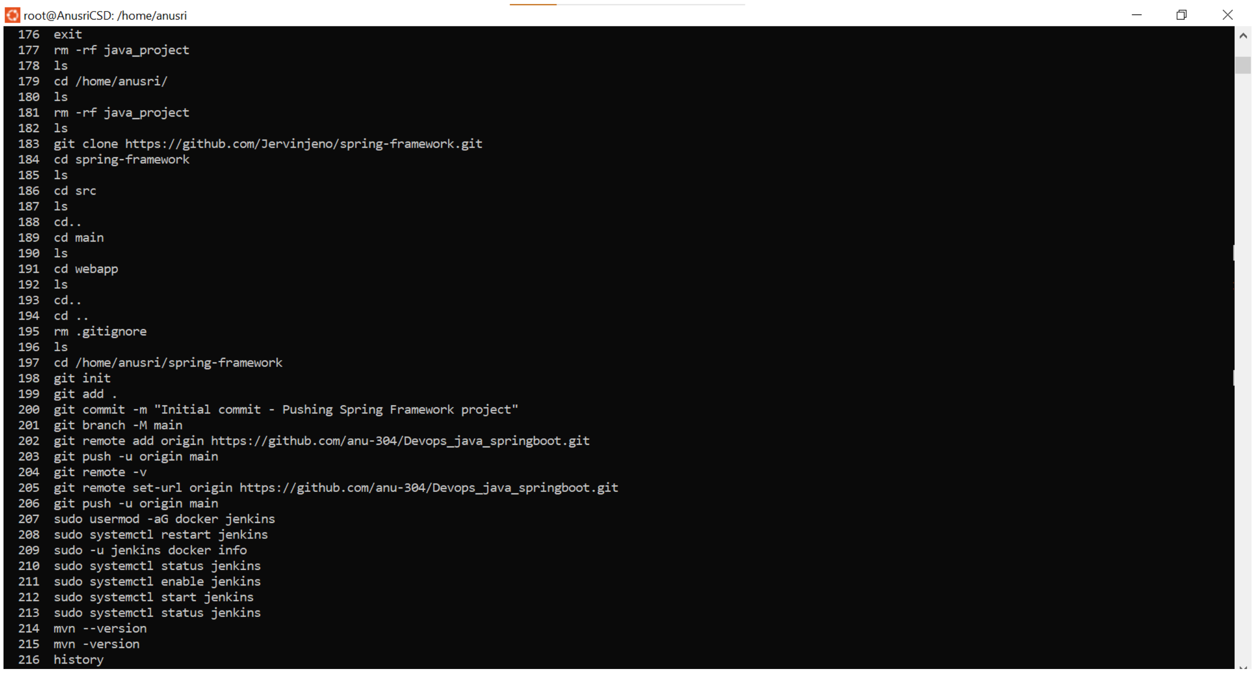
Step 12: Install maven and other necessary plugins in jenkins, give correct docker hub password and build again.



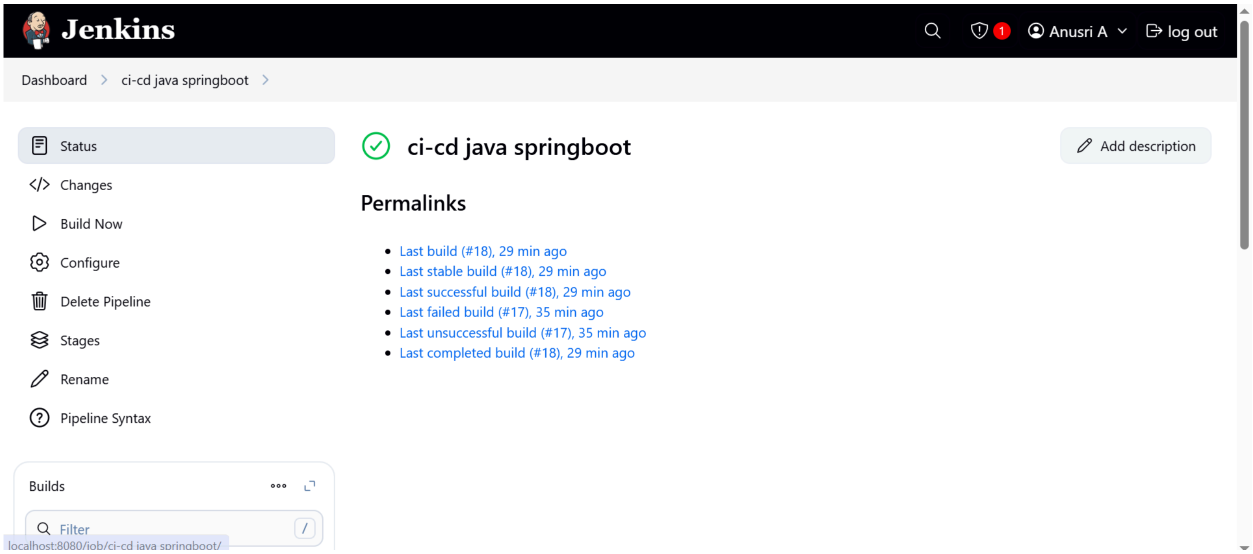
Plugins

docker pipeline

Name ↓	Enabled
Docker Pipeline 611.v16e84da_6d3ff Build and use Docker containers from pipelines. Report an issue with this plugin	✓



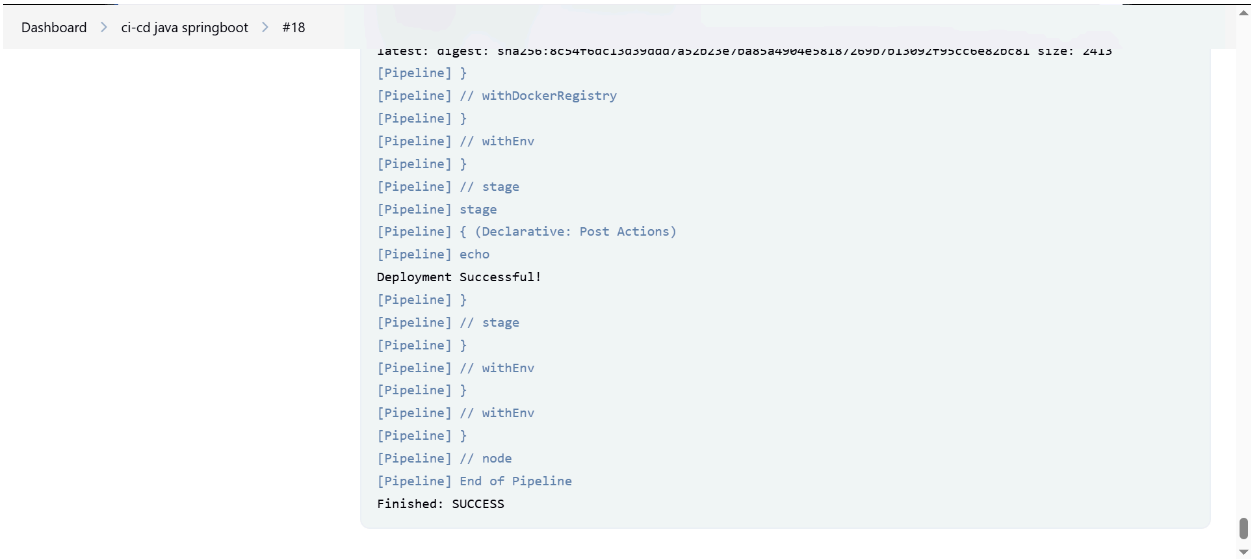
```
 176  exit
 177  rm -rf java_project
 178  ls
 179  cd /home/anusri/
 180  ls
 181  rm -rf java_project
 182  ls
 183  git clone https://github.com/Jervinjeno/spring-framework.git
 184  cd spring-framework
 185  ls
 186  cd src
 187  ls
 188  cd..
 189  cd main
 190  ls
 191  cd webapp
 192  ls
 193  cd..
 194  cd ..
 195  rm .gitignore
 196  ls
 197  cd /home/anusri/spring-framework
 198  git init
 199  git add .
 200  git commit -m "Initial commit - Pushing Spring Framework project"
 201  git branch -M main
 202  git remote add origin https://github.com/anu-304/Devops_java_springboot.git
 203  git push -u origin main
 204  git remote -v
 205  git remote set-url origin https://github.com/anu-304/Devops_java_springboot.git
 206  git push -u origin main
 207  sudo usermod -aG docker jenkins
 208  sudo systemctl restart jenkins
 209  sudo -u jenkins docker info
 210  sudo systemctl status jenkins
 211  sudo systemctl enable jenkins
 212  sudo systemctl start jenkins
 213  sudo systemctl status jenkins
 214  mvn --version
 215  mvn -version
 216  history
```



ci-cd java springboot

Permalinks

- Last build (#18), 29 min ago
- Last stable build (#18), 29 min ago
- Last successful build (#18), 29 min ago
- Last failed build (#17), 35 min ago
- Last unsuccessful build (#17), 35 min ago
- Last completed build (#18), 29 min ago



```
latest: digest: sha256:8c54f6dc13d39ddd7a52b23e7ba85a4904e58187269b7b13092f95cc6e82bc81 size: 2413
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Deployment Successful!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```