

DEVOPS TRAINING

DAY 2-MOULEESHWARAN-S

Step 1: create repository in github

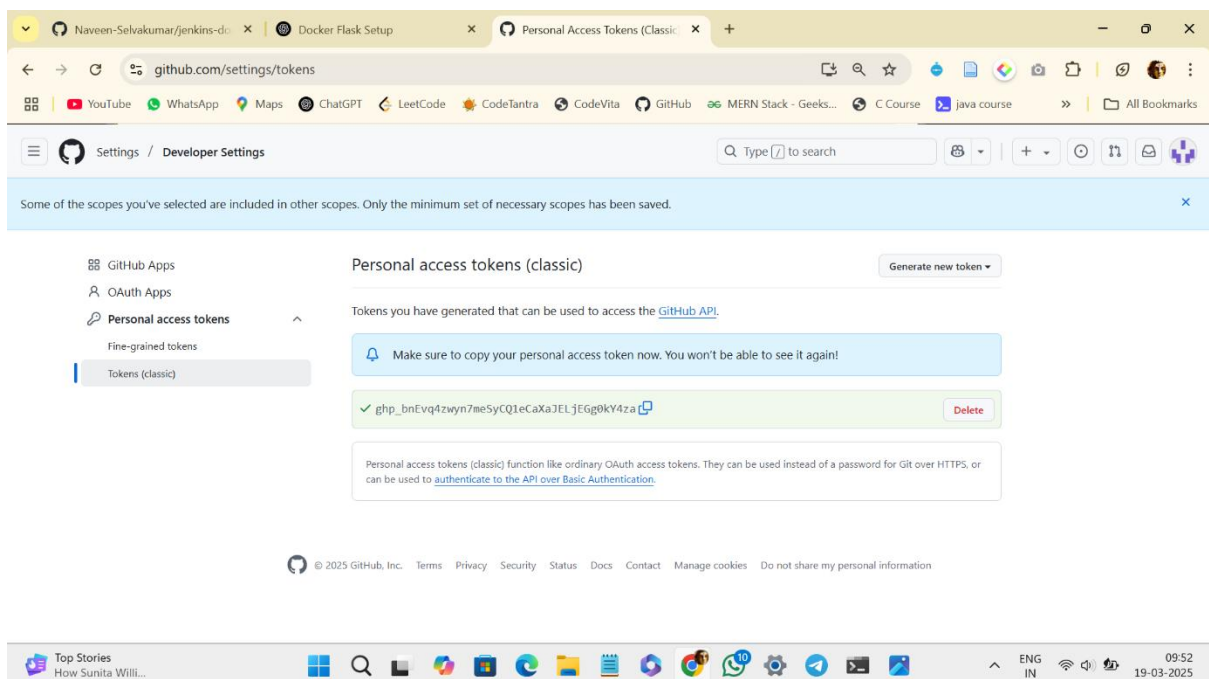
Go to GitHub and create a new repository.

Step 2: go to developer settings

- Navigate to **Settings > Developer Settings > Personal Access Tokens**
- Click **Generate New Token (Classic)**
- Copy and store the token securely

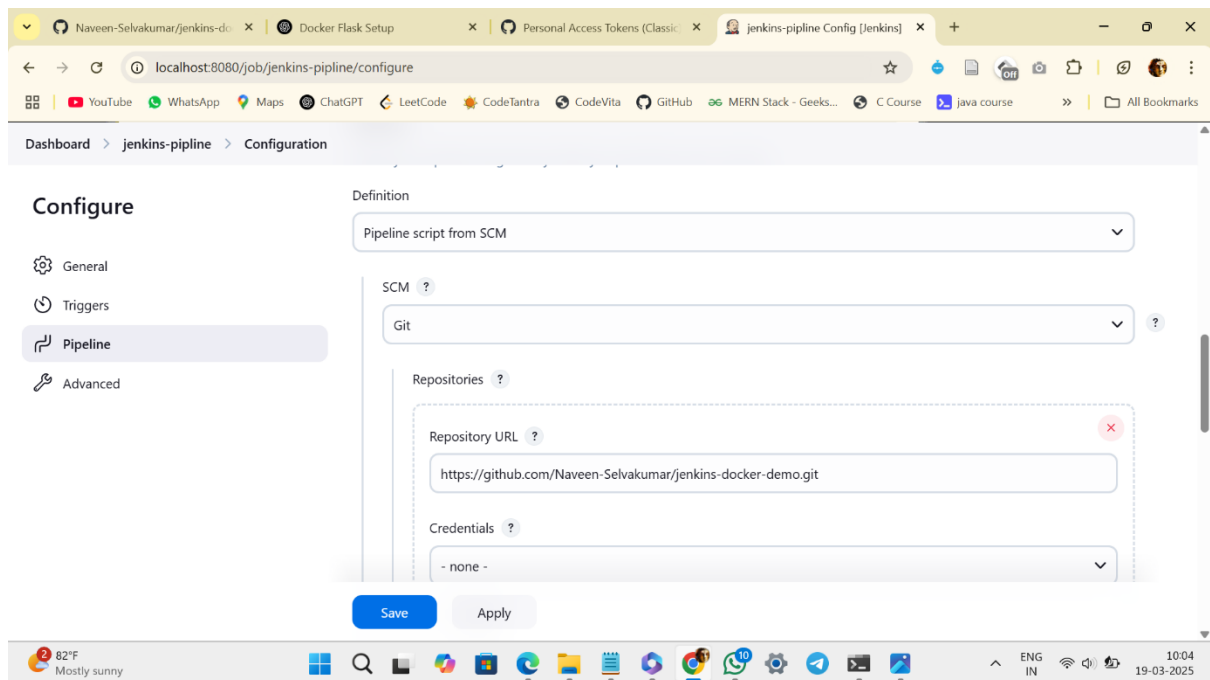
Step 3: generate and copy the token (classic)

- Open Jenkins
- Click **New Item > Pipeline**
- In **Configuration**, add the GitHub repository URL
- Save the configuration



Step 4: open Jenkins and create new item and select pipeline in that go to configuration add github repository url into it.

Check the **Jenkins Status Page** to confirm that the setup is successful



Step 5: in Jenkins configure save it

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted) >

Kind
Username with password

Scope ?
Global (Jenkins, nodes, items, all child items, etc)

Username ?
mouleeshwaran28

☐ Treat username as secret ?

Password ?
.....

ID ?

Create

Step 6: verify the status page

Jenkins

Dashboard >

+ New Item

Build History

Manage Jenkins

My Views

Build Queue
No builds in the queue.

Build Executor Status
0/2

Icon: S M L

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	Mouleesh	20 hr #7	21 hr #3	4.6 sec

REST API Jenkins 2.492.2

Step 7: clone the git repository

git clone <https://github.com/your-username/your-repository.git>

cd your-repository

```
naveen@LAPTOP-MR5RNM1C:~/docker-python-app$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
naveen@LAPTOP-MR5RNM1C:~/docker-python-app$ sudo systemctl start jenkins
naveen@LAPTOP-MR5RNM1C:~/docker-python-app$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
   Active: active (running) since Wed 2025-03-19 03:33:44 UTC; 51min ago
     Main PID: 166 (java)
       Tasks: 61 (limit: 4574)
      Memory: 439.9M ()
     CGroup: /system.slice/jenkins.service
            └─166 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPo

Mar 19 03:33:42 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:42.854+0000 [id=41] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:42 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:42.860+0000 [id=66] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:43 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:43.201+0000 [id=41] INFO h.p.b.g.GlobalTimeOutConfigura>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.193+0000 [id=66] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.195+0000 [id=67] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.265+0000 [id=58] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.284+0000 [id=58] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.324+0000 [id=50] INFO jenkins.InitReactorRunner$1on>
Mar 19 03:33:44 LAPTOP-MR5RNM1C jenkins[166]: 2025-03-19 03:33:44.372+0000 [id=33] INFO hudson.lifecycle.Lifecycle#onR>
Mar 19 03:33:44 LAPTOP-MR5RNM1C systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
lines 1-19/19 (END)
naveen@LAPTOP-MR5RNM1C:~/docker-python-app$ git status
fatal: not a git repository (or any of the parent directories): .git
naveen@LAPTOP-MR5RNM1C:~/docker-python-app$ git clone https://github.com/Naveen-Selvakumar/jenkins-docker-demo.git
Cloning into 'jenkins-docker-demo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
```

Step 8: using cd add the repository into it

git add .

git commit -m "Initial commit"

git push origin main

```
mouleesh@DESKTOP-PBBPDK2:~$ git status
fatal: not a git repository (or any of the parent directories): .git
mouleesh@DESKTOP-PBBPDK2:~$ sudo docker build -t test .
[sudo] password for mouleesh:
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

unable to prepare context: unable to evaluate symlinks in Dockerfile path: lstat /home/mouleesh/Dockerfile: no such file or directory
mouleesh@DESKTOP-PBBPDK2:~$ sudo docker run -p 5000:5000 test
\docker: Error response from daemon: driver failed programming external connectivity on endpoint flamboyant_cartwright (849de082831f1f75f9f6c8bfe4cf9acf2dcafa5529ebe370c71342054f97625e): Bind for 0.0.0.0:5000 failed: port is already allocated.
mouleesh@DESKTOP-PBBPDK2:~$ git clone https://github.com/Mouleesh28/Jenkins-Docker-Demo.git
Cloning into 'Jenkins-Docker-Demo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
mouleesh@DESKTOP-PBBPDK2:~$ ls
Jenkins-Docker-Demo  docker-python-app
mouleesh@DESKTOP-PBBPDK2:~$ cd docker-python-app
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ git clone https://github.com/Mouleesh28/Jenkins-Docker-Demo.git
Cloning into 'Jenkins-Docker-Demo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ ls
Dockerfile  Jenkins-Docker-Demo  app.py  app.pyu  docker-compose.yml  requirements.txt
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ mv Dockerfile Jenkins-Docker-Demo app.py app.pyu docker-compose.yml requirements.txt
mv: target 'requirements.txt': Not a directory
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ mv app.py app.pyu docker-compose.yml requirements.txt Dockerfile Jenkins-Docker-Demo/
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ ls
Jenkins-Docker-Demo
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app$ |
```

Step 9: using git push command to push all the files into github

git push

https://Mouleesh28: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@github.com/Mouleesh28/jenkins-docker-demo.git

```
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ git commit -m "docker commit"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: empty ident name (for <mouleesh@DESKTOP-PBBPDK2.>) not allowed
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ git config --global user.email "mouleeshwaranshanmugam@gmail.com"
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ git config --global user.name "Mouleesh28"
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   Dockerfile
        new file:   app.py
        new file:   app.pyu
        new file:   docker-compose.yml
        new file:   requirements.txt

mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ git commit -m "docker commit"
[main 3907508] docker commit
5 files changed, 37 insertions(+)
create mode 100644 Dockerfile
create mode 100644 app.py
create mode 100644 app.pyu
create mode 100644 docker-compose.yml
create mode 100644 requirements.txt
mouleesh@DESKTOP-PBBPDK2:~/docker-python-app/Jenkins-Docker-Demo$ |
```

Step 10: check the docker all the files are uploaded in the github repository

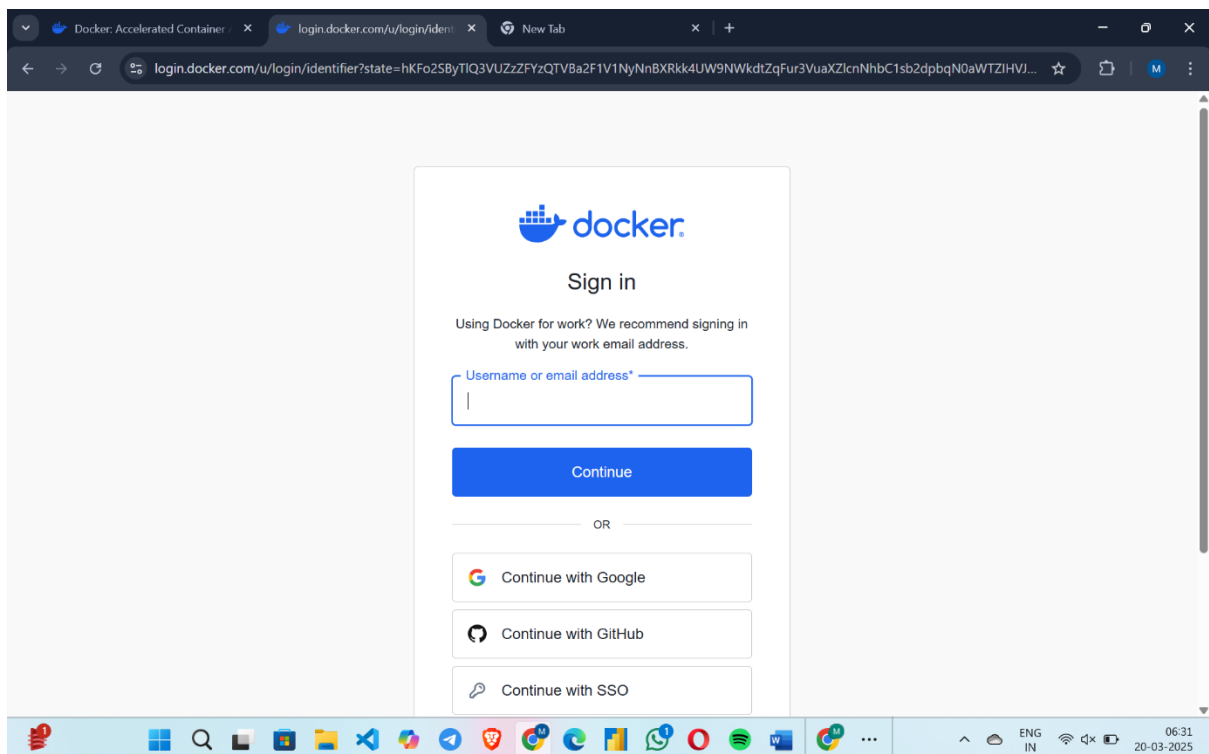
The screenshot displays a GitHub repository page for 'Jenkins-Docker-Demo' by user 'Mouleesh28'. The repository is public and has 1 branch and 0 tags. The file list shows the following files and their commit history:

File	Commit Message	Time Ago
Dockerfile	docker commit	19 hours ago
Jenkinsfile	jenkins updated	15 hours ago
README.md	Create README.md	20 hours ago
app.py	docker commit	19 hours ago
app.pyu	docker commit	19 hours ago
docker-compose.yml	docker commit	19 hours ago
jenkins	jenkins committed	16 hours ago
requirements.txt	docker commit	19 hours ago
{	jenkins updated	15 hours ago

The right sidebar shows repository statistics: 0 stars, 1 watching, 0 forks. The bottom of the screen shows a Windows taskbar with various application icons and a system clock showing 06:27 on 20-03-2025.

Step 11: go to the docker and login in
docker login

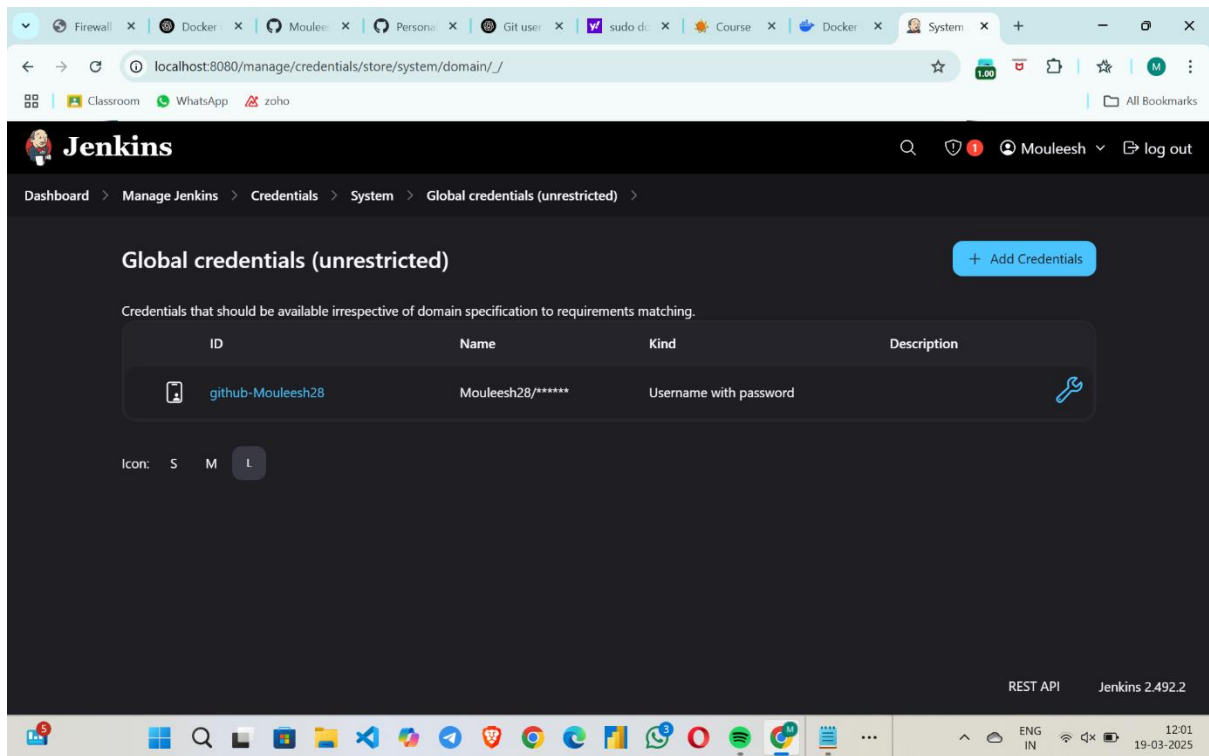
Enter your **Docker Hub username** and **password/token** when prompted



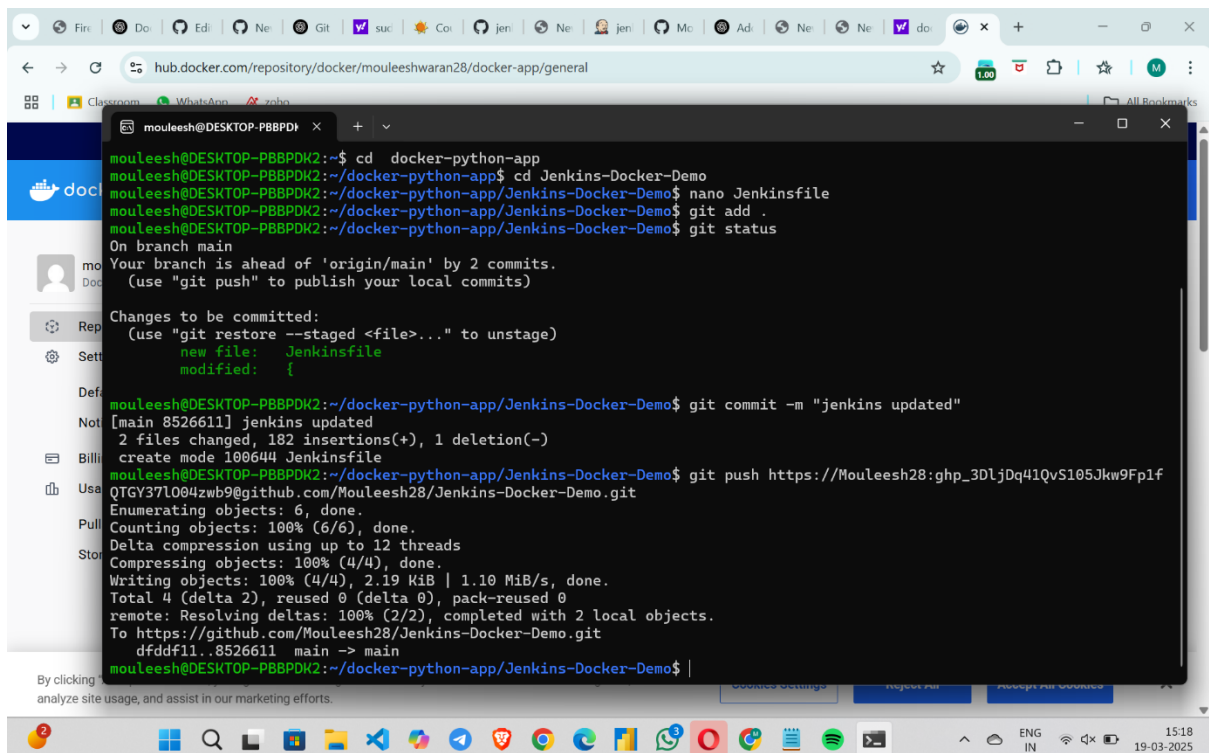
Step 12: in jenkins copy the global credentials and change in
the jenkins file

```
sudo usermod -aG docker jenkins
```

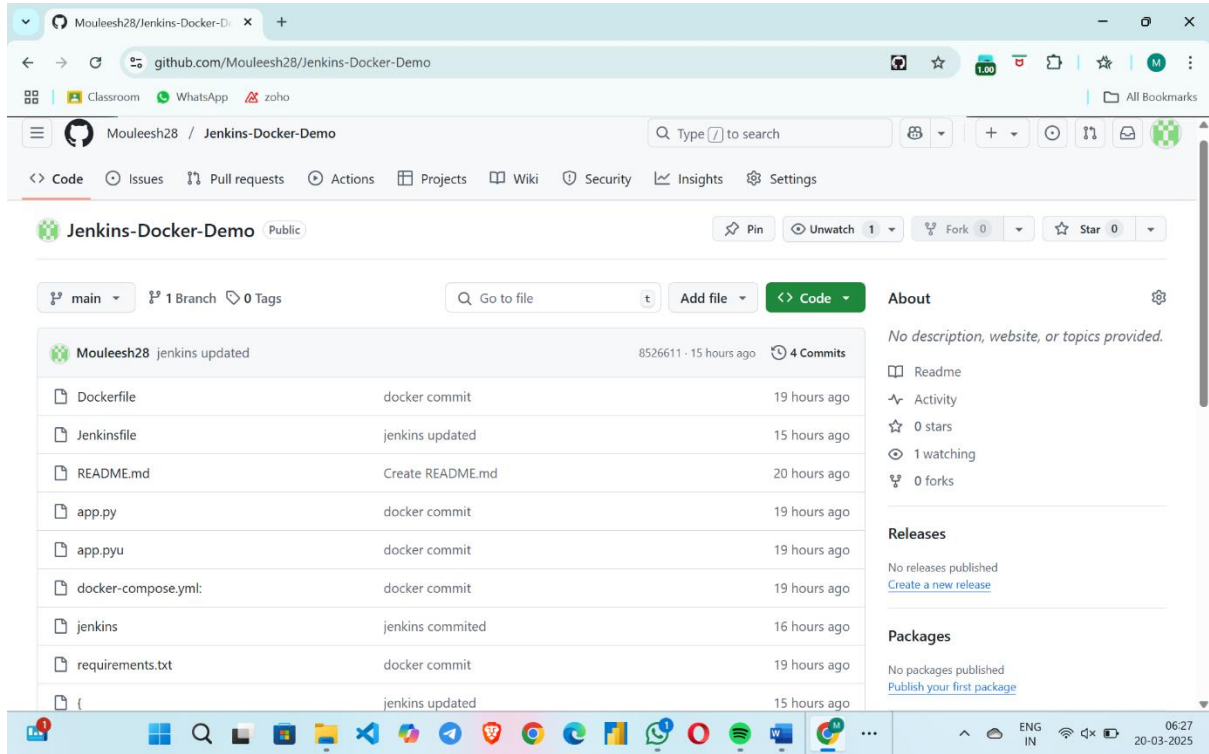
```
sudo systemctl restart jenkins
```



Step 13: commit the jenkinsfile into github



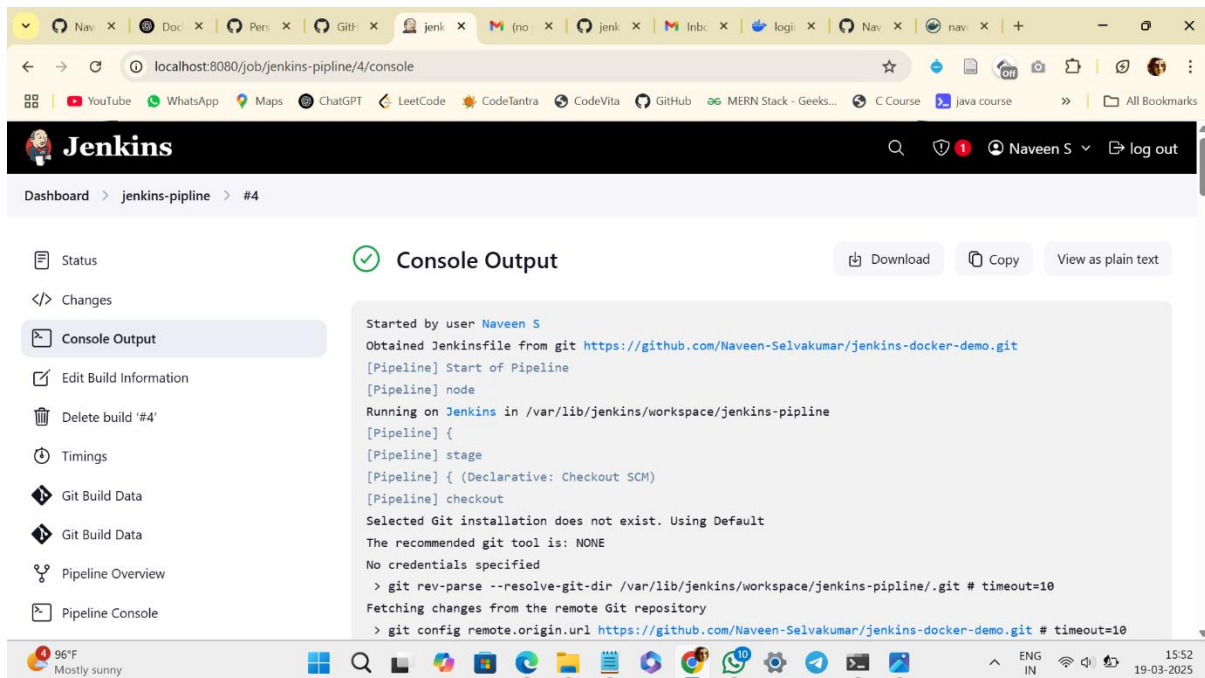
Step 14: verify the jenkins file is pushed in the github



Step 15 : using “sudo usermod –aG docker jenkins” and restart the jenkins

Step 16 : build the item and check the output in console output

- In **Jenkins**, click **Build Now**
- Monitor the **Console Output**

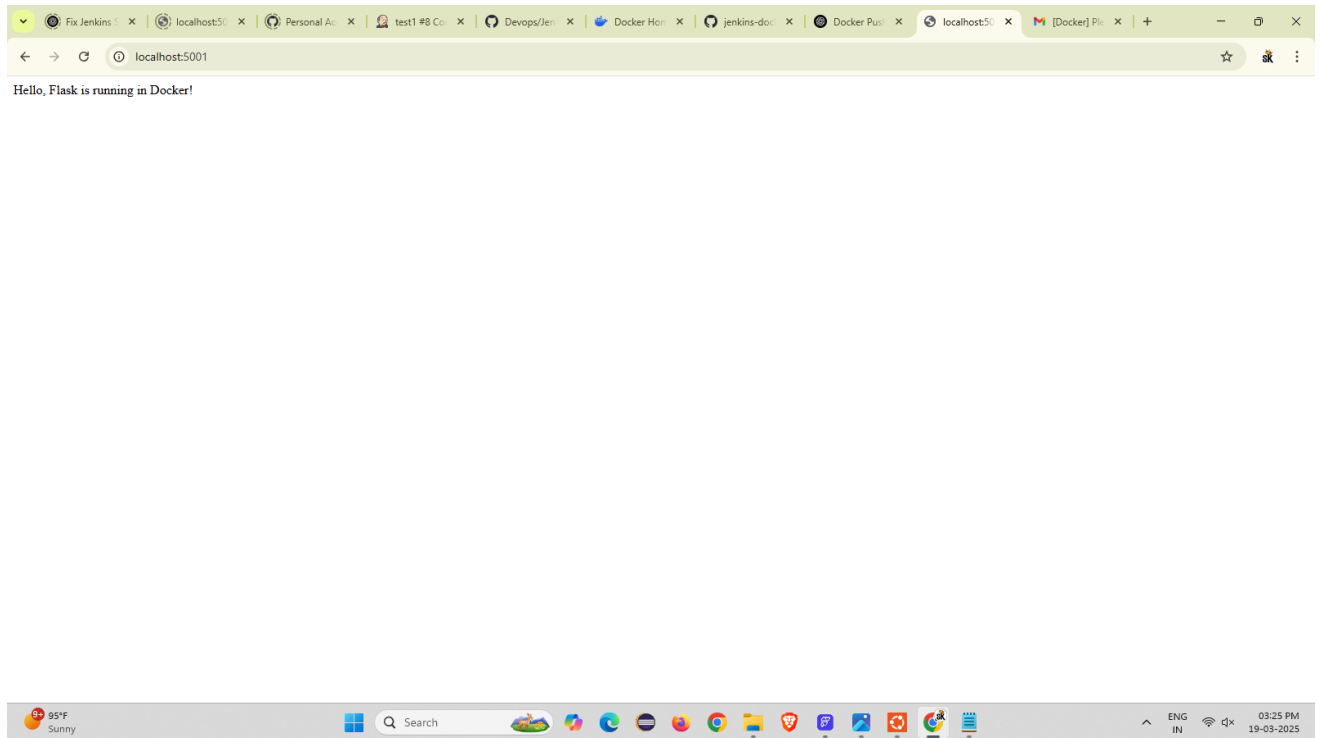


The screenshot shows the Jenkins web interface in a browser. The address bar indicates the URL is `localhost:8080/job/jenkins-pipeline/4/console`. The Jenkins logo and navigation menu are visible at the top. The left sidebar shows the 'Console Output' tab selected. The main area displays the console output for build #4, which includes the following text:

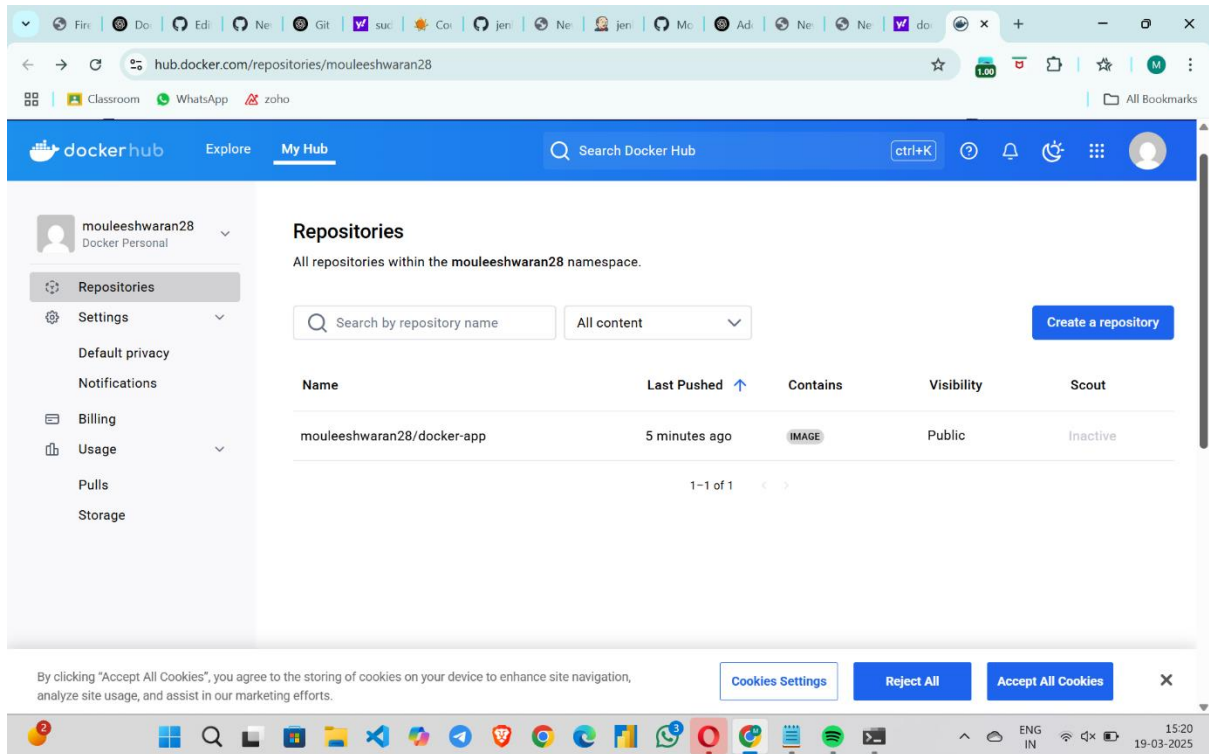
```
Started by user Naveen S
Obtained Jenkinsfile from git https://github.com/Naveen-Selvakumar/jenkins-docker-demo.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/jenkins-pipeline
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[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/lib/jenkins/workspace/jenkins-pipeline/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Naveen-Selvakumar/jenkins-docker-demo.git # timeout=10
```

At the bottom of the console output, there are buttons for 'Download', 'Copy', and 'View as plain text'. The browser's taskbar at the bottom shows the system clock as 15:52 on 19-03-2025.

Step 17 : run the localhost:5001



Step 18 : check the image repository in docker



The screenshot shows the Docker Hub interface for the user 'mouleeshwaran28'. The page title is 'Repositories' and it lists all repositories within the 'mouleeshwaran28' namespace. A search bar and a dropdown menu are visible. The table below shows the repository 'mouleeshwaran28/docker-app' with details on its last push, contents, visibility, and scout status.

Name	Last Pushed	Contains	Visibility	Scout
mouleeshwaran28/docker-app	5 minutes ago	IMAGE	Public	Inactive

1-1 of 1

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