

DEVOPS TRAINING

DAY 2

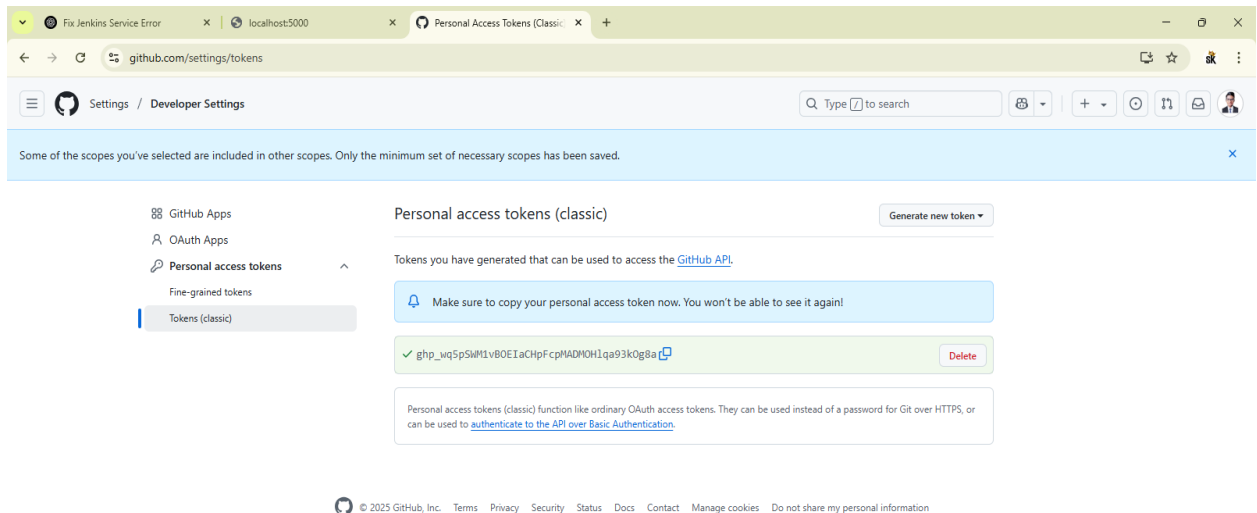
Step 1: create repository in github

The screenshot shows a web browser with multiple tabs. The active tab is 'S3nThil-03/Devops' on GitHub. The page displays the repository 'Devops' (Public) by user 'S3nThil-03'. It shows 1 branch (main) and 0 tags. A commit history table lists three commits: 'Create README.md' (4 minutes ago), 'Day 1' (19 hours ago), and another 'Create README.md' (4 minutes ago). The README file is visible, containing the text 'DEVOPS GUVI TRAINING'. The right sidebar includes sections for 'About' (no description), 'Releases' (no releases published), and 'Packages' (no packages published). The footer of the page shows the GitHub logo, copyright notice for 2025, and links for Terms, Privacy, Security, Status, Docs, Contact, Manage cookies, and Do not share my personal information.

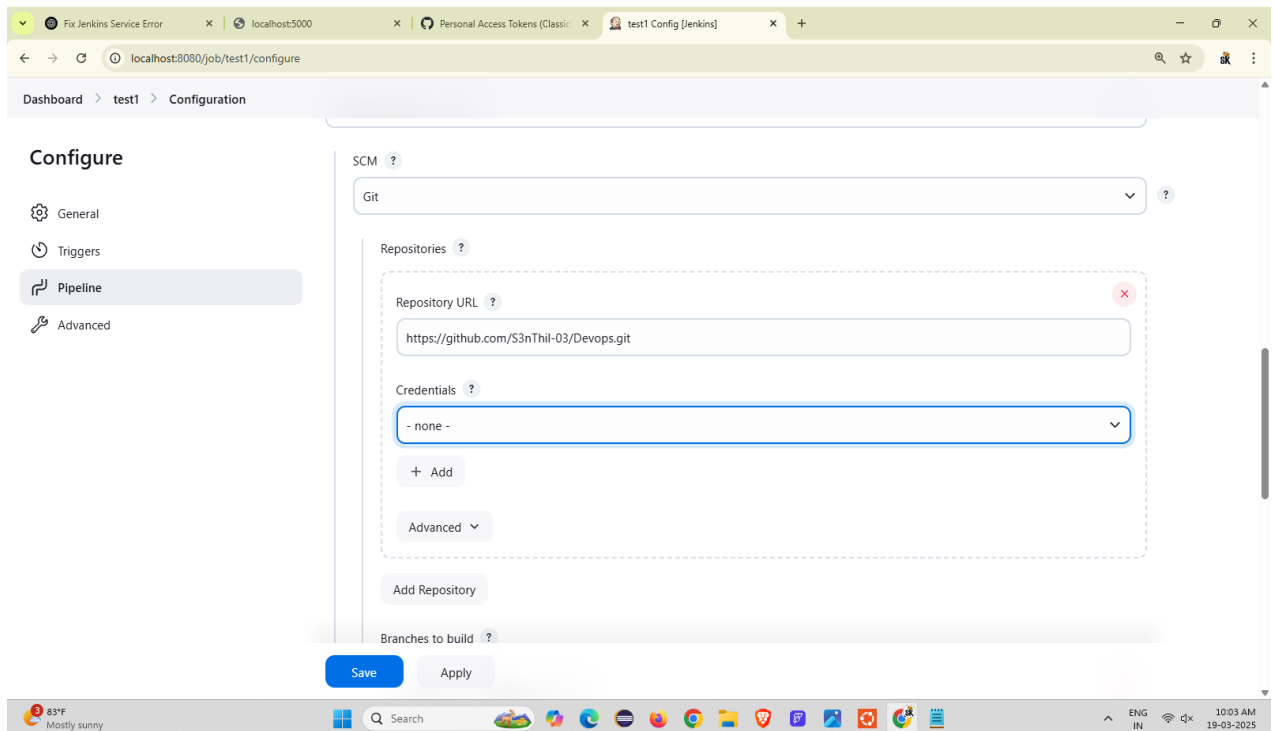
Step 2: go to developer settings

The screenshot shows the 'Developer Settings' page on GitHub, specifically the 'Personal access tokens (classic)' section. The page indicates that 'No personal access token created' and prompts the user to 'Need an API token for scripts or testing? Generate a personal access token for quick access to the GitHub API.' A button labeled 'Generate new token' is visible. Below this, a note explains that personal access tokens (classic) function like ordinary OAuth access tokens and can be used to authenticate to the API over Basic Authentication. The left sidebar shows the navigation menu with 'Personal access tokens' selected. The footer is identical to the previous screenshot, showing the GitHub logo, copyright notice for 2025, and various utility links.

Step 3: generate and copy the token (classic)



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



Step 5: in Jenkins configure save it

The screenshot shows the Jenkins Pipeline Configuration page for a job named 'test1'. The left sidebar contains a 'Configure' menu with options: General, Triggers, Pipeline (selected), and Advanced. The main area is titled 'Pipeline' and contains the following fields:

- Definition:** Pipeline script from SCM (selected)
- SCM:** Git
- Repository:** Repository URL: `https://github.com/Senthil73587/...`, Credentials: none
- Branches to build:** */main
- Repository browser:** (blank)
- Script Path:** Jenkinsfile
- Additional Behaviours:** Add
- Lightweight checkout:** ☒

At the bottom, there are 'Save' and 'Apply' buttons. The Windows taskbar at the bottom shows the date and time as 10:25 AM on 19-03-2025.

Step 6: verify the status page

The screenshot shows the Jenkins 'test1' status page. The top navigation bar includes the Jenkins logo, a search icon, a shield icon, the user 'Senthilkumar', and a 'log out' button. The main content area is titled 'test1' and includes an 'Add description' button. On the left, there is a sidebar with the following links: Status (selected), Changes, Build Now, Configure, Delete Pipeline, Stages, Rename, and Pipeline Syntax. The main area displays 'Permalinks' and a 'Builds' section with the message 'No builds'. The Windows taskbar at the bottom shows the date and time as 10:53 AM on 19-03-2025.

Step 7: clone the git repository

```
student@CTS-6: ~/docker-python-app
student@CTS-6:~/docker-python-app$ ls
app.py  docker-compose.yml  dockerfile  requirements.txt
student@CTS-6:~/docker-python-app$ cat docker-compose.yml
version: '3.8'
services:
  web:
    build: .
    ports:
      - "5000:5000"
    volumes:
      - ./app
    restart: always
student@CTS-6:~/docker-python-app$ sudo systemctl enable jenkins
[sudo] password for student:
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
student@CTS-6:~/docker-python-app$ sudo systemctl start jenkins
student@CTS-6:~/docker-python-app$ cat dockerfile
FROM python:3.11
WORKDIR /app
COPY requirements.txt .
RUN pip install --no-cache-dir flask
COPY . .
EXPOSE 5000
CMD ["python", "app.py"]
student@CTS-6:~/docker-python-app$ ls
app.py  docker-compose.yml  dockerfile  requirements.txt
student@CTS-6:~/docker-python-app$ git clone https://github.com/S3nThil-03/Devops.git_
```

Step 8: using cd add the repository into it

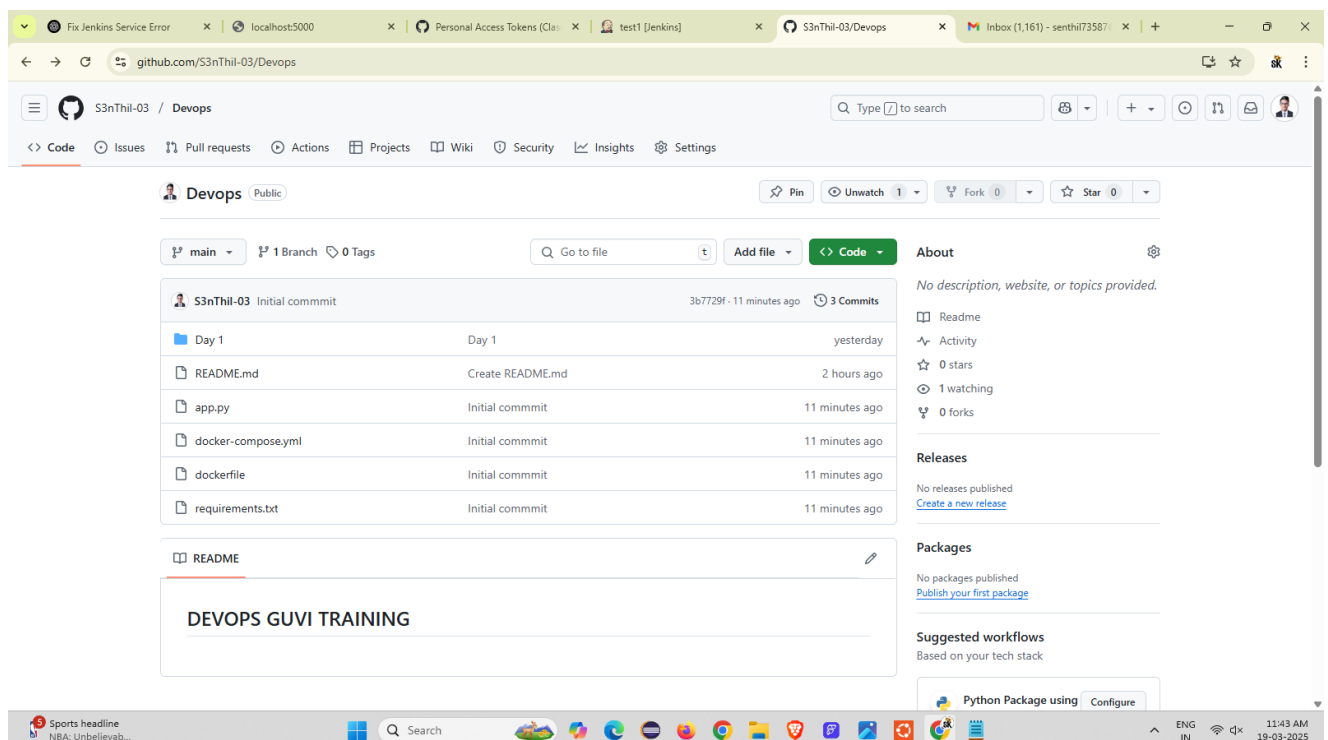
```
student@CTS-6: ~/docker-python-app/Devops
- ./app
  restart: always
student@CTS-6:~/docker-python-app$ sudo systemctl enable jenkins
[sudo] password for student:
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
student@CTS-6:~/docker-python-app$ sudo systemctl start jenkins
student@CTS-6:~/docker-python-app$ cat dockerfile
FROM python:3.11
WORKDIR /app
COPY requirements.txt .
RUN pip install --no-cache-dir flask
COPY . .
EXPOSE 5000
CMD ["python", "app.py"]
student@CTS-6:~/docker-python-app$ ls
app.py  docker-compose.yml  dockerfile  requirements.txt
student@CTS-6:~/docker-python-app$ git clone https://github.com/S3nThil-03/Devops.git
Cloning into 'Devops'...
remote: Enumerating objects: 14, done.
remote: Counting objects: 100% (14/14), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 14 (delta 5), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (14/14), 4.84 MiB | 4.13 MiB/s, done.
Resolving deltas: 100% (5/5), done.
student@CTS-6:~/docker-python-app$ ls
Devops  app.py  docker-compose.yml  dockerfile  requirements.txt
student@CTS-6:~/docker-python-app$ mv app.py docker-compose.yml dockerfile requirements.txt Devops/
student@CTS-6:~/docker-python-app$ ls
Devops
student@CTS-6:~/docker-python-app$ cd Devops/
student@CTS-6:~/docker-python-app/Devops$ ls
'Day 1'  README.md  app.py  docker-compose.yml  dockerfile  requirements.txt
student@CTS-6:~/docker-python-app/Devops$
```

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

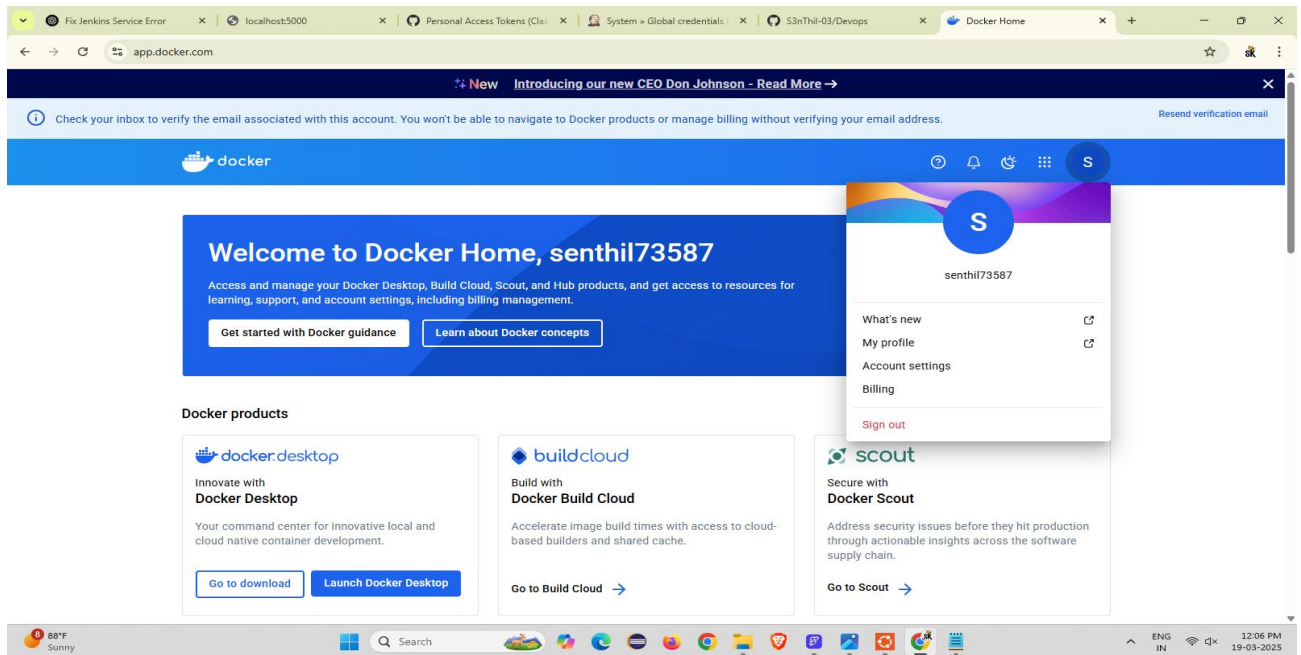
```
student@CTS-6: ~/docker-python-app/Devops
to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: empty ident name (for <student@CTS-6.>) not allowed
student@CTS-6:~/docker-python-app/Devops$ git config --global user.email senthil73587@gmail.com
student@CTS-6:~/docker-python-app/Devops$ git config --global user.name S3nThil-03
student@CTS-6:~/docker-python-app/Devops$ git config --global user.email "senthil73587@gmail.com"
student@CTS-6:~/docker-python-app/Devops$ git config --global user.name "S3nThil-03"
student@CTS-6:~/docker-python-app/Devops$ git commit -m "Initial commit"
[main 3b7729f] Initial commit
4 files changed, 27 insertions(+)
create mode 100644 app.py
create mode 100644 docker-compose.yml
create mode 100644 dockerfile
create mode 100644 requirements.txt
student@CTS-6:~/docker-python-app/Devops$ git push https://S3nThil-03:ghp_wq5p5Wm1v80EiaChpMADMOH1qa93k0g8a@github.com/S3nThil-03/Devops.git
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 815 bytes | 815.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
to https://github.com/S3nThil-03/Devops.git
   b1e96e7..3b7729f  main -> main
student@CTS-6:~/docker-python-app/Devops$
```

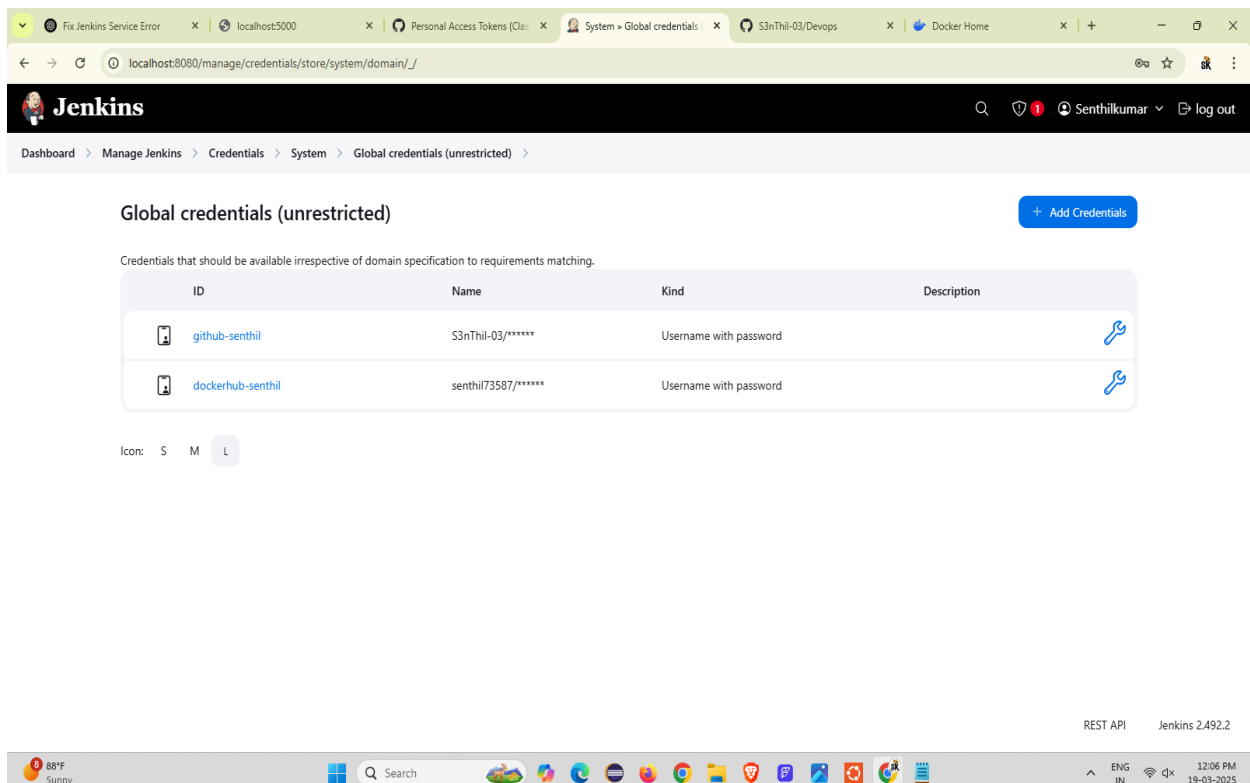
Step 10: check the docker all the files are uploaded in the github repository



Step 11: go to the docker and login in



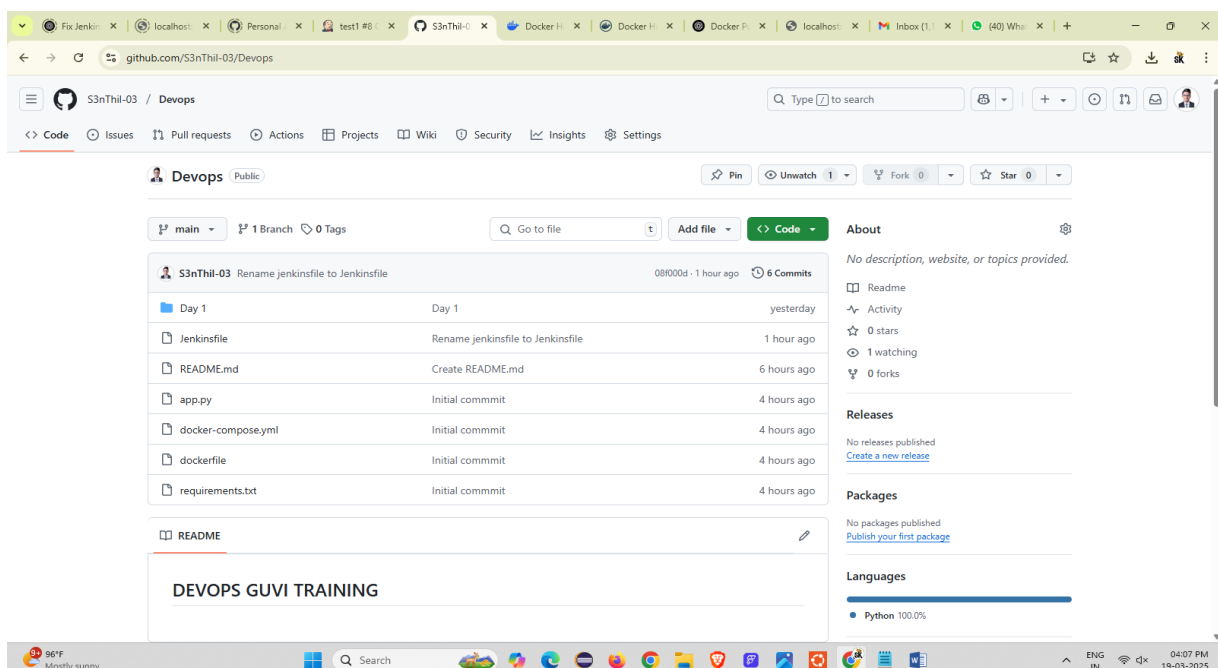
Step 12: in jenkins copy the global credentials and change in the jenkins file



Step 13: commit the jenkinsfile into github

```
student@CTS-6: ~/docker-python-app/Devops
student@CTS-6:~/docker-python-app/Devops$ git push https://S3nThil-03:ghp_wq5pSWM1vB0EIaChpFcPMADMOH1qa93k0g8a@github.com/S3nThil-03/Devops.git
student@CTS-6:~/docker-python-app/Devops$
student@CTS-6:~/docker-python-app/Devops$
student@CTS-6:~/docker-python-app/Devops$
student@CTS-6:~/docker-python-app/Devops$ 15.00 KiB/s, done.
student@CTS-6:~/docker-python-app/Devops$ k-reused 0
student@CTS-6:~/docker-python-app/Devops$ t
student@CTS-6:~/docker-python-app/Devops$
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ ls
'Day 1' README.md app.py docker-compose.yml dockerfile jenkinsfile requirements.txt
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ git add .
student@CTS-6:~/docker-python-app/Devops$ git commit -m "Second Commit"
[main 3f97c4c] Second Commit
1 file changed, 66 insertions(+)
create mode 100644 jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ git add .
student@CTS-6:~/docker-python-app/Devops$ git commit -m "Second Commit"
[main 443aa6] Second Commit
1 file changed, 1 insertion(+), 1 deletion(-)
student@CTS-6:~/docker-python-app/Devops$ git push https://S3nThil-03:ghp_wq5pSWM1vB0EIaChpFcPMADMOH1qa93k0g8a@github.com/S3nThil-03/Devops.git
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.19 KiB | 1.19 MiB/s, done.
Total 6 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
To https://github.com/S3nThil-03/Devops.git
3b7729f..443aa6 main -> main
student@CTS-6:~/docker-python-app/Devops$
```

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

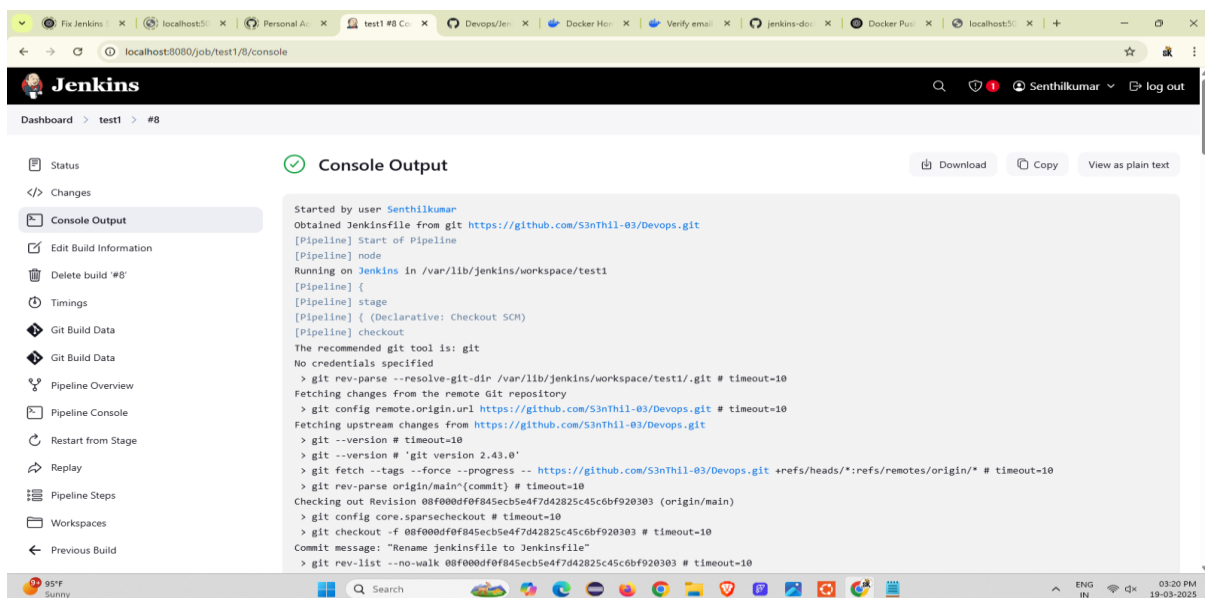


Step 15 : using “sudo usermod –aG docker jenkins” and restart the jenkins

```
student@CTS-6: ~/docker-python-app/Devops
Day 1 README.md app.py docker-compose.yml dockerfile jenkinsfile requirements.txt
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ git add .
student@CTS-6:~/docker-python-app/Devops$ git commit -m "Second Commit"
[main 3f97c4c] Second Commit
1 file changed, 66 insertions(+)
create mode 100644 jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ nano jenkinsfile
student@CTS-6:~/docker-python-app/Devops$ git add .
student@CTS-6:~/docker-python-app/Devops$ git commit -m "Second Commit"
[main 443aae6] Second Commit
1 file changed, 1 insertion(+), 1 deletion(-)
student@CTS-6:~/docker-python-app/Devops$ git push https://S3nThil-03:ghp_wq5pSWM1vBOEiaChpFcpMADMOHlqa93kOg8a@github.com/S3nThil-03/Devops.git
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.19 KiB | 1.19 MiB/s, done.
Total 6 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
To https://github.com/S3nThil-03/Devops.git
3b7729f..443aae6 main -> main
student@CTS-6:~/docker-python-app/Devops$ ls
Day 1 README.md app.py docker-compose.yml dockerfile jenkinsfile requirements.txt
student@CTS-6:~/docker-python-app/Devops$ sudo usermod -aG docker jenkins
[sudo] password for student:
student@CTS-6:~/docker-python-app/Devops$ sudo systemctl restart jenkins
student@CTS-6:~/docker-python-app/Devops$ docker push senthil73587/docker-app:latest
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.45/images/sen
thil73587/docker-app/push?tag=latest": dial unix /var/run/docker.sock: connect: permission denied
student@CTS-6:~/docker-python-app/Devops$ docker login -u senthil73587 -p senthil2233
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
WARNING! Your password will be stored unencrypted in /home/student/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

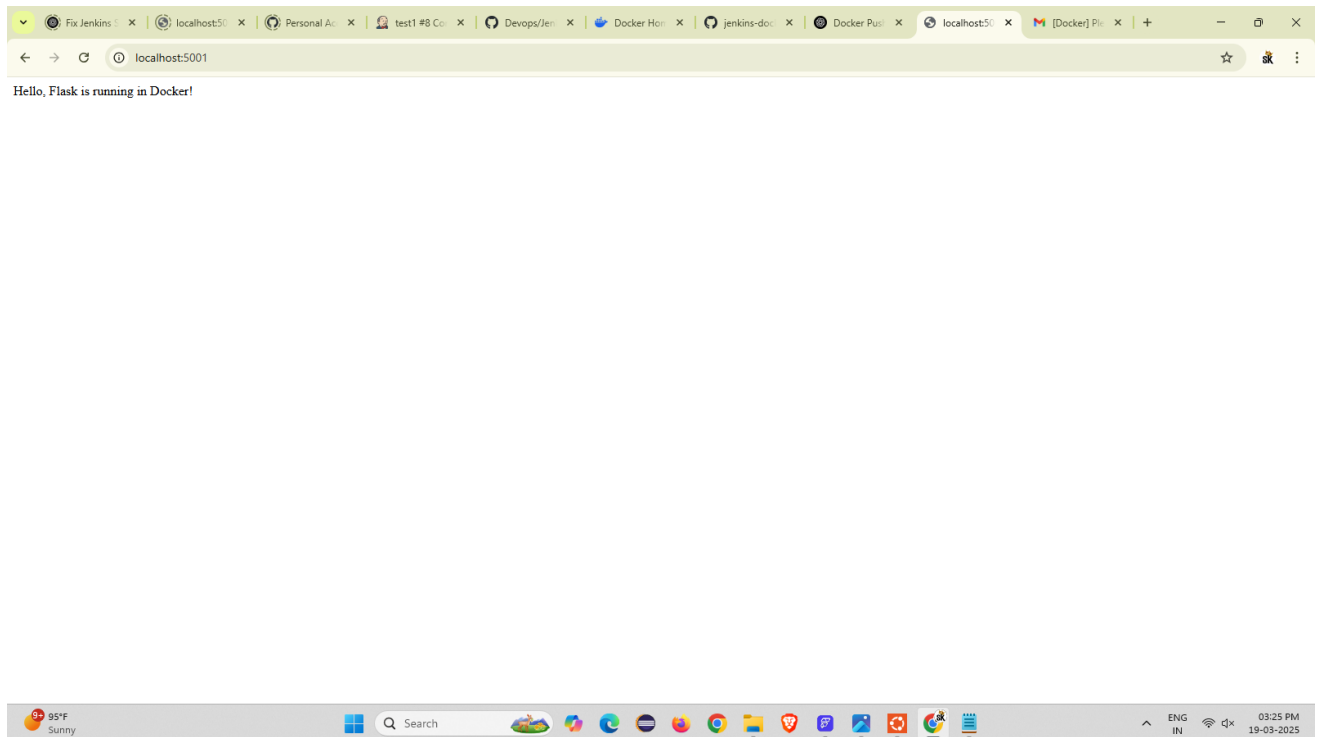
Login Succeeded
student@CTS-6:~/docker-python-app/Devops$ sudo usermod -aG docker jenkins
```

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



```
Started by user Senthilkumar
Obtained Jenkinsfile from git https://github.com/S3nThil-03/Devops.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/test1
[Pipeline] {
[Pipeline] stage
[Pipeline] { [Declarative: Checkout SCM]
[Pipeline] checkout
The recommended git tool is: git
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/test1/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/S3nThil-03/Devops.git # timeout=10
Fetching upstream changes from https://github.com/S3nThil-03/Devops.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/S3nThil-03/Devops.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse origin/main^{commit} # timeout=10
Checking out Revision 08f000df0f845ecb5e4f7d42825c45c6bf920303 (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 08f000df0f845ecb5e4f7d42825c45c6bf920303 # timeout=10
Commit message: "Rename jenkinsfile to Jenkinsfile"
> git rev-list --no-walk 08f000df0f845ecb5e4f7d42825c45c6bf920303 # timeout=10
```


Step 17 : run the localhost:5001



Step 18 : check the image repository in docker

