

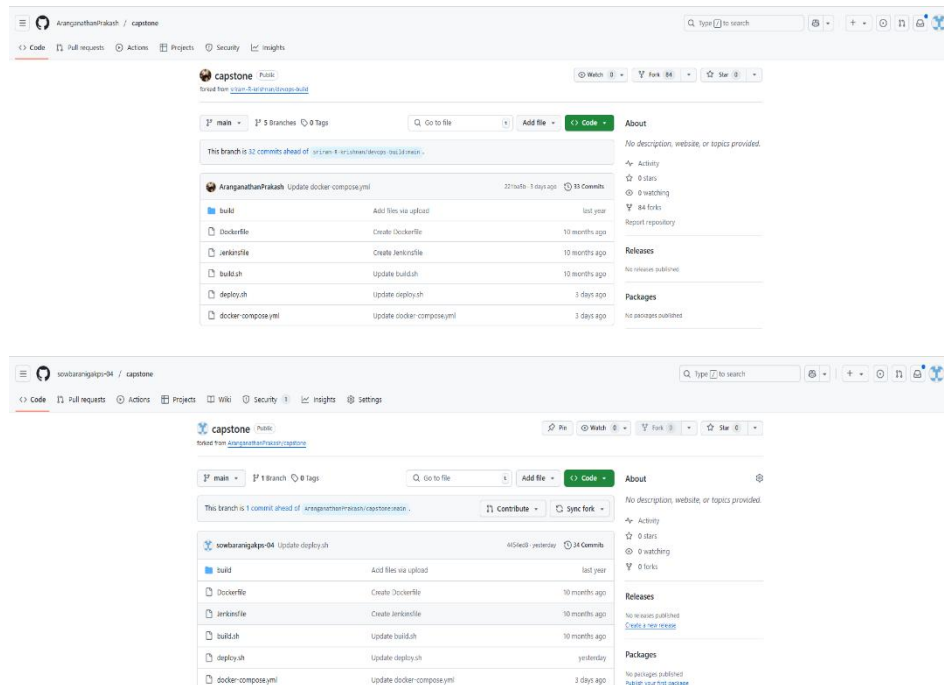
## TASK- 2

- 1) Installation of Docker  
sudo apt install docker.io  
Docker –version  
sudo systemctl  
start docker  
sudo systemctl  
enable docker  
sudo systemctl status docker

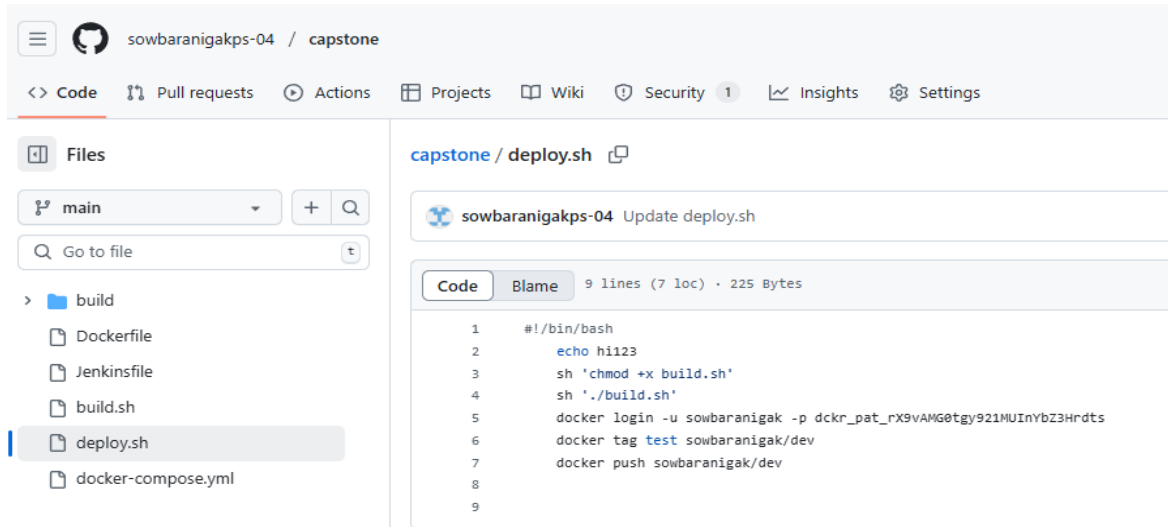
```
root@LAPTOP-6V7WQ2S0:~# apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker.io is already the newest version (26.1.3-ubuntu1-24.04.1).
The following packages were automatically installed and are no longer required:
  libitm1 libpcaaccess0 libpensors-config libpensors0
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.
root@LAPTOP-6V7WQ2S0:~# docker --version
Docker version 26.1.1, build 26.1.1~ubuntu1-24.04.1
root@LAPTOP-6V7WQ2S0:~# sudo systemctl start docker
root@LAPTOP-6V7WQ2S0:~# sudo systemctl enable docker
root@LAPTOP-6V7WQ2S0:~# sudo systemctl status docker
* docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
   Active: active (running) since The 2025-03-20 06:48:32 UTC; 1h 32min ago
   TriggeredBy: + docker.socket
   Docs: https://docs.docker.com
   Main PID: 9561 (dockerd)
   Tasks: 29
   Memory: 62.0M (-)
   CGroup: /system.slice/docker.service
           └─ 1051 /usr/bin/dockerd -s q:/// --containers/run/containers/containers.sock
              └─ 1053 /usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-port 70 -container-ip 172.17.0.2 -con
                 └─ 10261 /usr/bin/docker-proxy -proto tcp -host-ip :: -host-port 70 -container-ip 172.17.0.2 -con

Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185697727Z" level=warning msg="WARNING:
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185692122Z" level=warning msg="WARNING:
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185688187Z" level=warning msg="WARNING:
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185655187Z" level=warning msg="WARNING:
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185688248Z" level=info msg="Docker o
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.185645482Z" level=info msg="Daemon h
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:48:32.379285869Z" level=info msg="API List
Mar 20 06:48:32 LAPTOP-6V7WQ2S0 systemd[1]: Started docker.service - Docker Application Container Engine.
Mar 20 06:45:16 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:45:16.485075978Z" level=info msg="Layer sh
Mar 20 06:45:16 LAPTOP-6V7WQ2S0 dockerd[9561]: time="2025-03-20T06:45:16.556116375Z" level=info msg="Layer sh
time="2025-03-20T06:45:16.556116375Z" level=info msg="Layer sh
* docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
```

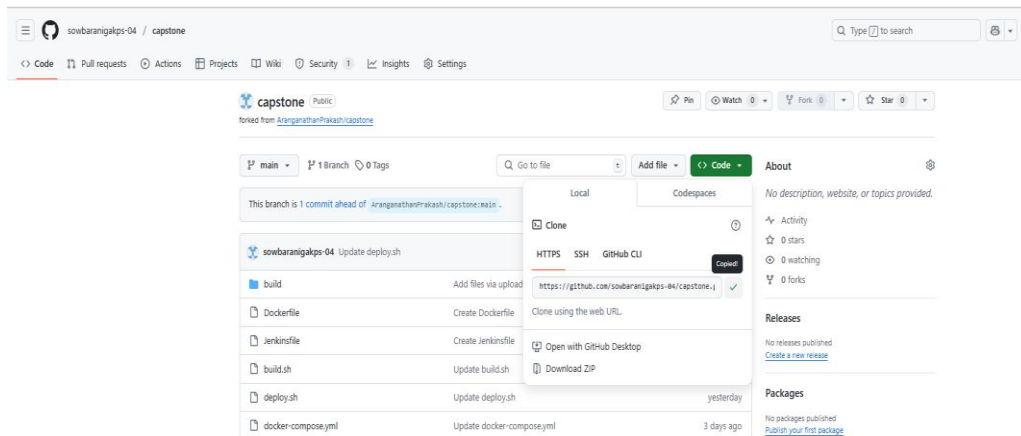
- 2) Fork a copy of a GitHub repository which contains the necessary files which will result in the clone of that repository in our own repository.



- 3) Then change the token and repository name of the Docker Hub in the deploy.sh file which is in our repository.



- 4) Then copy the GitHub link of the repository and go to Jenkins.



5) In Jenkins, create a New Item with a type Pipeline and add the copied GitHub URL to it with the correct branch and Jenkinsfile.

Dashboard > DevopsPipeline > Configuration

Configure

Pipeline script from SCM

SCM ?

Git ?

Repositories ?

Repository URL ?

https://github.com/sowbaranigakps-04/capstone.git

Credentials ?

- none -

+ Add

Advanced

Add Repository

Branches to build ?

Save Apply

6) After Creating the job, build it and it will give the console output and the Docker image will be created.

Dashboard > DevopsPipeline > #5

Status

Changes

Console Output

Edit Build Information

Delete build '#5'

Git Build Data

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

Next Build

Console Output

```
Started by user admin
Obtained Jenkinsfile from git https://github.com/sowbaranigakps-04/capstone.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/DevopsPipeline
[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
Cloning the remote Git repository
Cloning repository https://github.com/sowbaranigakps-04/capstone.git
> git init /var/lib/jenkins/workspace/DevopsPipeline # timeout=10
Fetching upstream changes from https://github.com/sowbaranigakps-04/capstone.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/sowbaranigakps-04/capstone.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/sowbaranigakps-04/capstone.git # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git rebase refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 4454ed86eeeee0f9f558c5957eeac06cc1feea065 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 4454ed86eeeee0f9f558c5957eeac06cc1feea065 # timeout=10
Commit message: "Update deploy.sh"
First time build. Skipping changelog.
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Build and Push Docker Image)
[Pipeline] sh
```

```

Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
Using default tag: latest
The push refers to repository [docker.io/sowbaranigak/dev]
af272204c1dc: Preparing
03d9365bc5dc: Preparing
d26dc06ef910: Preparing
aa82c57cd9fe: Preparing
d98dcc720ae0: Preparing
ad2f08e39a9d: Preparing
135f786ad046: Preparing
1287fbecdfcc: Preparing
ad2f08e39a9d: Waiting
135f786ad046: Waiting
1287fbecdfcc: Waiting
d98dcc720ae0: Mounted from library/nginx
aa82c57cd9fe: Mounted from library/nginx
d26dc06ef910: Mounted from library/nginx
03d9365bc5dc: Mounted from library/nginx
ad2f08e39a9d: Mounted from library/nginx
135f786ad046: Mounted from library/nginx
1287fbecdfcc: Mounted from library/nginx
af272204c1dc: Pushed
latest: digest: sha256:ff0eafc0698dd71dc0abe965e7e5b616c3899853fb442acac30c36794120781a size: 1988
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

7) Now Built this docker image in the terminal with desired port number to it.

```

root@DESKTOP-73QEITE:/home/sowbaraniga_k# docker run -itd -p 90:80 test
15c9ffa095be5919067afa47e1f09d72e71e486998133a234b543bd97945b95f

```

8) Go to the Browser and search for localhost:<PORT\_NUMBER> and the respective application will be hosted.

