

TASK- 2 - DOCKER

Step 1: Installation of Docker:

Install the docker.io

CODE :

sudo apt install docker.io Docker --version

sudo systemctl start docker sudo

systemctl enable docker sudo systemctl

status docker

```
root@LAPTOP-6V70H2B0:~# apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker.io is already the newest version (26.1.3-0ubuntu1-24.04.1).
The following packages were automatically installed and are no longer required:
  libdrm-intel1 libpciaccess0 libsensors-config libsensors5
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.
root@LAPTOP-6V70H2B0:~# docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1-24.04.1
root@LAPTOP-6V70H2B0:~# sudo systemctl start docker
root@LAPTOP-6V70H2B0:~# sudo systemctl enable docker
root@LAPTOP-6V70H2B0:~# 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 Thu 2025-03-20 06:44:32 UTC; 1h 32min ago
   TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
    Main PID: 9561 (dockerd)
       Tasks: 30
      Memory: 62.0M (-)
      CGroup: /system.slice/docker.service
              └─ 9561 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
                10253 /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 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185097971Z" level=warning msg="WARNIN
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185409232Z" level=warning msg="WARNIN
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185440810Z" level=warning msg="WARNIN
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185455418Z" level=warning msg="WARNIN
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185499240Z" level=info msg="Docker de
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.185804540Z" level=info msg="Daemon h
Mar 20 06:44:32 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:44:32.379205869Z" level=info msg="API list
Mar 20 06:44:32 LAPTOP-6V70H2B0 systemd[1]: Started docker.service - Docker Application Container Engine.
Mar 20 06:45:16 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:45:16.405475078Z" level=info msg="Layer sh
Mar 20 06:45:16 LAPTOP-6V70H2B0 dockerd[9561]: time="2025-03-20T06:45:16.550116575Z" level=info msg="Layer sh
lines 1-23/23 (END) ...skipping...
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
```

Step 2:Fork

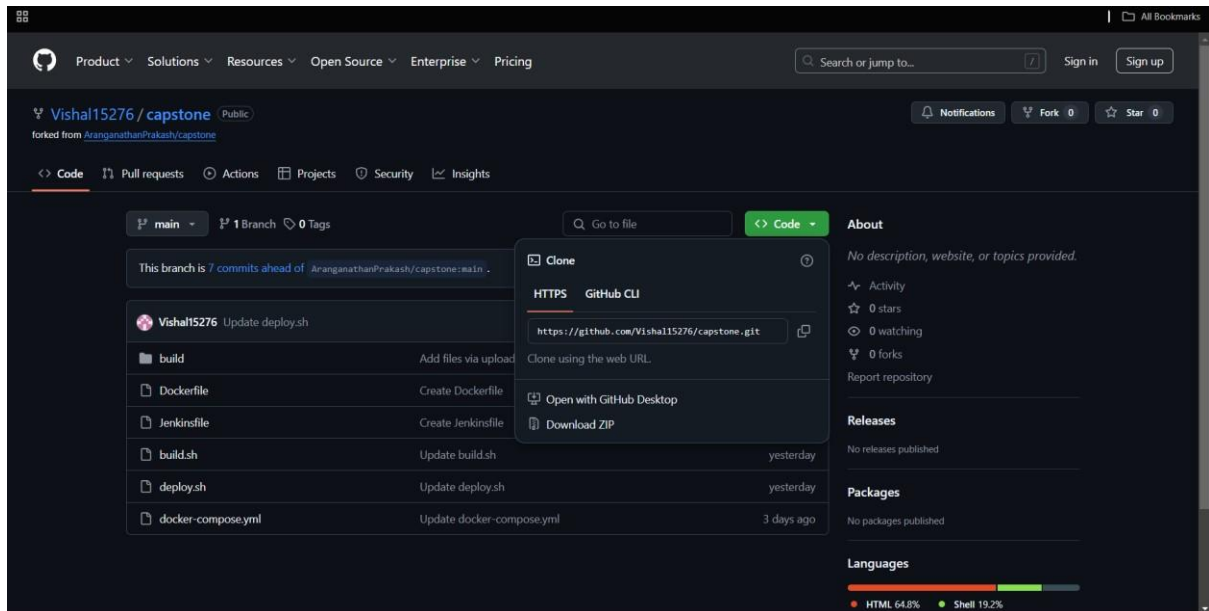
Fork a copy of a GitHub repo which contains the necessary files which will result in the clone of that repo in our own repository . Then change the token and repo name of the docker Hub in the deploy.sh file which is in our repository.

The screenshot shows the GitHub interface for the repository 'Vishal15276/capstone'. The repository is a fork of 'AranganathanPrakash/capstone'. The 'Code' tab is active, showing the file list on the left and the content of 'deploy.sh' on the right. The file list includes 'build', 'Dockerfile', 'Jenkinsfile', 'build.sh', 'deploy.sh', and 'docker-compose.yml'. The 'deploy.sh' file content is as follows:

```
1 #!/bin/bash
2 #echo h1123
3 sh 'chmod ax build.sh'
4 sh './build.sh'
5 docker login -u vishal15276t -p dckr_pat_bHtBKd1_EGehv0RqKGreAXYolM
6 docker tag test1 vishal15276t/test1
7 docker push vishal15276t/test1
8 docker compose up -d
```

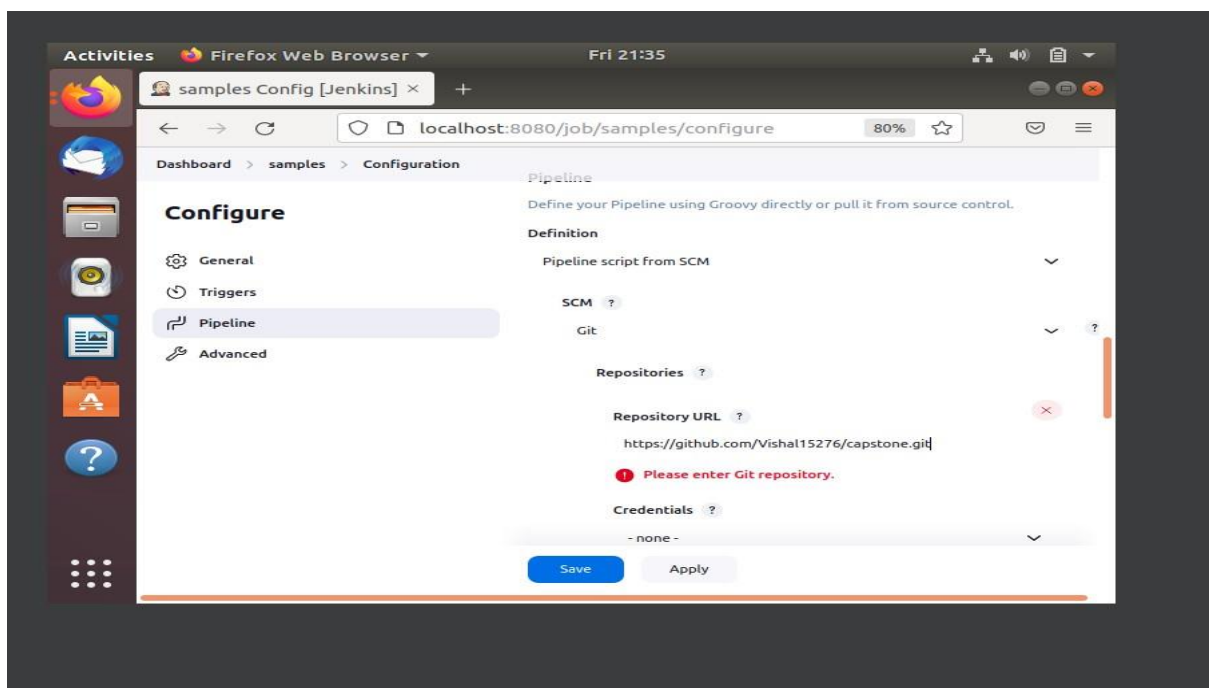
Step 3: GitHub Link

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



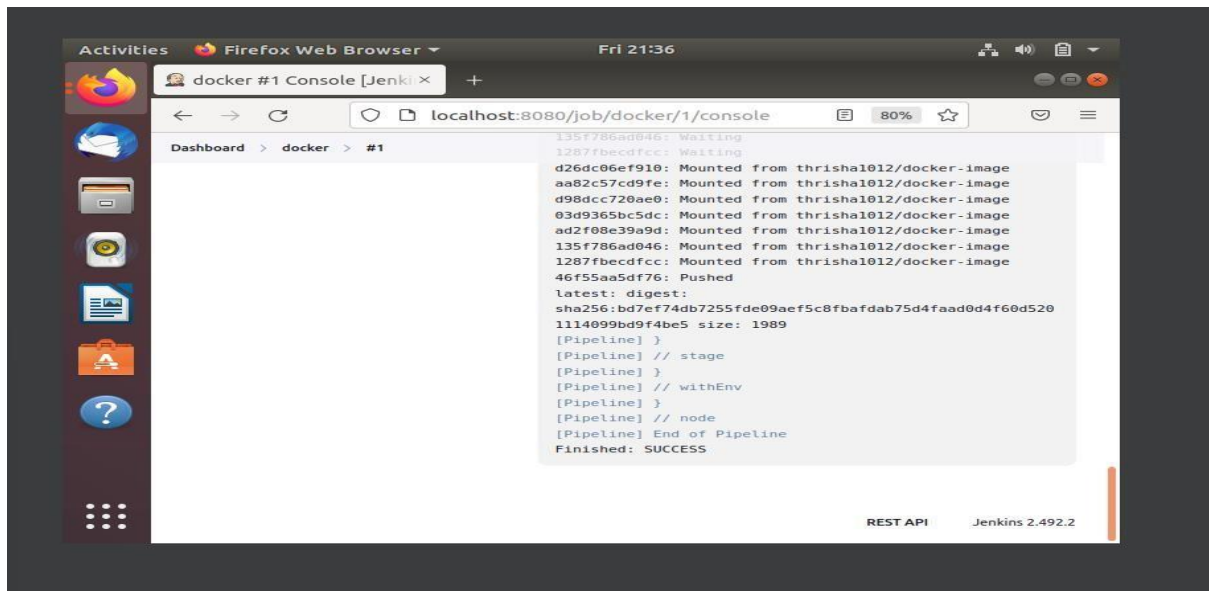
Step 4: New Item

In Jenkins, create a new item (Job) with a type pipeline and add the copied GitHub url to it with the correct branch and Jenkinsfile.



Step 5: Build And Image Creation

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



Step 6: Build Image with Port number

Now Build this docker image in the terminal with desired port number to it.

CODE:

docker images docker build -itd

-p 70:80 test1

```
Password:
Error saving credentials: error storing credentials - err: exit status 1, out: 'error storing credentials - err: exit status 1, out: 'exit status 1: gpg: suganth07
gpg: [stdin]: encryption failed: No public key
Password encryption aborted.'
suganth@suganth-debian: $ cd ~/docker/config.json
suganth@suganth-debian: $ docker login -u suganth07

Info - A Personal Access Token (PAT) can be used instead.
To create a PAT, visit https://app.docker.com/settings

Password:

WARNING! Your credentials are stored unencrypted in '/home/suganth/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
suganth@suganth-debian: $ docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
suganth07/devops    latest     d96625e7ec0b  2 hours ago  195MB
test1               latest     d96625e7ec0b  2 hours ago  195MB
hello-world         latest     74c54e27dc4   8 weeks ago  10.1kB
suganth@suganth-debian: $ docker run -itd -p 70:80 test1
09183a957145c5486005700a40291d3153d2148d50390f0fbc9a31afcf27eb68
suganth@suganth-debian: $ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES
09183a957145   test1     "/docker-entrypoint..." About a minute ago Up About a minute  0.0.0.0:70->80/tcp, [::]:70->80/tcp  flamboyant_chatterjee
suganth@suganth-debian: $ color a
bash: color: command not found
suganth@suganth-debian: $ history
1008  git add
1009  git commit -m "vercel hosting updated"
```

Step 7: Output

Go to the Browser and search for localhost:<PORT_NUMBER> and the respective application will be hosted.

