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PRACTICAL- 1

Aim: Basic Git commands

1. Check git version git – version

```
ubuntu@ubuntu:~$ git --version
git version 2.25.1
ubuntu@ubuntu:~$
```

–

2. Create folder and initialize.

```
ubuntu@ubuntu:~$ git --version
git version 2.25.1
ubuntu@ubuntu:~$ mkdir newuser
ubuntu@ubuntu:~$ cd newuser/
ubuntu@ubuntu:~/newuser$ git init
Initialized empty Git repository in /home/ubuntu/newuser/.git/
ubuntu@ubuntu:~/newuser$
```

3. Configure Git git config --global user.name "usernewncrd" git config --global user.email "symca669@gmail.com"

```
ubuntu@ubuntu:~/newuser$ git config --global user.name "usernewncrd"
ubuntu@ubuntu:~/newuser$ git config --global user.email "symca669@gmail.com"
ubuntu@ubuntu:~/newuser$
```

4. Create a new project folder mkdir git-demo cd git-demo

```
ubuntu@ubuntu:~/newuser$ mkdir git-demo
ubuntu@ubuntu:~/newuser$ cd git-demo/
ubuntu@ubuntu:~/newuser/git-demo$
```

5. git init

```
ubuntu@ubuntu:~/newuser/git-demo$ git init
Initialized empty Git repository in /home/ubuntu/newuser/git-demo/.git/
ubuntu@ubuntu:~/newuser/git-demo$
```

6. Create and track a file: echo "Hello User" > file.txt git add file.txt git commit -m "Initial commit"

```
ubuntu@ubuntu:~/newuser/git-demo$ echo "Hello User"> file.txt
ubuntu@ubuntu:~/newuser/git-demo$ git add file.txt
ubuntu@ubuntu:~/newuser/git-demo$ git commit -m "Initial Commit"
[master (root-commit) 5da5867] Initial Commit
 1 file changed, 1 insertion(+)
 create mode 100644 file.txt
ubuntu@ubuntu:~/newuser/git-demo$
```

7. Check status and log:
   git status
   git log

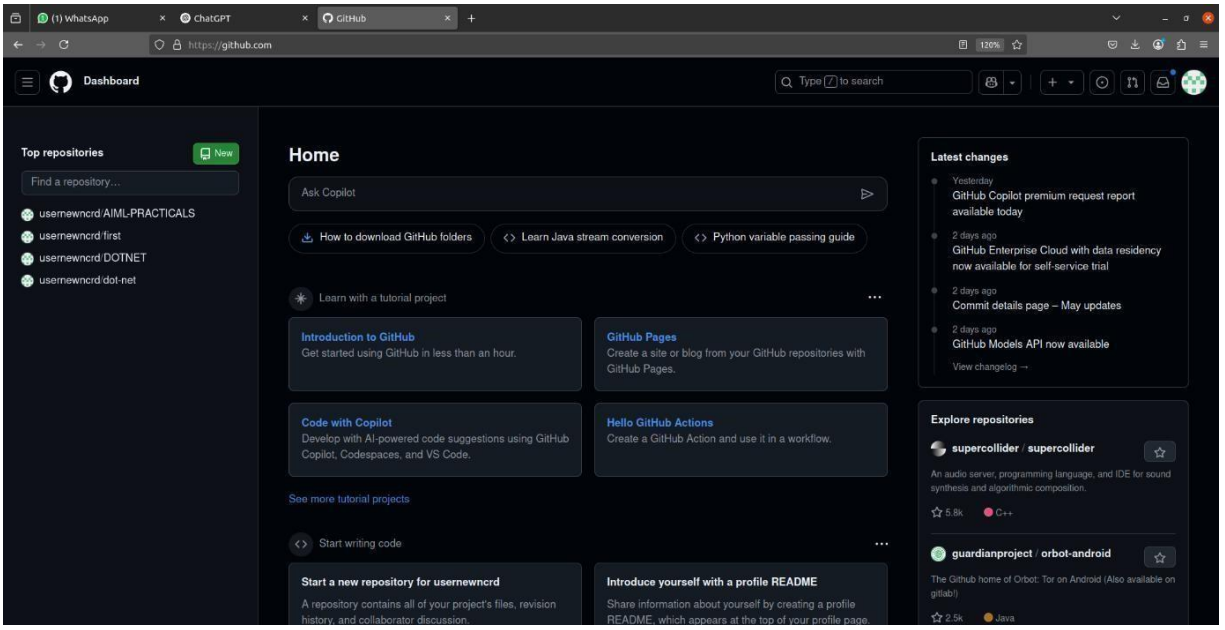
```
ubuntu@ubuntu:~/newuser/git-demo$ git status
On branch master
nothing to commit, working tree clean
ubuntu@ubuntu:~/newuser/git-demo$ git log
commit 5da586754b11433e7ab5ed5d1eafad9ad22d9289 (HEAD -> master)
Author: usernewncrd <symca669@gmail.com>
Date:   Sun May 18 13:52:53 2025 +0530

    Initial Commit
ubuntu@ubuntu:~/newuser/git-demo$
```

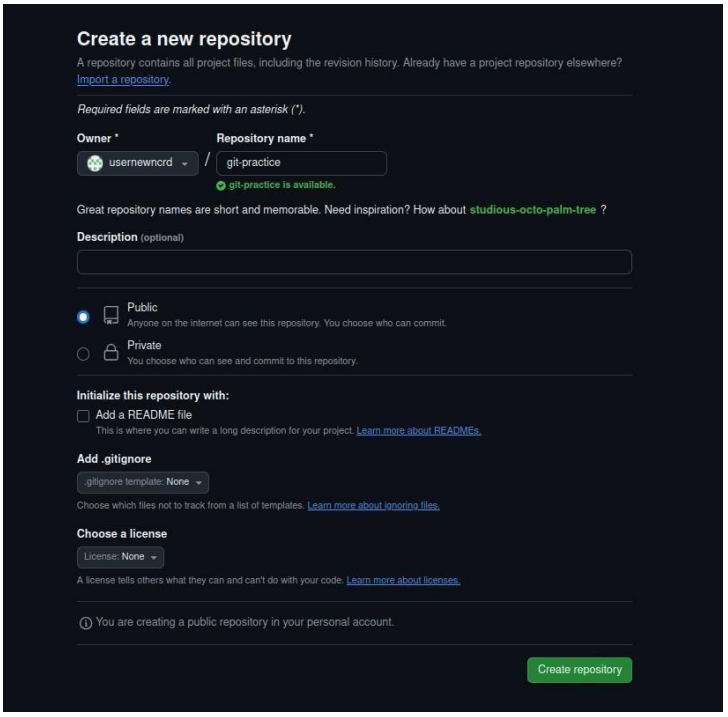
PRACTICAL- 2

Aim: Create and fork repositories in GitHub. Apply branch, merge, rebase concepts.

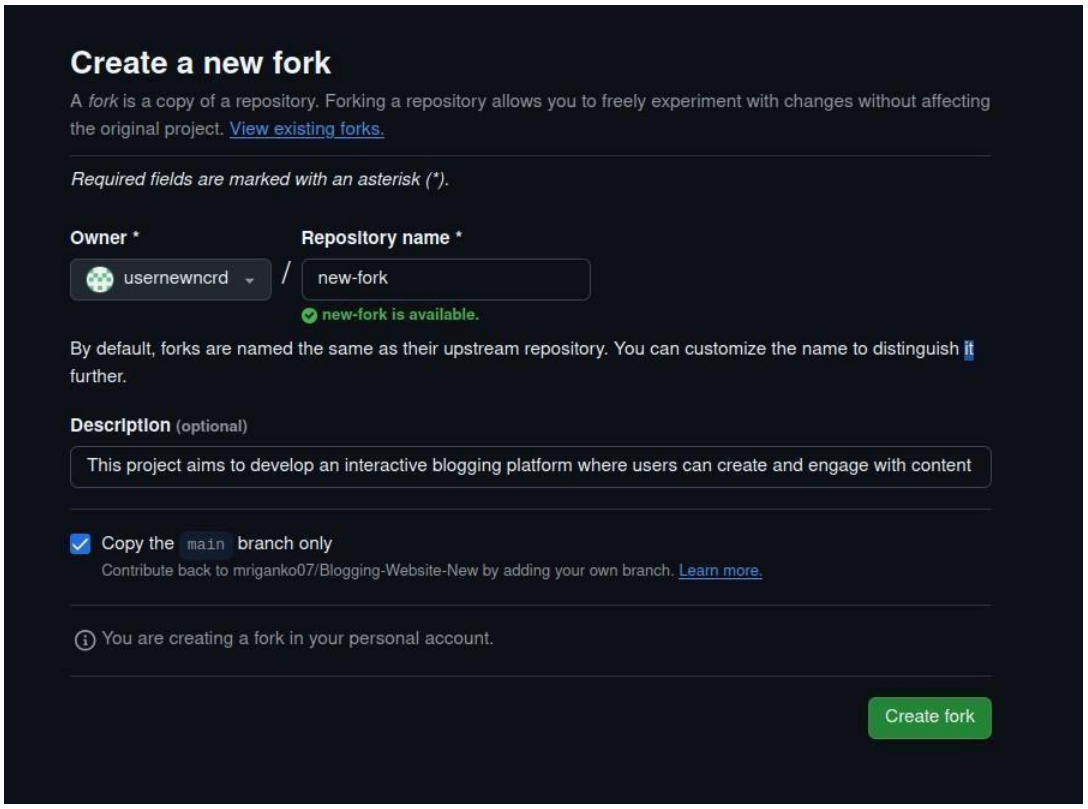
1. Create a GitHub account and log in.



2. Create a repository on GitHub (e.g., git-practice).



3. Fork any public repository or your own from another account



4. Clone the forked repo: git clone https://github.com/usernewncrd/git-practice.git cd git-practice

```
ubuntu@ubuntu:~/newuser/git-demo$ git clone https://github.com/usernewncrd/new-fork
Cloning into 'new-fork'...
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 7 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (7/7), 28.85 KiB | 1.07 MiB/s, done.
ubuntu@ubuntu:~/newuser/git-demo$ cd new-fork/
ubuntu@ubuntu:~/newuser/git-demo/new-fork$
```

5. Create a branch: git checkout -b feature

```
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git checkout -b feature
Switched to a new branch 'feature'
```

6. Make changes, then commit: echo "Feature added" >> newfile.txt git add . git commit -m "Added new feature"

```
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ echo "Feature Added" >> newfile.txt
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git add .
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git commit -m "Added new feature"
[feature ec92d67] Added new feature
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
```

7. Merge branch into main: git checkout master git merge feature

```
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git merge feature
Updating d0bf9b1..ec92d67
Fast-forward
 newfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
ubuntu@ubuntu:~/newuser/git-demo/new-fork$
```

8. Rebase branch (alternative to merge): git checkout feature git rebase master

```
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git checkout feature
Switched to branch 'feature'
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git rebase main
Current branch feature is up to date.
ubuntu@ubuntu:~/newuser/git-demo/new-fork$
```

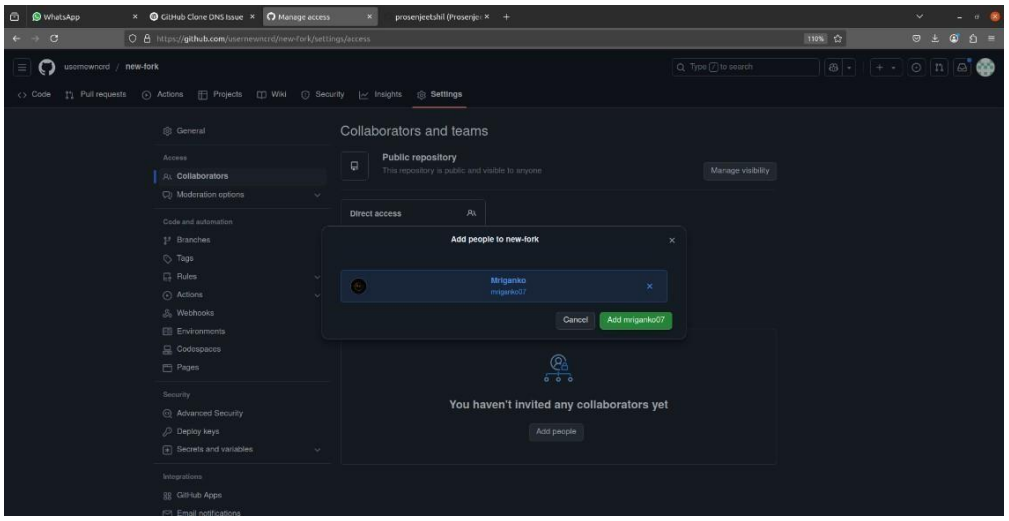
9. Push to GitHub:
   git push origin feature

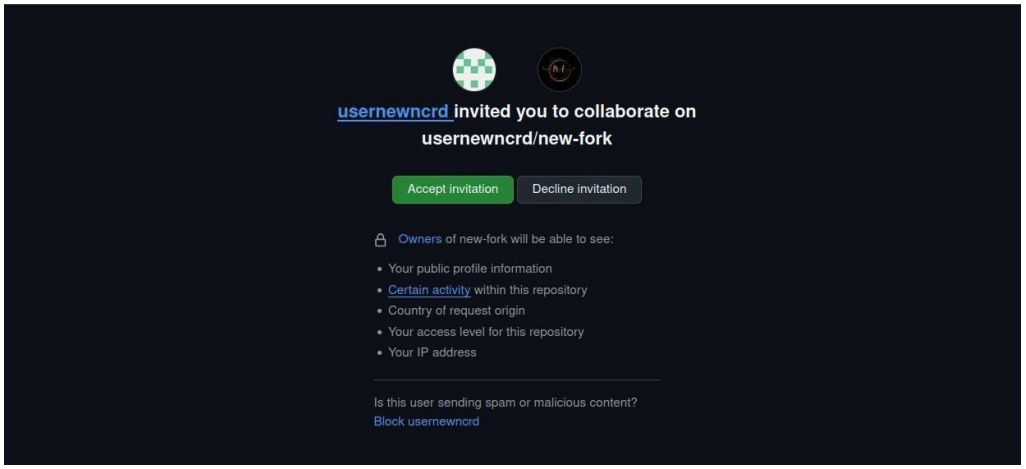
```
ubuntu@ubuntu:~/newuser/git-demo/new-fork$ git push origin feature
Username for 'https://github.com': usernewncrd
Password for 'https://usernewncrd@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 283 bytes | 283.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'feature' on GitHub by visiting:
remote:      https://github.com/usernewncrd/new-fork/pull/new/feature
remote:
To https://github.com/usernewncrd/new-fork
 * [new branch]      feature -> feature
ubuntu@ubuntu:~/newuser/git-demo/new-fork$
```

PRACTICAL-3

Aim : Using Git for Collaboration

1. Using Git for Collaboration





2. Friend clones the repo:
   git clone https://github.com/usernewncrd/git-practice.git cd

```
ubuntu@ubuntu:~/newuser/git-demo$ git clone https://github.com/usernewncrd/git-practice.git
Cloning into 'git-practice'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 1000.37 KiB | 2.44 MiB/s, done.
ubuntu@ubuntu:~/newuser/git-demo$ cd team-repo
bash: cd: team-repo: No such file or directory
ubuntu@ubuntu:~/newuser/git-demo$ git checkout -b bug-fix
Switched to a new branch 'bug-fix'
ubuntu@ubuntu:~/newuser/git-demo$
```

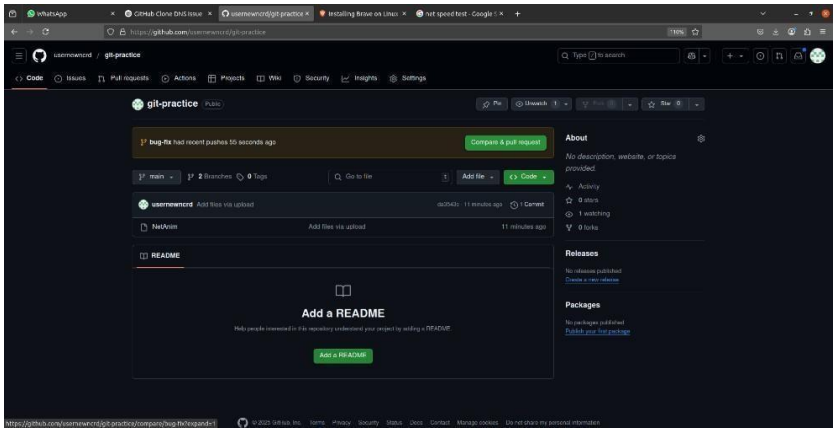
3. Friend makes changes and pushes:
   echo "Bug fixed" >> bug.txt
   git add .
   git commit -m "Fixed a bug"

```
ubuntu@ubuntu:~/newuser/git-demo$ echo "Bug fixed">>bug.txt
ubuntu@ubuntu:~/newuser/git-demo$ git add .
warning: adding embedded git repository: git-practice
hint: You've added another git repository inside your current repository.
hint: Clones of the outer repository will not contain the contents of
hint: the embedded repository and will not know how to obtain it.
hint: If you meant to add a submodule, use:
hint:
hint:   git submodule add <url> git-practice
hint:
hint: If you added this path by mistake, you can remove it from the
hint: index with:
hint:
hint:   git rm --cached git-practice
hint:
hint: See "git help submodule" for more information.
warning: adding embedded git repository: new-fork
ubuntu@ubuntu:~/newuser/git-demo$ git commit -m "Fixed the bug"
[bug-fix a816be3] Fixed the bug
 3 files changed, 3 insertions(+)
 create mode 100644 bug.txt
 create mode 160000 git-practice
 create mode 160000 new-fork
ubuntu@ubuntu:~/newuser/git-demo$
```

4. git push origin bug-fix

```
ubuntu@ubuntu:~/newuser/git-demo$ git push origin bug-fix
Username for 'https://github.com': usernewncrd
Password for 'https://usernewncrd@github.com':
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 549 bytes | 549.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'bug-fix' on GitHub by visiting:
remote:      https://github.com/usernewncrd/git-practice/pull/new/bug-fix
remote:
To https://github.com/usernewncrd/git-practice.git
 * [new branch]      bug-fix -> bug-fix
ubuntu@ubuntu:~/newuser/git-demo$
```

5. Pull Request



PRACTICAL-4

Aim : Collaborating and Cloning using GitHub

1. Clone a public repository: git clone https://github.com/usernewncrd /git-practice.git

```
ubuntu@ubuntu:~/newuser/git-demo$ git clone https://github.com/usernewncrd/git-practice.git
Cloning into 'git-practice'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 1000.37 KiB | 2.44 MiB/s, done.
```

2. Create a branch: git checkout -b update-readme

```
ubuntu@ubuntu:~/newuser/git-demo$ git checkout -b update-readme
Switched to a new branch 'update-readme'
ubuntu@ubuntu:~/newuser/git-demo$
```

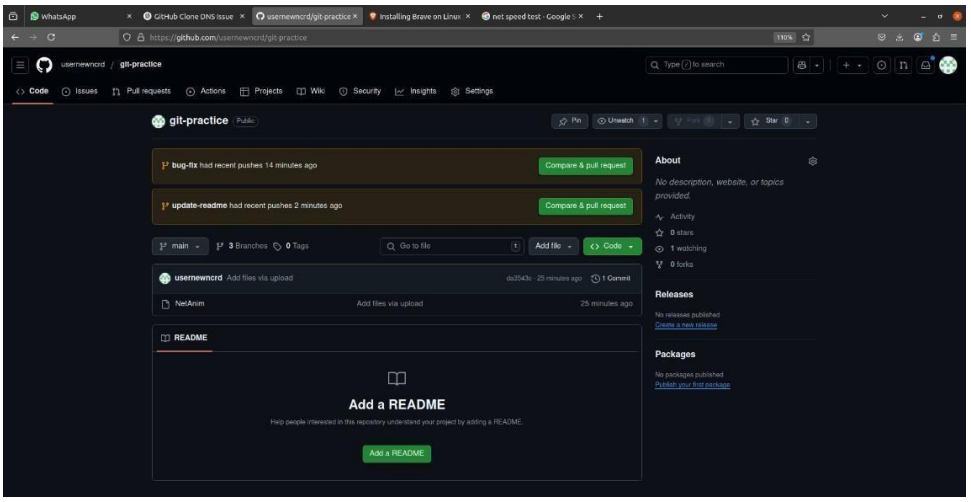
3. Edit and commit changes: echo "Added a line" >> README.md git add README.md git commit -m "Updated README"

```
ubuntu@ubuntu:~/newuser/git-demo$ echo "Added a line">>README.md
ubuntu@ubuntu:~/newuser/git-demo$ git add README.md
ubuntu@ubuntu:~/newuser/git-demo$ git commit -m "Updated README"
[update-readme 11aa668] Updated README
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
ubuntu@ubuntu:~/newuser/git-demo$
```

4. Push and open pull request:

```
ubuntu@ubuntu:~/newuser/git-demo$ git push origin update-readme
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 290 bytes | 290.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'update-readme' on GitHub by visiting:
remote:      https://github.com/usernewncrd/git-practice/pull/new/update-readme
remote:
To https://github.com/usernewncrd/git-practice.git
 * [new branch]      update-readme -> update-readme
ubuntu@ubuntu:~/newuser/git-demo$
```

5. git push origin update-readme

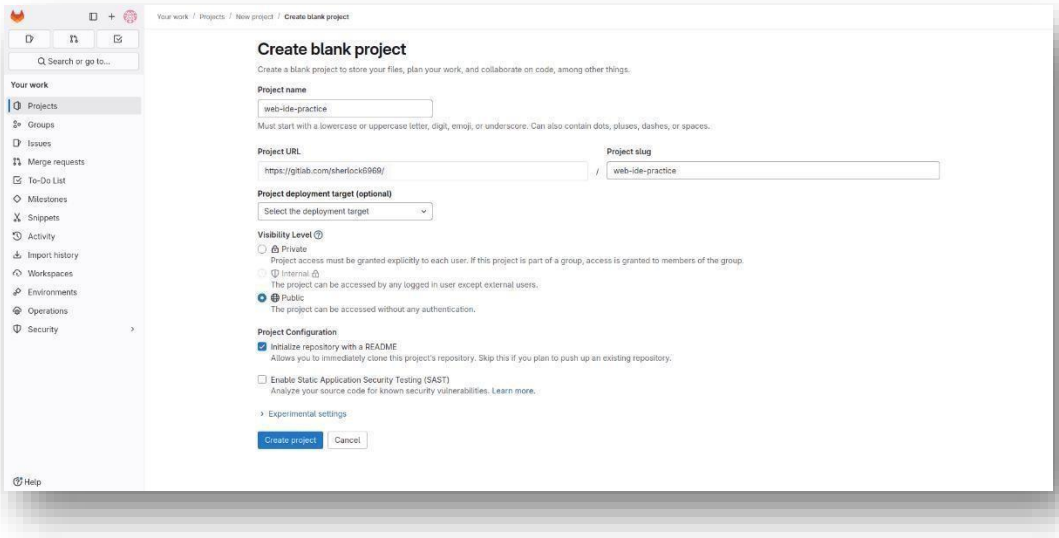


PRACTICAL-5

Aim : Using GitLab Web IDE

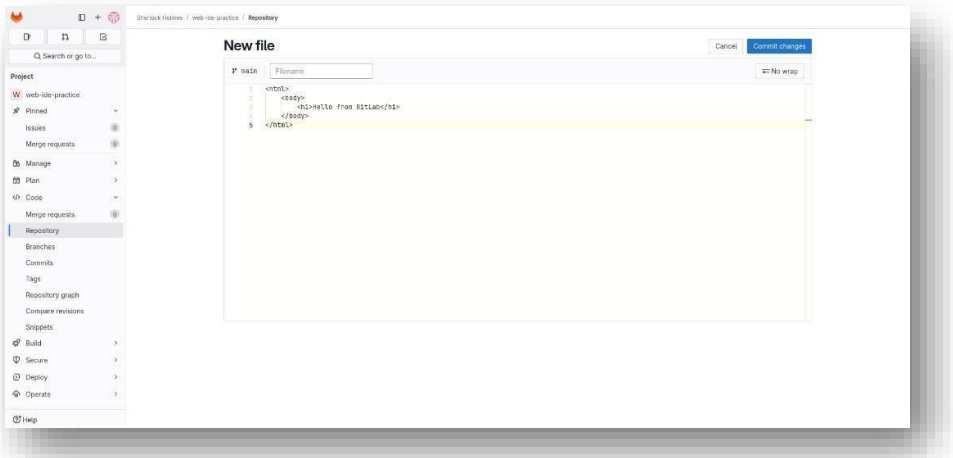
Steps:

1. Sign up at https://gitlab.com 2. Create a project.
3. Click on Web IDE in your repository.

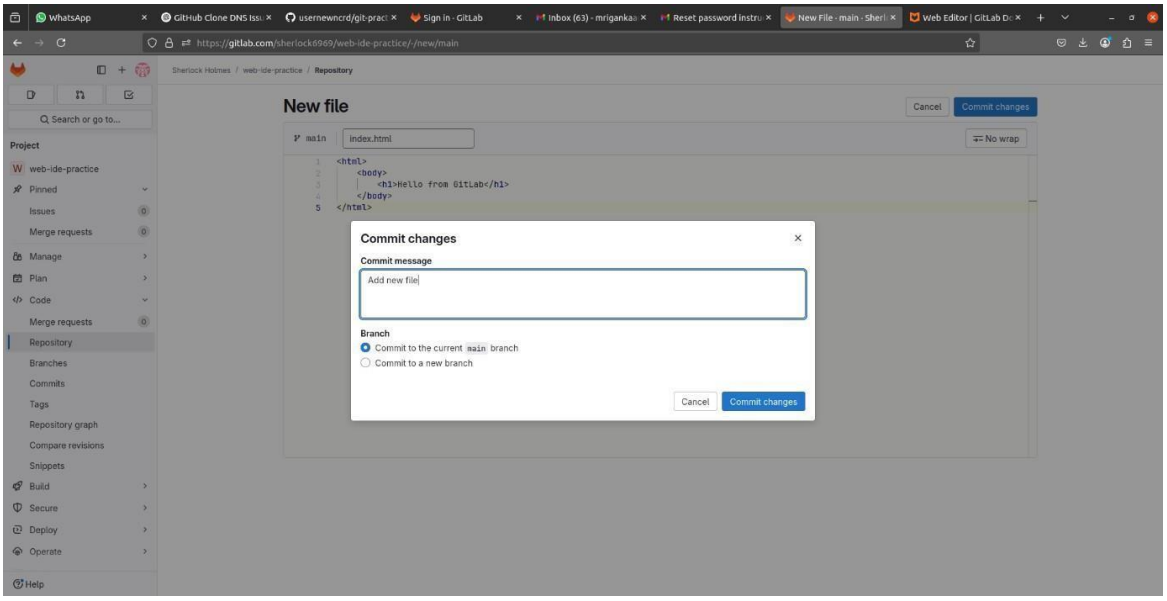


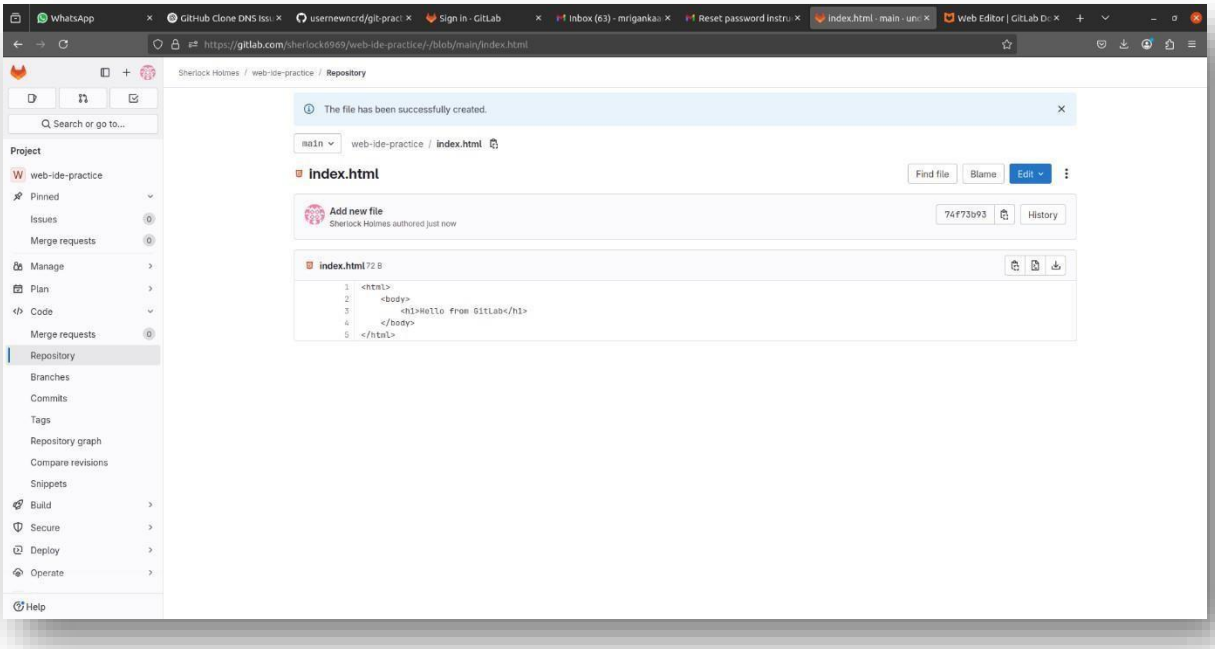
4. Create a file (index.html):

```
<html>
  <body>
     <h1>Hello from GitLab</h1>
  </body>
</html>
```



4. Click Commit and push changes.

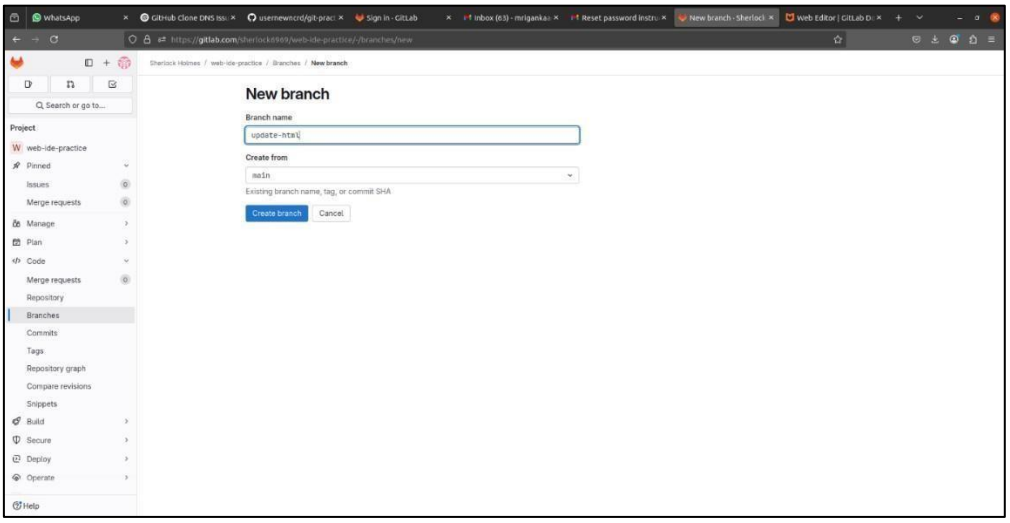




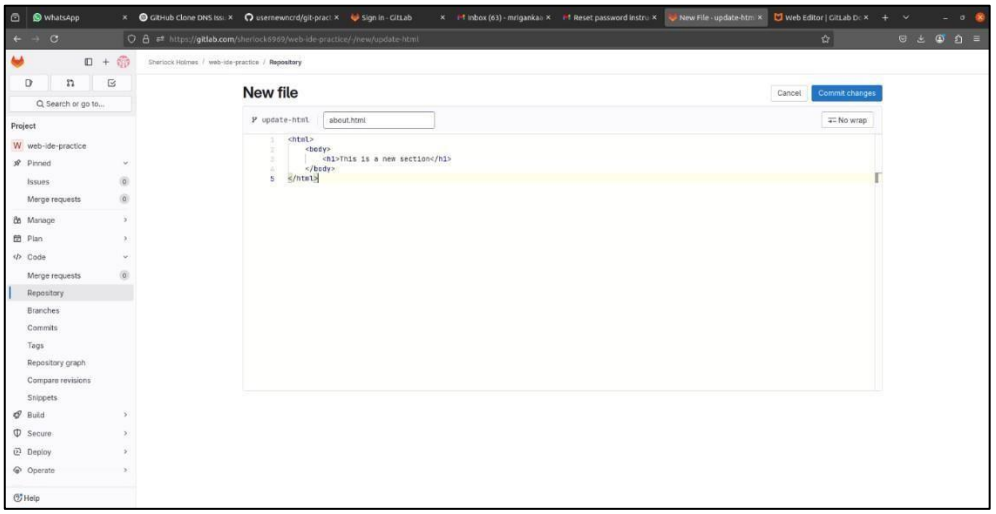
PRACTICAL-6

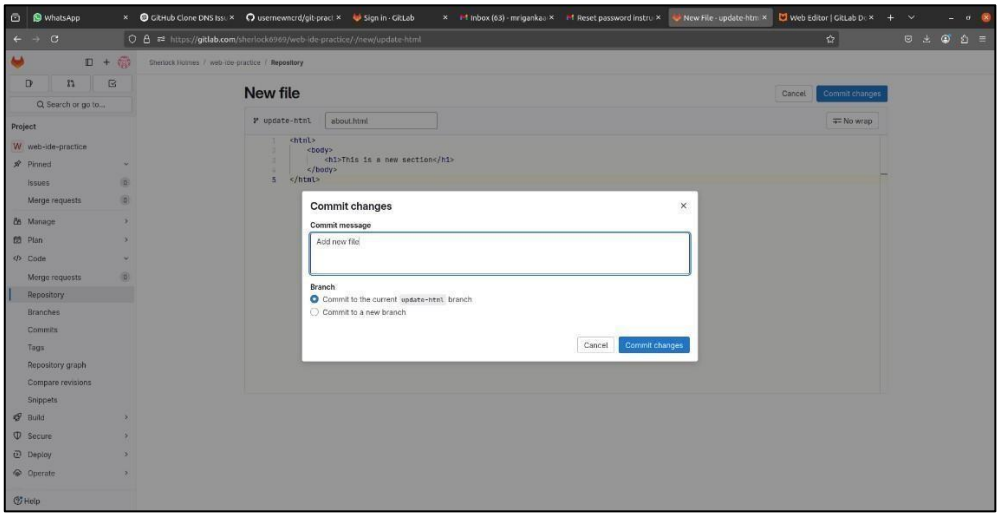
Aim : Performing merge requests using GitLab

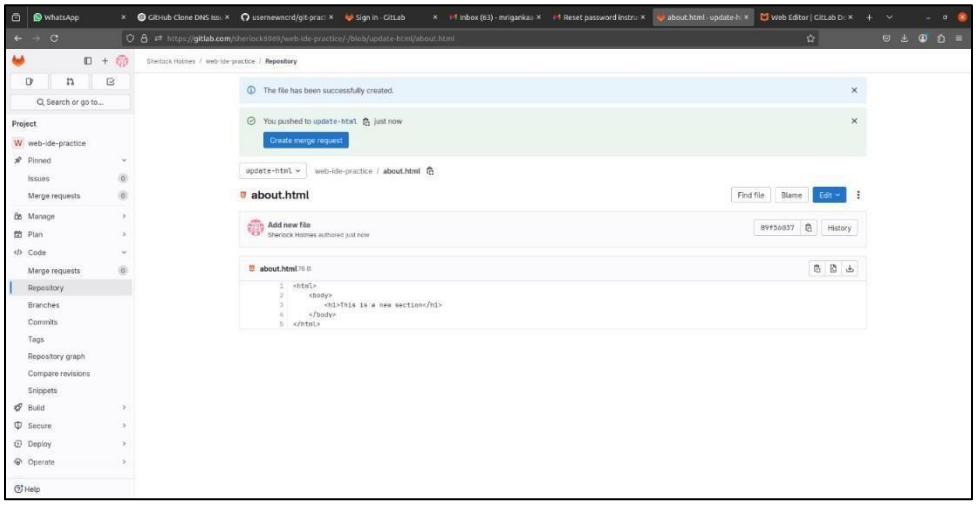
1. Create a new branch in Web IDE.



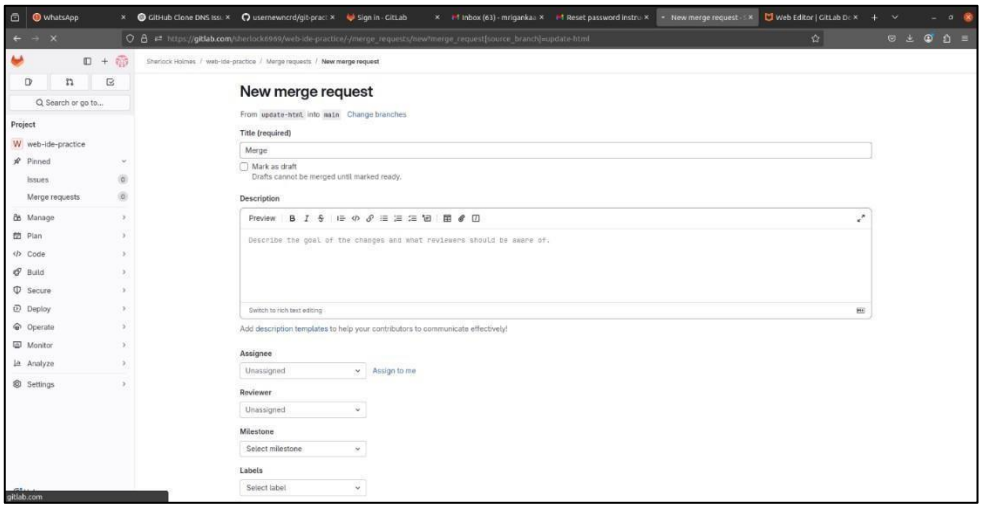
2. Add/edit a file and commit.



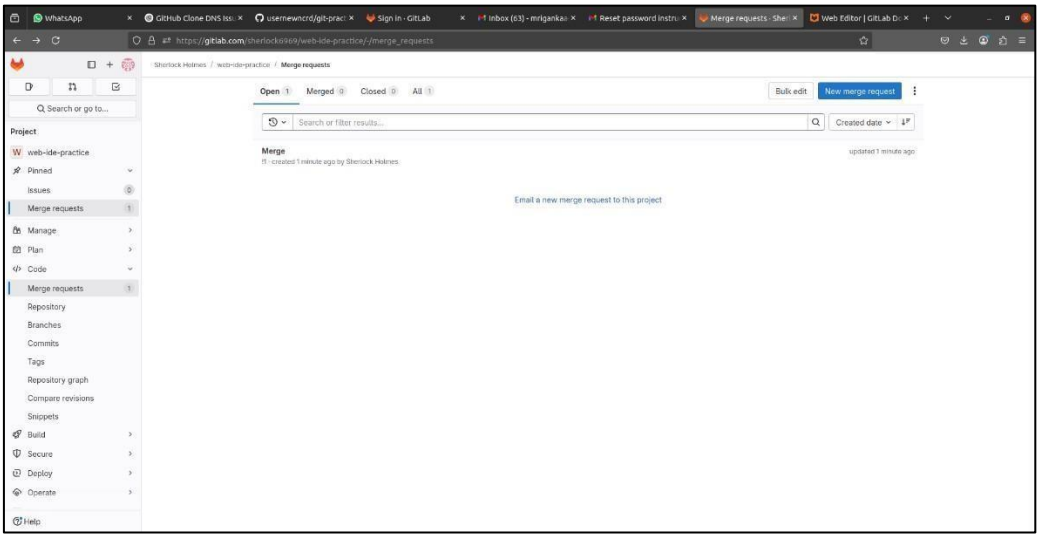




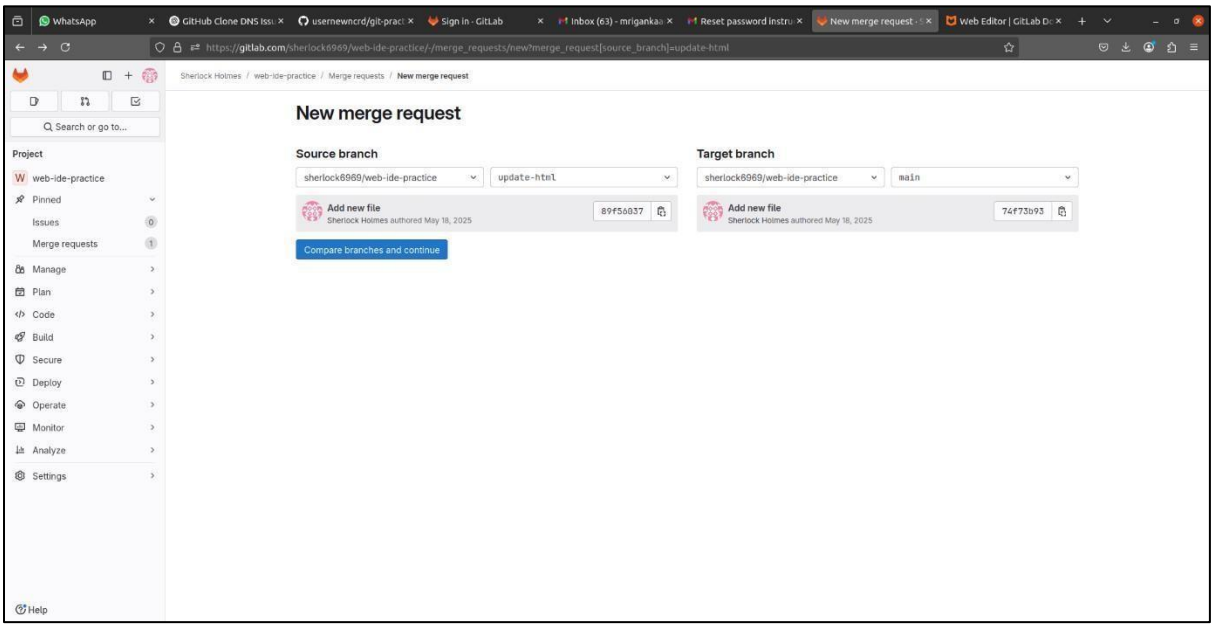
3. Click on Merge Requests > New Merge Request.



4. Select source and target branches.



5. Submit and merge after review.



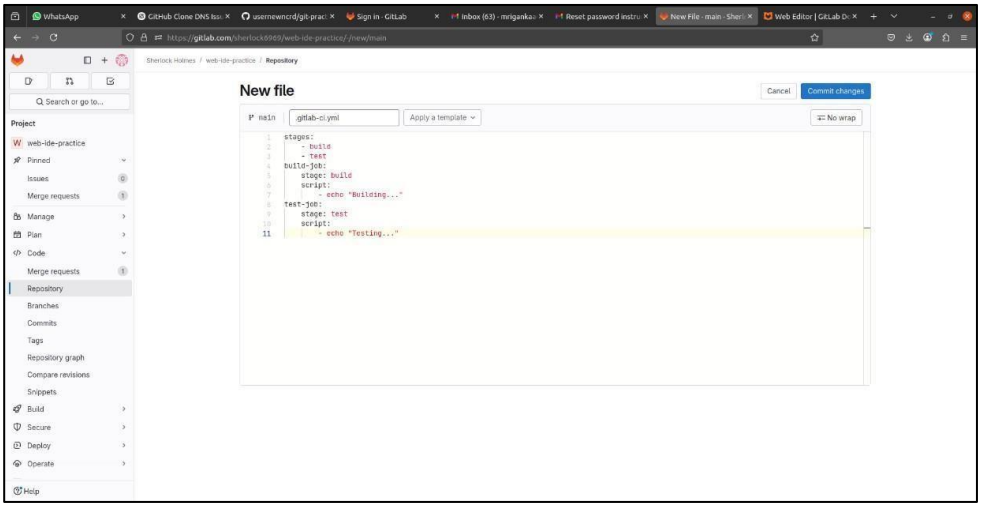
PRACTICAL-7

Aim: Workflow management in GitLab

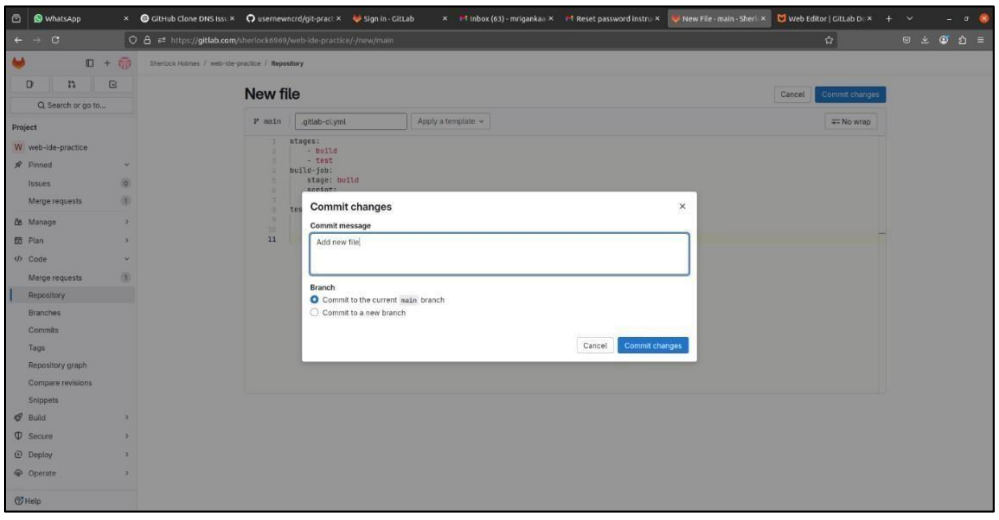
Steps:

1. In your repo, create .gitlab-ci.yml:

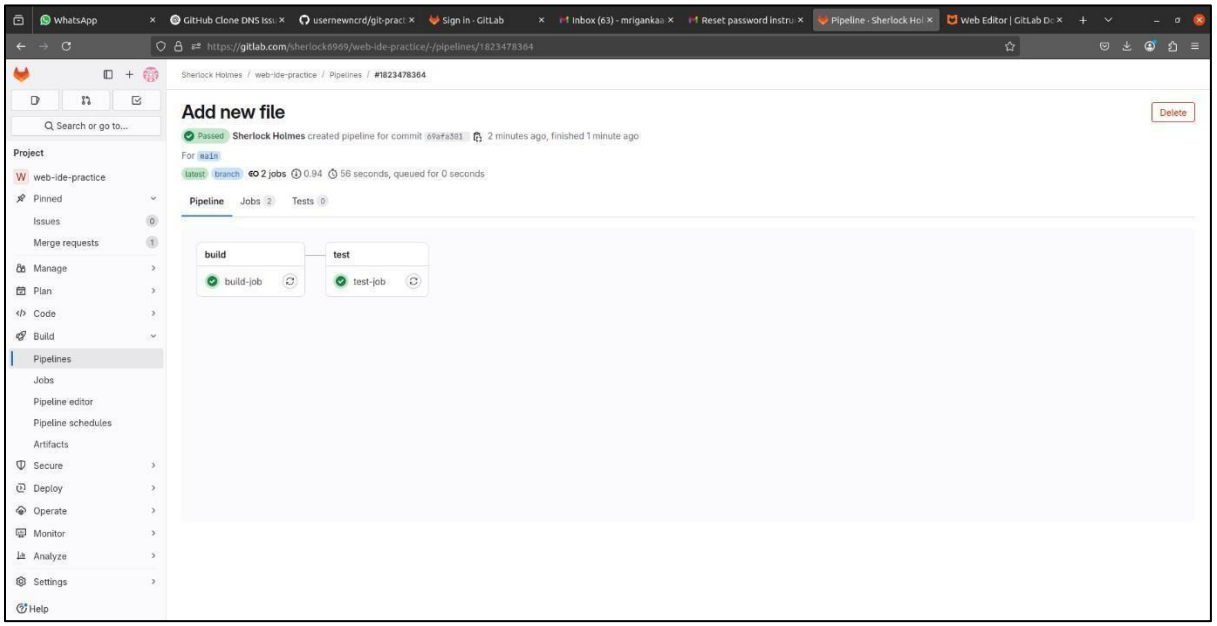
```
stages:
 -        build
 -        test
build-job: stage:
build script:
 -        echo
"Building..."
test- job: stage:
test
script:
- echo "Testing..."
```

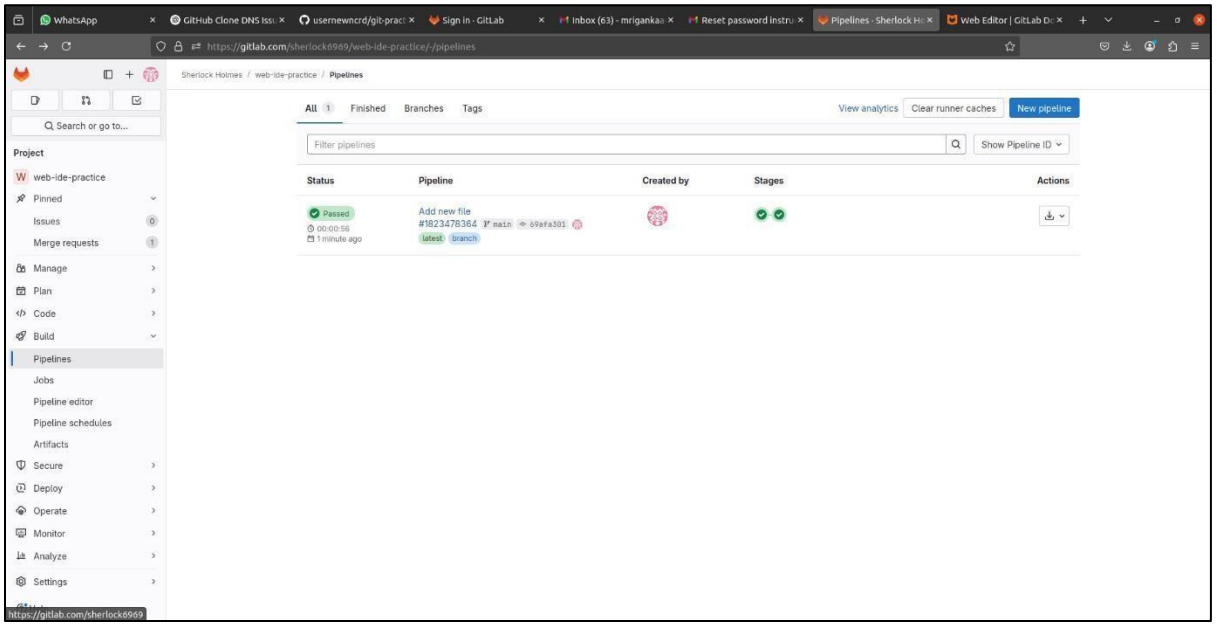


2. Commit and push.



3. Go to CI/CD > Pipelines and view the build/test stages.



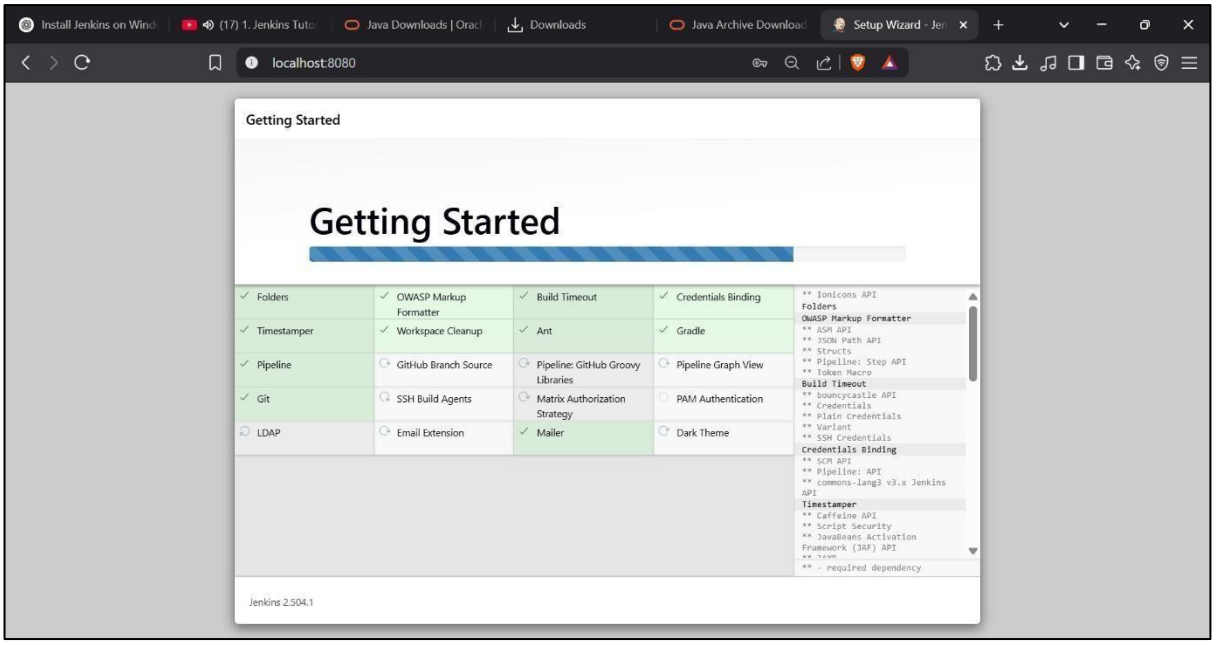


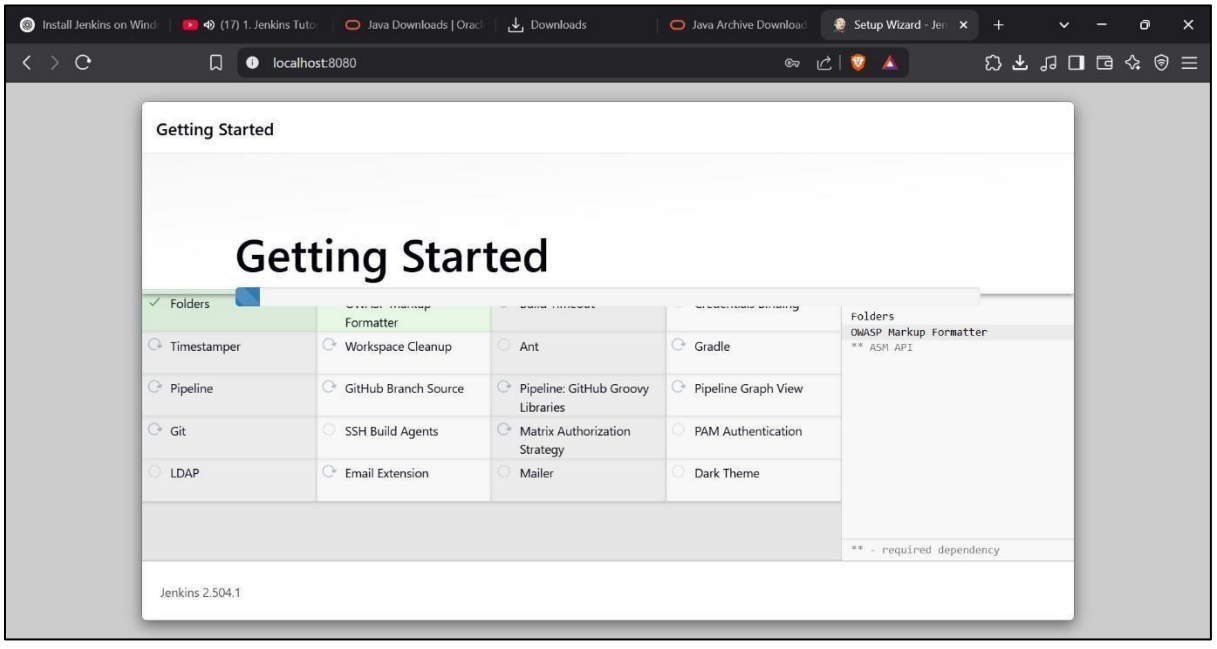
PRACTICAL-8

Aim: Demonstrate Continuous Integration and development using Jenkins

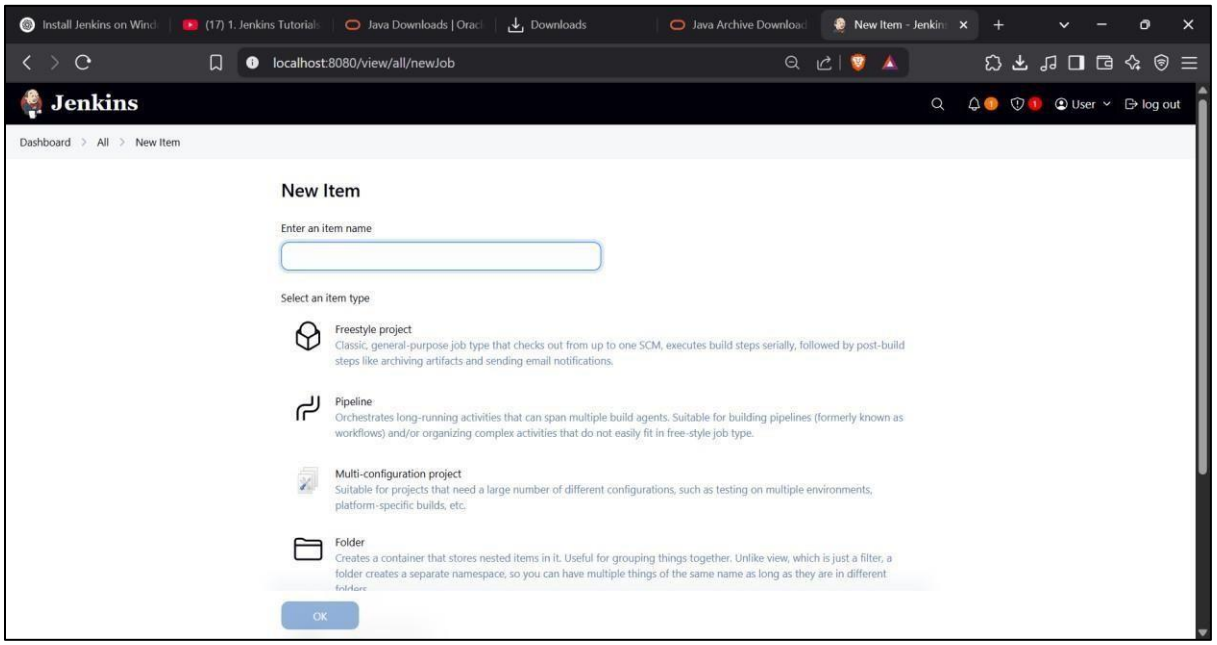
Steps

1. Install Jenkins (visit https://www.jenkins.io)
2. Run Jenkins: http://localhost:8080

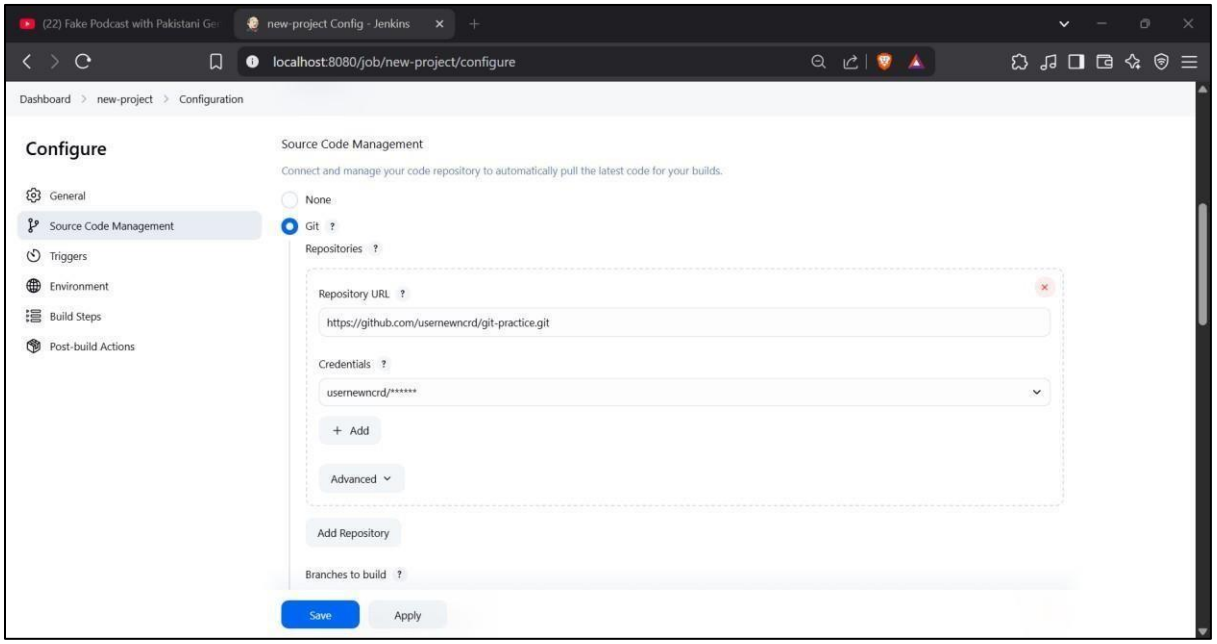




3. Create new Freestyle Project: CI-Demo

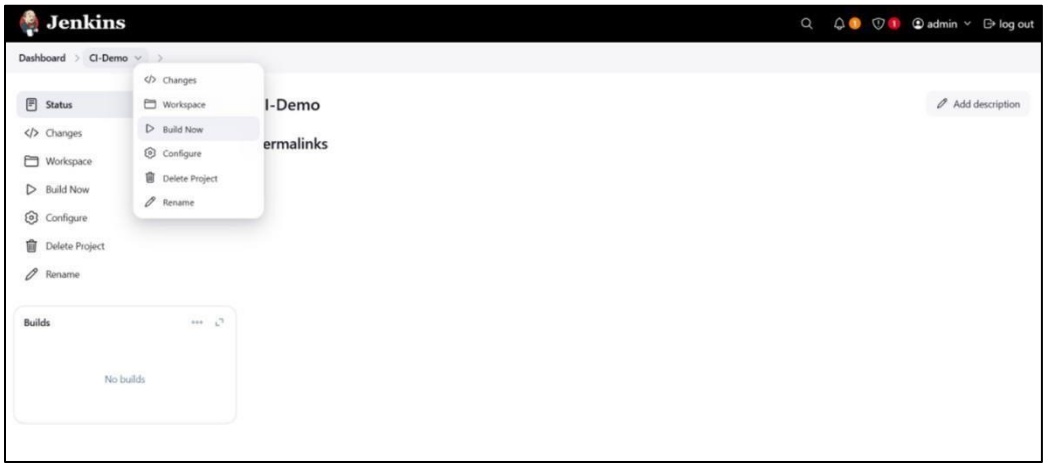


4. Under Source Code Management, choose Git and enter your repo URL.



5. Add Build Step > Execute Shell: echo "Building Project..." echo "Run tests..."

6. Save and click Build Now.



7. Check output in Console Output.

```
+ echo 'Building Project...'
Building Project...
+ echo 'Run tests...'
Run tests...
Finished: SUCCESS
```

PRACTICAL-9

Aim : Explore docker commands for content management

1. Check Docker version docker –version

```
ubuntu@ubuntu:~$ docker --version
Docker version 28.1.1, build 4eba377
```

2. Pull a Docker image from Docker Hub docker pull nginx

```
ubuntu@ubuntu:~$ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
254e724d7786: Pull complete
913115292750: Pull complete
3e544d53ce49: Pull complete
4f21ed9ac0c0: Pull complete
d38f2ef2d6f2: Pull complete
40a6e9f4e456: Pull complete
d3dc5ec71e9d: Pull complete
Digest: sha256:c15da6c91de8d2f436196f3a768483ad32c258ed4e1beb3d367a27ed67253e66
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
```

3. List all Docker images docker images

```
ubuntu@ubuntu:~$ docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
nginx        latest    a830707172e8   4 weeks ago   192MB
```

4. Run a container from an image docker run -d -p 8080:80 --name mynginx nginx

This will run the Nginx container and map port 80 (inside the container) to port 8080 (on your host).

```
ubuntu@ubuntu:~$ docker run -d -p 8080:80 --name mynginx nginx
c241fdc47993e83fe932231e1ba068b8953126eb87a89916c50ebabdc088254c
```

5. List all running containers docker ps

```
ubuntu@ubuntu:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS                  NAMES
c241fdc47993   nginx     "/docker-entrypoint.…"   27 seconds ago   Up 26 seconds   0.0.0.0:8080->80/tcp   mynginx
```

6. Copy content from host to container docker cp index.html mynginx:/usr/share/nginx/html/

Replace index.html with your actual file. This copies a file into the running container.

```
ubuntu@ubuntu:~$ docker cp index.html mynginx:/usr/share/nginx/html/
lstat /home/ubuntu/index.html: no such file or directory
```

7. Copy content from container to host docker cp mynginx:/usr/share/nginx/html/index.html .

```
ubuntu@ubuntu:~$ docker cp index.html mynginx:/usr/share/nginx/html/
lstat /home/ubuntu/index.html: no such file or directory
```

8. Create and use Docker volume for persistent content docker volume create mydata

docker run -d -p 8081:80 --name nginx_vol -v mydata:/usr/share/nginx/html nginx

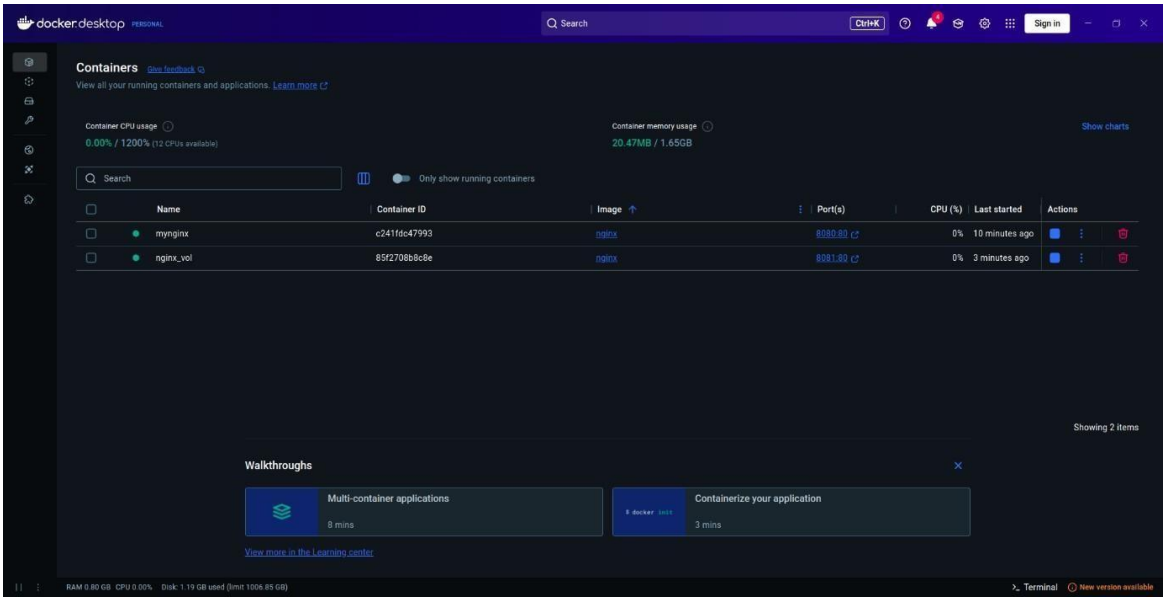
Now any data added to the /usr/share/nginx/html inside the container will persist even if the container is removed.

```
ubuntu@ubuntu:~$ docker volume create mydata
mydata
ubuntu@ubuntu:~$ docker run -d -p 8081:80 --name nginx_vol -v mydata:/usr/share/nginx/html nginx
85f2708b8c8ec2c1eba2bb88f10a162feec1faa1ad3f86c2f0e8d0ba32e1090a
```

9. List Docker volumes docker volume ls

```
ubuntu@ubuntu:~$ docker volume ls
DRIVER    VOLUME NAME
local     mydata
```

10. Remove a container docker rm -f mynginx Remove an image docker rmi nginx



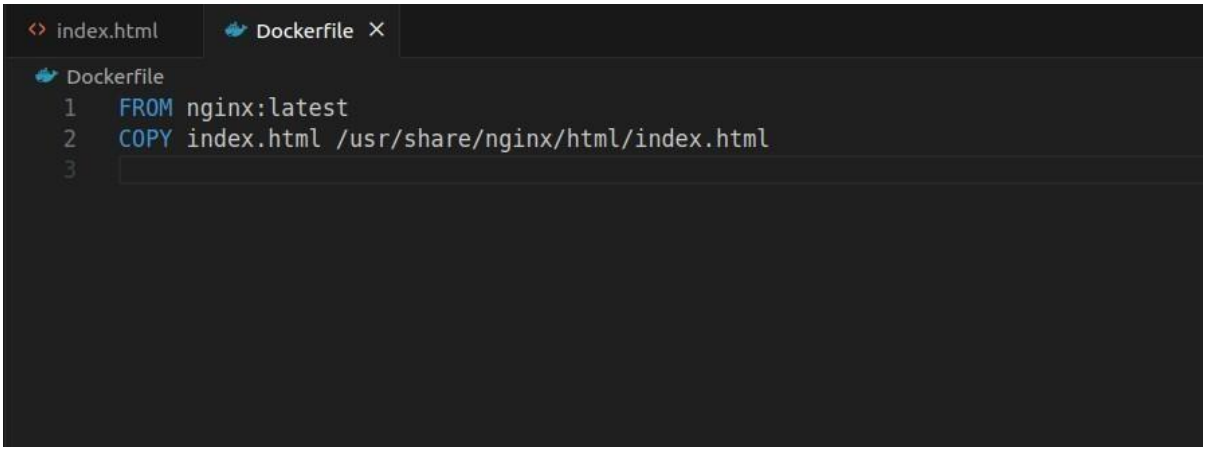
PRACTICAL-10

Aim: Develop a simple containerized application using Docker.

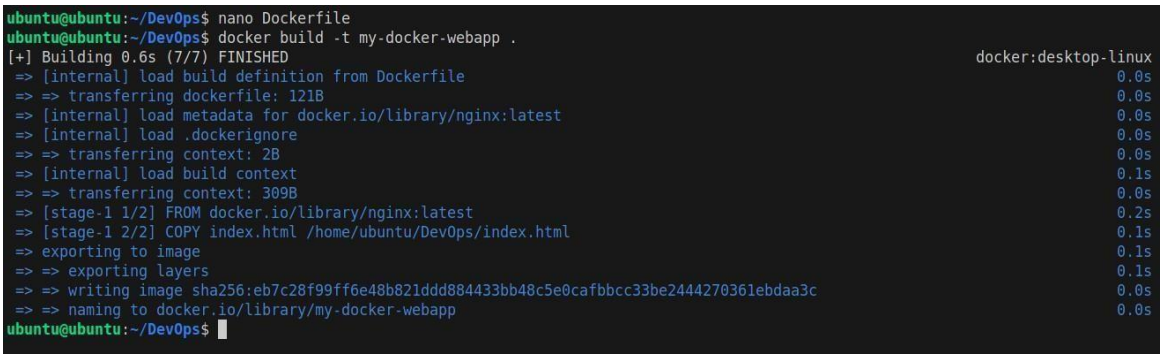
Develop a Simple Containerized Application using Docker.

1. Index.html

2. DockerfIle :-



3. docker build -t my-docker-webapp .



4. docker run -d -p 8080:80 --name webapp-container my-docker-webapp

```
ubuntu@ubuntu:~/DevOps$ docker run -d -p 8080:80 --name webapp-container my-docker-webapp
87758d2c13e4eb227c0bb149148952a661a46b92867ef336a4dd2ad74a993e3f
ubuntu@ubuntu:~/DevOps$
```

5. docker ps

```
ubuntu@ubuntu:~/DevOps$ docker ps
CONTAINER ID   IMAGE              COMMAND                  CREATED          STATUS          PORTS                  NAMES
87758d2c13e4   my-docker-webapp   "/docker-entrypoint.…"   38 seconds ago   Up 37 seconds   0.0.0.0:8080->80/tcp   webapp-container
85f2708b8c8e   nginx              "/docker-entrypoint.…"   18 minutes ago   Up 18 minutes   0.0.0.0:8081->80/tcp   nginx_vol
```

6. docker stop webapp-container

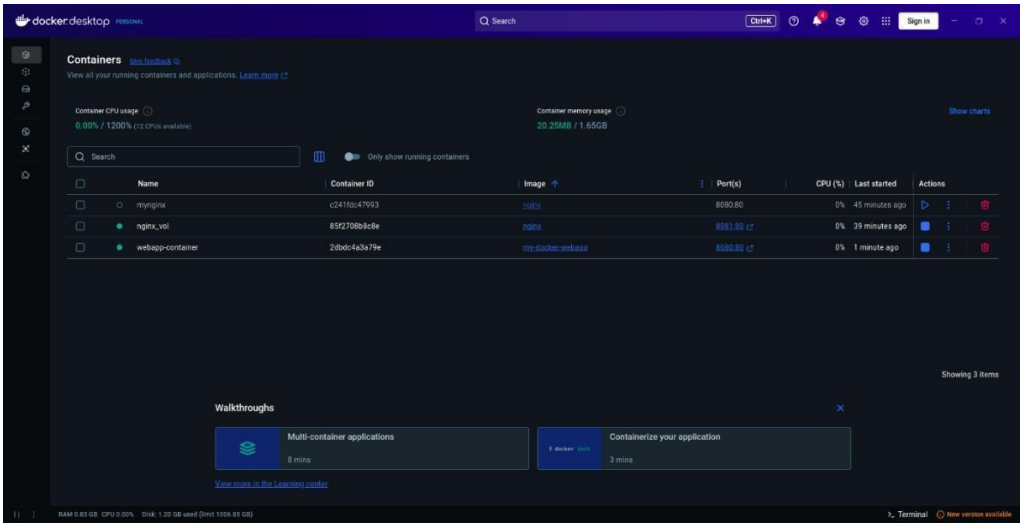
```
ubuntu@ubuntu:~/DevOps$ docker stop webapp-container
webapp-container
```

7. docker rm webapp-container

```
ubuntu@ubuntu:~/DevOps$ docker rm webapp-container
webapp-container
```

8. docker rmi my-docker-webapp

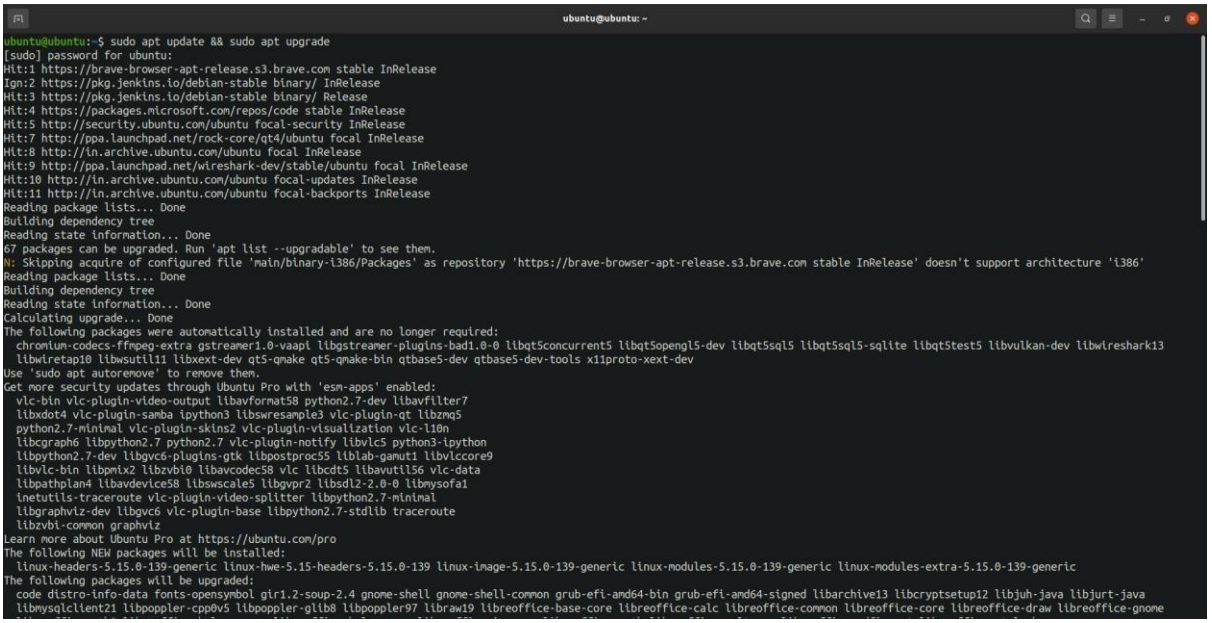
```
ubuntu@ubuntu:~/DevOps$ docker rmi my-docker-webapp
Untagged: my-docker-webapp:latest
Deleted: sha256:eb7c28f99ff6e48b821ddd884433bb48c5e0cafbbcc33be2444270361ebdaa3c
```



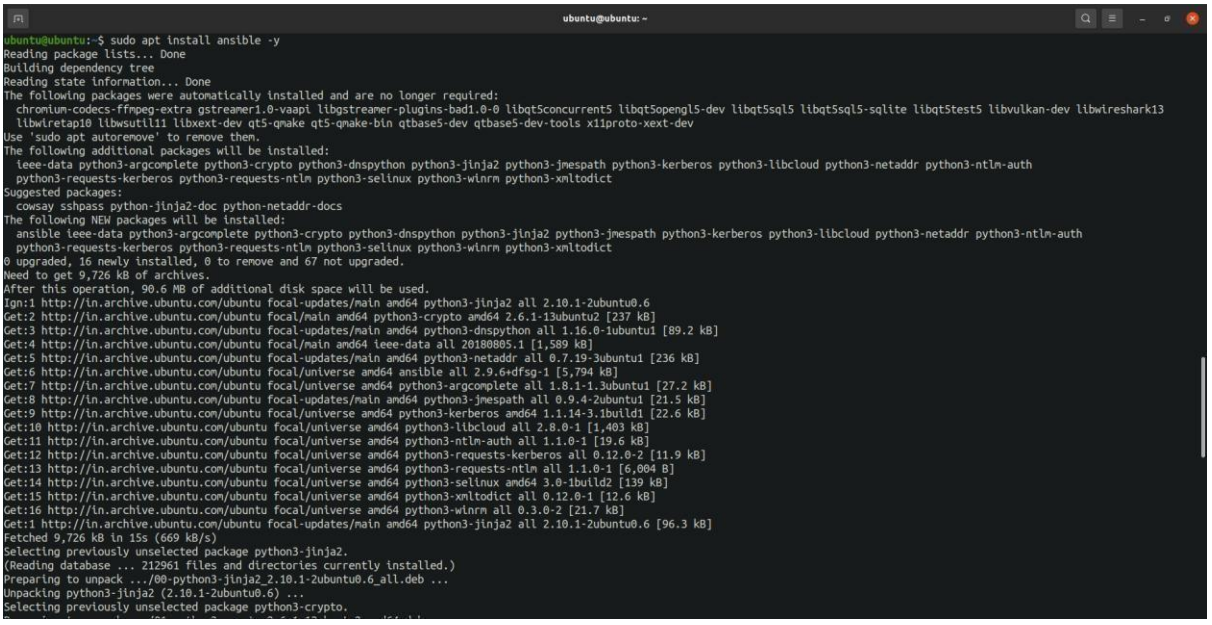
PRACTICAL-11

Aim : Ad-hoc Ansible Commands.

Step 1: Update your VM



Step 2: Install Ansible



Step 3: Check version:

```
ubuntu@ubuntu:~$ ansible --version
ansible 2.9.6
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  executable location = /usr/bin/ansible
  python version = 3.8.10 (default, Mar 18 2025, 20:04:55) [GCC 9.4.0]
ubuntu@ubuntu:~$
```

```
ubuntu@ubuntu:~$ nano host.ini
ubuntu@ubuntu:~$
```

```
  GNU nano 4.8
localhost ansible_connection=local
```

1. Ping the remote host ansible local -i host.ini -m ping

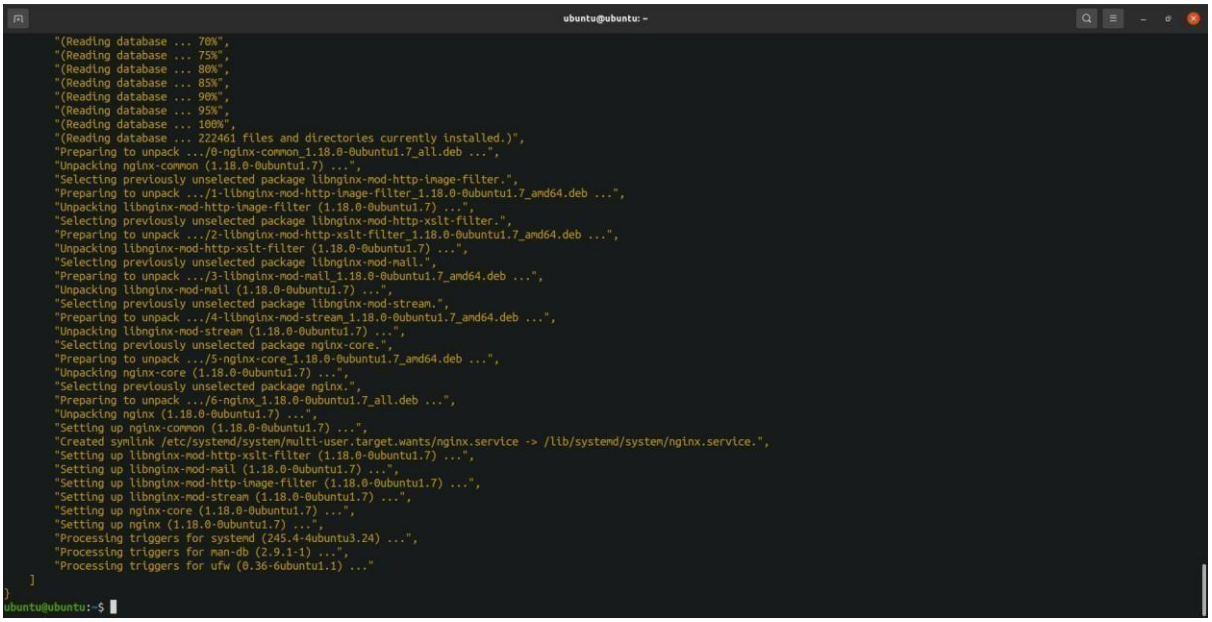
```
ubuntu@ubuntu:~$ ansible local -i host.ini -m ping
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host localhost should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future
Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more
information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
localhost | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python"
    },
    "changed": false,
    "ping": "pong"
}
ubuntu@ubuntu:~$
```

2. Check uptime
   ansible local -i host.ini -a "uptime"

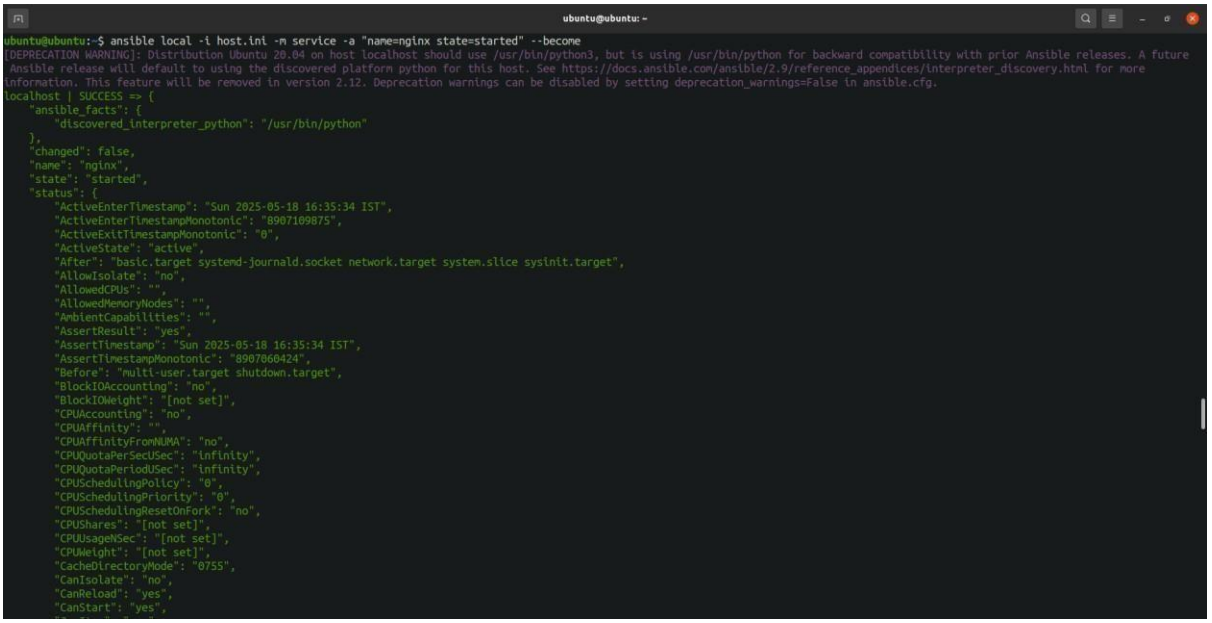
```
ubuntu@ubuntu:~$ ansible local -i host.ini -a "uptime"
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host localhost should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future
Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more
information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
localhost | CHANGED | rc=0 >>
 16:31:16 up  2:49,  1 user,  load average: 1.08, 0.98, 0.90
ubuntu@ubuntu:~$
```

3. Install a package ansible local -i host.ini -m apt -a "name=nginx state=present update_cache=yes" –become

```
ubuntu@ubuntu: ~
ubuntu@ubuntu:~$ ansible local -i host.ini -m apt -a "name=nginx state=present update_cache=yes" --become
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host localhost should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future
Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more
information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
localhost | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python"
    },
    "cache_update_time": 1747566323,
    "cache_updated": true,
    "changed": true,
    "stderr": "",
    "stderr_lines": [],
    "stdout": "Reading package lists...\nBuilding dependency tree...\nReading state information...\nThe following packages were automatically installed and are no longer required:\n  chromium-codecs-ffmpeg-extra gstreamer1.0-vaapi\n  libgstreamer-plugins-bad1.0-0 libqt5concurrent5 libqt5opengl5-dev libqt5sql5\n  libqt5sql5-sqlite libqt5test5 libvulkan-dev libwireshark13 libwiretap10\n  libwsutil11 libxext-dev qt5-qmake qt5-qmake-bin qtbase5-dev\n  qtbase5-dev-tools x11proto-xext-dev\nUse 'sudo apt autoremove' to remove them.\nThe following additional packages will be installed:\n  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter\n  libnginx-mod-mail libnginx-mod-stream nginx-common nginx-core\nSuggested packages:\n  fcgiwrap nginx-doc\nThe following NEW packages will be installed:\n  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter\n  libnginx-mod-mail libnginx-mod-stream nginx nginx-common nginx-core\n0 upgraded, 7 newly installed, 0 to remove and 67 not upgraded.\nNeed to get 605 kB of archives.\nAfter this operation, 2141 kB of additional disk space will be used.\nGet:1 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx-common all 1.18.0-0ubuntu1.7 [37.8 kB]\nGet:2 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-http-image-filter amd64 1.18.0-0ubuntu1.7 [14.8 kB]\nGet:3 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.18.0-0ubuntu1.7 [13.1 kB]\nGet:4 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-mail amd64 1.18.0-0ubuntu1.7 [43.0 kB]\nGet:5 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-stream amd64 1.18.0-0ubuntu1.7 [67.3 kB]\nGet:6 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx-core amd64 1.18.0-0ubuntu1.7 [425 kB]\nGet:7 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx all 1.18.0-0ubuntu1.7 [3620 B]\nPreconfiguring packages ...\nFetched 605 kB in 7s (85.6 kB/s)\nSelecting previously unselected package nginx-common.\r\n(Reading database ... \r(Reading database ... 5%\r(Reading database ... 10%\r(Reading database ... 15%\r(Reading database ... 20%\r(Reading database ... 25%\r(Reading database ... 30%\r(Reading database ... 35%\r(Reading database ... 40%\r(Reading database ... 45%\r(Reading database ... 50%\r(Reading database ... 55%\r(Reading database ... 60%\r(Reading database ... 65%\r(Reading database ... 70%\r(Reading database ... 75%\r(Reading database ... 80%\r(Reading database ... 85%\r(Reading database ... 90%\r(Reading database ... 95%\r(Reading database ... 100%\r(Reading database ... 222461 files and directories currently installed.)\r\nPreparing to unpack .../0-nginx-common_1.18.0-0ubuntu1.7_all.deb ...\r\nUnpacking nginx-common (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package libnginx-mod-http-image-filter.\r\nPreparing to unpack .../1-libnginx-mod-http-image-filter_1.18.0-0ubuntu1.7_amd64.deb ...\r\nUnpacking libnginx-mod-http-image-filter (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package libnginx-mod-http-xslt-filter.\r\nPreparing to unpack .../2-libnginx-mod-http-xslt-filter_1.18.0-0ubuntu1.7_amd64.deb ...\r\nUnpacking libnginx-mod-http-xslt-filter (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package libnginx-mod-mail.\r\nPreparing to unpack .../3-libnginx-mod-mail_1.18.0-0ubuntu1.7_amd64.deb ...\r\nUnpacking libnginx-mod-mail (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package libnginx-mod-stream.\r\nPreparing to unpack .../4-libnginx-mod-stream_1.18.0-0ubuntu1.7_amd64.deb ...\r\nUnpacking libnginx-mod-stream (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package nginx-core.\r\nPreparing to unpack .../5-nginx-core_1.18.0-0ubuntu1.7_amd64.deb ...\r\nUnpacking nginx-core (1.18.0-0ubuntu1.7) ...\r\nSelecting previously unselected package nginx.\r\nPreparing to unpack .../6-nginx_1.18.0-0ubuntu1.7_all.deb ...\r\nUnpacking nginx (1.18.0-0ubuntu1.7) ...\r\nSetting up nginx-common (1.18.0-0ubuntu1.7) ...\r\nCreated symlink /etc/systemd/system/multi-user.target.wants/nginx.service -> /lib/systemd/system/nginx.service.\r\nSetting up libnginx-mod-http-xslt-filter (1.18.0-0ubuntu1.7) ...\r\nSetting up libnginx-mod-mail (1.18.0-0ubuntu1.7) ...\r\nSetting up libnginx-mod-http-image-filter (1.18.0-0ubuntu1.7) ...\r\nSetting up libnginx-mod-stream (1.18.0-0ubuntu1.7) ...\r\nSetting up nginx-core (1.18.0-0ubuntu1.7) ...\r\nSetting up nginx (1.18.0-0ubuntu1.7) ...\r\nProcessing triggers for systemd (245.4-4ubuntu3.24) ...\r\nProcessing triggers for man-db (2.9.1-1) ...\r\nProcessing triggers for ufw (0.36-6ubuntu1.1) ...\r\n",
    "stdout_lines": [
        "Reading package lists...",
        "Building dependency tree...",
        "Reading state information...",
```



4. Start a service ansible local -i host.ini -m service -a "name=nginx state=started" –become



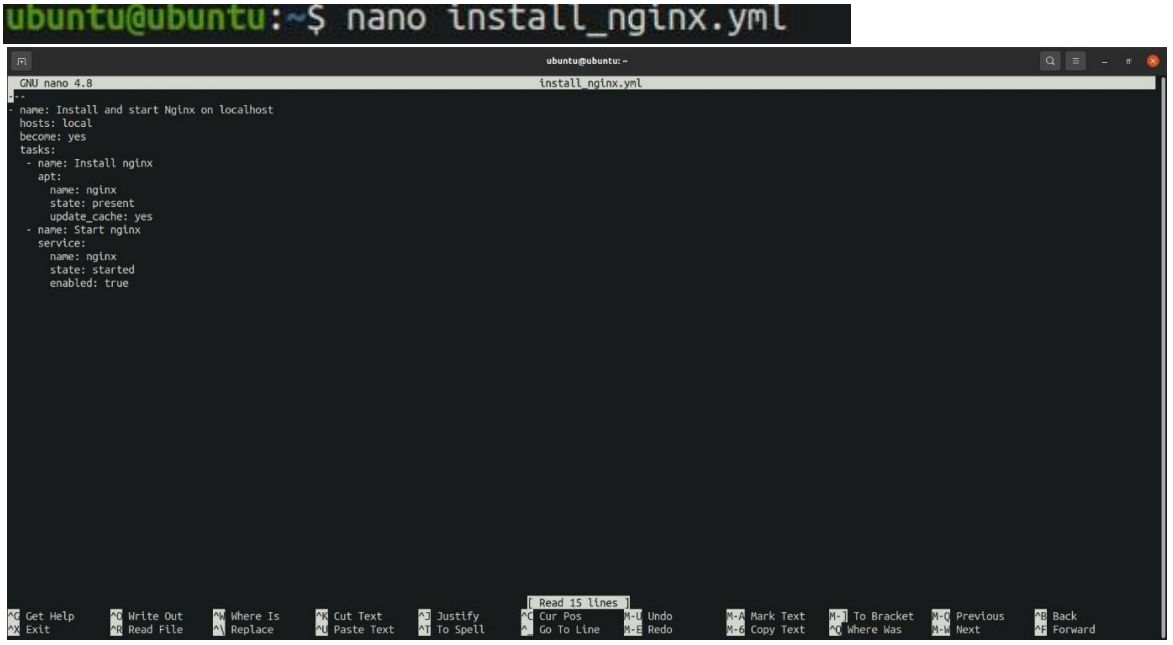
PRACTICAL-12

Aim: Using Ansible Playbooks.

Install and Start Nginx.

install_nginx.yml:

```
name: Install and start Nginx on web servers
hosts: webservers become: true tasks:
- name: Install
  Nginx apt: name:
  nginx state:
  present
  update_cache:
  yes
- name: Start
  Nginx service:
  name: nginx
  state: started
  enabled: true
```



Run the Playbook:
ansible-playbook -i hosts.ini install_nginx.yml

```
ubuntu@ubuntu:~$ ansible-playbook -i host.ini install_nginx.yml

PLAY [Install and start Nginx on localhost] ************************************************************************************************************************************************

TASK [Gathering Facts] *********************************************************************************************************************************************************************
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host localhost should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future
 Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more
information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ok: [localhost]

TASK [Install nginx] ***********************************************************************************************************************************************************************
ok: [localhost]

TASK [Start nginx] *************************************************************************************************************************************************************************
ok: [localhost]

PLAY RECAP *********************************************************************************************************************************************************************************
localhost                  : ok=3    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```