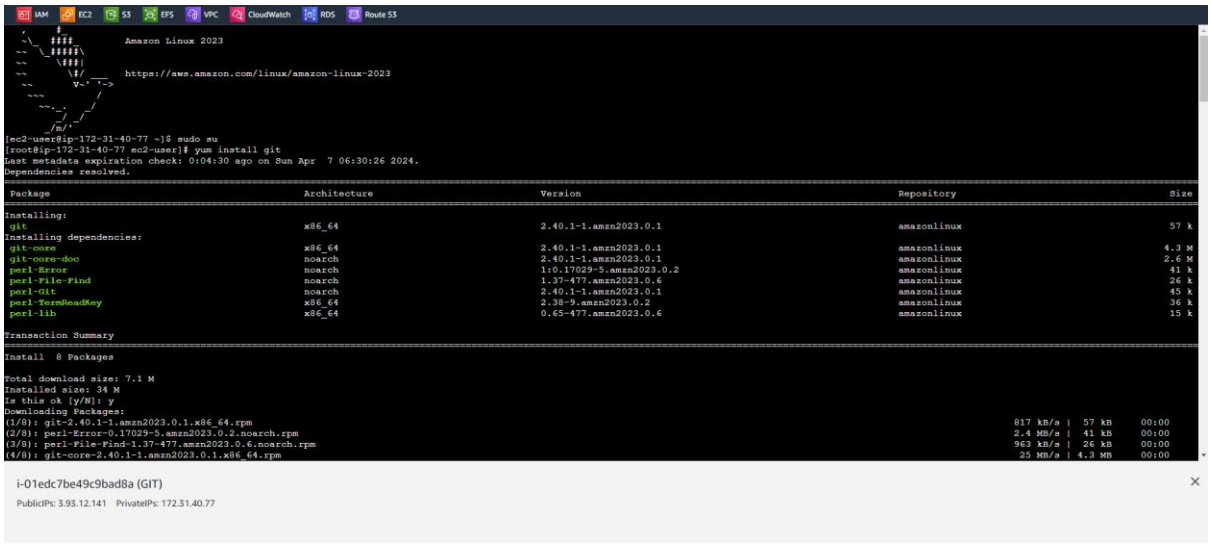
GIT:-

Run an instance and connect it to the terminal.

Then get the root access by giving command

>> sudo su

>>yum install git –y (Install git**)**



After installing git make a folder

>>mkdir folder-name

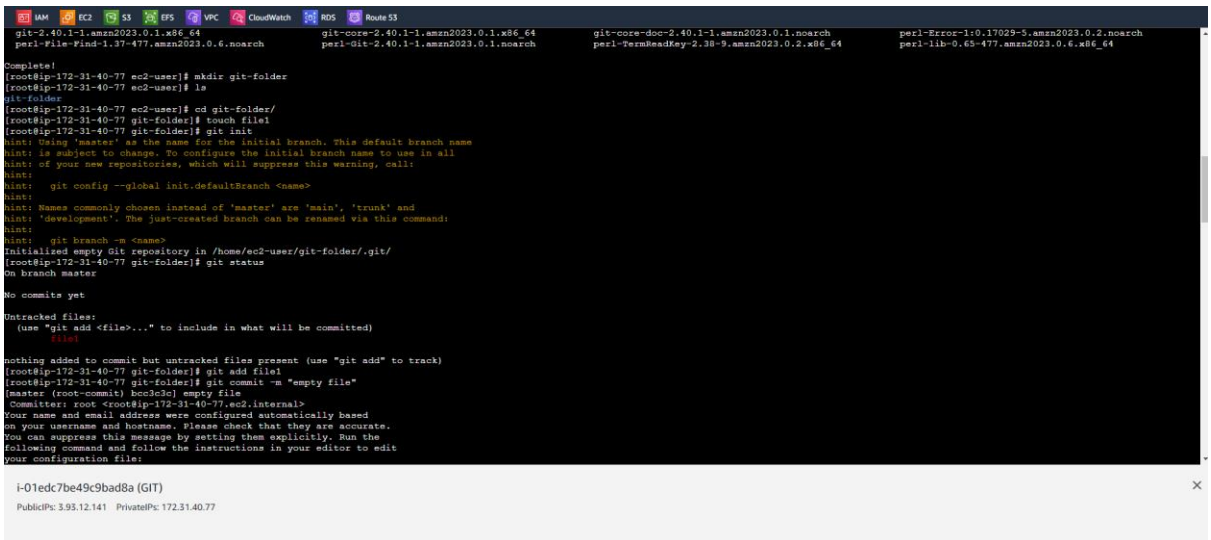
>>ls (for checking folder created or not)

>>cd folder-name (to enter inside folder)

Create a file just for demonstrating as a developer file

>>touch file-name

>>git init (to make the normal repository -> local repository**)**



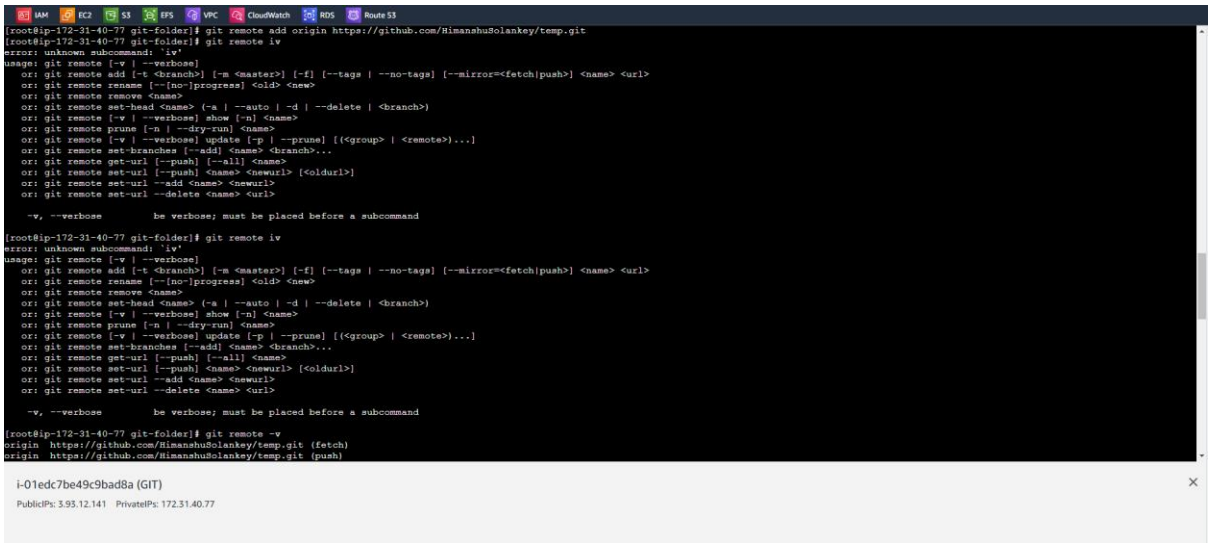
>>git add .

>> git commit –m “status/comments”

Now have to connect the github account

>> **git remote add origin *github-repository-link***

>>git remote –v (check the github connection**)**



Now we have to just push the file into repository.

>>git push origin master (master is the branch-name**)**

Check the github we have our newly created file successfully pushed into the github.

Now make some changes in the file in github itself. Now we have to try to pull the updated file to our system.

>>git pull origin master

>>cat file

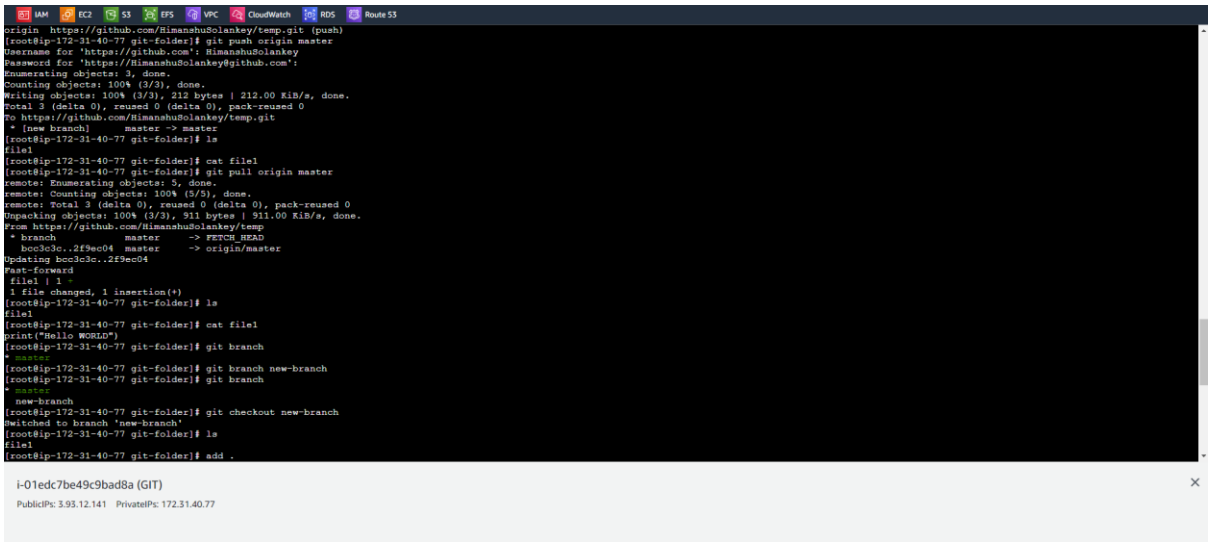
Create other branch instead of master branch

>>git branch (to check the current or list the branch names)

>>**git branch branch-name (**to create new branch**)**

>>git checkout branch-name(to change the branch**)**

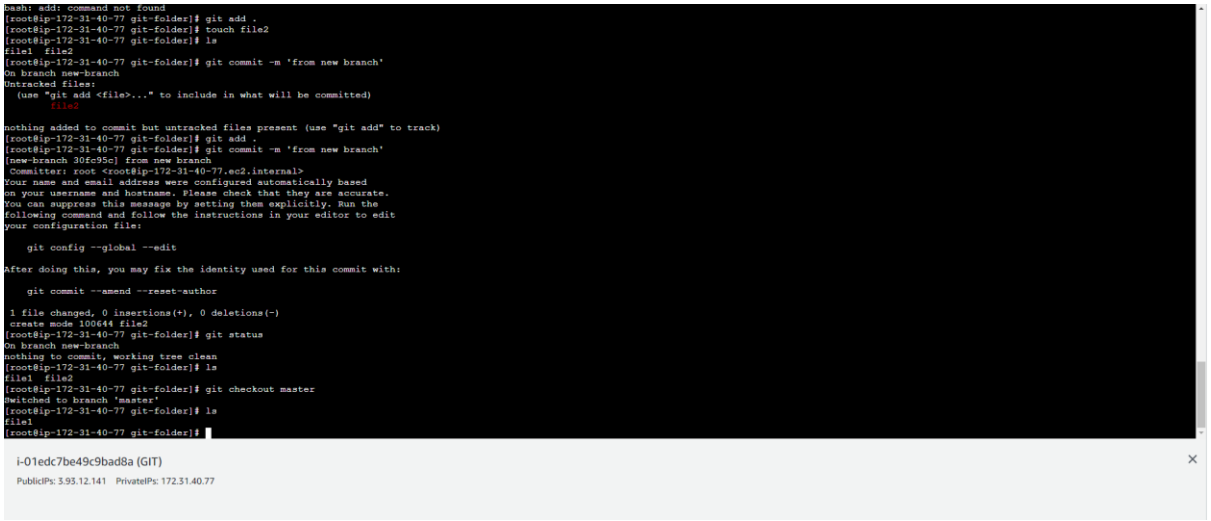
>> git add .



>> touch file2

>> git add .

>>git commit –m ‘status/comments”



DOCKER

1. **Docker Engine :-**

Docker Engine is an open source containerization technology for building and containerizing your applications.

2. Dockerfile

A Dockerfile is a script with instructions on how to make a Docker image. In these instructions, you can find information about the operating system, languages, environment variables, file locations, network ports, and other details needed to run the image.

3. Docker Image:-

Docker image is the building block for containers which contains libraries, tools, dependencies, and additional files to run an application.

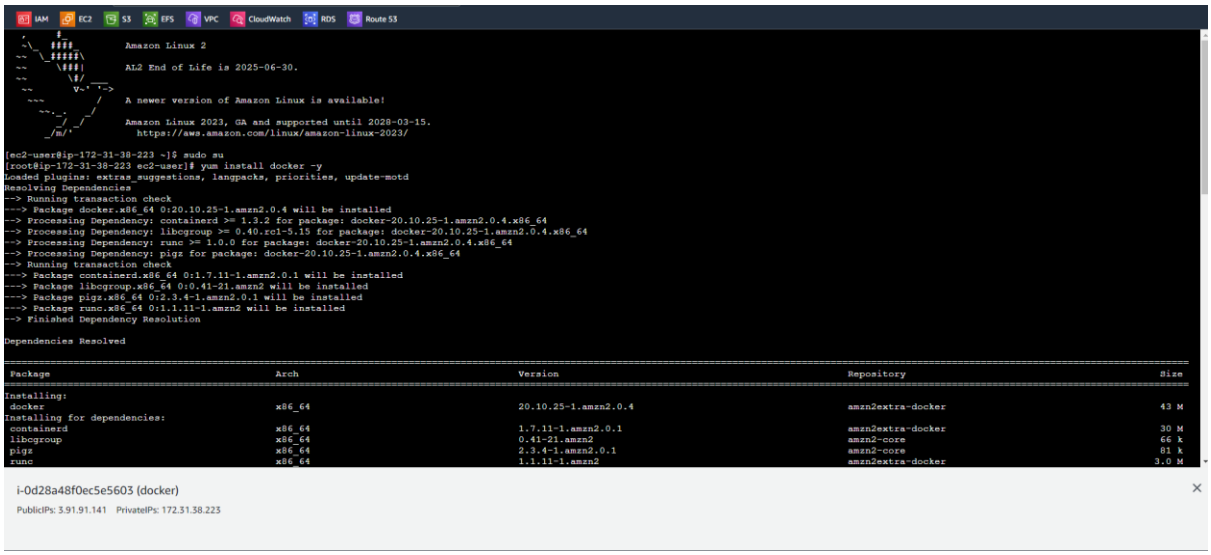
4. Docker containers :-

The active, operational instances of Docker images are known as containers. Docker images are read-only files, whereas containers contain executable, transient content.

Connect instance through shell or open terminal.

>>sudo su

>>yum install docker -y



>>systemctl start docker

>>docker run –it - -name himanshu Ubuntu /bin/bash

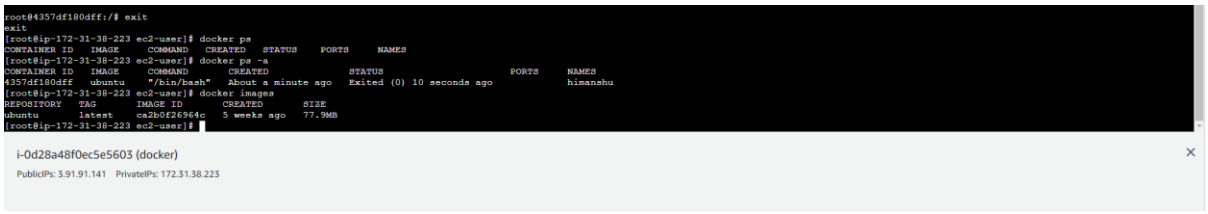
>>exit

```
  libnfnetlink-1.0.1-19.amzn2023.0.2.x86_64  libnftnl-1.2.2-2.amzn2023.0.2.x86_64
  pigz-2.5-1.amzn2023.0.3.x86_64             runc-1.1.11-1.amzn2023.0.1.x86_64

Complete!
[root@ip-172-31-27-166 ec2-user]# systemctl start docker
[root@ip-172-31-27-166 ec2-user]# systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; preset: disabled)
     Active: active (running) since Mon 2024-04-08 09:12:28 UTC; 8s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
    Process: 25058 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
    Process: 25076 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, stat>
   Main PID: 25081 (dockerd)
      Tasks: 8
     Memory: 32.4M
        CPU: 322ms
     CGroup: /system.slice/docker.service
             └─25081 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --d>

Apr 08 09:12:27 ip-172-31-27-166.ec2.internal systemd[1]: Starting docker.service - Docker Appl>
Apr 08 09:12:27 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:27.8136040>
Apr 08 09:12:27 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:27.8908543>
Apr 08 09:12:28 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:28.4304185>
Apr 08 09:12:28 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:28.4671030>
Apr 08 09:12:28 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:28.4672195>
Apr 08 09:12:28 ip-172-31-27-166.ec2.internal dockerd[25081]: time="2024-04-08T09:12:28.5401030>
Apr 08 09:12:28 ip-172-31-27-166.ec2.internal systemd[1]: Started docker.service - Docker Appli>
lines 1-22/22 (END)

[root@ip-172-31-27-166 ec2-user]# docker run --it --name himanshu ubuntu /bin/bash
unknown flag: --it
See 'docker run --help'.
[root@ip-172-31-27-166 ec2-user]# docker run -it --name himanshu ubuntu /bin/bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
bccd10f490ab: Pull complete
Digest: sha256:77906da86b60585ce12215807090eb327e7386c8fafb5402369e421f44eff17e
Status: Downloaded newer image for ubuntu:latest
root@6edc23edeca5:/#
```

>>docker ps –a

>>docker images

```
[root@ip-172-31-27-166 ec2-user]# docker run --it --name himanshu ubuntu /bin/bash
unknown flag: --it
See 'docker run --help'.
[root@ip-172-31-27-166 ec2-user]# docker run -it --name himanshu ubuntu /bin/bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
bccd10f490ab: Pull complete
Digest: sha256:77906da86b60585ce12215807090eb327e7386c8fafb5402369e421f44eff17e
Status: Downloaded newer image for ubuntu:latest
root@6edc23edeca5:/# docker ps -a
bash: docker: command not found
root@6edc23edeca5:/# docker show
bash: docker: command not found
root@6edc23edeca5:/# docker images
bash: docker: command not found
root@6edc23edeca5:/# docker images^C
root@6edc23edeca5:/# docker images
bash: docker: command not found
root@6edc23edeca5:/# ^C
root@6edc23edeca5:/# ^C
root@6edc23edeca5:/# ^C
root@6edc23edeca5:/# exit
exit
[root@ip-172-31-27-166 ec2-user]# docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
ubuntu       latest    ca2b0f26964c   5 weeks ago   77.9MB
[root@ip-172-31-27-166 ec2-user]# docker ps -a
CONTAINER ID   IMAGE     COMMAND       CREATED              STATUS                          PORTS     NAMES
6edc23edeca5   ubuntu    "/bin/bash"   About a minute ago   Exited (130) 13 seconds ago               himanshu
[root@ip-172-31-27-166 ec2-user]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
[root@ip-172-31-27-166 ec2-user]#
```


root@4357df180dff:/# exit
exit
[root@ip-172-31-38-223 ec2-user]# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
[root@ip-172-31-38-223 ec2-user]# docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
4357df180dff ubuntu "/bin/bash" About a minute ago Exited (0) 10 seconds ago himanshu
[root@ip-172-31-38-223 ec2-user]# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu latest ca2b0f26964c 5 weeks ago 77.9MB
[root@ip-172-31-38-223 ec2-user]#
i-0d28a48f0ec5e5603 (docker)
PublicIPs: 3.91.91.141 PrivateIPs: 172.31.38.223