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INTERNATIONAL  
UNIVERSITY**  
AKURDI PUNE

**School of Computer Science Engineering and Application**

**BCA TY SEM VI**

**Subject Name: Container and Orchestration Practical**

**Assignment No 2**

**Aim: Create a Dockerfile, create your own image configure your space in dockerhub and push your own image into that workspace. Delete previously available image from your local machine and pull your own image from docker-hub.**

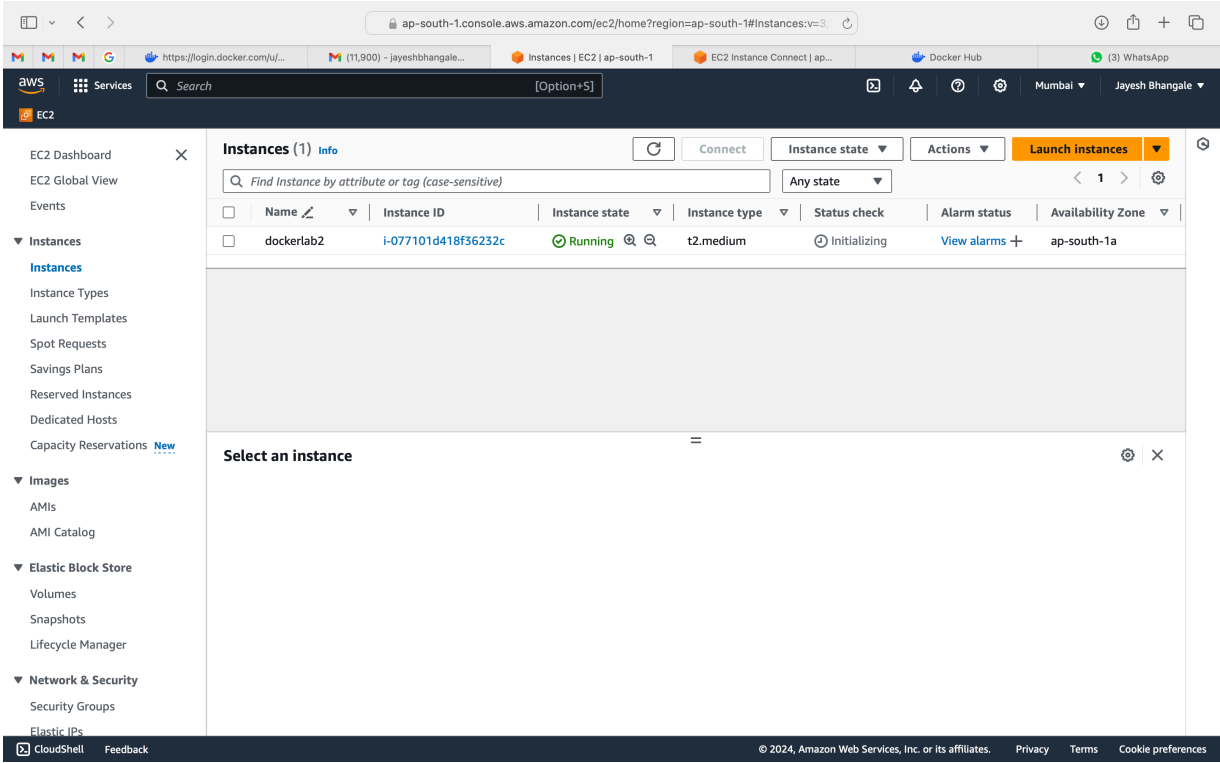
**Submitted By**

**Name: Jayesh Bhangale**

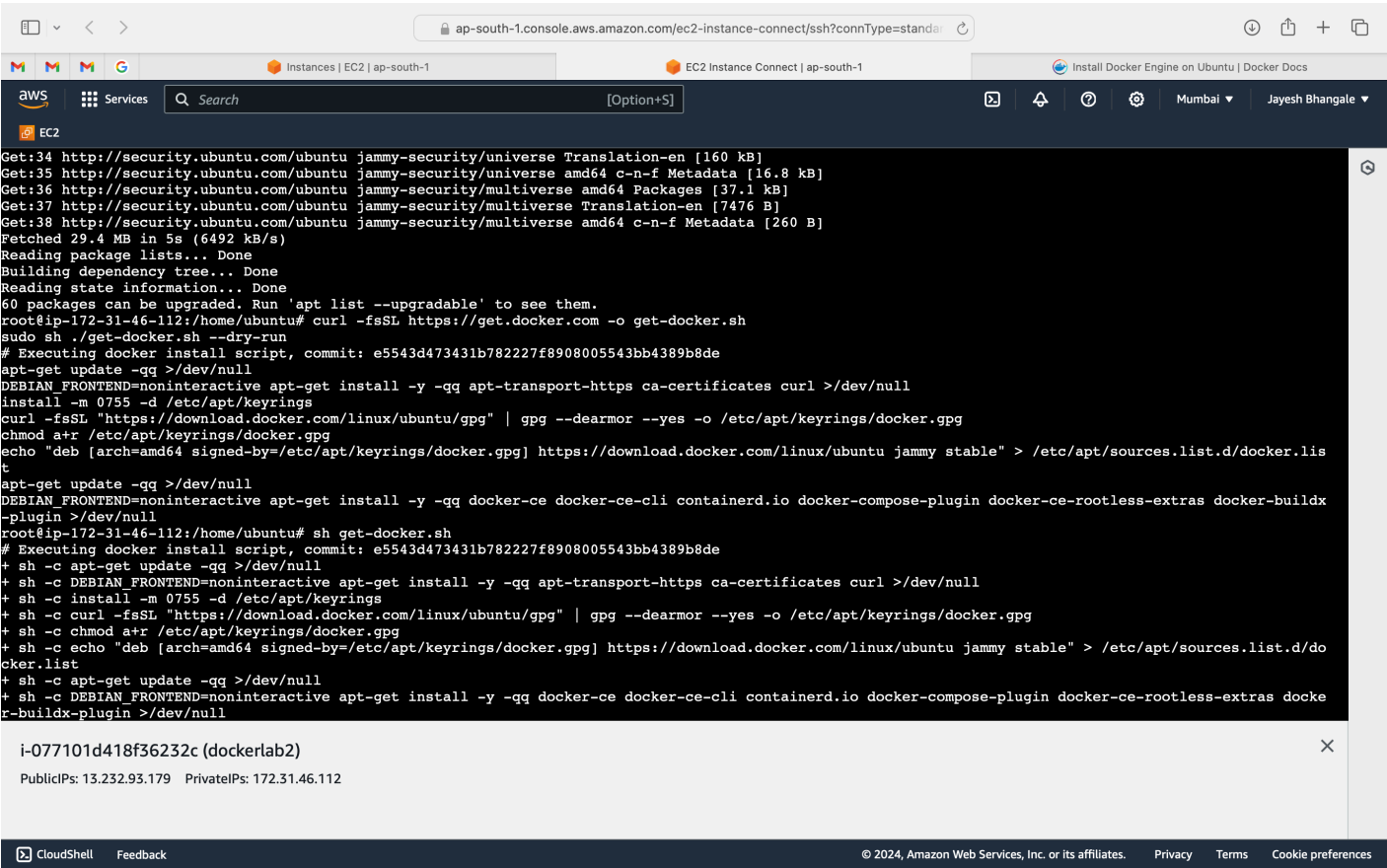
**PRN: 20210801024**

**Date: 05 feb 2024**

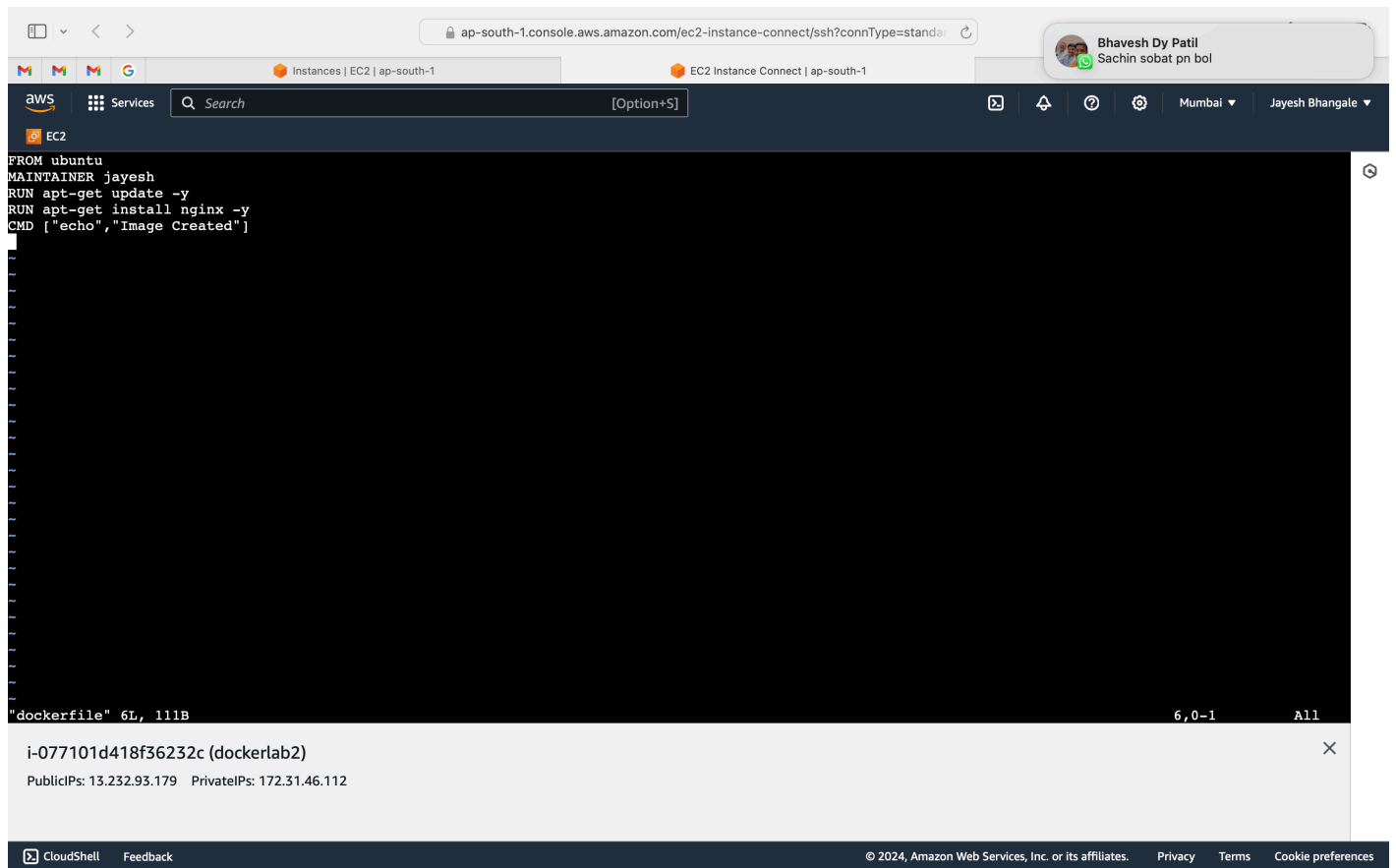
# Step 1: Create an Instance



# Step 2: Install docker engine using following commands.



## Step 3: Create a dockerfile with name Dockerfile. Open dockerfile with vimfiles and paste image content in that.

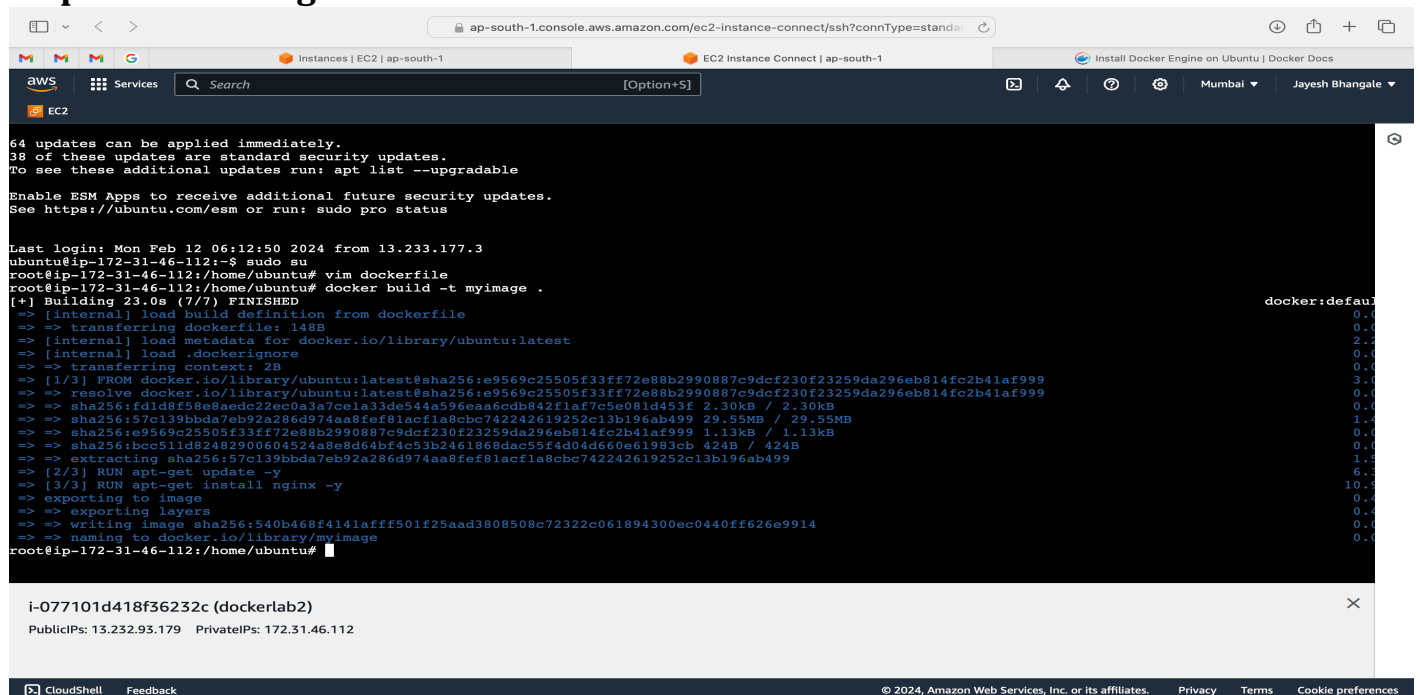


The screenshot shows the AWS CloudShell interface. The terminal window displays the following commands and output:

```
FROM ubuntu
MAINTAINER jayesh
RUN apt-get update -y
RUN apt-get install nginx -y
CMD ["echo", "Image Created"]
```

The terminal output shows the Dockerfile content being pasted into the file. The status bar at the bottom indicates the file size is 6L, 111B. The terminal window title is "i-077101d418f36232c (dockerlab2)".

## Step 4: Build image from docker.



The screenshot shows the AWS CloudShell terminal interface. The terminal output displays the following commands and output:

```
64 updates can be applied immediately.
38 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Mon Feb 12 06:12:50 2024 from 13.233.177.3
ubuntu@ip-172-31-46-112:~$ sudo su
root@ip-172-31-46-112:/home/ubuntu# vim dockerfile
root@ip-172-31-46-112:/home/ubuntu# docker build -t myimage .
[+] Building 23.0s (7/7) FINISHED
=> [internal] load build definition from dockerfile
=> transferring dockerfile: 148B
=> [internal] load metadata for docker.io/library/ubuntu:latest
=> [internal] load .dockerignore
=> transferring context: 2B
=> [1/3] FROM docker.io/library/ubuntu:latest@sha256:e9569c25505f33ff72e88b2990887c9dcf230f23259da296eb814fc2b41af999
=> resolve docker.io/library/ubuntu:latest@sha256:e9569c25505f33ff72e88b2990887c9dcf230f23259da296eb814fc2b41af999
=> sha256:fd1d8f58e8aedc22ec0a3a7c6a33de544a596eaa6c8b842f1af7c5e081d453f 2.30kB / 2.30kB
=> sha256:57c139bbda7eb92a286d974aa8fef81acfla8cbcb742242619252c13b196ab499 29.55MB / 29.55MB
=> sha256:e9569c25505f33ff72e88b2990887c9dcf230f23259da296eb814fc2b41af999 1.13kB / 1.13kB
=> sha256:bcc511a82482900604524a8e8d64bf4c53b2461868dac55f4d04d660e61983cb 424B / 424B
=> extracting sha256:57c139bbda7eb92a286d974aa8fef81acfla8cbcb742242619252c13b196ab499
=> [2/3] RUN apt-get update -y
=> [3/3] RUN apt-get install nginx -y
=> exporting to image
=> exporting layers
=> writing image sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914
=> naming to docker.io/library/myimage
root@ip-172-31-46-112:/home/ubuntu#
```

The terminal output shows the Docker build process, including the installation of nginx and the export of the image. The status bar at the bottom indicates the file size is 6L, 111B. The terminal window title is "i-077101d418f36232c (dockerlab2)".

## Step 5: Repository :

```
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standar
https://login.docker.com/u/...
(11,900) - jayeshbhangale...
Instances | EC2 | ap-south-1
EC2 Instance Connect | ap...
Install Docker Engine on U...
Docker Hub

aws Services Search [Option+S]
EC2

SO. Learn more at https://docs.docker.com/go/access-tokens/

Username: jayeshbhangale
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
root@ip-172-31-46-112:/home/ubuntu# docker tag myimage jayeshbhangale/jr
Error response from daemon: No such image: myimage:latest
root@ip-172-31-46-112:/home/ubuntu# docker build -t myimage .
[+] Building 1.5s (8/8) FINISHED
=> [internal] load build definition from dockerfile
=> => transferring dockerfile: 148B
=> [internal] load metadata for docker.io/library/ubuntu:latest
=> [auth] library/ubuntu:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/library/ubuntu:latest@sha256:e9569c25505f33ff72e88b2990887c9dcf230f23259da296eb814fc2b41af999
=> CACHED [2/3] RUN apt-get update -y
=> CACHED [3/3] RUN apt-get install nginx -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914
=> => naming to docker.io/library/myimage
root@ip-172-31-46-112:/home/ubuntu# docker tag myimage jayeshbhangale/jr
root@ip-172-31-46-112:/home/ubuntu# docker push jayeshbhangale/jr
Using default tag: latest
The push refers to repository [docker.io/jayeshbhangale/jr]
ae4133428e23: Pushed
f9b8a6533845: Pushed
1a102d1cac2b: Mounted from library/ubuntu
latest: digest: sha256:5d0c1ae534b1549173b8c5d205f78942cd3e3491d16f8bf9dc88888e75aab2dd size: 953
root@ip-172-31-46-112:/home/ubuntu#

i-077101d418f36232c (dockerlab2)
PublicIPs: 13.232.93.179 PrivateIPs: 172.31.46.112

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```

## Step 6: Docker-hub Login Command:

```
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standar
https://login.docker.com/u/...
(11,900) - jayeshbhangale...
Instances | EC2 | ap-south-1
EC2 Instance Connect | ap...
Install Docker Engine on U...
Docker Hub

aws Services Search [Option+S]
EC2

62e9d8323806
root@ip-172-31-46-112:/home/ubuntu# docker rmi myimage
Untagged: myimage:latest
Deleted: sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914
root@ip-172-31-46-112:/home/ubuntu# docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to
eate one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using
SO. Learn more at https://docs.docker.com/go/access-tokens/

Username: JAYesh@12345
Password:
root@ip-172-31-46-112:/home/ubuntu# docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to
eate one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using
SO. Learn more at https://docs.docker.com/go/access-tokens/

Username: jayeshbhangale
Password:
Error response from daemon: Get "https://registry-1.docker.io/v2/": unauthorized: incorrect username or password
root@ip-172-31-46-112:/home/ubuntu# docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to
eate one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using
SO. Learn more at https://docs.docker.com/go/access-tokens/

Username: jayeshbhangale
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
root@ip-172-31-46-112:/home/ubuntu#

i-077101d418f36232c (dockerlab2)
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```

## Step 7: Push your own image from docker Command:

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standar

ServicesSearch[Option+S]

EC2

SO. Learn more at <https://docs.docker.com/go/access-tokens/>

Username: jayeshbhangale  
Password:  
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.  
Configure a credential helper to remove this warning. See <https://docs.docker.com/engine/reference/commandline/login/#credentials-store>  
Login Succeeded  
root@ip-172-31-46-112:/home/ubuntu# docker tag myimage jayeshbhangale/jr  
Error response from daemon: No such image: myimage:latest  
root@ip-172-31-46-112:/home/ubuntu# docker build -t myimage .  
[+] Building 1.5s (8/8) FINISHED  
=> [internal] load build definition from dockerfile  
=> => transferring dockerfile: 148B  
=> [internal] load metadata for docker.io/library/ubuntu:latest  
=> [auth] library/ubuntu:pull token for registry-1.docker.io  
=> [internal] load .dockerignore  
=> => transferring context: 2B  
=> [1/3] FROM docker.io/library/ubuntu:latest@sha256:e9569c25505f33ff72e88b2990887c9dcf230f23259da296eb814fc2b41af999  
=> CACHED [2/3] RUN apt-get update -y  
=> CACHED [3/3] RUN apt-get install nginx -y  
=> exporting to image  
=> => exporting layers  
=> => writing image sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914  
=> => naming to docker.io/library/myimage  
root@ip-172-31-46-112:/home/ubuntu# docker tag myimage jayeshbhangale/jr  
root@ip-172-31-46-112:/home/ubuntu# docker push jayeshbhangale/jr  
Using default tag: latest  
The push refers to repository [docker.io/jayeshbhangale/jr]  
ae4133428e23: Pushed  
f9b8a6533845: Pushed  
1a102d1cac2b: Mounted from library/ubuntu  
latest: digest: sha256:5d0c1ae534b1549173b8c5d205f78942cd3e3491d16f8bf9dc88888e75aab2dd size: 953  
root@ip-172-31-46-112:/home/ubuntu#

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## Step 8: Delete previously available image from your local machine and pull your own image from docker-hub Commands:

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standar

ServicesSearch[Option+S]

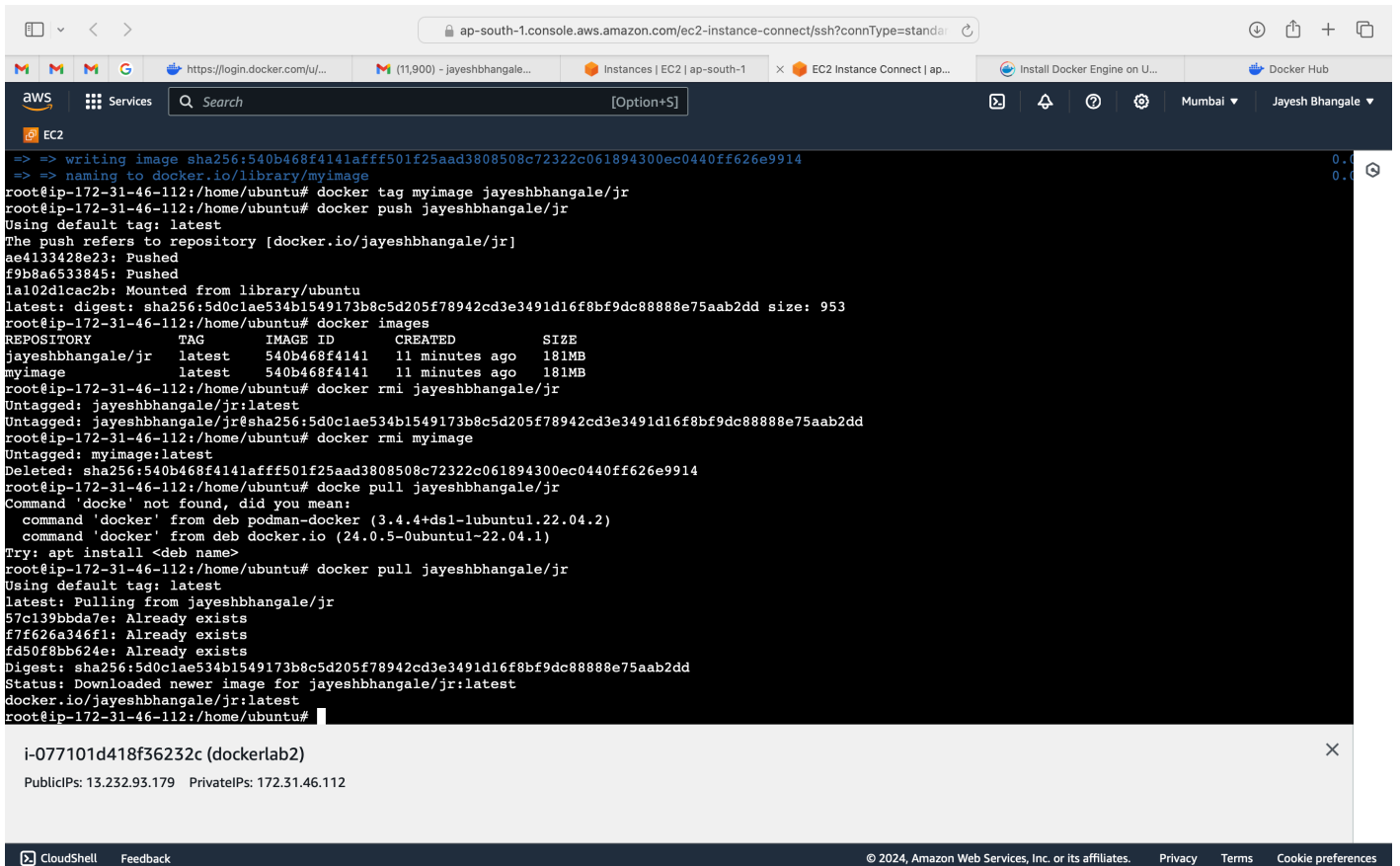
EC2

=> => writing image sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914  
=> => naming to docker.io/library/myimage  
root@ip-172-31-46-112:/home/ubuntu# docker tag myimage jayeshbhangale/jr  
root@ip-172-31-46-112:/home/ubuntu# docker push jayeshbhangale/jr  
Using default tag: latest  
The push refers to repository [docker.io/jayeshbhangale/jr]  
ae4133428e23: Pushed  
f9b8a6533845: Pushed  
1a102d1cac2b: Mounted from library/ubuntu  
latest: digest: sha256:5d0c1ae534b1549173b8c5d205f78942cd3e3491d16f8bf9dc88888e75aab2dd size: 953  
root@ip-172-31-46-112:/home/ubuntu# docker images  
REPOSITORY TAG IMAGE ID CREATED SIZE  
jayeshbhangale/jr latest 540b468f4141 11 minutes ago 181MB  
myimage latest 540b468f4141 11 minutes ago 181MB  
root@ip-172-31-46-112:/home/ubuntu# docker rmi jayeshbhangale/jr  
Untagged: jayeshbhangale/jr:latest  
Untagged: jayeshbhangale/jr@sha256:5d0c1ae534b1549173b8c5d205f78942cd3e3491d16f8bf9dc88888e75aab2dd  
root@ip-172-31-46-112:/home/ubuntu# docker rmi myimage  
Untagged: myimage:latest  
Deleted: sha256:540b468f4141afff501f25aad3808508c72322c061894300ec0440ff626e9914  
root@ip-172-31-46-112:/home/ubuntu# docke pull jayeshbhangale/jr  
Command 'docke' not found, did you mean:  
command 'docker' from deb podman-docker (3.4.4+ds1-1ubuntu1.22.04.2)  
command 'docker' from deb docker.io (24.0.5-0ubuntu1.22.04.1)  
Try: apt install <deb name>  
root@ip-172-31-46-112:/home/ubuntu# docker pull jayeshbhangale/jr  
Using default tag: latest  
latest: Pulling from jayeshbhangale/jr  
57c139bbda7e: Already exists  
f7f626a346f1: Already exists  
fd50f8bb624e: Already exists  
Digest: sha256:5d0c1ae534b1549173b8c5d205f78942cd3e3491d16f8bf9dc88888e75aab2dd  
Status: Downloaded newer image for jayeshbhangale/jr:latest  
docker.io/jayeshbhangale/jr:latest  
root@ip-172-31-46-112:/home/ubuntu#

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**End of the practical (Last page)**

## Sign

**Subject In charge: Dr. Swapnil Waghmare**