EXPERIMENT-09

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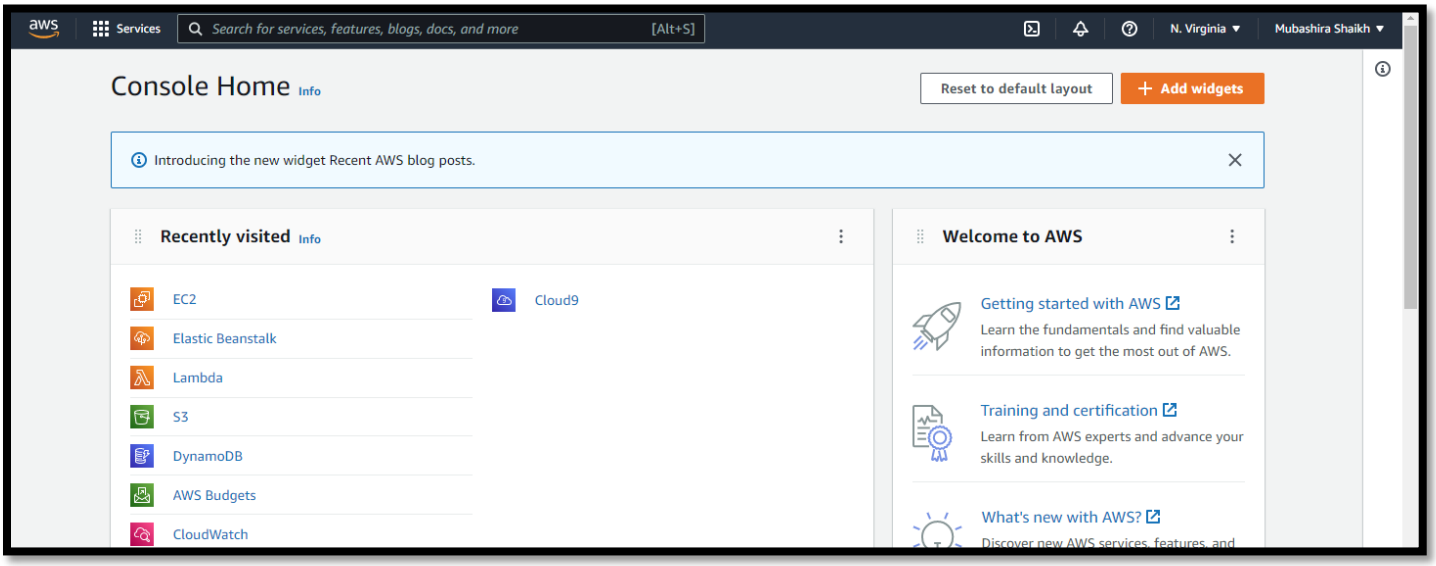
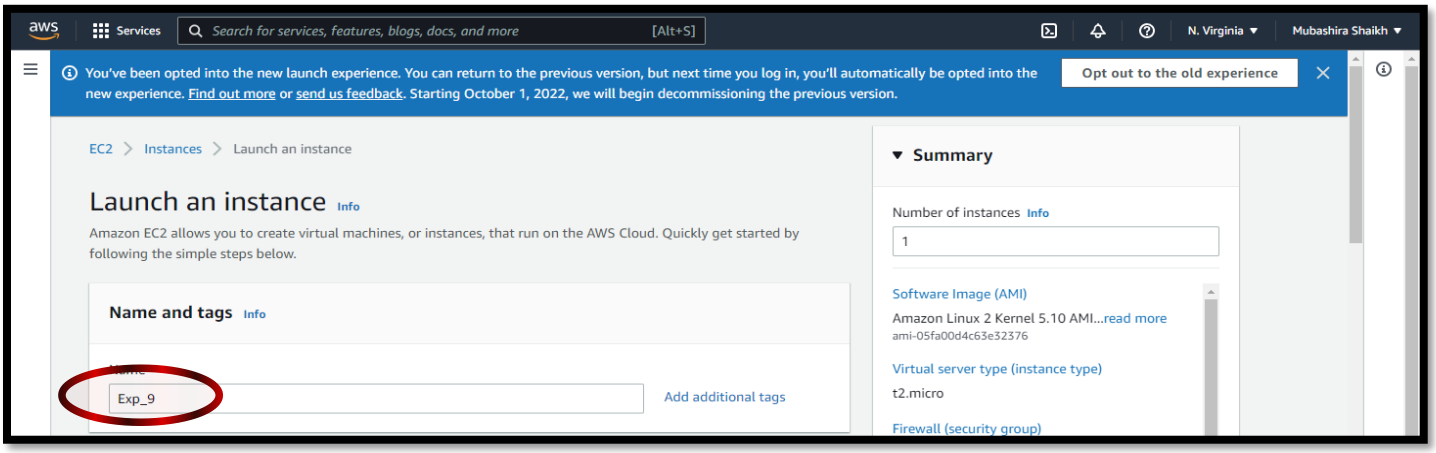
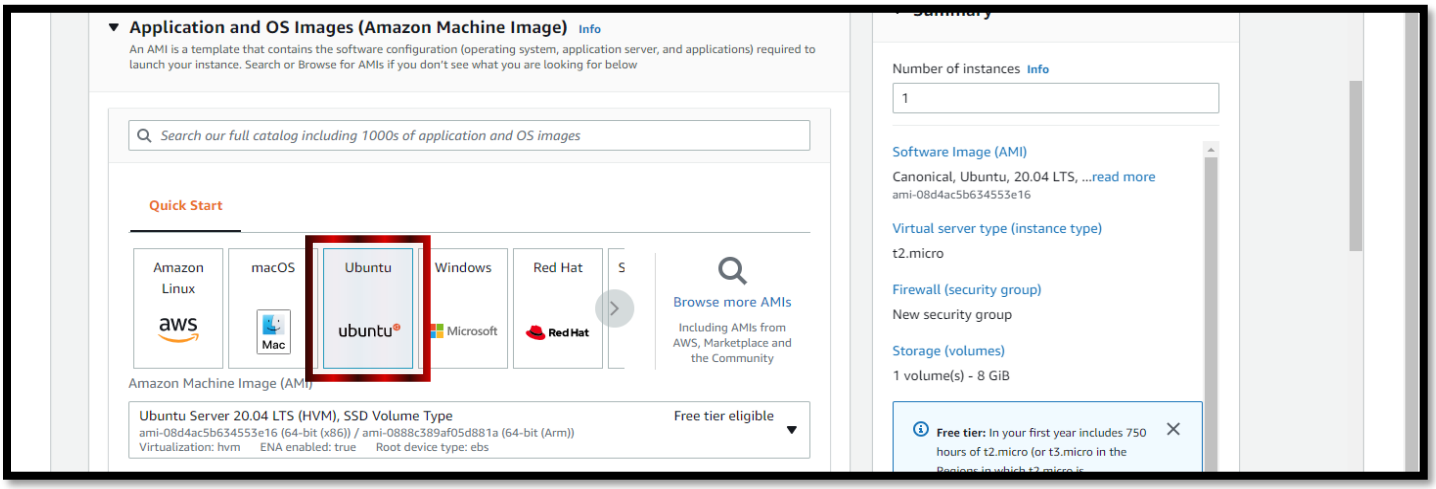
ROLL NO: 612055 **COURSE:** ADVANCE DEVOPS(ITL504)
BRANCH: T.E. INFORMATION TECHNOLOGY (SEM 5)

Step 1: AWS Management Console Dashboard.

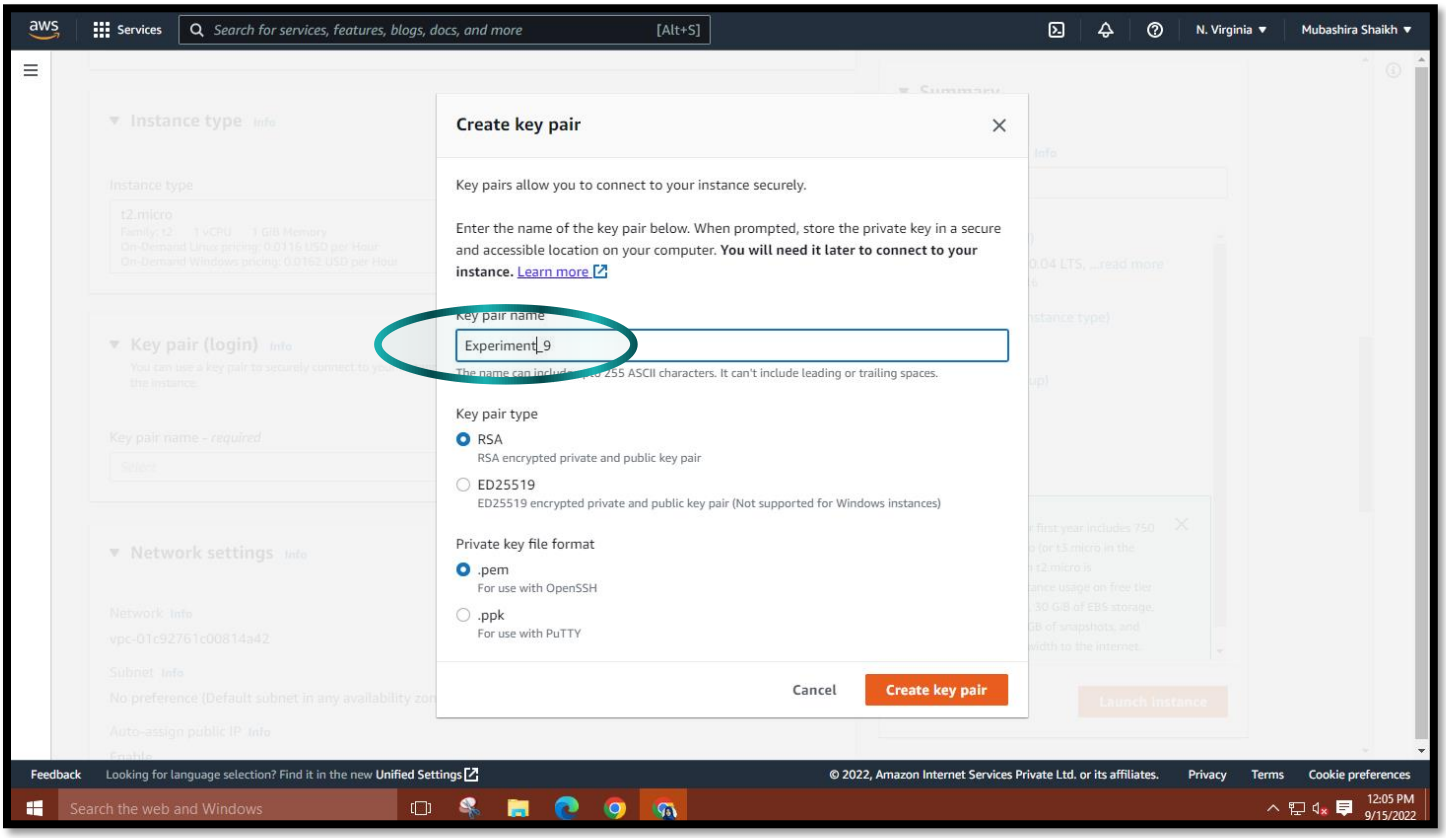


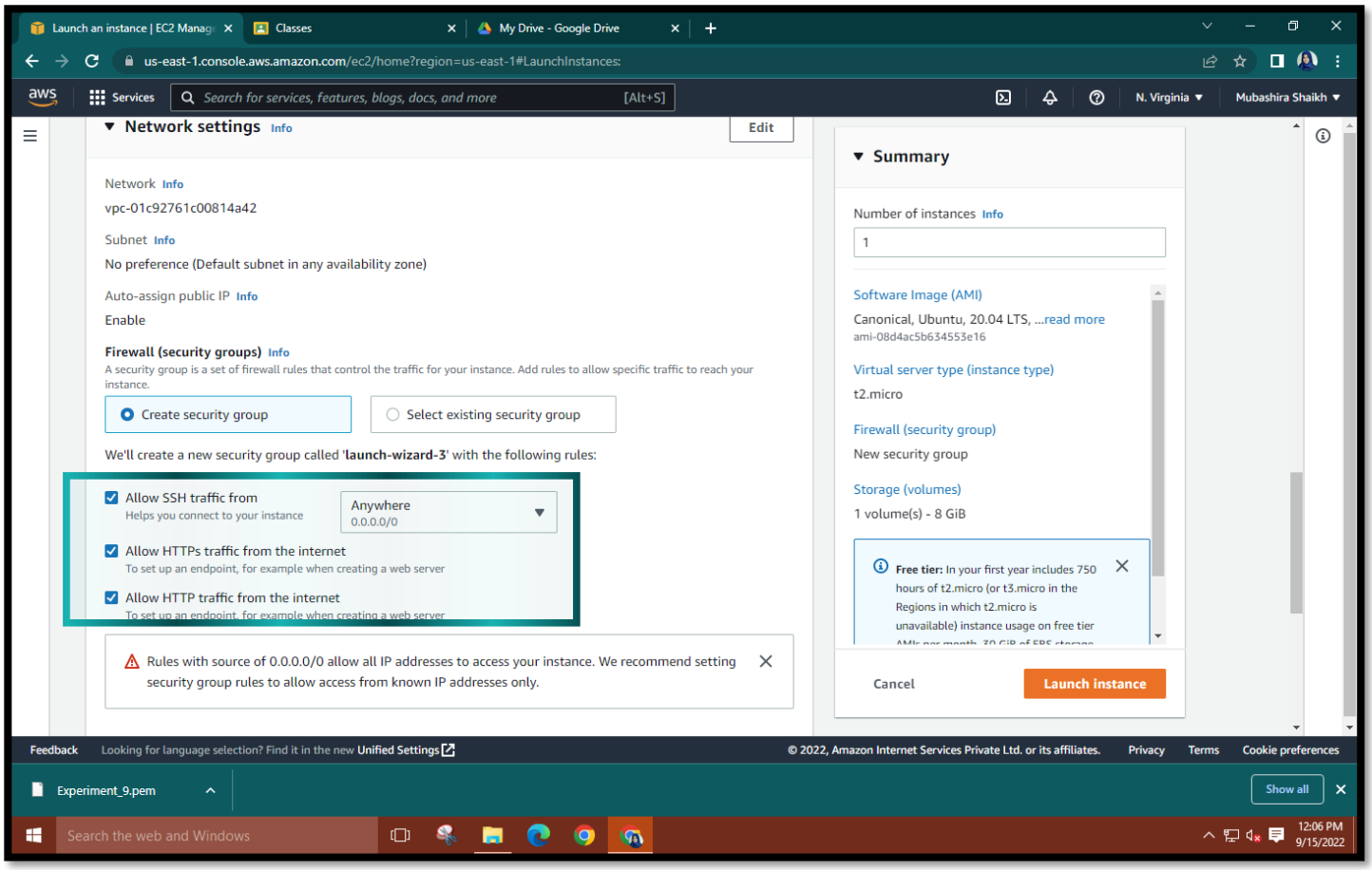
Step 2: Search for EC2→ Click on Launch instance→ Give a name to your instance and create an Ubuntu instance with 20.04 lts version.



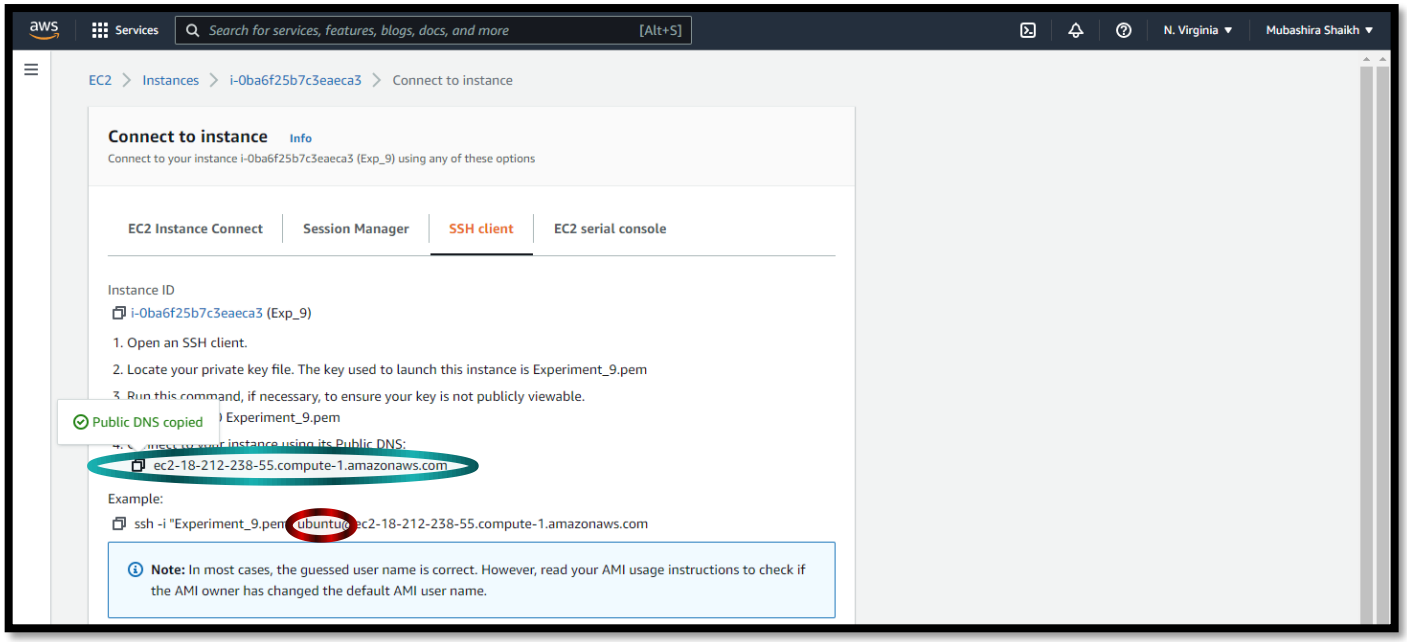


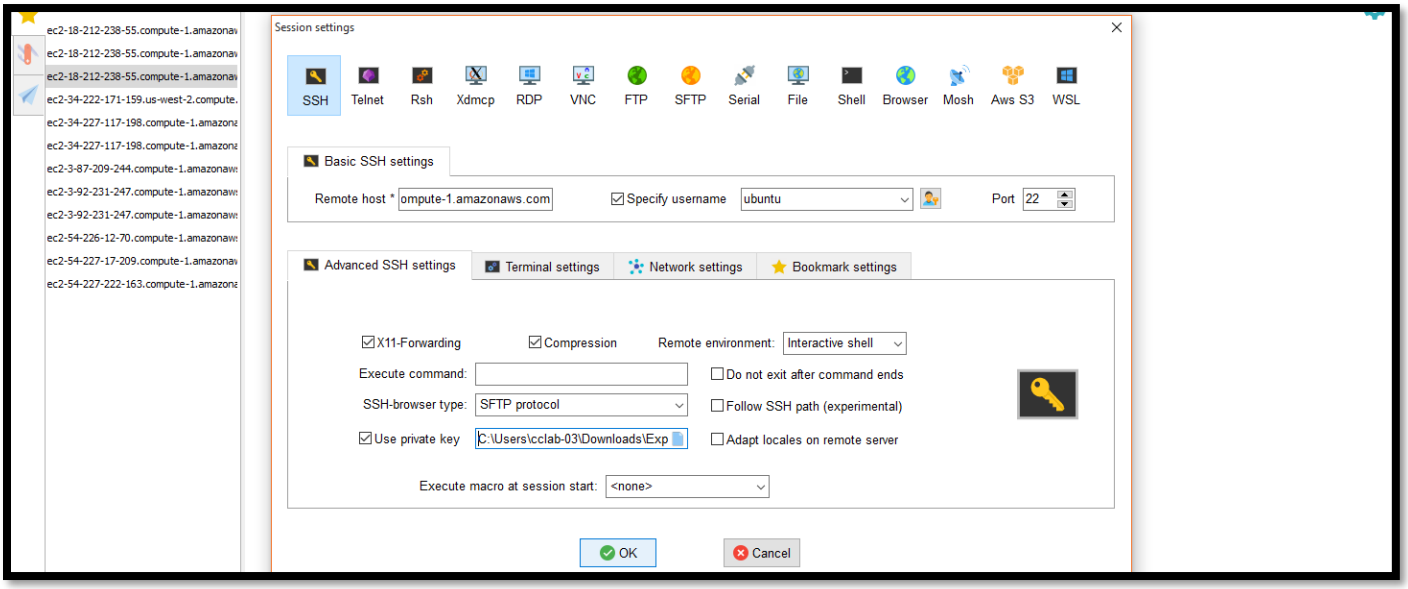
Step 3: Create new key pair for your instance→Network Settings→allow the HTTPS and HTTP traffic.



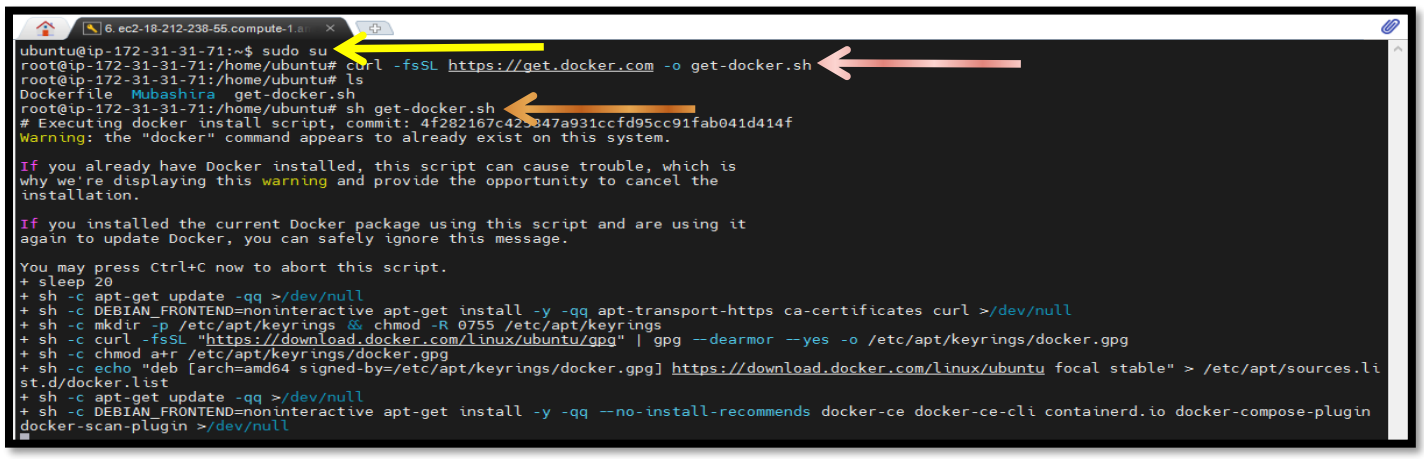


Step 4: Launch MobaXterm→Select SSH session→Copy the public DNS of your instance and paste it into the remote host. Use the downloaded key pair as the private key.



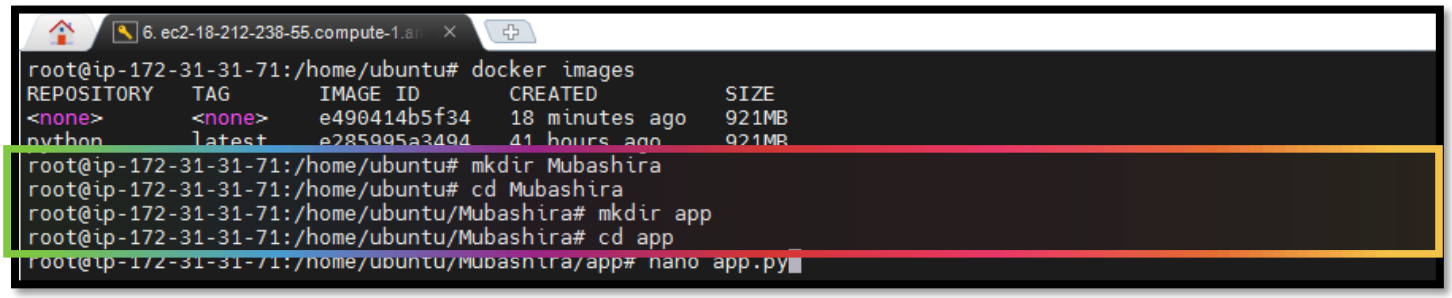


Step 5: Run the command 'sudo su' to gain root user access. Then enter commands:
→curl -fsSL https://get.docker.com -o get-docker.sh and
→sh get-docker.sh

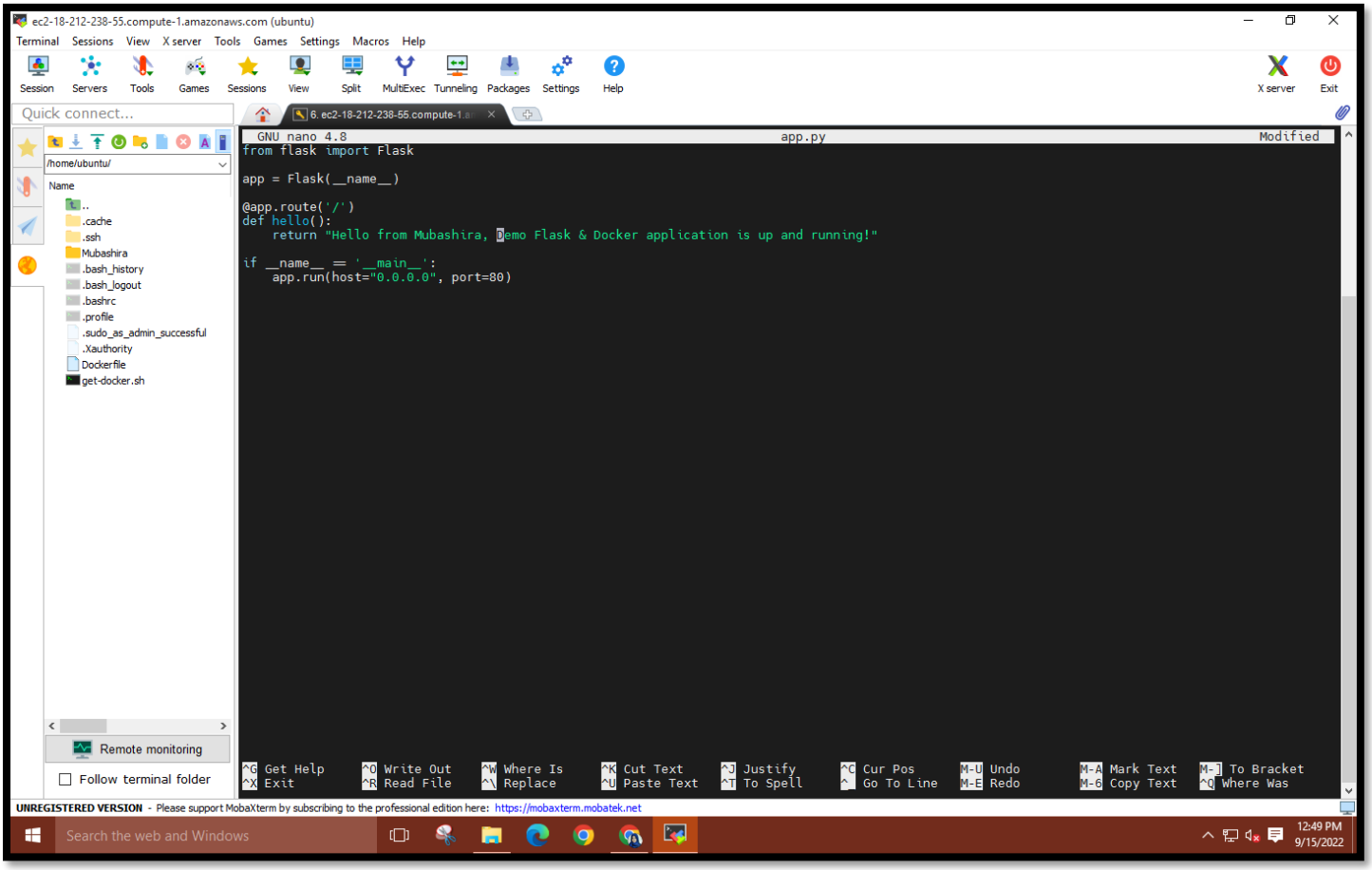


Step 6: Enter commands 'docker –version' to see current docker version & 'docker images' to see installed images.

Step 7: Now create a directory [your own name], go inside it and create another directory name as "APP" and go inside it too.

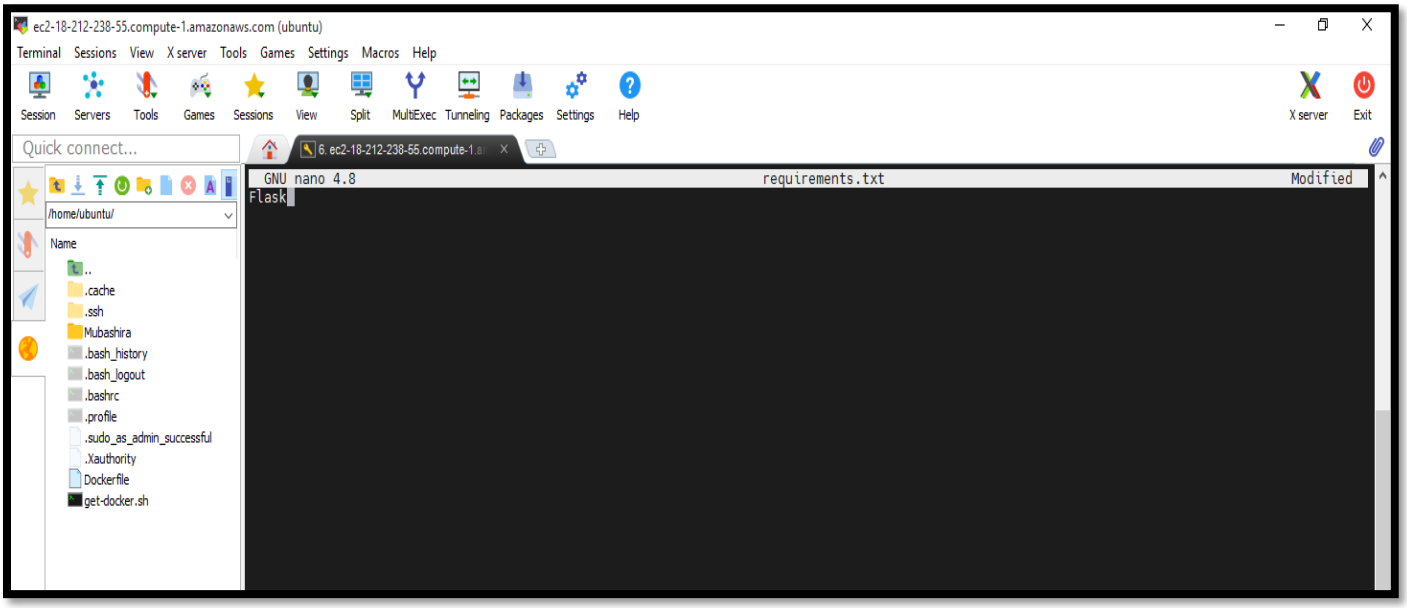


Step 8: Now open nano editor by using command [nano app.py] and add the code of flask given in the classroom.

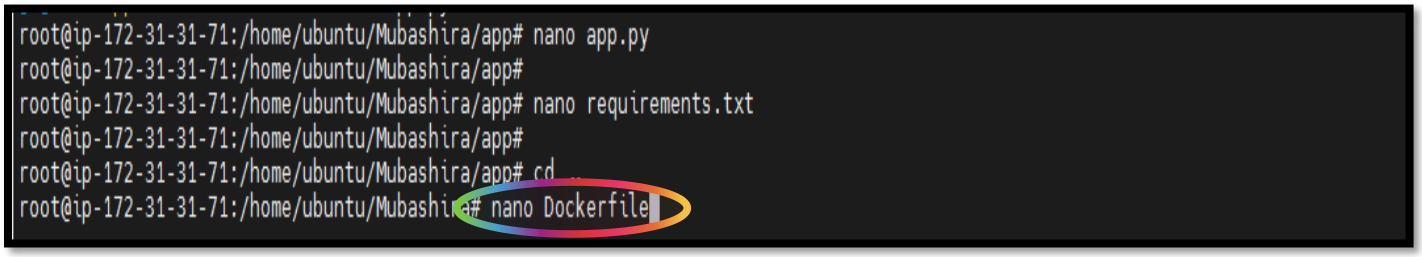


***To save the file press CTRL+O → ENTER → CTRL+ X.**

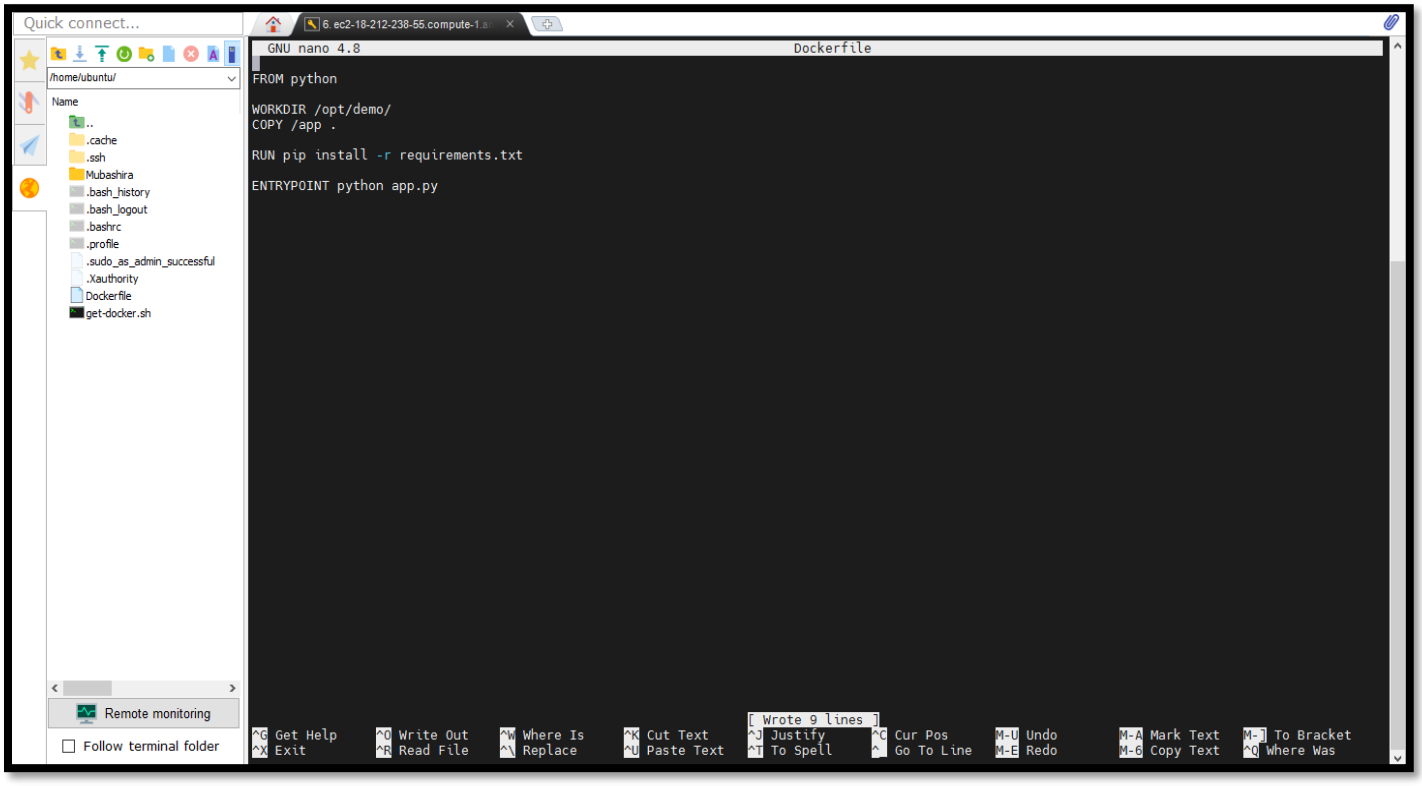
Step 9: Now open nano editor by using command [requirements.txt] and write the requirements of the file to be installed on other PC.



Step 10: Now go back to your Parent Directory and write command [nano Dockerfile] and copy the code give in the classroom.



Write code in the Dockerfile.



Step 11: Now enter the command “docker build -t [file name]:latest .”

```
Build an image from a Dockerfile
root@ip-172-31-31-71:/home/ubuntu/Mubashira# docker build -t mubashira:latest .
Sending build context to Docker daemon  4.608kB
Step 1/5 : FROM python
 ---> e285995a3494
Step 2/5 : WORKDIR /opt/demo/
 ---> Using cache
 ---> e490414b5f34
Step 3/5 : COPY /app .
 ---> 3c46f9f2ea88
Step 4/5 : RUN pip install -r requirements.txt
 ---> Running in 1a13e91dbb01
Collecting Flask
  Downloading Flask-2.2.2-py3-none-any.whl (101 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 101.5/101.5 kB 3.0 MB/s eta 0:00:00
Collecting Werkzeug>=2.2.2
  Downloading Werkzeug-2.2.2-py3-none-any.whl (232 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 232.7/232.7 kB 31.5 MB/s eta 0:00:00
Collecting Jinja2>=3.0
  Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 133.1/133.1 kB 2.9 MB/s eta 0:00:00
Collecting click>=8.0
  Downloading click-8.1.3-py3-none-any.whl (96 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 96.6/96.6 kB 15.4 MB/s eta 0:00:00
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.1.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, Werkzeug, Jinja2, Flask
Successfully installed Flask-2.2.2 Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 itsdangerous-2.1.2
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv
Removing intermediate container 1a13e91dbb01
 ---> 87729ba59de0
Step 5/5 : ENTRYPOINT python app.py
 ---> Running in c16dd93860d3
Removing intermediate container c16dd93860d3
 ---> d8624cee440c
Successfully built d8624cee440c
Successfully tagged mubashira:latest
root@ip-172-31-31-71:/home/ubuntu/Mubashira#
```

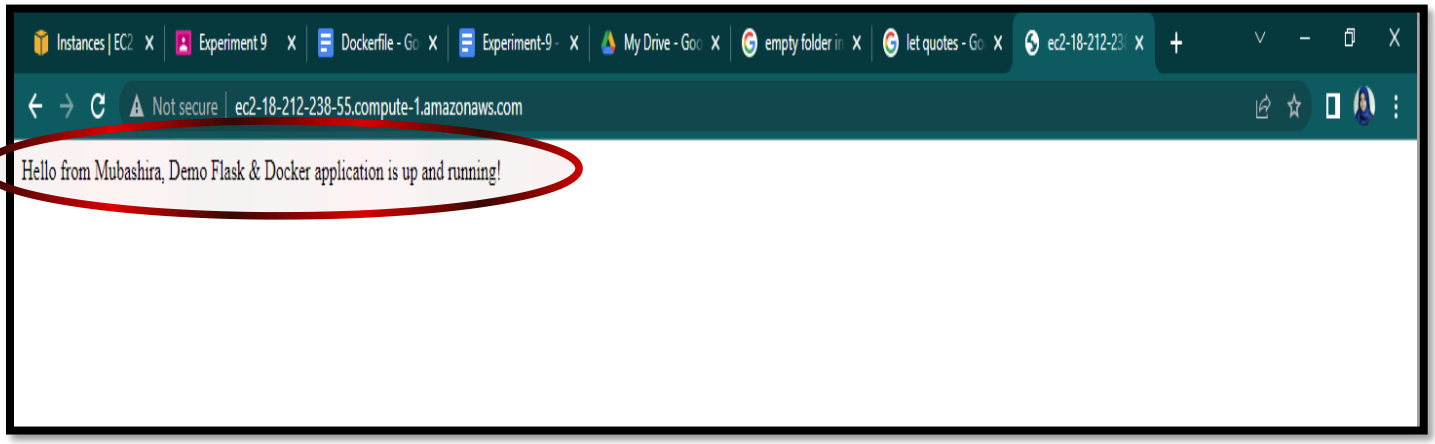
Step 12: Now for checking the images run command as “docker images”.

```
root@ip-172-31-31-71:/home/ubuntu/Mubashira# docker images
REPOSITORY   TAG       IMAGE ID       CREATED              SIZE
mubashira    latest    d8624cee440c   About a minute ago   933MB
python       latest    e285995a3494   41 hours ago         921MB
root@ip-172-31-31-71:/home/ubuntu/Mubashira#
```

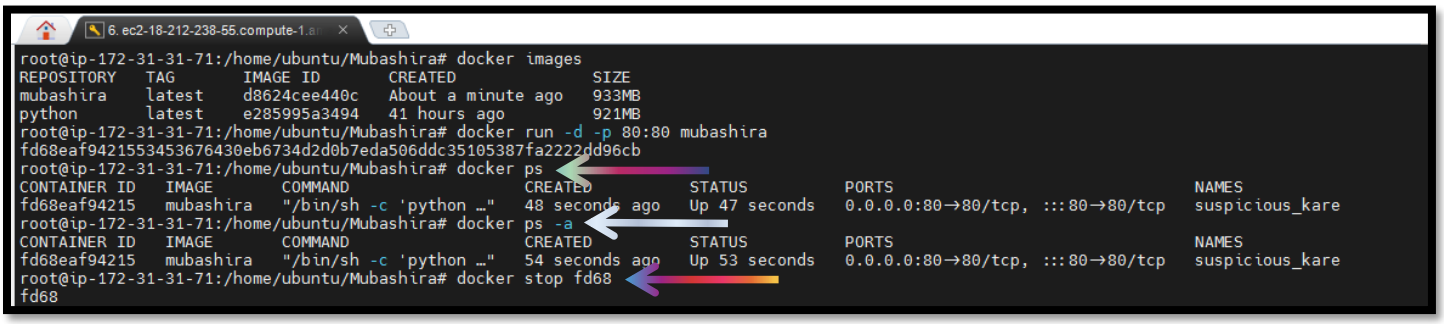
Step 13: Run command “docker run -d -p 80:80 [directory name]”.

```
root@ip-172-31-31-71:/home/ubuntu/Mubashira# docker images
REPOSITORY   TAG       IMAGE ID       CREATED              SIZE
mubashira    latest    d8624cee440c   About a minute ago   933MB
python       latest    e285995a3494   41 hours ago         921MB
root@ip-172-31-31-71:/home/ubuntu/Mubashira# docker run -d -p 80:80 mubashira
fd68eaf94215534536764 30eb6734d2d0b7eda506ddc3510538 [illegible]
root@ip-172-31-31-71:/home/ubuntu/Mubashira#
```

copy the IPV4 address from the EC2 instance details and paste it into a web browser.



Step 14: Run the commands 'docker ps' to check the number of containers and their ID's. You can use the command 'docker ps -a' to check the status of the container. To stop a container use command: 'docker stop (container id)'.



Quit MobaXterm and then delete your EC2 instance.