1. Build a Docker container from a custom Docker-file

Step-1: Create a Dockerfile using **nano** in the pwd

—> **Dockerfile**

```
FROM python:3.9-slim
WORKDIR /app
COPY req.txt .
RUN pip install --no-cache-dir -r req.txt
COPY . .
ENV FLASK_APP=app.py
ENV FLASK_RUN_HOST=0.0.0.0
ENV FLASK_RUN_PORT=5000
EXPOSE 5000
CMD ["flask","run"]
```

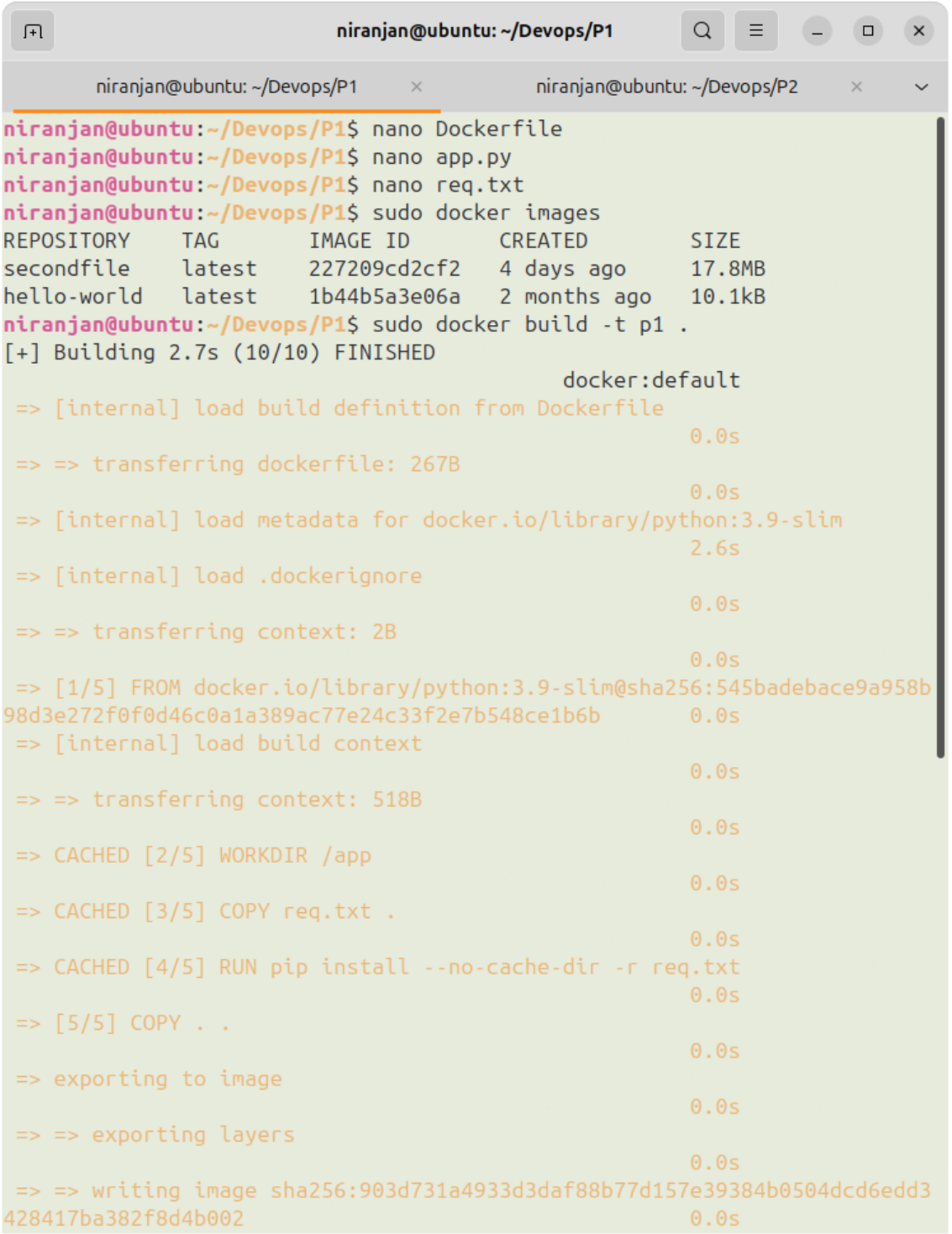
Step-2: Create a python file **app.py**

→**app.py**

```
from flask import Flask

app = Flask(__name__)

@app.route("/")
def hello():
        return "Hello, Dockerrr...!"

if __name__ == "__main__":
        app.run(host="0.0.0.0", port=5000)
```

Step-3: Create a requirements file **req.txt**

flask



Step-4: Build the docker image using the below command

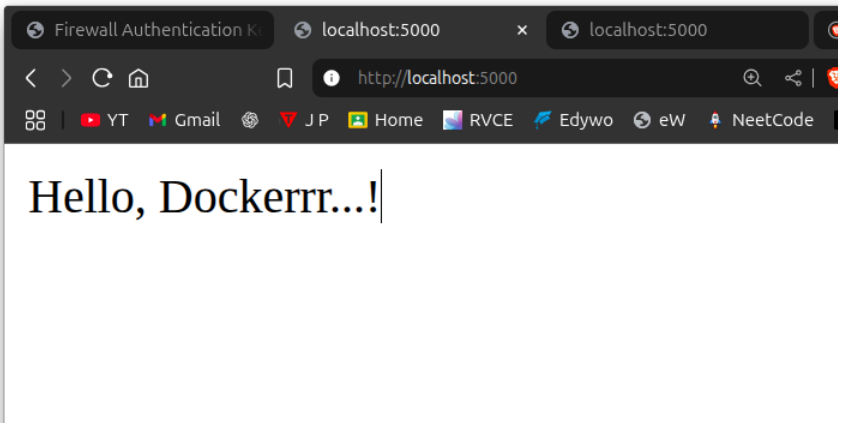
docker build -t p1 .

Step-5: Run the Docker Run command to create a container specifying the port number and name for the container

docker run -d -p 5000:5000 –name flask-app p1

```
                                                    0.0s
niranjan@ubuntu:~/Devops/P1$ sudo docker images

REPOSITORY    TAG       IMAGE ID       CREATED         SIZE
p1            latest    903d731a4933   7 seconds ago   132MB
secondfile    latest    227209cd2cf2   4 days ago      17.8MB
hello-world   latest    1b44b5a3e06a   2 months ago    10.1kB
niranjan@ubuntu:~/Devops/P1$ sudo docker run -d -p 5000:5000 --name Progr
am-1 p1
bbb828aeb0f23deb66efd2398528c4b132315052d2938f7e7ac756def986701c
niranjan@ubuntu:~/Devops/P1$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND       CREATED         STATUS         POR
TS                                       NAMES
bbb828aeb0f2   p1        "flask run"   7 seconds ago   Up 6 seconds   0.0
.0.0:5000->5000/tcp, [::]:5000->5000/tcp   Program-1
```

Step-6: Test the container by verifying whether its showing some results on http://loalhost:5000 stating **“hello Dockerr!”**



You can also check the status of the container by using below command

docker ps // displays current running containers
Docker pa -a // displays all present containers

Step-7: Stop the container, remove the container using container number

sudo docker container ls -a or docker ps -a
sudo docker container stop <container-id>
sudo docker container rm <container–id>
sudo docker image rm <image-id> or docker rmi <image-id>

```
niranjan@ubuntu:~/Devops/P1$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND       CREATED         STATUS         POR
TS                                       NAMES
bbb828aeb0f2   p1        "flask run"   7 seconds ago   Up 6 seconds   0.0
.0.0:5000->5000/tcp, [::]:5000->5000/tcp   Program-1
niranjan@ubuntu:~/Devops/P1$ sudo docker stop bbb
bbb
niranjan@ubuntu:~/Devops/P1$ sudo docker rm bbb
bbb
niranjan@ubuntu:~/Devops/P1$ sudo docker rmi p1
Untagged: p1:latest
Deleted: sha256:903d731a4933d3daf88b77d157e39384b0504dcd6edd3428417ba382f
8d4b002
niranjan@ubuntu:~/Devops/P1$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
secondfile    latest    227209cd2cf2   4 days ago     17.8MB
hello-world   latest    1b44b5a3e06a   2 months ago   10.1kB
niranjan@ubuntu:~/Devops/P1$
```