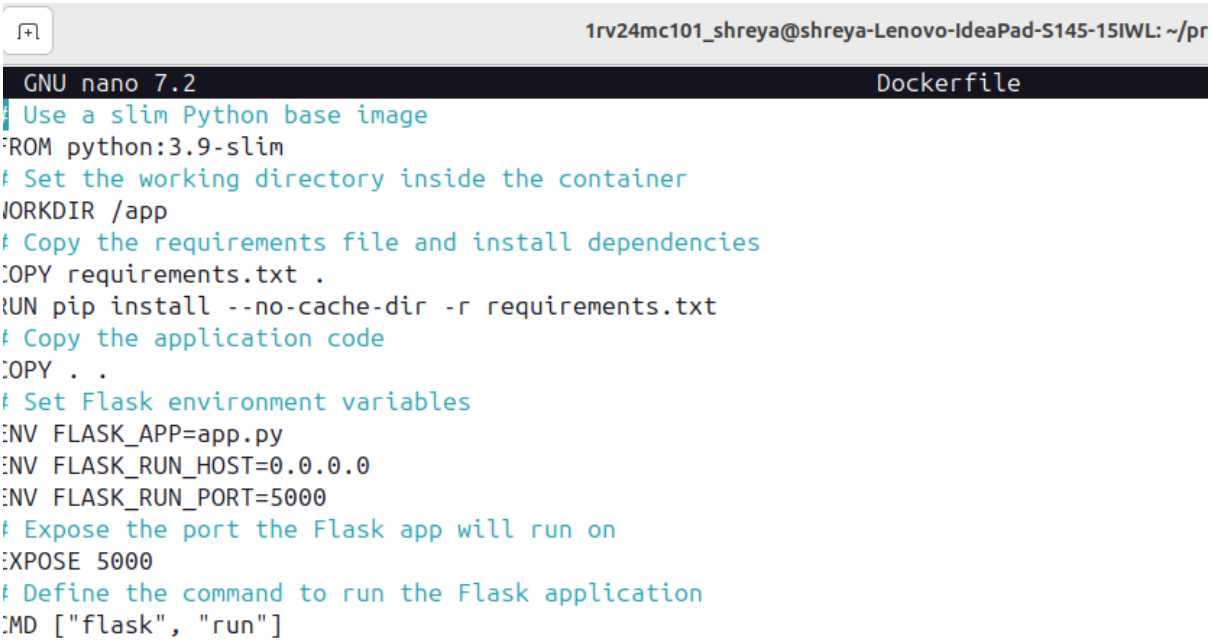
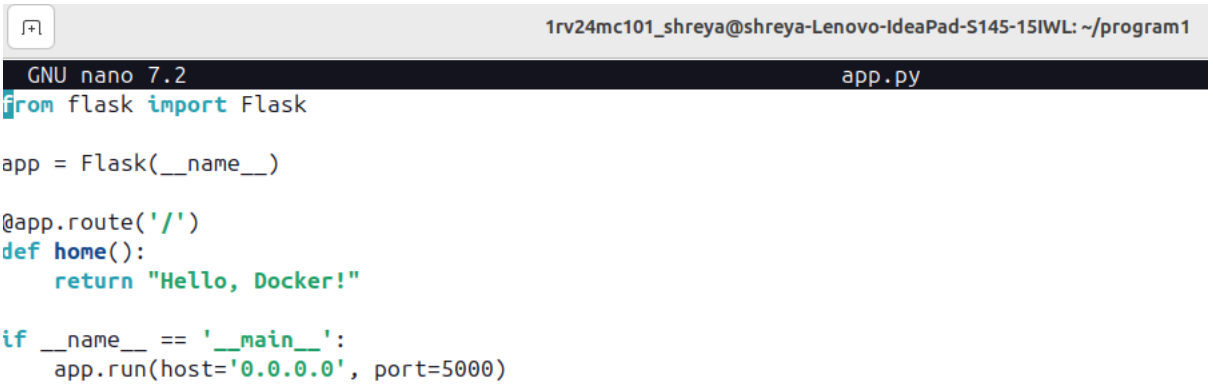
Program 1: Build a Docker Container from a Custom Dockerfile

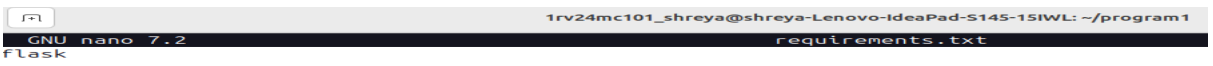
Step 1 : Create a Dockerfile



Step 2 : Create python file app.py



Step 3 : Create a simple text file - requirements.txt



Step 4 : Execute the Docker build command on the terminal
> docker build -t program1 .

```
=> => naming to docker.io/library/my-flask-app                          0.2s
1rv24mc101_shreya@shreya-Lenovo-IdeaPad-S145-15IWL:~/program1$ docker build -t program1 .
[+] Building 4.4s (10/10) FINISHED                              docker:default
 => [internal] load build definition from Dockerfile                    0.1s
 => => transferring dockerfile: 552B                                    0.0s
 => [internal] load metadata for docker.io/library/python:3.9-slim      3.4s
 => [internal] load .dockerignore                                       0.1s
 => => transferring context: 2B                                         0.0s
 => [1/5] FROM docker.io/library/python:3.9-slim@sha256:2d97f6910b16bd338  0.0s
 => [internal] load build context                                       0.1s
 => => transferring context: 93B                                        0.0s
 => CACHED [2/5] WORKDIR /app                                           0.0s
 => CACHED [3/5] COPY requirements.txt .                                0.0s
 => CACHED [4/5] RUN pip install --no-cache-dir -r requirements.txt     0.0s
 => CACHED [5/5] COPY . .                                               0.0s
 => exporting to image                                                  0.1s
 => => exporting layers                                                 0.0s
 => => writing image sha256:08a5c2d7ce2f1025fad0228cb314e3f6315a97aa7fb4c  0.0s
 => => naming to docker.io/library/program1                             0.0s
1rv24mc101_shreya@shreya-Lenovo-IdeaPad-S145-15IWL:~/program1$ docker run -d -p 5000:5000 --name flask-container p
```

Step 5 : Run the Docker run command
> docker run -d -p 5000:5000 -program1

```
 => => exporting layers                                                 0.0s
 => => writing image sha256:e7f426a24079f07745c078baa19ea20e12f0c50fdfaf6  0.0s
 => => naming to docker.io/library/program1                             0.0s
2528239db53a9b261b7ccc3c13d2d971a597798a5a7475a5f00892dabde2b839
1rv24mc101_shreya@shreya-Lenovo-IdeaPad-S145-15IWL:~/program1$ docker ps
CONTAINER ID   IMAGE      COMMAND       CREATED         STATUS         PORTS                                       NAMES
2528239db53a   program1   "flask run"   9 seconds ago   Up 8 seconds   0.0.0.0:5000->5000/tcp, [::]:5000->5000/tcp   flask-conta
iner
```

Step 6 : Test and verify the localhost text -> “Hello Docker!”