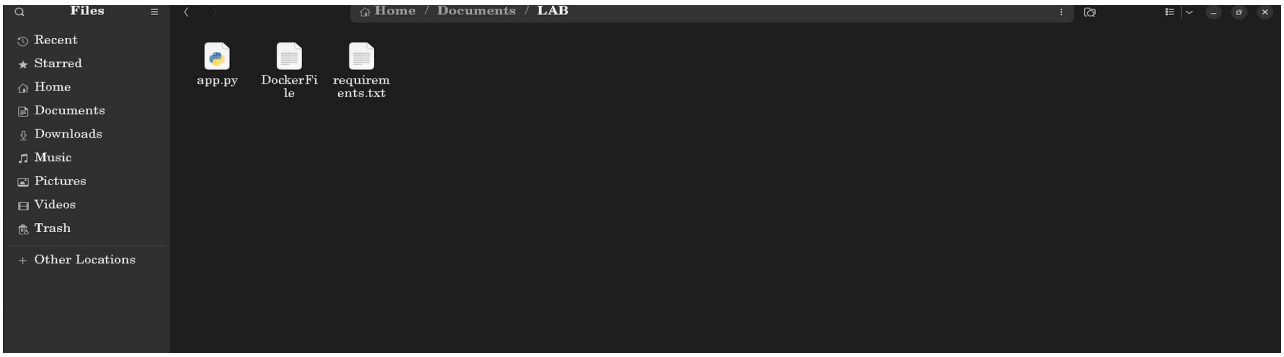
Honey J
1RV24MC043

PROGRAM 1

Build a Docker Container from a custom Docker File

Step 1 : Create the following files inside a folder (app.py, DockerFile and requirements.txt)




```
  GNU nano 7.2                                                    app.py
from flask import Flask

app = Flask(__name__)
@app.route('/')
def hello():
    return "Hello!!, From Docker"
if __name__ == '__main__':
    app.run("0.0.0.0", port=5000)
```

```
  GNU nano 7.2                                                 DockerFile
FROM python:3.9-slim

WORKDIR /app

COPY requirements.txt .

RUN pip install -r requirements.txt

COPY . .

ENV FLASKHOST=0.0.0.0
ENV FLASKPORT=5000

EXPOSE 5000

CMD [ "python", "app.py" ]
```

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Step 2 : Open that in a terminal. Run these commands to build and run Docker

```
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9: ~/Documents/LAB
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9:~/Documents/LAB$ nano app.py
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9:~/Documents/LAB$ nano requirements.txt
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9:~/Documents/LAB$ nano DockerFile
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9:~/Documents/LAB$ docker build -f DockerFile -t p1 .
[+] Building 2.0s (10/10) FINISHED                                                                                                  docker:default
 => [internal] load build definition from DockerFile                                                                                         0.0s
 => => transferring dockerfile: 229B                                                                                                         0.0s
 => [internal] load metadata for docker.io/library/python:3.9-slim                                                                           1.8s
 => [internal] load .dockerignore                                                                                                            0.0s
 => => transferring context: 2B                                                                                                              0.0s
 => [1/5] FROM docker.io/library/python:3.9-slim@sha256:545badebace9a958b98d3e272f0f0d46c0a1a389ac77e24c33f2e7b548ce1b6b                     0.0s
 => [internal] load build context                                                                                                            0.0s
 => => transferring context: 488B                                                                                                            0.0s
 => CACHED [2/5] WORKDIR /app                                                                                                                0.0s
 => CACHED [3/5] COPY requirements.txt .                                                                                                     0.0s
 => CACHED [4/5] RUN pip install -r requirements.txt                                                                                         0.0s
 => CACHED [5/5] COPY . .                                                                                                                    0.0s
 => exporting to image                                                                                                                       0.0s
 => => exporting layers                                                                                                                      0.0s
 => => writing image sha256:7d4ab2f157f7b11301ec228b97a4aae70bfce73172f1c17b0d3cd43a2a4d7ff3                                                 0.0s
 => => naming to docker.io/library/p1                                                                                                        0.0s
1rv24mc043_Honey@Yoga-7-2-in-1-14IML9:~/Documents/LAB$ docker run --rm -p 5000:5000 --name p1_container p1
 * Serving Flask app 'app'
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5000
 * Running on http://172.18.0.2:5000
Press CTRL+C to quit
172.18.0.1 - - [31/Oct/2025 04:40:19] "GET / HTTP/1.1" 200 -
```

Step 3 : The output of the program