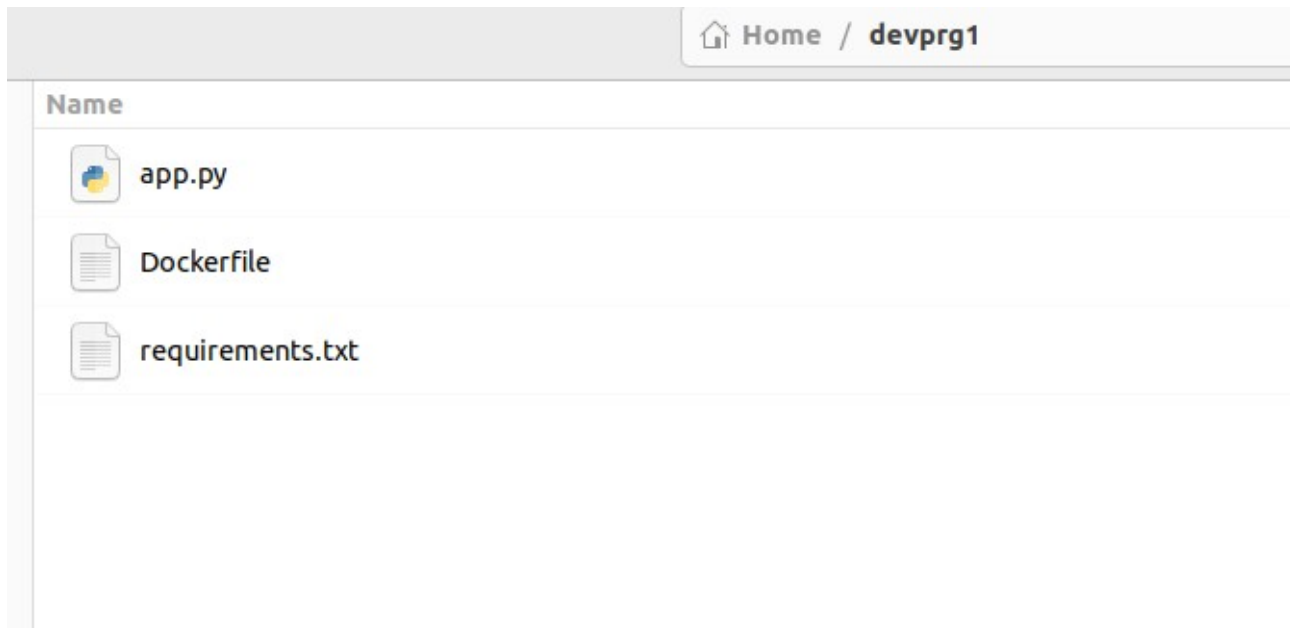


Devops Lab Program 1 : Build a Docker Container from a custom docker file

Folder Structure :



Python file (app.py) :

```
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$ cat app.py
from flask import Flask
app=Flask(__name__)

@app.route("/")
def hello():
    return "Hello Docker"

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

1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$
```

create app.py and write code python and save it.

Dockerfile

Create Dockerfile and write these code

```
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515: ~/devprg1
GNU nano 6.2 Dockerfile
#Dockerfile
FROM python:3.9-slim

#setting current working directory
WORKDIR /app

#label
LABEL "maintainer"="swasthikdevadiga1@gmail.com"

COPY requirements.txt ./

RUN pip install -r requirements.txt

COPY . .

ENV FLASK_APP=app.py
ENV FLASK_HOST=0.0.0.0
ENV FLASK_PORT=5000

EXPOSE 5000

CMD ["flask", "run", "--host=0.0.0.0", "--port=5000"]
```

Next Step : build the image and run the container

To build the image run this command :

docker build -t lab1 .

```
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$ docker build -t lab1 .
[+] Building 2.3s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 386B
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/5] FROM docker.io/library/python:3.9-slim@sha256:545badebace9a958b98d3e272f0f0d46c0a1a389ac77e24c33f2e7b548ce1b6b
=> [internal] load build context
=> => transferring context: 447B
=> CACHED [2/5] WORKDIR /app
=> CACHED [3/5] COPY requirements.txt ./
=> CACHED [4/5] RUN pip install -r requirements.txt
=> CACHED [5/5] COPY . .
=> exporting to image
=> => exporting layers
=> => writing image sha256:94ce1ac06ea5a638bb139cab681d5d9ba98f402ad3c68bd3c3f442afb026f86f
=> => naming to docker.io/library/lab1
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$
```

To create and run the container :

`docker run -it p 5000:5000 lab1`

```
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$ docker build -t lab1 .
[+] Building 2.3s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 386B
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/5] FROM docker.io/library/python:3.9-slim@sha256:545badebace9a958b98d3e272f0f0d46c0a1a389ac77e24c33f2e7b548ce1b6b
=> [internal] load build context
=> => transferring context: 447B
=> CACHED [2/5] WORKDIR /app
=> CACHED [3/5] COPY requirements.txt ./
=> CACHED [4/5] RUN pip install -r requirements.txt
=> CACHED [5/5] COPY . .
=> exporting to image
=> => exporting layers
=> => writing image sha256:94ce1ac06ea5a638bb139cab681d5d9ba98f402ad3c68bd3c3f442afb026f86f
=> => naming to docker.io/library/lab1
1RV24MC108_SWASTHIK_DEVADIGA@swasthik-Inspiron-15-3515:~/devprg1$ docker run -it -p 5000:5000 lab1
* Serving Flask app 'app.py'
* 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
```