

Program3: code a Dockerized python Flask or [node.js](#) application

We have to create a single folder called program 3 so that in that we can create three files called

1. Dockerfile
2. app.py
- 3.requirements.txt

```
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~$ mkdir prog3
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~$ cd prog3
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~/prog3$ nano Dockerfile
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~/prog3$ nano app.py
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~/prog3$ nano requirements.txt
1RV24MC104_SINDHURA@sindhra-IdeaPad-Slim-5-16IAH8:~/prog3$ docker build -t prog3 .
[+] Building 12.9s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 349B
=> [internal] load metadata for docker.io/library/python:latest
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/5] FROM docker.io/library/python:latest@sha256:92b51c6fa86611bbf2000abf360a2068
=> [internal] load build context
=> => transferring context: 635B
=> CACHED [2/5] WORKDIR /app
=> [3/5] COPY requirements.txt .
=> [4/5] RUN pip install -r requirements.txt
=> [5/5] COPY . .
--> exporting to image
```

In nano Dockerfile we have to add the code below

```
# Use Python image
FROM python:latest

# Set working directory
WORKDIR /app

# Copy the requirements file
COPY requirements.txt .

# Install dependencies
RUN pip install -r requirements.txt

# Copy the rest of the app
COPY . .

# Expose the port 5000
EXPOSE 5000

# Run the application
CMD ["python", "app.py"]
```

In nano [app.py](#) we have to add the code below

```
GNU nano 7.2
from flask import Flask

app = Flask(__name__)

@app.route('/')
def hello():
    return "hello from simple Flask Docker"

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

In nano requirements.txt we have to add the code below

```
GNU nano 7.2
Flask==2.3.3
```

Now have to run the following commands for the output

```
>docker build -t prog3 .
```

```
> docker run -p 5000:5000 prog3
```

