

Program 1 : Build a docker container from a custom docker file.

File structure

```
/app.py  
/requirement.txt  
/Dockerfile
```

Run following command to build image

```
#sudo docker build -t program1 .
```

To see created image

```
#sudo docker images
```

To run contain from existing image

```
#sudo docker run -d -p 5000:5000 --name pro1 program1
```

To see all the containers

```
#sudo docker container ls -a
```

```
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$ sudo docker build -t program1 .
[+] Building 1.3s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 270B
=> [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@sha256:545badbe9a958b98d3e272f0f0d46c0a1a389ac77e24c33f2e7b548ce1b6b
=> [internal] load build context
=> transferring context: 331B
=> CACHED [2/5] WORKDIR /app
=> CACHED [3/5] COPY requirements.txt .
=> CACHED [4/5] RUN pip install --no-cache-dir -r requirements.txt
=> CACHED [5/5] COPY . .
=> exporting layers
=> => exporting layers
=> => writing image sha256:c64eb9efde228b1fe6babf4d73c7748f2e9bc1932a92e86f32150fb05a41613
=> => naming to docker.io/library/program1
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$ sudo docker images ps -a
REPOSITORY TAG IMAGE ID CREATED SIZE
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
program1 latest c64eb9efde22 12 hours ago 132MB
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$ sudo docker run -d -p 5000:5000 --name pro1 program1
55c06fe15290a272f4afe4a72b258fed77ea3b8afeea9772079cb1bf21a64da
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$ sudo docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
55c06fe15290 program1 "flask run" 13 seconds ago Up 12 seconds 0.0.0.0:5000->5000/tcp, [::]:5000->5000/tcp pro1
1rv24mc016_anantha_m@anantha-ASUS-TUF-Gaming-A15-FA506IHRB-FA506IHRZ:~/Desktop/LabPrograms/Lab1$
```