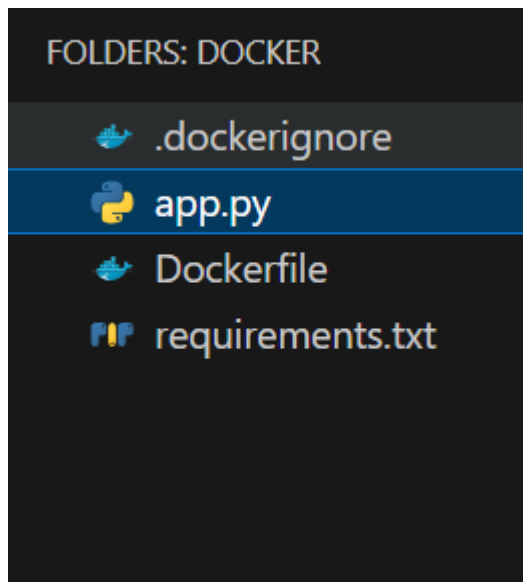# Docker Documentation

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I have a simple web application which was created in flask app in python.

In this activity I'm going to containerize the application using Docker.

Project structure:

```Dockerfile
FROM python:3.10-alpine


# create working directory
WORKDIR /app

# copy requirements first (good for caching)
COPY requirements.txt .

# install dependencies
RUN pip install -r requirements.txt

# copy rest of the project
COPY . .

# start flask app
CMD ["python", "app.py"]
```

Terminal Commands:

```
monee@IdeaPad MINGW64 /e/Docker
$ docker build -t flask-demo .
[+] Building 18.7s (10/10) FINISHED                        docker:desktop-linux
 => [internal] load build definition from Dockerfile              0.1s
 => => transferring dockerfile: 333B                             0.0s
 => [internal] load metadata for docker.io/library/python:3.10-alpine  0.1s
 => [internal] load .dockerignore                               0.1s
 => => transferring context: 87B                                0.0s
 => [1/5] FROM docker.io/library/python:3.10-alpine@sha256:63f6d26c6612648133  0.3s
 => => resolve docker.io/library/python:3.10-alpine@sha256:63f6d26c6612648133  0.1s
 => [internal] load build context                               0.1s
 => => transferring context: 483B                               0.1s
 => [2/5] WORKDIR /app                                          0.2s
 => [3/5] COPY requirements.txt .                               0.2s
 => [4/5] RUN pip install -r requirements.txt                  13.8s
 => [5/5] COPY . .                                              0.2s
 => exporting to image                                          3.3s
 => => exporting layers                                         1.8s
 => => exporting manifest sha256:6656f4fc2fa5e4976d51690e1d6310fab3acb0570f54  0.0s
 => => exporting config sha256:5ff0c7e18019f4d15228144f8ef0882c6b9651c1f6b9e4  0.0s
 => => exporting attestation manifest sha256:d5149b67d8317fc325b1945de26b2b58  0.1s
 => => exporting manifest list sha256:4b7ec4c17398afc6fa02df13bfb0b849fd2991f  0.0s
 => => naming to docker.io/library/flask-demo:latest           0.0s
 => => unpacking to docker.io/library/flask-demo:latest        1.1s
```

```
monee@IdeaPad MINGW64 /e/Docker
$ docker tag flask-demo sathishveera012/flask-demo:latest
```

```
monee@IdeaPad MINGW64 /e/Docker
$ docker push sathishveera012/flask-demo:latest
The push refers to repository [docker.io/sathishveera012/flask-demo]
7714f75ddfc2: Mounted from library/python
2d35ebdb57d9: Mounted from library/python
d6919b1d38e5: Mounted from library/python
9a29d2da4034: Pushed
e83770e23e8e: Pushed
35db02935369: Pushed
9463c33f02cb: Mounted from library/python
0d372ade72cb: Pushed
e9d54aba387d: Pushed
```

Link for image in DockerHub:

https://hub.docker.com/r/sathishveera012/flask-demo

Docker desktop: