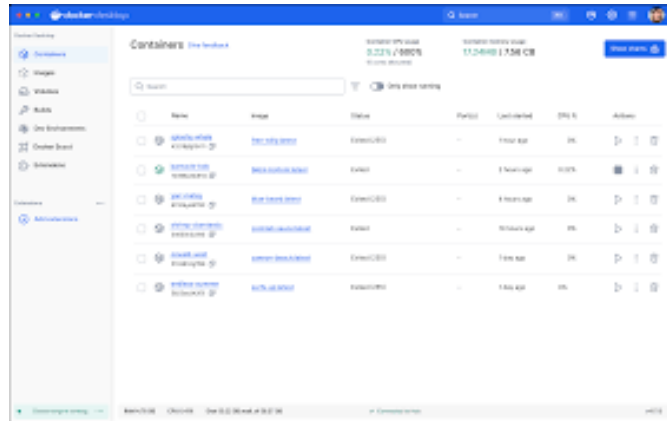


Docker Containers for Simple Python Scripts Description

Step 1: Install Docker

First, ensure that Docker is installed on your system. You can download and install Docker from Docker's official website.



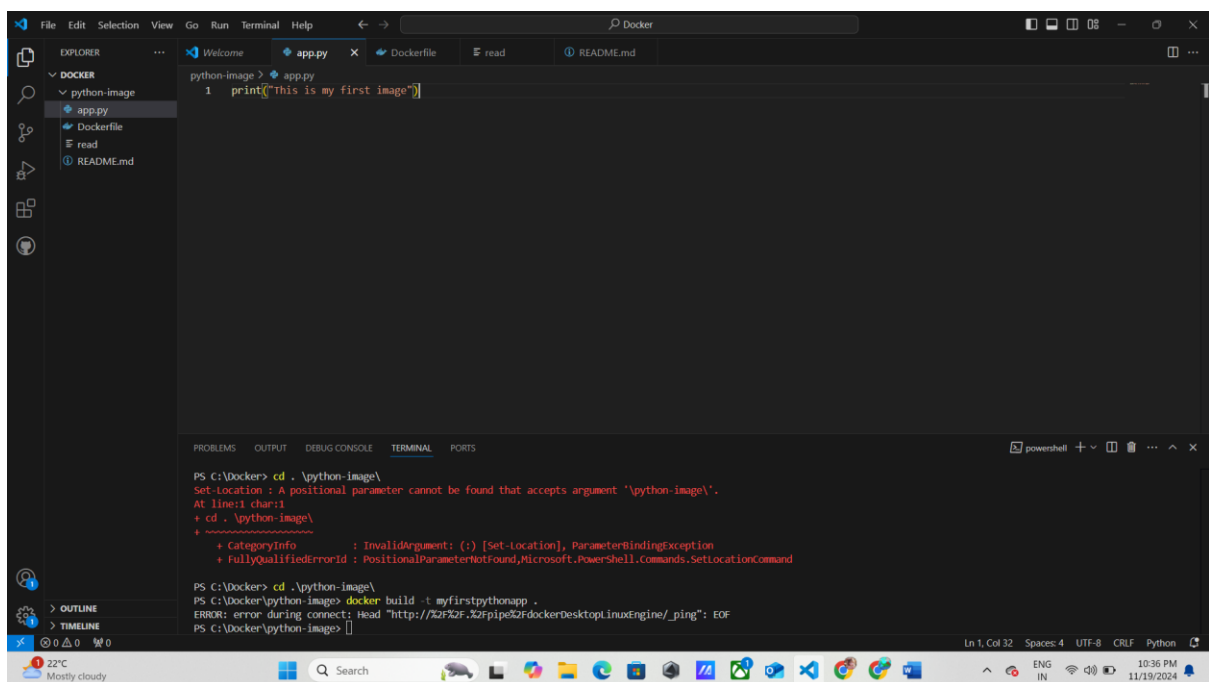


2. Write the Python Script

Create a simple Python script. For example, create a file named app.py:

```
# app.py
```

```
print("Hello from inside a Docker container!")
```



3. Create a Dockerfile

The Dockerfile specifies the instructions to build the Docker image. Create a file named Dockerfile in the same directory as app.py:

Use the official Python base image

FROM python:3.9-slim

Set the working directory inside the container

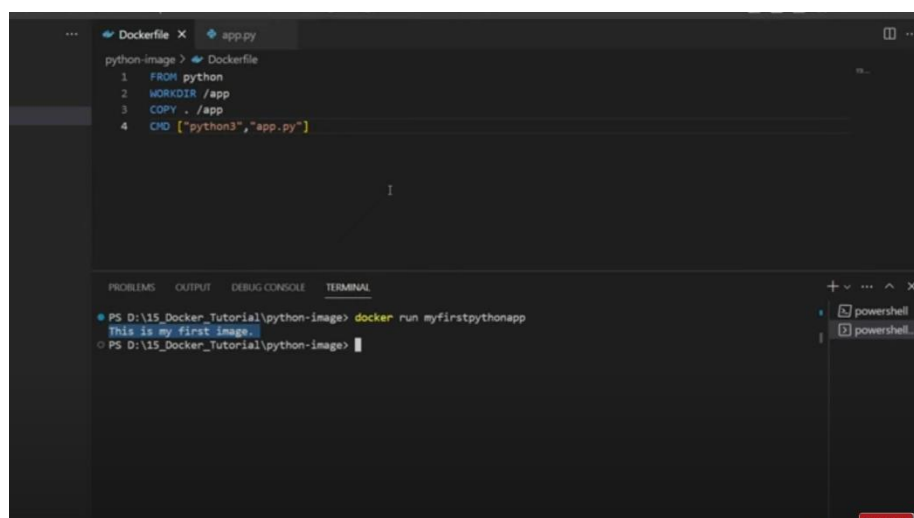
WORKDIR /app

Copy the Python script into the container

COPY app.py .

Set the default command to run the Python script

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

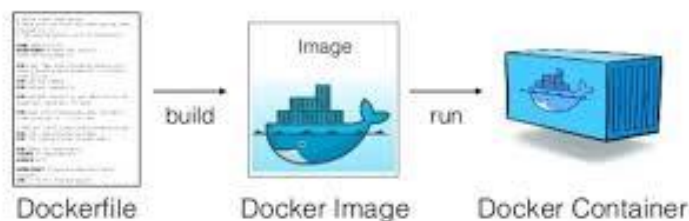


4.Build the Docker Image

Use the following command to build the Docker image. Run this command in the terminal from the directory containing the Dockerfile:

```
bash
```

```
docker build -t python-docker-demo .
```



5.Run the Docker Container

After building the image, run a container from it:

```
docker run python-docker-demo
```

Verify the Docker Image and Container

```
docker images
```

- **List running containers:**

```
docker ps -a
```

6.Clean Up (Optional)

- **Stop running containers:**

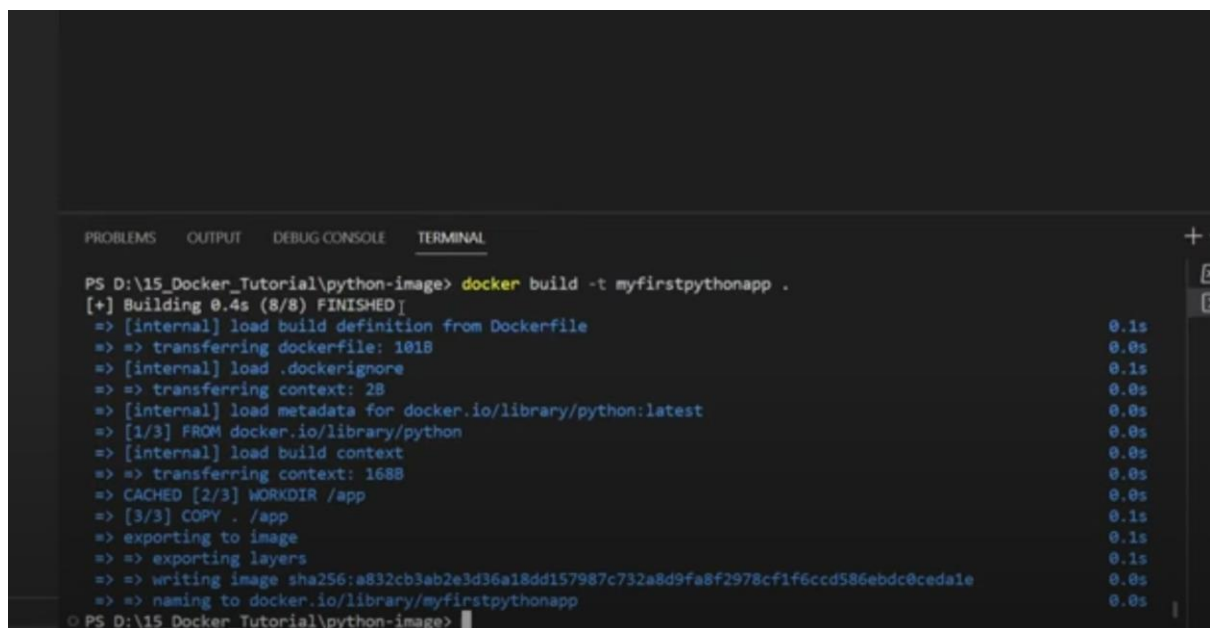
`docker stop <container_id>`

- **Remove containers:**

`docker rm <container_id>`

7.Run the Docker Container

Once the image is built, you can run a container using the following command. Replace `your_image_name` with the name of your Docker image:



```
PS D:\15_Docker_Tutorial\python-image> docker build -t myfirstpythonapp .
[+] Building 0.4s (8/8) FINISHED
=> [internal] load build definition from Dockerfile                                0.1s
=> => transferring dockerfile: 101B                                              0.0s
=> [internal] load .dockerignore                                                  0.1s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/python:latest                 0.0s
=> [1/3] FROM docker.io/library/python                                          0.0s
=> [internal] load build context                                                 0.0s
=> => transferring context: 168B                                                 0.0s
=> CACHED [2/3] WORKDIR /app                                                    0.0s
=> [3/3] COPY . /app                                                            0.1s
=> exporting to image                                                            0.1s
=> => exporting layers                                                            0.1s
=> => writing image sha256:a832cb3ab2e3d36a18dd157987c732a8d9fa8f2978cf1f6ccd586ebdc@cedale 0.0s
=> => naming to docker.io/library/myfirstpythonapp                             0.0s
PS D:\15_Docker_Tutorial\python-image>
```

