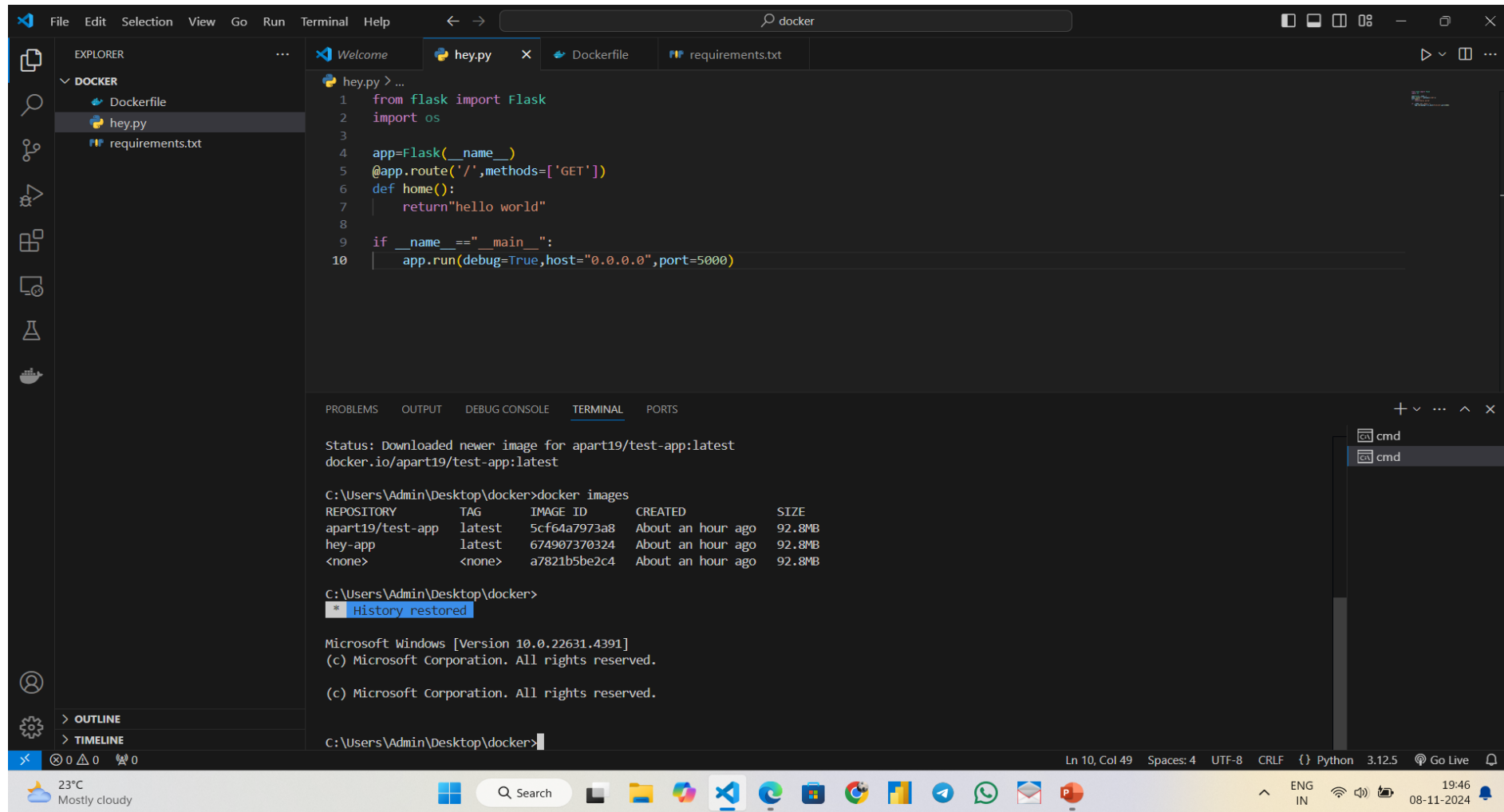


docker®

**Exploring Cloud Computing with Docker: A Journey from Flask to Containers**



**Created a basic application for testing using Flask a python web dev framework**

The screenshot shows the Visual Studio Code interface with a Dockerfile being edited. The Explorer sidebar on the left shows the project structure under a 'DOCKER' folder, containing '.venv', 'Dockerfile', 'hey.py', and 'requirements.txt'. The Dockerfile content is as follows:

```
Dockerfile > ...
1 FROM python:3.8-alpine
2 COPY . /app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 CMD python hey.py
6
```

The Terminal panel at the bottom shows the command to build the Docker image and its output:

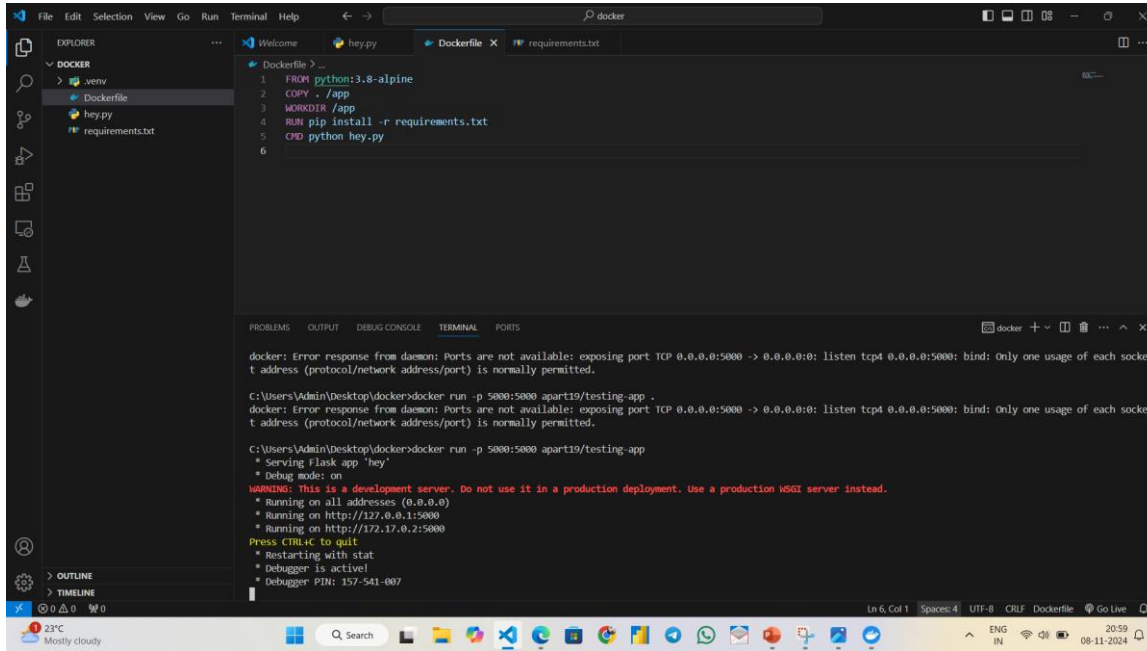
```
C:\Users\Admin\Desktop\docker>docker build -t apart19/testing-app .
[+] Building 9.1s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 144B
=> [internal] load metadata for docker.io/library/python:3.8-alpine
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 529.64kB
=> CACHED [1/4] FROM docker.io/library/python:3.8-alpine@sha256:3d93b1f77efce339aa77db726656872517b0d67837989aa7c4b35bd5ae7e81ba
=> => resolve docker.io/library/python:3.8-alpine@sha256:3d93b1f77efce339aa77db726656872517b0d67837989aa7c4b35bd5ae7e81ba
=> [2/4] COPY . /app
=> [3/4] WORKDIR /app
=> [4/4] RUN pip install -r requirements.txt
=> exporting to image
=> => exporting layers
```

On the right side of the terminal, a table shows the progress of each layer:

Layer	Time
cmd	0.0s
cmd	0.0s
Python	2.2s
cmd	0.0s
cmd	0.0s
cmd	0.0s
cmd	0.1s
cmd	0.0s
cmd	0.0s
cmd	0.1s
cmd	5.2s
cmd	1.2s
cmd	0.8s

The status bar at the bottom indicates the current file is 'Dockerfile' and the encoding is 'UTF-8'.

## Creating Docker images

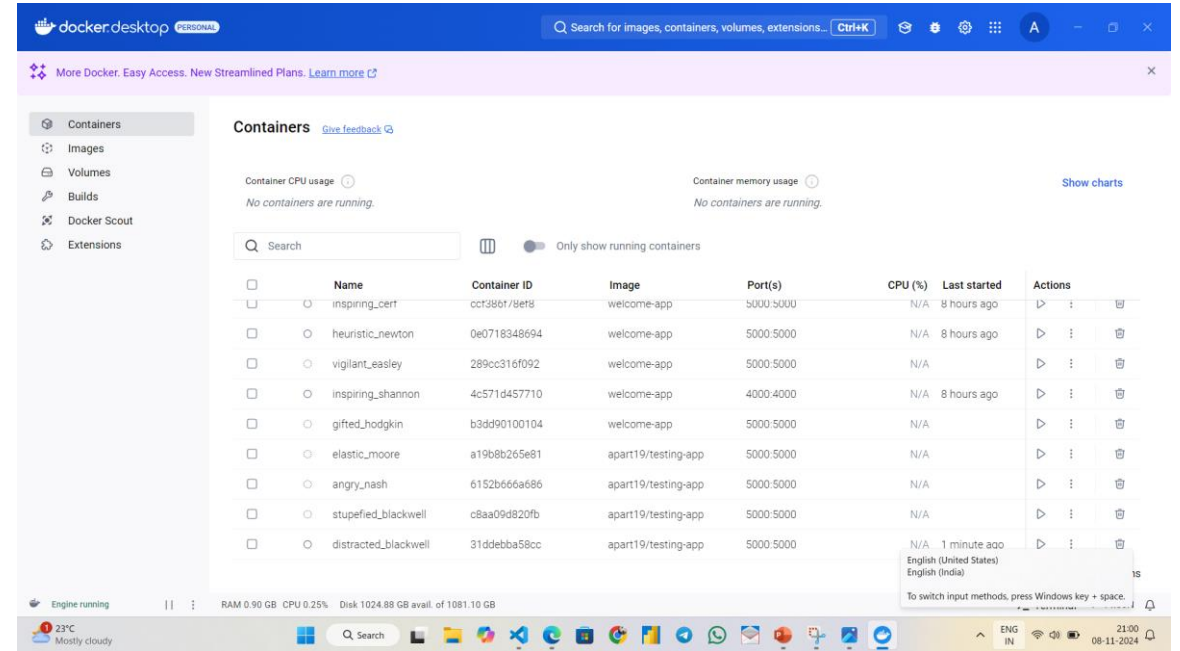


The screenshot shows a code editor with a Dockerfile and its terminal output. The Dockerfile contains the following instructions:

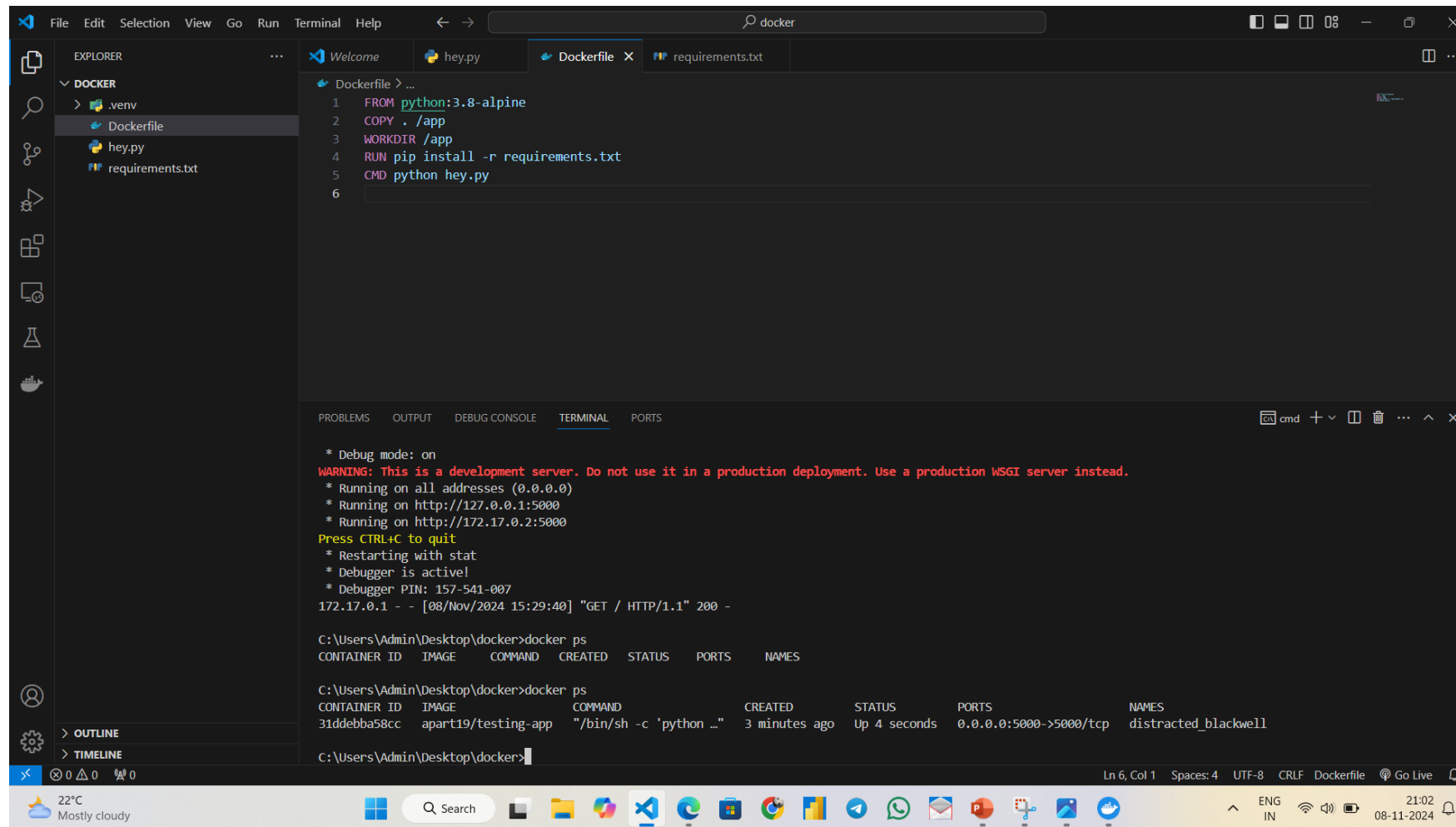
```
1 FROM python:3.8-alpine
2 COPY . /app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 CMD python hey.py
6
```

The terminal output shows the command `docker run -p 5000:5000 apart19/testing-app` being executed. It displays a warning that this is a development server and not for production use. The application is running on `http://127.0.0.1:5000` and `http://172.17.0.2:5000`. The status bar at the bottom indicates the file is `Dockerfile` and the editor is in `UTF-8` encoding.

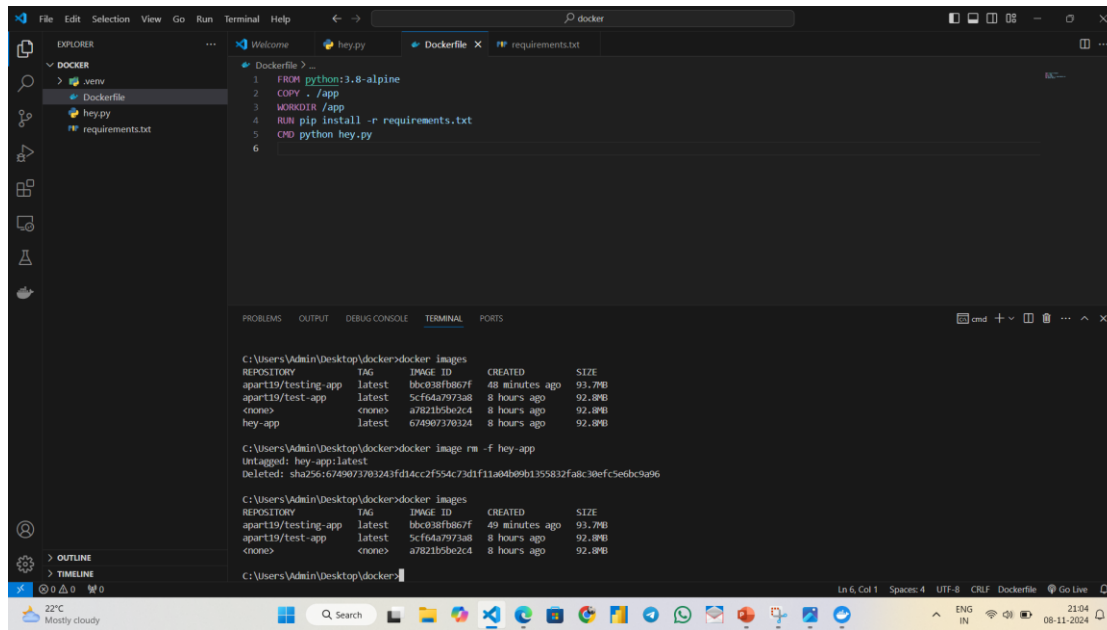
Running docker images in container



Container running in docker desktop



# Current container running



The screenshot shows a VS Code editor with a Dockerfile and a terminal window. The Dockerfile contains the following content:

```
Dockerfile > ...
1 FROM python:3.8-alpine
2 COPY ./app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 CMD python hey.py
6
```

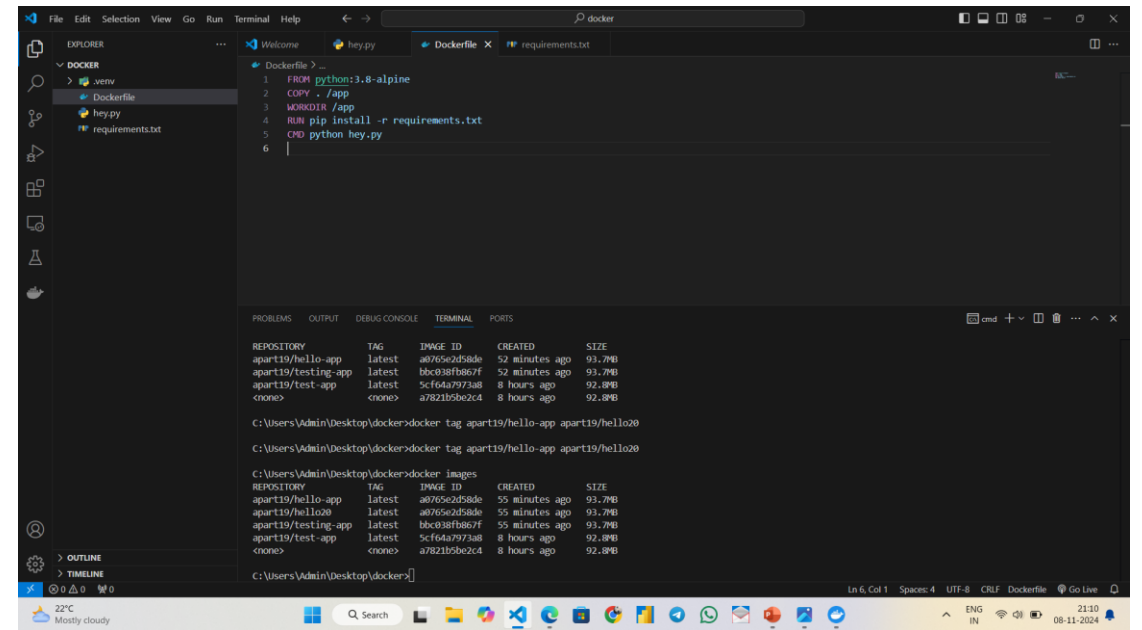
The terminal window shows the following commands and output:

```
C:\Users\Admin\Desktop\docker> docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
apart19/testing-app  latest         b6c08fb867f    48 minutes ago 93.7MB
apart19/test-app     latest         5cf64a7973a8   8 hours ago    92.8MB
<none>              <none>         a7821b5be2c4   8 hours ago    92.8MB
hey-app             latest         674907370324   8 hours ago    92.8MB

C:\Users\Admin\Desktop\docker> docker image rm -f hey-app
Untagged: hey-app:latest
Deleted: sha256:6749073703243fd14cc2f554c73d1f11a04b9b1355832fa8c30efc5e6bc9a6

C:\Users\Admin\Desktop\docker> docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
apart19/testing-app  latest         b6c08fb867f    48 minutes ago 93.7MB
apart19/test-app     latest         5cf64a7973a8   8 hours ago    92.8MB
<none>              <none>         a7821b5be2c4   8 hours ago    92.8MB
```

Docker image deletion command



The screenshot shows a VS Code editor with a Dockerfile and a terminal window. The Dockerfile contains the following content:

```
Dockerfile > ...
1 FROM python:3.8-alpine
2 COPY ./app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 CMD python hey.py
6
```

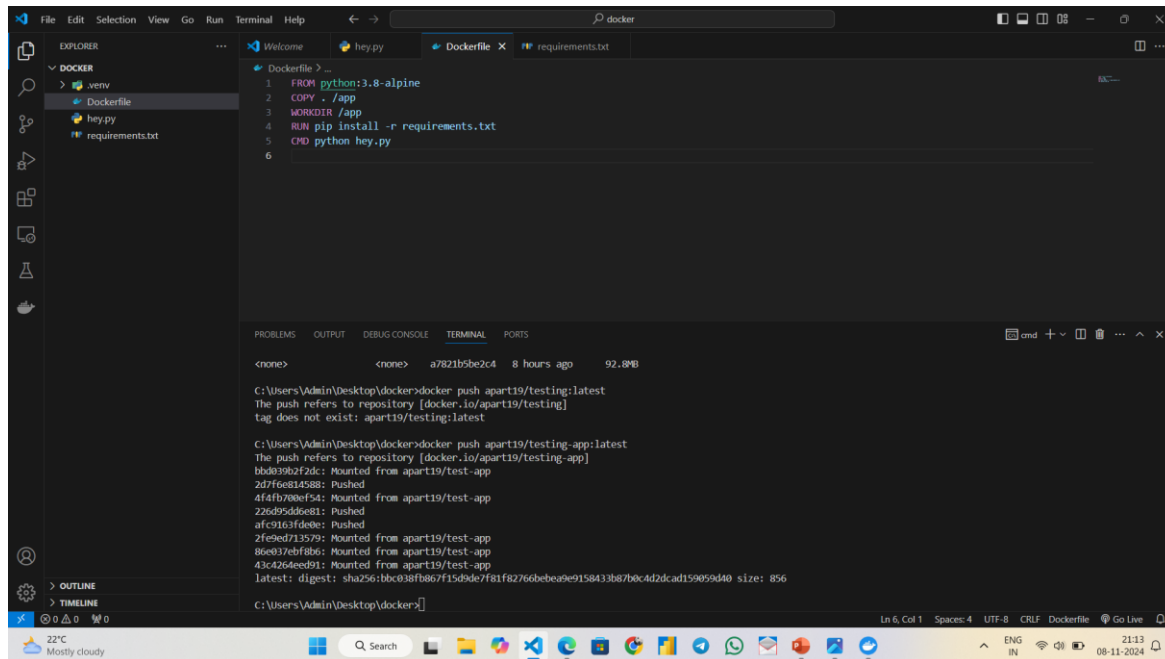
The terminal window shows the following commands and output:

```
C:\Users\Admin\Desktop\docker> docker tag apart19/hello-app apart19/hello20

C:\Users\Admin\Desktop\docker> docker tag apart19/hello20 apart19/hello20

C:\Users\Admin\Desktop\docker> docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
apart19/hello-app   latest         a0765e2d58de   52 minutes ago 93.7MB
apart19/testing-app  latest         b6c08fb867f    52 minutes ago 93.7MB
apart19/test-app     latest         5cf64a7973a8   8 hours ago    92.8MB
<none>              <none>         a7821b5be2c4   8 hours ago    92.8MB
```

Docker image name changing command



The image shows a Visual Studio Code editor window with a Dockerfile and a terminal. The Dockerfile contains the following content:

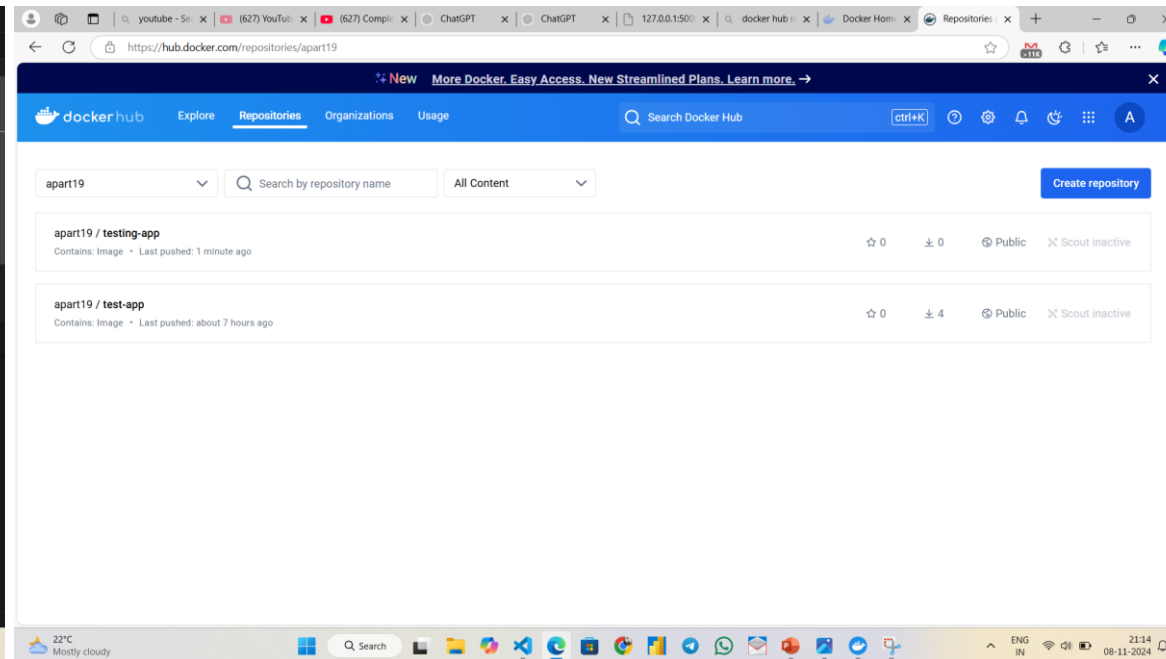
```
1 FROM python:3.8-alpine
2 COPY . /app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 CMD python hey.py
```

The terminal output shows the following commands and results:

```
C:\Users\Admin\Desktop\docker>docker push apart19/testing:latest
The push refers to repository [docker.io/apart19/testing]
tag does not exist: apart19/testing:latest

C:\Users\Admin\Desktop\docker>docker push apart19/testing:latest
The push refers to repository [docker.io/apart19/testing-app]
bbd09b2f2dc: Mounted from apart19/test-app
2d7f6e814588: Pushed
4fa1b700ef5d: Mounted from apart19/test-app
22e095d0e081: Pushed
afcc03cf8dee: Pushed
2fe9ed713579: Mounted from apart19/test-app
86e037ebf8b6: Mounted from apart19/test-app
43c426eed91: Mounted from apart19/test-app
latest: digest: sha256:bbc038fb867f15d9de7f81f82766bebea9e9158433b67b0c4d2dcad159059d40 size: 856

C:\Users\Admin\Desktop\docker>
```



# Docker image pushing to repository hub

