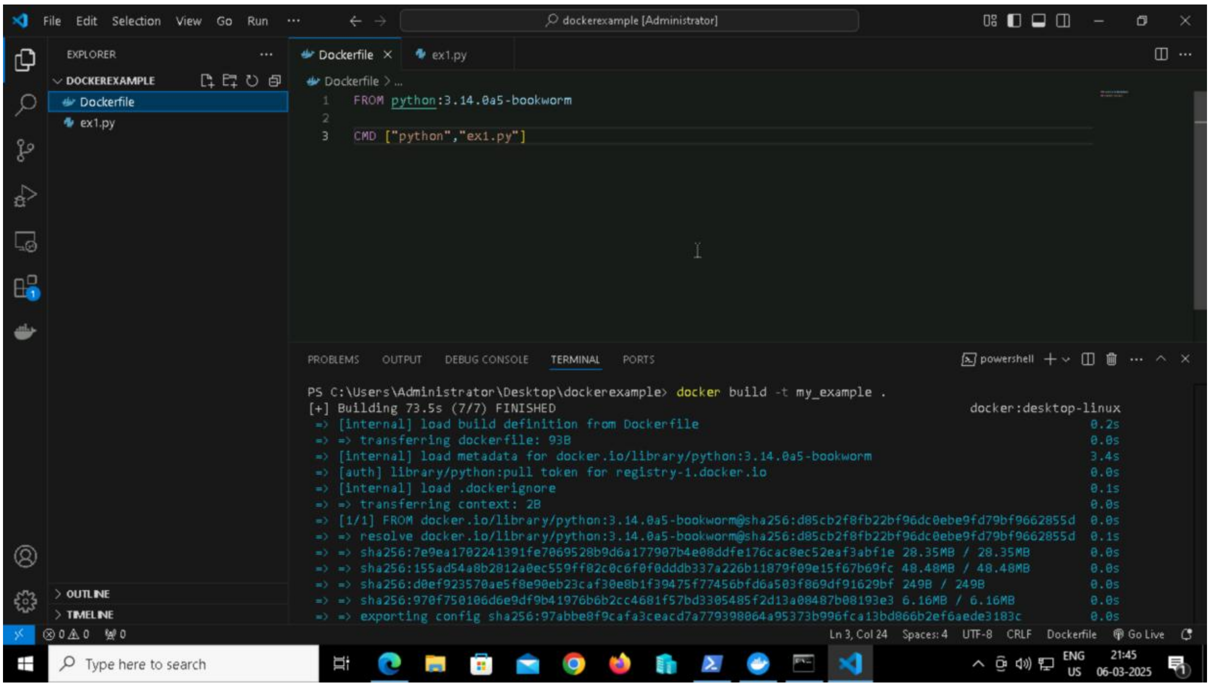
Docker assignment 1 & 2:

Q1.Deploy a Python Flask App Using Docker

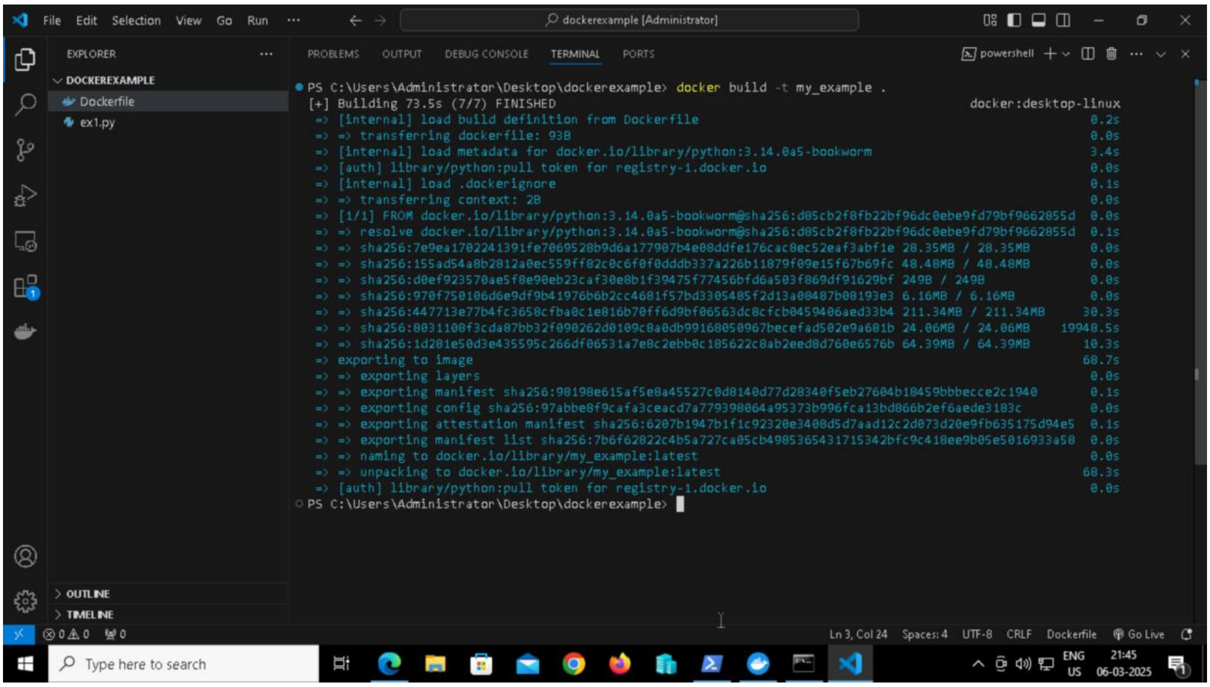


Dockerfile

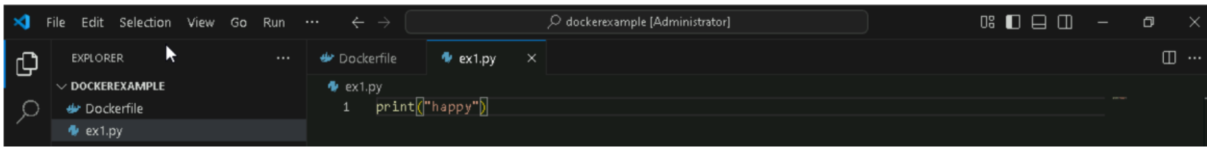
```
FROM python:3.14.0a5-bookworm

CMD ["python","ex1.py"]
```

```
PS C:\Users\Administrator\Desktop\dockerexample> docker build -t my_example .
[+] Building 73.5s (7/7) FINISHED                                                          docker:desktop-linux
 => [internal] load build definition from Dockerfile                                                      0.2s
 => => transferring dockerfile: 93B                                                                       0.0s
 => [internal] load metadata for docker.io/library/python:3.14.0a5-bookworm                               3.4s
 => [auth] library/python:pull token for registry-1.docker.io                                             0.0s
 => [internal] load .dockerignore                                                                         0.1s
 => => transferring context: 2B                                                                           0.0s
 => [1/1] FROM docker.io/library/python:3.14.0a5-bookworm@sha256:d85cb2f8fb22bf96dc0ebe9fd79bf9662855d  0.0s
 => => resolve docker.io/library/python:3.14.0a5-bookworm@sha256:d85cb2f8fb22bf96dc0ebe9fd79bf9662855d  0.1s
 => => sha256:7e9ea1702241391fe7069528b9d6a177907b4e08ddfe176cac8ec52eaf3abf1e 28.35MB / 28.35MB         0.0s
 => => sha256:155ad54a8b2812a0ec559ff82c0c6f0f0dddb337a226b11879f09e15f67b69fc 48.48MB / 48.48MB         0.0s
 => => sha256:d0ef923570ae5f8e90eb23caf30e8b1f39475f77456bfd6a503f869df91629bf 249B / 249B               0.0s
 => => sha256:970f750106d6e9df9b41976b6b2cc4681f57bd3305485f2d13a08487b08193e3 6.16MB / 6.16MB           0.0s
 => => exporting config sha256:97abbe8f9cafa3ceacd7a779398064a95373b996fca13bd866b2ef6aede3183c         0.0s
```



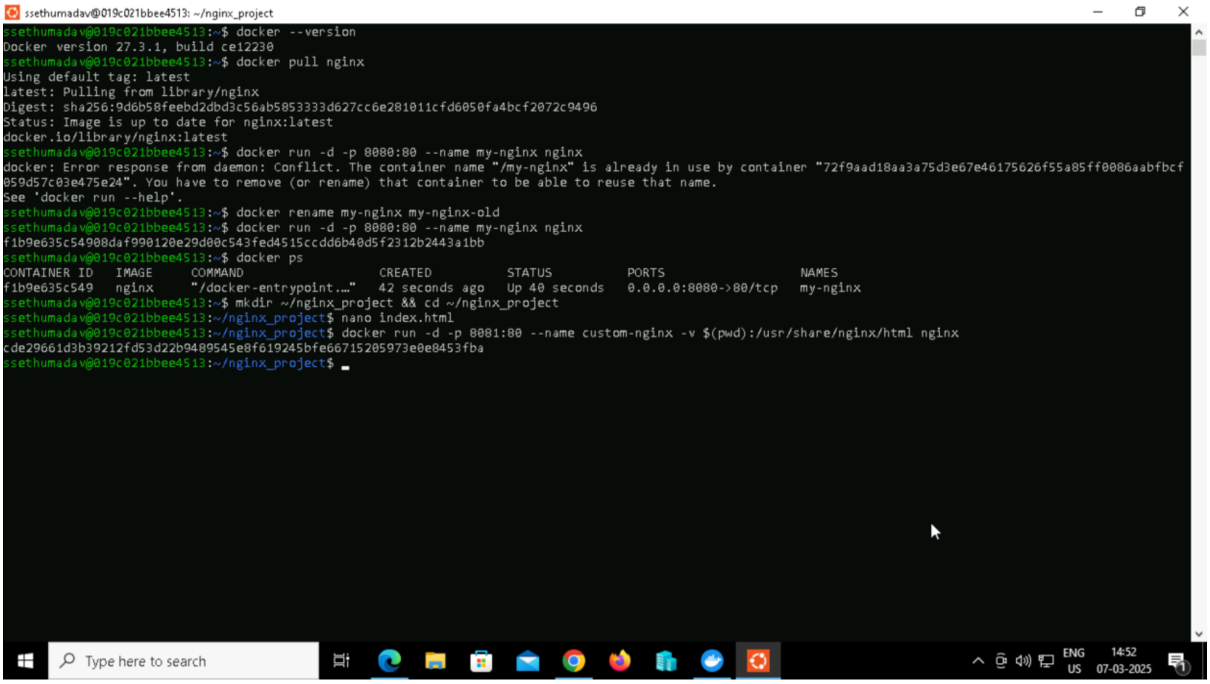
```
PS C:\Users\Administrator\Desktop\dockerexample> docker build -t my_example .
[+] Building 73.5s (7/7) FINISHED                                                          docker:desktop-linux
 => [internal] load build definition from Dockerfile                                                      0.2s
 => => transferring dockerfile: 93B                                                                       0.0s
 => [internal] load metadata for docker.io/library/python:3.14.0a5-bookworm                               3.4s
 => [auth] library/python:pull token for registry-1.docker.io                                             0.0s
 => [internal] load .dockerignore                                                                         0.1s
 => => transferring context: 2B                                                                           0.0s
 => [1/1] FROM docker.io/library/python:3.14.0a5-bookworm@sha256:d85cb2f8fb22bf96dc0ebe9fd79bf9662855d  0.0s
 => => resolve docker.io/library/python:3.14.0a5-bookworm@sha256:d85cb2f8fb22bf96dc0ebe9fd79bf9662855d  0.1s
 => => sha256:7e9ea1702241391fe7069528b9d6a177907b4e08ddfe176cac8ec52eaf3abf1e 28.35MB / 28.35MB         0.0s
 => => sha256:155ad54a8b2812a0ec559ff82c0c6f0f0dddb337a226b11879f09e15f67b69fc 48.48MB / 48.48MB         0.0s
 => => sha256:d0ef923570ae5f8e90eb23caf30e8b1f39475f77456bfd6a503f869df91629bf 249B / 249B               0.0s
 => => sha256:970f750106d6e9df9b41976b6b2cc4681f57bd3305485f2d13a08487b08193e3 6.16MB / 6.16MB           0.0s
 => => sha256:447713e77b4fc3658cfba0c1e816b70ff6d9bf06563dc8cfcb0459406aed33b4 211.34MB / 211.34MB      30.3s
 => => sha256:8031108f3cda87bb32f090262d0109c8a0db99168050967becefad502e9a681b 24.06MB / 24.06MB     19948.5s
 => => sha256:1d281e50d3e435595c266df06531a7e8c2ebb0c185622c8ab2eed8d760e6576b 64.39MB / 64.39MB        10.3s
 => exporting to image                                                                                   68.7s
 => => exporting layers                                                                                   0.0s
 => => exporting manifest sha256:98198e615af5e8a45527c0d8140d77d28340f5eb27604b18459bbbecce2c1940        0.1s
 => => exporting config sha256:97abbe8f9cafa3ceacd7a779398064a95373b996fca13bd866b2ef6aede3183c         0.0s
 => => exporting attestation manifest sha256:6207b1947b1f1c92320e3408d5d7aad12c2d073d20e9fb635175d94e5  0.1s
 => => exporting manifest list sha256:7b6f62822c4b5a727ca05cb4985365431715342bfc9c418ee9b05e5016933a58  0.0s
 => => naming to docker.io/library/my_example:latest                                                      0.0s
 => => unpacking to docker.io/library/my_example:latest                                                  68.3s
 => [auth] library/python:pull token for registry-1.docker.io                                             0.0s
PS C:\Users\Administrator\Desktop\dockerexample>
```



ex1.py

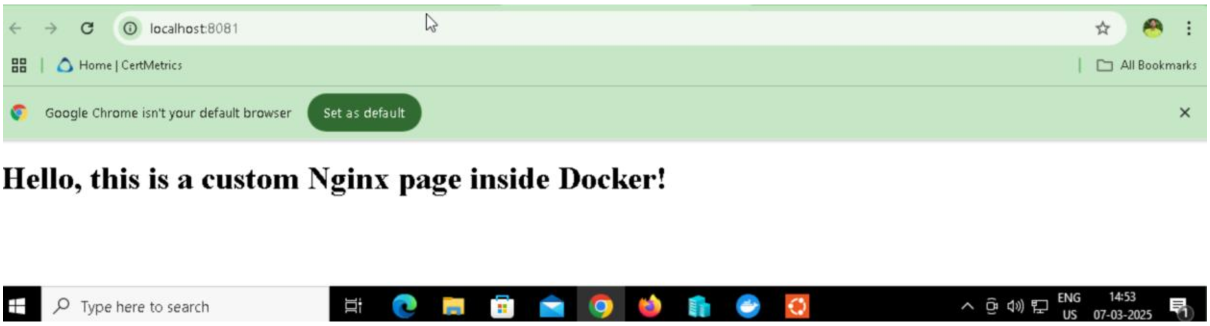
```
print("happy")
```

Q2.Deploy an Nginx Web Server With Docker

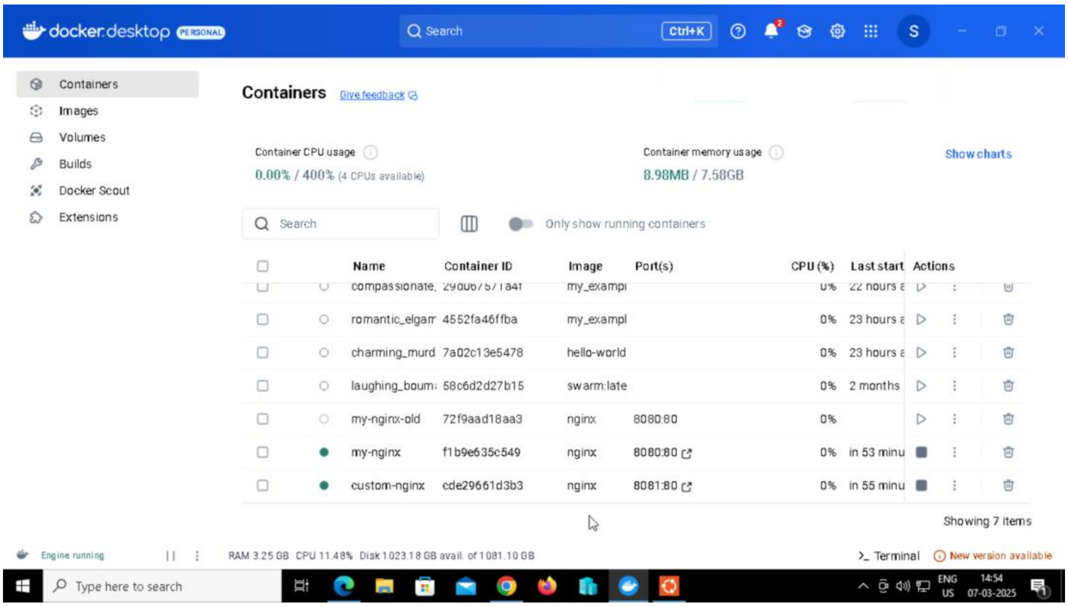


ssethumadav@019c021bbee4513: ~/nginx_project

```
ssethumadav@019c021bbee4513:~$ docker --version
Docker version 27.3.1, build ce12230
ssethumadav@019c021bbee4513:~$ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
Digest: sha256:9d6b58feebd2dbd3c56ab5853333d627cc6e281011cfd6050fa4bcf2072c9496
Status: Image is up to date for nginx:latest
docker.io/library/nginx:latest
ssethumadav@019c021bbee4513:~$ docker run -d -p 8080:80 --name my-nginx nginx
docker: Error response from daemon: Conflict. The container name "/my-nginx" is already in use by container "72f9aad18aa3a75d3e67e46175626f55a85ff0086aabfbcf
059d57c03e475e24". You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
ssethumadav@019c021bbee4513:~$ docker rename my-nginx my-nginx-old
ssethumadav@019c021bbee4513:~$ docker run -d -p 8080:80 --name my-nginx nginx
f1b9e635c54908daf990120e29d00c543fed4515ccdd6b40d5f2312b2443a1bb
ssethumadav@019c021bbee4513:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS                  NAMES
f1b9e635c549   nginx     "/docker-entrypoint.…"   42 seconds ago   Up 40 seconds   0.0.0.0:8080->80/tcp   my-nginx
ssethumadav@019c021bbee4513:~$ mkdir ~/nginx_project && cd ~/nginx_project
ssethumadav@019c021bbee4513:~/nginx_project$ nano index.html
ssethumadav@019c021bbee4513:~/nginx_project$ docker run -d -p 8081:80 --name custom-nginx -v $(pwd):/usr/share/nginx/html nginx
cde29661d3b39212fd53d22b9489545e8f619245bfe66715205973e0e8453fba
ssethumadav@019c021bbee4513:~/nginx_project$
```



Hello, this is a custom Nginx page inside Docker!



Containers Give feedback

Container CPU usage
0.00% / 400% (4 CPUs available)

Container memory usage
8.98MB / 7.58GB

Show charts

Search

Only show running containers

□		Name	Container ID	Image	Port(s)	CPU (%)	Last start	Actions
□	○	compassionate_	29d067571a4f	my_exampl		0%	22 hours a	▷ ⋮ 🗑
□	○	romantic_elgam	4552fa46ffba	my_exampl		0%	23 hours a	▷ ⋮ 🗑
□	○	charming_murd	7a02c13e5478	hello-world		0%	23 hours a	▷ ⋮ 🗑
□	○	laughing_boum	58c6d2d27b15	swarm:late		0%	2 months	▷ ⋮ 🗑
□	○	my-nginx-old	72f9aad18aa3	nginx	8080:80	0%		▷ ⋮ 🗑
□	●	my-nginx	f1b9e635c549	nginx	8080:80	0%	in 53 minu	■ ⋮ 🗑
□	●	custom-nginx	cde29661d3b3	nginx	8081:80	0%	in 55 minu	■ ⋮ 🗑

Showing 7 items

Engine running

RAM 3.25 GB CPU 11.48% Disk 1023.18 GB avail. of 1081.10 GB

>_ Terminal ⓘ New version available