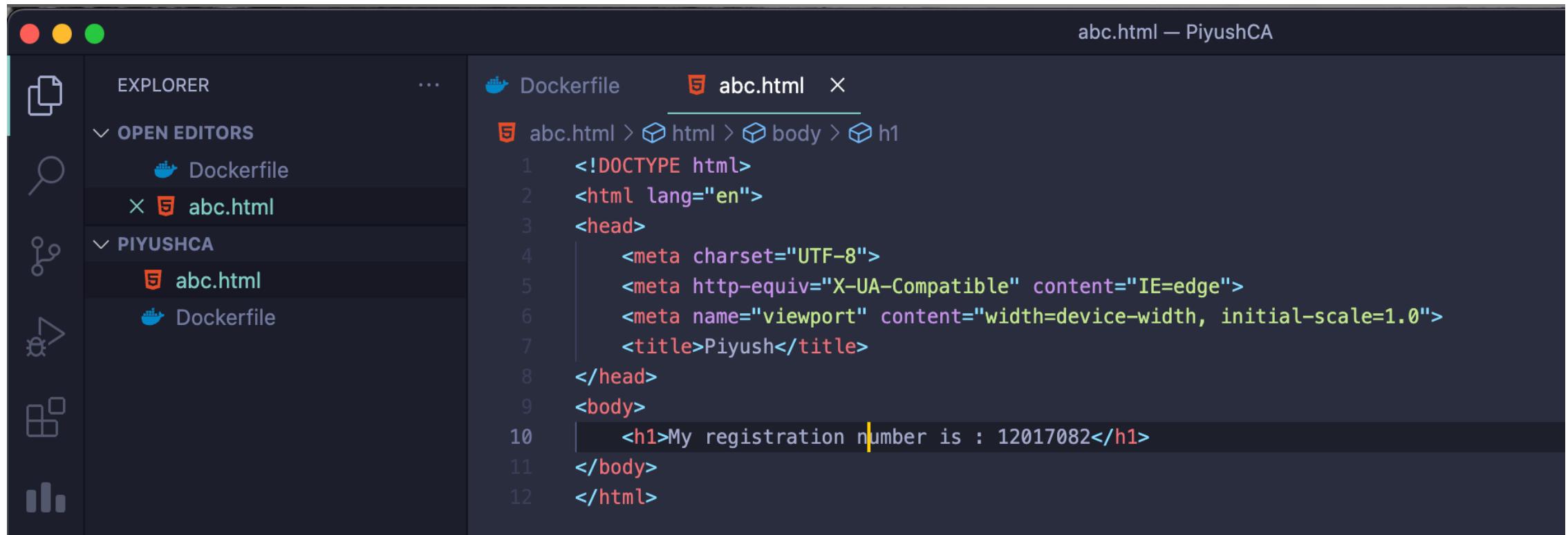


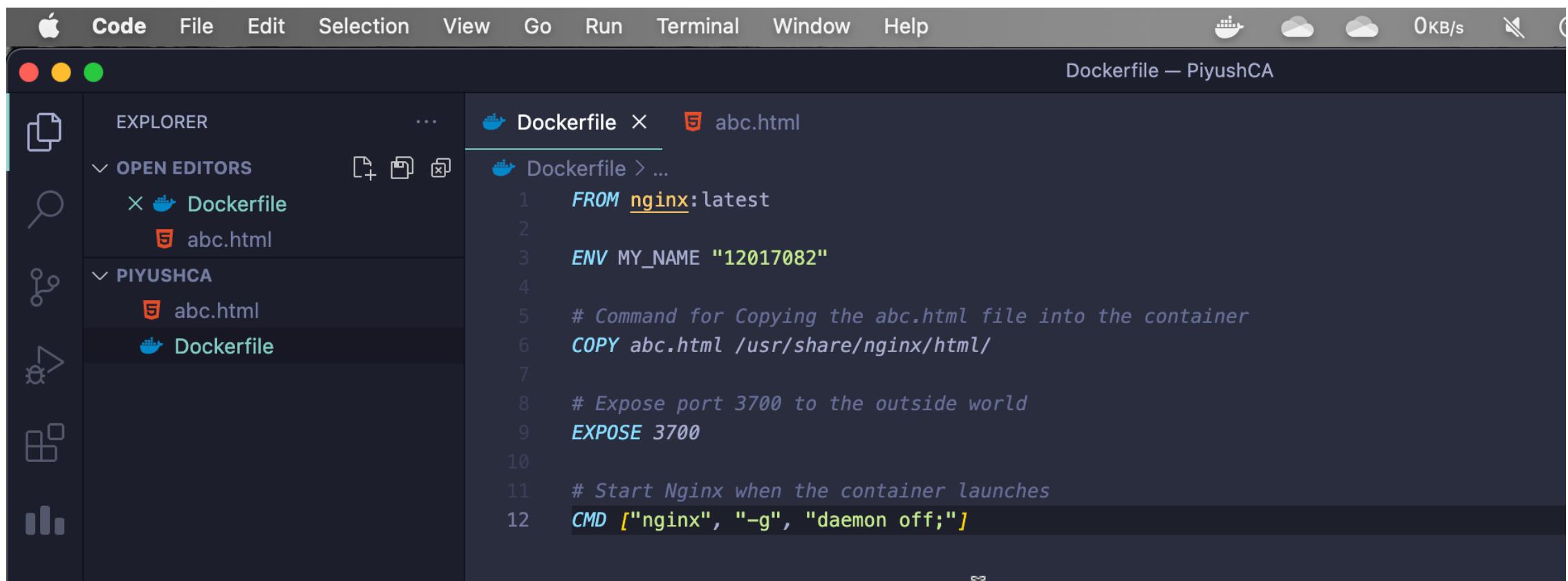
Q1. Create a docker file and host a webpage named abc.html displaying your reg no. Set the environment variable as your reg no in the container.



The screenshot shows the Visual Studio Code interface with a dark theme. The title bar reads "abc.html — PiyushCA". The left sidebar has icons for Explorer, Search, Problems, and others. The "OPEN EDITORS" section shows "Dockerfile" and "abc.html". The "PIYUSHCA" folder contains "abc.html" and "Dockerfile". The main editor area displays the "abc.html" file with the following code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1.0">
7     <title>Piyush</title>
8   </head>
9   <body>
10    <h1>My registration number is : 12017082</h1>
11  </body>
12 </html>
```

**Here Is the abc.html file which is used in Q1.
Here I wrote my Registration Number**



A screenshot of the Visual Studio Code (VS Code) interface. The top menu bar includes Apple logo, Code, File, Edit, Selection, View, Go, Run, Terminal, Window, and Help. The top right corner shows network status (0KB/s), battery level, and volume. The title bar says "Dockerfile — PiyushCA". The left sidebar has icons for Explorer, Open Editors, and a folder named "PIYUSHCA" containing "abc.html" and "Dockerfile". The main editor area shows a Dockerfile with the following content:

```
FROM nginx:latest
ENV MY_NAME "12017082"
# Command for Copying the abc.html file into the container
COPY abc.html /usr/share/nginx/html/
# Expose port 3700 to the outside world
EXPOSE 3700
# Start Nginx when the container launches
CMD ["nginx", "-g", "daemon off;"]
```

Here is the Dockerfile which I created with Env variable as my registration Number as per question

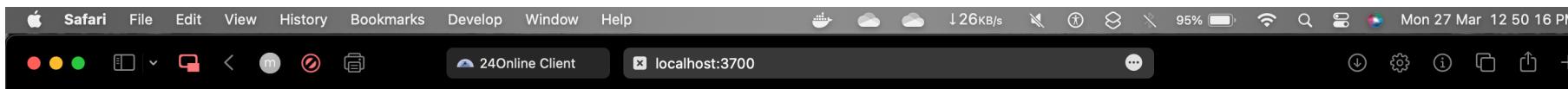
```
● PiyushCA — com.docker.cli ▾ docker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server — 120x32
...cker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server
~/Documents/PiyushCA — root@fed10649d7d2: /myvolume — com.docker.cli ▾ sudo + [ ]
```

```
See 'docker run --help'.
(base) piyushdubey@Piyush-MacBook-Air PiyushCA % docker build -t my-web-server .
[+] Building 0.1s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 37B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [internal] load build context
=> => transferring context: 30B
=> [1/2] FROM docker.io/library/nginx:latest
=> CACHED [2/2] COPY abc.html /usr/share/nginx/html/
=> exporting to image
=> => exporting layers
=> => writing image sha256:0f04e3145cbf2492567948be94c141d4a2eb9c2dda3ecbaf6964cc2eeb0940d9
=> => naming to docker.io/library/my-web-server
(base) piyushdubey@Piyush-MacBook-Air PiyushCA % docker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/03/27 06:53:08 [notice] 1#1: using the "epoll" event method
2023/03/27 06:53:08 [notice] 1#1: nginx/1.23.3
2023/03/27 06:53:08 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/03/27 06:53:08 [notice] 1#1: OS: Linux 5.15.49-linuxkit
2023/03/27 06:53:08 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/03/27 06:53:08 [notice] 1#1: start worker processes
```

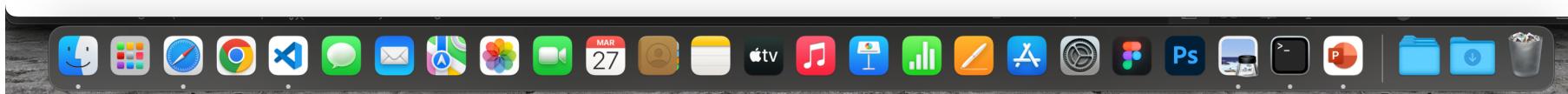
Here I ran command , docker build –t my-web-server, to build the Dockerfile I had in that location folder name PiyushCA

```
● ● ● PiyushCA — com.docker.cli ▾ docker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server — 120x32
...cker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server ~/Documents/PiyushCA — root@fed10649d7d2: /myvolume — com.docker.cli ▾ sudo +
=> [internal] load build context 0.0s
=> => transferring context: 30B 0.0s
=> [1/2] FROM docker.io/library/nginx:latest 0.0s
=> CACHED [2/2] COPY abc.html /usr/share/nginx/html/ 0.0s
=> exporting to image 0.0s
=> => exporting layers 0.0s
=> => writing image sha256:0f04e3145cbf2492567948be94c141d4a2eb9c2dda3ecbaf6964cc2eeb0940d9 0.0s
=> => naming to docker.io/library/my-web-server 0.0s
(base) piyushdubey@Piyush-MacBook-Air PiyushCA % docker run --name my-web-server -p 3700:3700 -e MY_NAME=12017082 my-web-server
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/03/27 06:53:08 [notice] 1#1: using the "epoll" event method
2023/03/27 06:53:08 [notice] 1#1: nginx/1.23.3
2023/03/27 06:53:08 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/03/27 06:53:08 [notice] 1#1: OS: Linux 5.15.49-linuxkit
2023/03/27 06:53:08 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/03/27 06:53:08 [notice] 1#1: start worker processes
2023/03/27 06:53:08 [notice] 1#1: start worker process 28
2023/03/27 06:53:08 [notice] 1#1: start worker process 29
2023/03/27 06:53:08 [notice] 1#1: start worker process 30
2023/03/27 06:53:08 [notice] 1#1: start worker process 31
2023/03/27 06:58:47 [notice] 1#1: signal 28 (SIGWINCH) received
2023/03/27 07:03:46 [notice] 1#1: signal 28 (SIGWINCH) received
2023/03/27 07:03:47 [notice] 1#1: signal 28 (SIGWINCH) received
```

Then I ran the command after building the docker file in last slide , docker run –name my-web-server –p 3700:3700 –e MY_NAME=12017082 my-web-server, and then check the localhost in browser for the output



My registration number is : 12017082



After Running It , the page opens when we open localhost:3700 as I mentioned port 3700



Q2. Create a mount volume and attach
the same with a containers. And
demonstrate the existence of volume
with files created in them

```
● ● ● piyushdubey — root@0737f215aae9: /data — com.docker.cli ▷ docker run -it --name my_container_2 -v my_volume:/data ubuntu — 120x32
```

```
Last login: Mon Mar 27 12:44:22 on ttys003
(base) piyushdubey@Piyush-MacBook-Air ~ % docker volume create data
data
(base) piyushdubey@Piyush-MacBook-Air ~ % sudo docker run -it --name my_container -v my_volume:/data ubuntu
[Password:
[root@706c1efae51f:/# ls
bin boot data dev etc home lib media mnt opt proc root run sbin srv sys tmp usr var
[root@706c1efae51f:/# touch /data/my_file.txt
[root@706c1efae51f:/# ls
bin boot data dev etc home lib media mnt opt proc root run sbin srv sys tmp usr var
[root@706c1efae51f:/# cd data
[root@706c1efae51f:/data# ls
my_file.txt
[root@706c1efae51f:/data# exit
exit
(base) piyushdubey@Piyush-MacBook-Air ~ % docker run -it --name my_container_2 -v my_volume:/data ubuntu
[root@0737f215aae9:/# ls
bin boot data dev etc home lib media mnt opt proc root run sbin srv sys tmp usr var
[root@0737f215aae9:/# cd data
[root@0737f215aae9:/data# ls
my_file.txt
root@0737f215aae9:/data# █
```

Here I have created a volume , then I have made. Container and mount the volume , it can be done using - - mount or -v ,if we use mount then we can specify bind or volume or other, finding it easy , I used -v , and created a file in data folder, then I exit from the container and again made A new container and went to check the same file is present or not , then I see that I have the same file present in the /data folder . Therefore fulfilling the requirements of Que 02