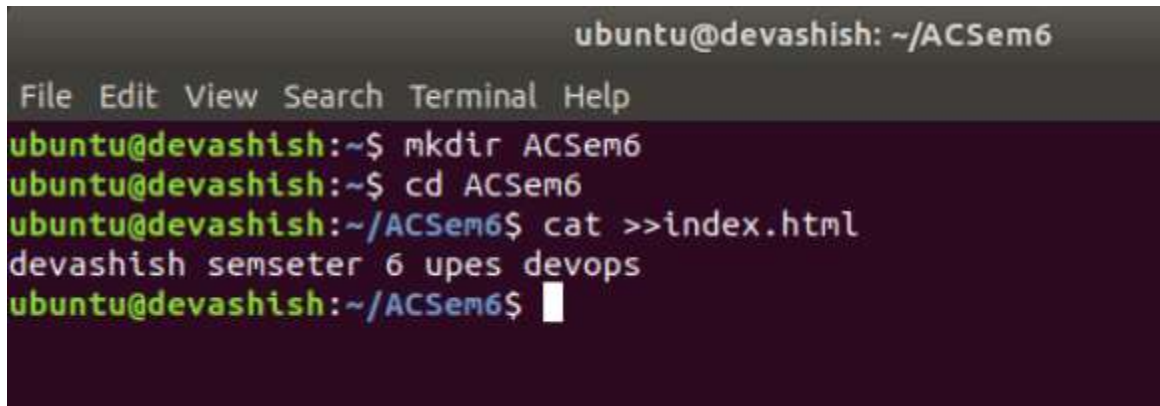


Experiment- 4 (Dockerfile)

Aim: Creating a docker image and pushing it into Docker hub

Step:1 Create a html file.

A terminal window with a dark background. The prompt is 'ubuntu@devashish: ~/ACSem6'. The menu bar shows 'File Edit View Search Terminal Help'. The user enters 'mkdir ACSem6', then 'cd ACSem6', and finally 'cat >>index.html'. The output of the last command is 'devashish semseter 6 upes devops'.

```
ubuntu@devashish: ~/ACSem6
File Edit View Search Terminal Help
ubuntu@devashish:~$ mkdir ACSem6
ubuntu@devashish:~$ cd ACSem6
ubuntu@devashish:~/ACSem6$ cat >>index.html
devashish semseter 6 upes devops
ubuntu@devashish:~/ACSem6$
```

Step:2 Create Dockerfile in that folder where we have index.html file with this content.

A text editor window titled 'Text Editor' with a dark theme. The menu bar includes 'Activities', 'Text Editor', and a dropdown arrow. On the right, it shows 'Wed 14:52' and 'Dockerfile ~/ACSem6'. The file content is a Dockerfile with the following instructions:

```
FROM ubuntu
RUN apt-get update
RUN apt-get install nginx -y
RUN echo "daemon off;" >> /etc/nginx/nginx.conf
COPY index.html /var/www/html/
EXPOSE 80
CMD ["nginx"]
```

Step: 3 Now, we will create image with the docker build command and the syntax of this will be :-

`docker build -t <usernameofdockerhub>/<image name> .`

```
ubuntu@devashish:~/ACSem6$ sudo docker build -t devashishchoudhary02/nginx .
Sending build context to Docker daemon 15.87kB
Step 1/7 : FROM ubuntu
--> f63181f19b2f
Step 2/7 : RUN apt-get update
--> Running in 6f42c9432c9a
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [109 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal InRelease [265 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [13.3 kB]
Get:6 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [612 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [664 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [165 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages
```

```
Step 3/7 : RUN apt-get install nginx -y
--> Running in dee992ab1f1b
Reading package lists...
Building dependency tree...
Reading state information...
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core iproute2 libatm1 libbsd0 libcap2
  libcap2-bin libelf1 libexpat1 libfontconfig1 libfreetype6 libgd3 libicu66
  libjbig0 libjpeg-turbo8 libjpeg8 libmnl0 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libpam-cap libpng16-16 libssl1.1 libtiff5 libwebp6 libx11-6 libx11-data
  libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 libxtables12
  nginx-common nginx-core tzdata ucf
Suggested packages:
  iproute2-doc libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core iproute2 libatm1 libbsd0 libcap2
  libcap2-bin libelf1 libexpat1 libfontconfig1 libfreetype6 libgd3 libicu66
  libjbig0 libjpeg-turbo8 libjpeg8 libmnl0 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
```

```

---> c8b6bb08de60
Step 4/7 : RUN echo "daemon off;" >> /etc/nginx/nginx.conf
---> Running in efedda87f66b
Removing intermediate container efedda87f66b
---> c71e8ec1bb6a
Step 5/7 : COPY index.html /var/www/html/
---> d78173c0644d
Step 6/7 : EXPOSE 80
---> Running in 38aeaf422b34
Removing intermediate container 38aeaf422b34
---> 2b358c7b1a7b
Step 7/7 : CMD ["nginx"]
---> Running in 2d774d283867
Removing intermediate container 2d774d283867
---> a546edd311f9
Successfully built a546edd311f9
Successfully tagged devashishchoudhary02/nginx:latest
ubuntu@devashish:~/ACSem6$

```

Step:4 Now, we will login to the docker hub

```

ubuntu@devashish:~$ sudo docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't
have a Docker ID, head over to https://hub.docker.com to create one.
Username: devashishchoudhary02
Password:
WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config
.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

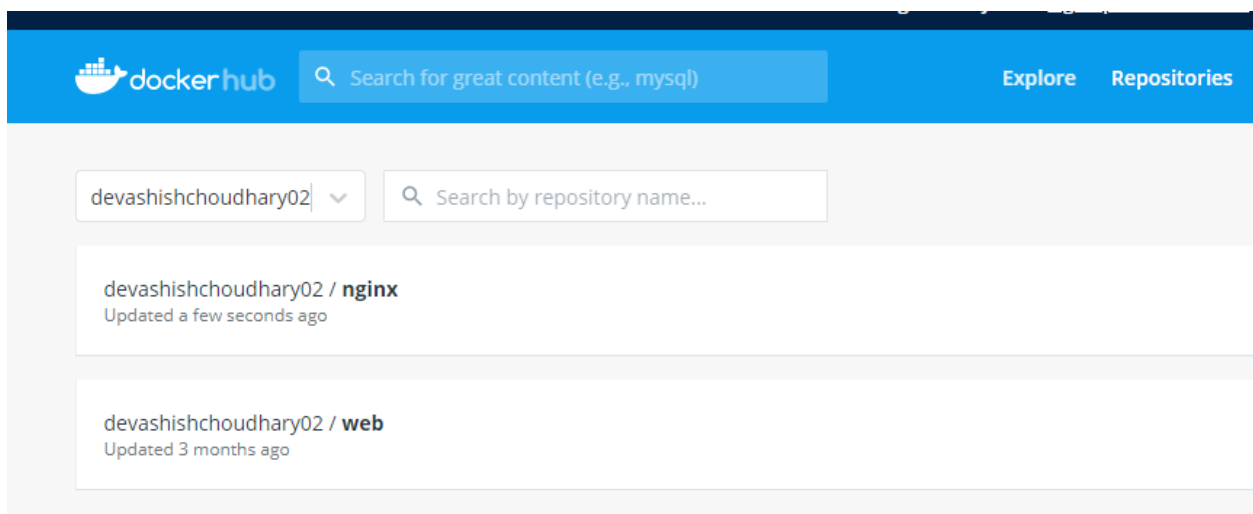
Login Succeeded
ubuntu@devashish:~$

```


Step:5 Created image will be pushed to docker hub with this command.

```
ubuntu@devashish:~$ sudo docker push devashishchoudhary02/nginx
Using default tag: latest
The push refers to repository [docker.io/devashishchoudhary02/nginx]
8eca12822f49: Pushed
563d0aee1016: Pushed
64ec085c5ec3: Pushed
a57c8e7c93f1: Pushed
```

The image can be seen in docker hub also:-



Step: 6 Now, we will remove image locally with the docker image rm <image name> command.

```
ubuntu@devashish:~$ sudo docker image rm devashishchoudhary02/nginx
Untagged: devashishchoudhary02/nginx:latest
Untagged: devashishchoudhary02/nginx@sha256:5b056e2c1de96e5fd3a7af91ba3d3608919ad87bd6c680cff044d8eb84b03f8a
Deleted: sha256:a546edd311f984b6f7ceb69ac772cd682a772196085827e877ed73fd3961cdde
Deleted: sha256:2b358c7b1a7b495eec42d6ff33123855d2b165100898670d6b8b2b59b8a17849
Deleted: sha256:d78173c0644df8336ac9c48ceffb7788315f7221ee6f24f723d173ac685079bc
Deleted: sha256:a1c6dc7e352e5a25dfe596e5899bfc48300daf47db1840c77bf84240ab57f5ac
Deleted: sha256:c71e8ec1bb6adf155691210c9fe0efa84e5eaed65abee787bdb20c8e83dfaab6
Deleted: sha256:83d33d62e15ae3a1be1a796226401183311a8c5544bae5c9516e3d8856e4cf6f
Deleted: sha256:c8b6bb08de60653ba76238feecf0f1ac590335442fc2ba02173d8da2a78f2e05
Deleted: sha256:4a349fe34652063358c6938eb30ac94d3c9e6e86d56873ec8a6f15943548478a
Deleted: sha256:87588f4109ca2785a52a3bcf263ca4d78dcbf181b57ddb0c87e607c7ba989340
Deleted: sha256:9fa4cca222ed3e4253d9f963242c2c24942f6c4c34505b1fd5aff2cb2c2cdee0
ubuntu@devashish:~$
```

Step:7 Pulling created image from docker hub and launching the container

```
ubuntu@devashish:~$ sudo docker run -dit -p 5000:80 --name mycon devashishchoudhary02/nginx
Unable to find image 'devashishchoudhary02/nginx:latest' locally
latest: Pulling from devashishchoudhary02/nginx
83ee3a23efb7: Already exists
db98fc6f11f0: Already exists
f611acd52c6c: Already exists
b2ae6d18862f: Pull complete
59844b5ddf33: Pull complete
2d7eadd6455c: Pull complete
d712224c6677: Pull complete
Digest: sha256:5b056e2c1de96e5fd3a7af91ba3d3608919ad87bd6c680cff044d8eb84b03f8a
Status: Downloaded newer image for devashishchoudhary02/nginx:latest
4e05061a9ee89362b2d7a41cbd355b5f306994514e54ad959350525291b45ed4
ubuntu@devashish:~$
```

Step:8 Now, finally we can see the content written in index.html file from the newly launched container at 5000 port.

```
ubuntu@devashish:~$ curl localhost:5000
devashish semseter 6 upes devops
ubuntu@devashish:~$
```