Docker

Assignment – 1

Task to be performed

1. Pull Ubuntu container
2. Run this container and map port 80 on the local
3. Install Apache2 on this container
4. Check if you are able to access the Apache page on your browser

Steps and Commands

- Update the machine by running the command **sudo apt update**
- Next Install Docker by running command **sudo apt install docker.io –y**
- To pull the Ubuntu by running the command **sudo docker pull Ubuntu**
- To see the Docker images by running the command **sudo docker images**
- To run the container and map the port my y running the command **sudo docker run –itd –p 80:80 ubuntu**
- To see the container by running the command **sudo docker ps**
- To change as rootuser by running **command sudo docker exec –it container ID bash**
- Next to update by running the command **apt update**
- To install Apache2 by running the command **apt install apache2 –y**
- To start Apache2 service by running the command **service apache2 start**
- To see the status of apache2 service by running the command **service apache2 status**
- To see the Apache2 page on browser put the **(public IP address)** of instance in the Brower the Apache2 page will be reflected.

```
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-31-91:~$ sudo apt update
```



```
ubuntu@ip-172-31-31-91:~$ sudo apt install docker.io -y
```



```
ubuntu@ip-172-31-31-91:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~22.04.1
ubuntu@ip-172-31-31-91:~$
```

```
ubuntu@ip-172-31-31-91:~$ sudo docker pull ubuntu
```



```
ubuntu@ip-172-31-31-91:~$ sudo docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
fdcaa7e87498: Pull complete
Digest: sha256:562456a05a0dbd62a671c1854868862a4687bf979a96d48ae8e766642cd911e8
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
ubuntu@ip-172-31-31-91:~$ sudo docker images
REPOSITORY   TAG       IMAGE ID       CREATED      SIZE
ubuntu       latest    de52d803b224   5 days ago   76.2MB
ubuntu@ip-172-31-31-91:~$
```



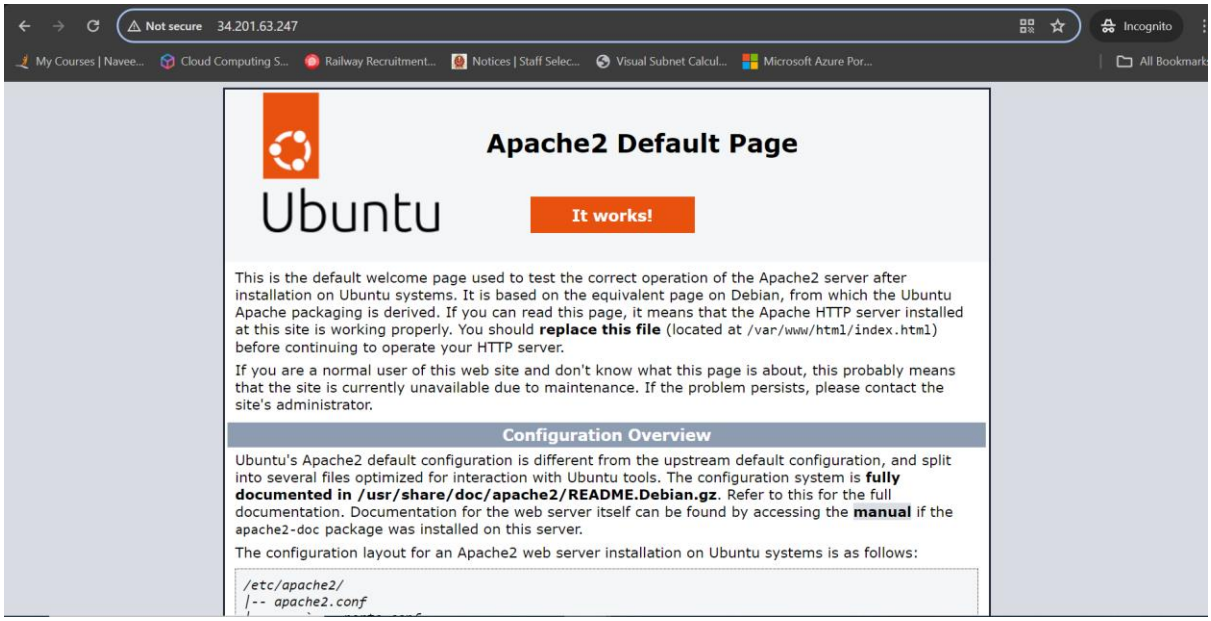
```
ubuntu@ip-172-31-31-91:~$ sudo docker run -itd -p 80:80 ubuntu
74e38cf0301c4f4d8971622f86c6807b66491dd75db3b55ef9014ad7a674e9eb
ubuntu@ip-172-31-31-91:~$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND       CREATED          STATUS          PORTS                                   NAMES
74e38cf0301c   ubuntu    "/bin/bash"   15 seconds ago   Up 14 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp   musing_mayer
ubuntu@ip-172-31-31-91:~$
```

```
ubuntu@ip-172-31-31-91:~$ sudo docker exec -it 74e38cf0301c bash
root@74e38cf0301c:/# apt update
```


```
root@74e38cf0301c:/# apt update
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [90.7 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [89.7 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [90.8 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [331 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [19.3 MB]
Get:7 http://archive.ubuntu.com/ubuntu noble/main amd64 Packages [1808 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble/restricted amd64 Packages [117 kB]
Fetched 22.1 MB in 3s (7137 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
root@74e38cf0301c:/# apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adduser apache2-bin apache2-data apache2-utils ca-certificates krb5-locales libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libaprutil1t64 libbrotli1 libcurl4t64 libdb5.3t64 libexpat1 libgdbm-compat4t64 libgdbm6t64 libgssapi-krb5-2 libicu74 libjansson4
  libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 libldap-common libldap2 liblua5.4-0 libnghttp2-14 libperl5.38t64 libpsl5t64 librtmp1
  libsasl2-2 libsasl2-modules libsasl2-modules-db libsqlite3-0 libssh-4 libxml2 media-types netbase openssl perl perl-modules-5.38
  publicsuffix ssl-cert
Suggested packages:
```


```
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
Processing triggers for libc-bin (2.39-0ubuntu8) ...
Processing triggers for ca-certificates (20240203) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
root@74e38cf0301c:/# service apache2 start
```

```
Enabling conf serve-cgi-bin.
Enabling site 000-default.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
Processing triggers for libc-bin (2.39-0ubuntu8) ...
Processing triggers for ca-certificates (20240203) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
root@74e38cf0301c:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive glo
bally to suppress this message
 *
root@74e38cf0301c:/# service apache2 status
 * apache2 is running
root@74e38cf0301c:/#
```

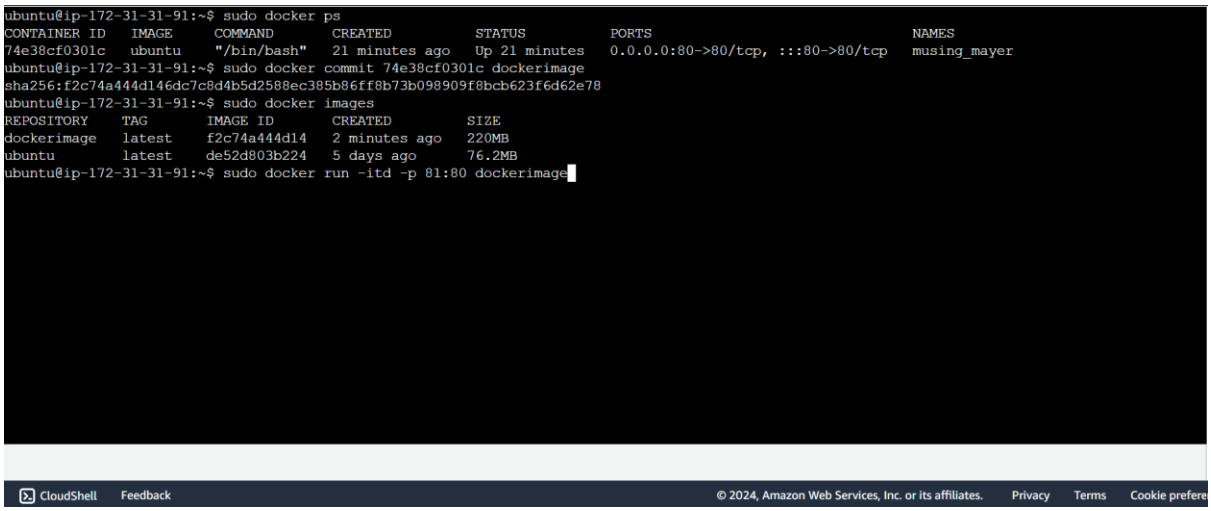
Assignment – 2

Task to be performed

1. Save the image created in assignment 1 as a Docker image
2. Launch container from this new image and map the port to 81
3. Go inside the container and start the Apache2 service
4. Check if you are able to access it on the browser

Steps and Commands

- To save the image from previous container which was created in assignment 1 by running the **command sudo docker container ID dockerimage**
- To see the Docker images by running the command **sudo docker images**
- To run the container and map the port my y running the command **sudo docker run –itd –p 81:80 dockerimage**
- To see the container by running the command **sudo docker ps**
- To change as rootuser by running **command sudo docker exec –it container ID bash**
- To start Apache2 service by running the command **service apache2 start**
- To see the status of apache2 service by running the command **service apache2 status**
- To see the Apache2 page on browser put the **(public IP address:81)** of instance name in the Brower the Apache2 page will be reflected.



```
ubuntu@ip-172-31-31-91:~$ sudo docker ps
CONTAINER ID   IMAGE         COMMAND       CREATED          STATUS          PORTS                                   NAMES
fc3c798ac405   dockerimage   "/bin/bash"   5 minutes ago    Up 5 minutes    0.0.0.0:81->80/tcp, :::81->80/tcp       jovial_shamir
74e38cf0301c   ubuntu        "/bin/bash"   39 minutes ago   Up 39 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp       musing_mayer
ubuntu@ip-172-31-31-91:~$ sudo docker exec -it fc3c798ac405 bash
root@fc3c798ac405:/# apache2 -version
Server version: Apache/2.4.58 (Ubuntu)
Server built:   2024-04-07T07:02:29
root@fc3c798ac405:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.3. Set the 'ServerName' directive glo
bally to suppress this message
 *
root@fc3c798ac405:/# service apache2 status
 * apache2 is running
root@fc3c798ac405:/#
```

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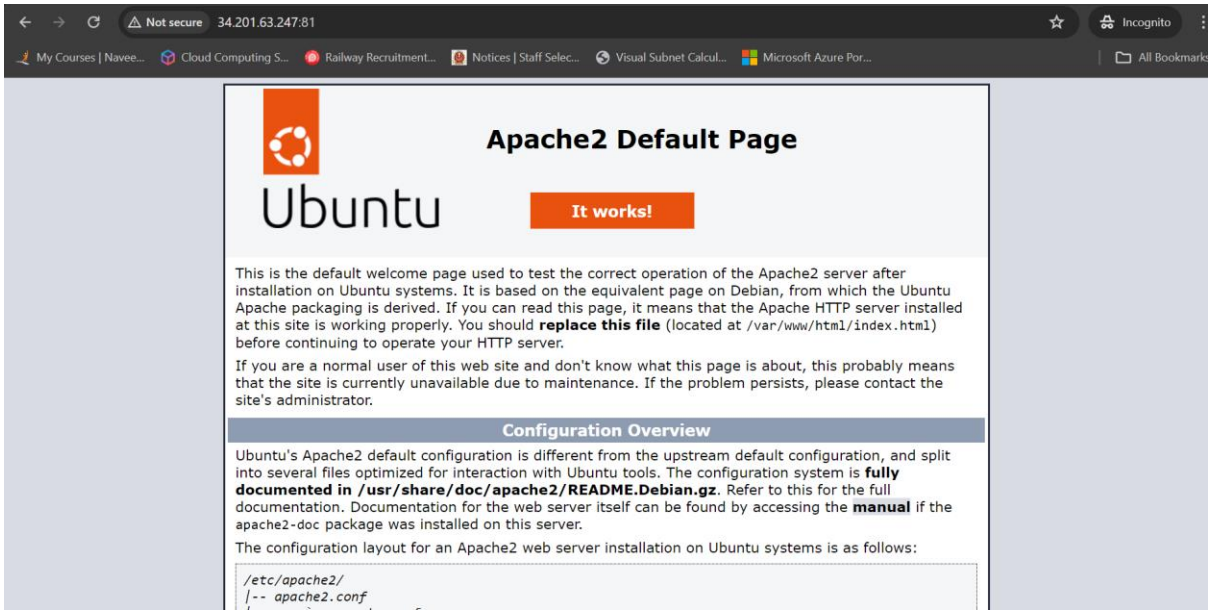


Assignment – 3

Task to be performed

1. Use the saved image in the previous assignment
2. Upload this image on Docker Hub
3. On a separate machine pull this Docker hub image and launch it on port 80
4. Start the Apache2 service
5. Verify if you are able to see the Apache2 service

Steps and Commands

- To login into the dockerhub account in our instance by running the command **sudo docker login**
- And provide the username and password of the dockerhub account
- Next to tag the name of image which was which was created in assignment 2 by running the command **sudo docker tag dockerimage (username of dockerhub/provide the name for upload image)**
- To upload the image in dockerhub by running the command **sudo docker push (name of the upload image)**
- The image which was pushed will be reflected in the dockerhub account
- Connect to the separate New Instance
- Update the machine by running the command **sudo apt update**
- Next Install Docker by running command **sudo apt install docker.io –y**
- To pull the image from the dockerhub by running the command **sudo docker pull** (name of the upload image) (The image is pulled without login into the dockerhub because it was pushed as public repository by default)
- To see the Docker images by running the command **sudo docker images**
- To run the container and map the port my y running the command **sudo docker run –itd –p 80:80** (name of the pulled image from dockerhub)
- To see the container by running the command **sudo docker ps**
- To change as rootuser by running **command sudo docker exec –it container ID bash**
- To start Apache2 service by running the command **service apache2 start**
- To see the status of apache2 service by running the command **service apache2 status**
- To see the Apache2 page on browser put the **(public IP address)** of new instance in the Brower the Apache2 page will be reflected.

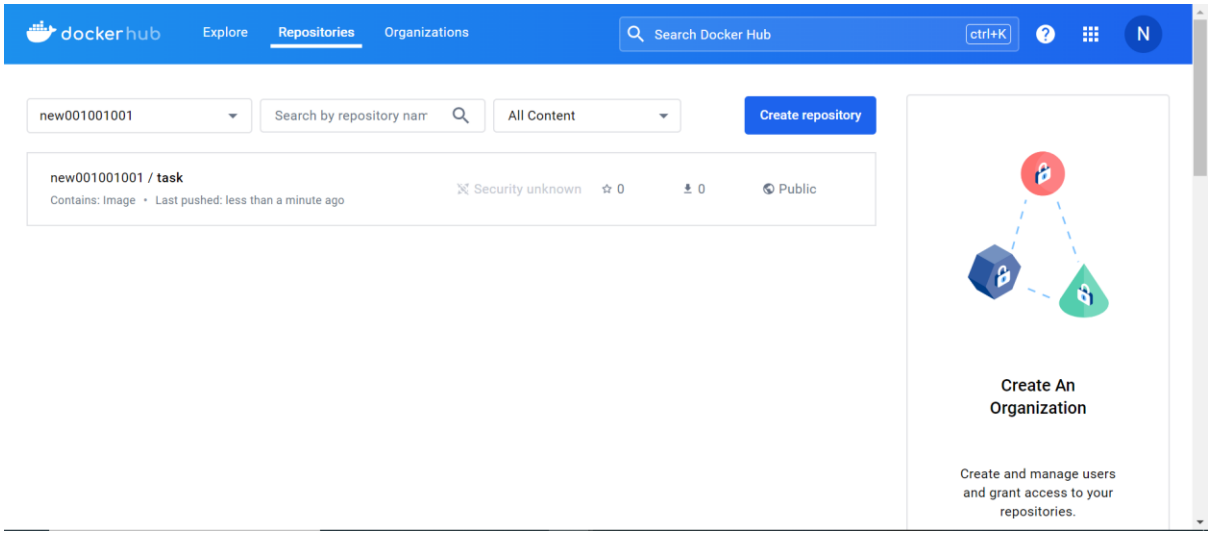
```
ubuntu@ip-172-31-31-91:~$ sudo docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com to crea
te one.
Username: new001001001
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-31-91:~$
```

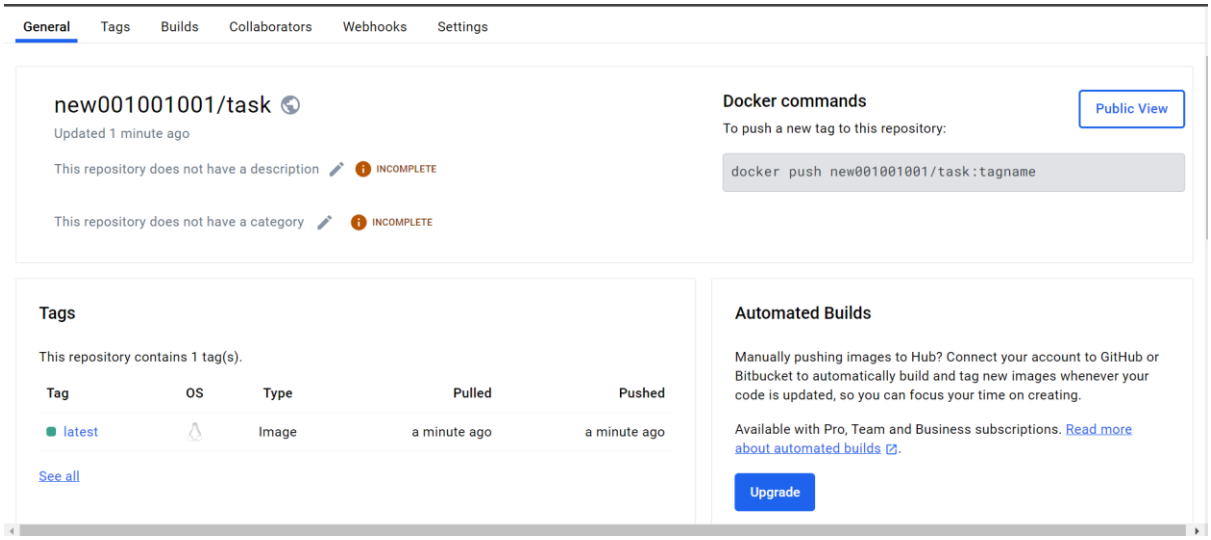


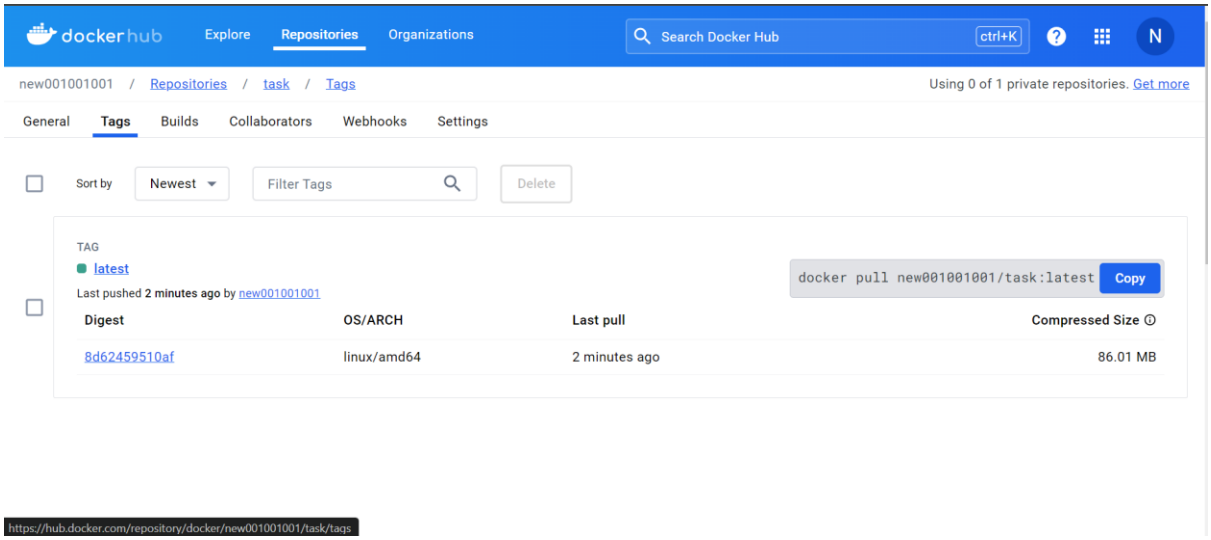
```
ubuntu@ip-172-31-31-91:~$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED          SIZE
dockerimage   latest    f2c74a444d14   45 minutes ago   220MB
ubuntu        latest    de52d803b224   5 days ago       76.2MB
ubuntu@ip-172-31-31-91:~$ sudo docker tag dockerimage new001001001/task
ubuntu@ip-172-31-31-91:~$ sudo docker images
REPOSITORY          TAG       IMAGE ID       CREATED          SIZE
dockerimage         latest    f2c74a444d14   48 minutes ago   220MB
new001001001/task   latest    f2c74a444d14   48 minutes ago   220MB
ubuntu              latest    de52d803b224   5 days ago       76.2MB
ubuntu@ip-172-31-31-91:~$ sudo docker push new001001001/task
```



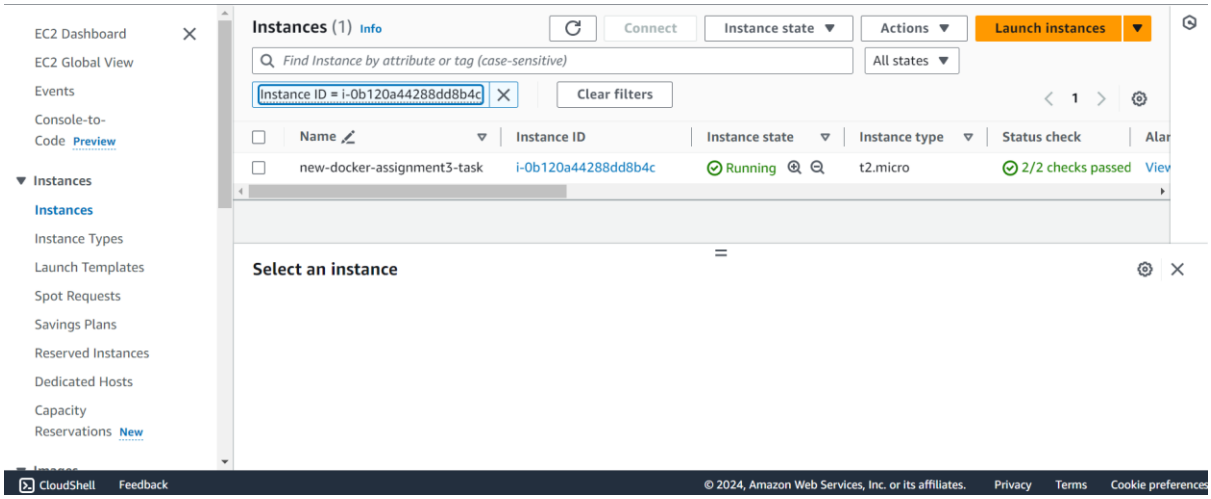
```
ubuntu@ip-172-31-31-91:~$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED          SIZE
dockerimage   latest    f2c74a444d14   45 minutes ago   220MB
ubuntu        latest    de52d803b224   5 days ago       76.2MB
ubuntu@ip-172-31-31-91:~$ sudo docker tag dockerimage new001001001/task
ubuntu@ip-172-31-31-91:~$ sudo docker images
REPOSITORY          TAG       IMAGE ID       CREATED          SIZE
dockerimage         latest    f2c74a444d14   48 minutes ago   220MB
new001001001/task   latest    f2c74a444d14   48 minutes ago   220MB
ubuntu              latest    de52d803b224   5 days ago       76.2MB
ubuntu@ip-172-31-31-91:~$ sudo docker push new001001001/task
Using default tag: latest
The push refers to repository [docker.io/new001001001/task]
b44505a52d6b: Pushed
3e1ed584ae0e: Mounted from library/ubuntu
latest: digest: sha256:8d62459510af1d6923b1cb12ed906db99408a68e0fc1ae7c3c8d0353552d9c7e size: 741
ubuntu@ip-172-31-31-91:~$
```







https://hub.docker.com/repository/docker/new001001001/task/tags


EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations New
Instances (1) Info
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Instance ID = i-0b120a44288dd8b4c
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
new-docker-assignment3-task
i-0b120a44288dd8b4c
Running
t2.micro
2/2 checks passed
Select an instance
CloudShell
Feedback
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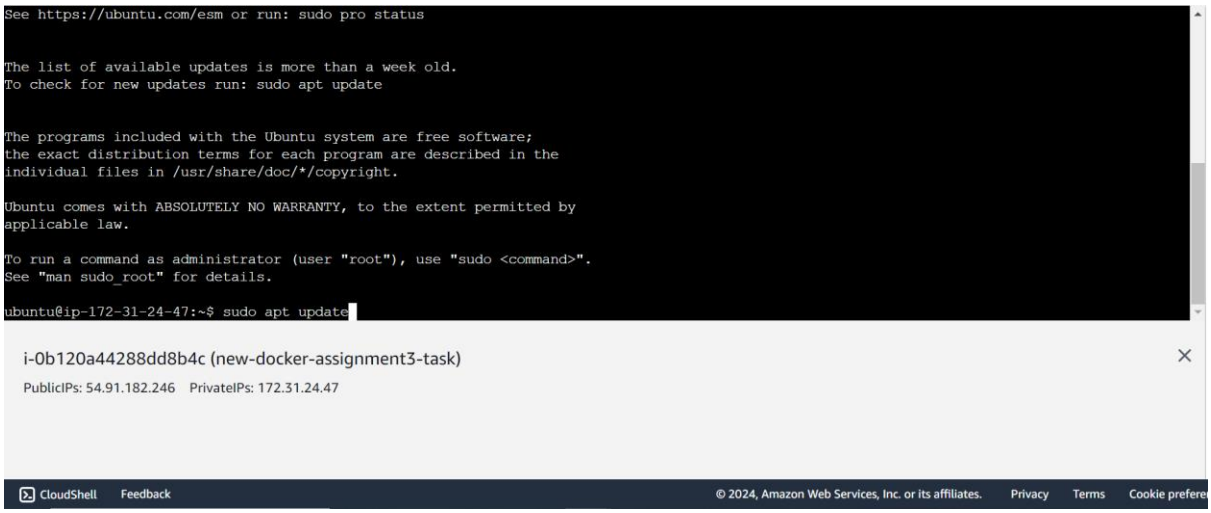
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-24-47:~$ sudo apt update
i-0b120a44288dd8b4c (new-docker-assignment3-task)
PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47
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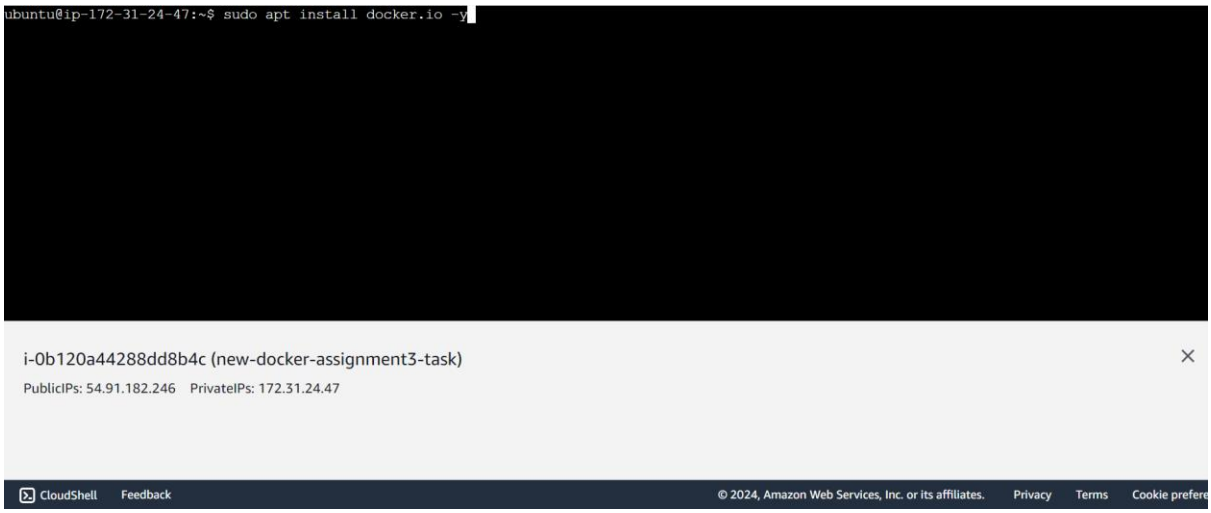
ubuntu@ip-172-31-24-47:~$ sudo apt install docker.io -y
i-0b120a44288dd8b4c (new-docker-assignment3-task)
PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47
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ubuntu@ip-172-31-24-47:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~22.04.1
ubuntu@ip-172-31-24-47:~$
i-0b120a44288dd8b4c (new-docker-assignment3-task)
PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47
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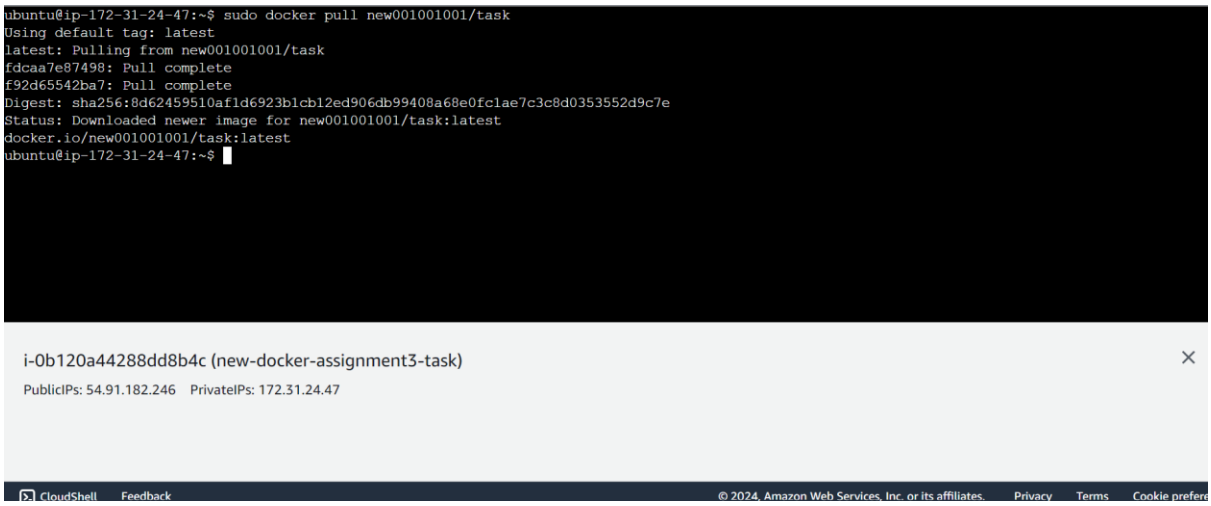
ubuntu@ip-172-31-24-47:~$ sudo docker pull new001001001/task
Using default tag: latest
latest: Pulling from new001001001/task
fdcaa7e87498: Pull complete
f92d65542ba7: Pull complete
Digest: sha256:8d62459510af1d6923b1cb12ed906db99408a68e0fc1ae7c3c8d0353552d9c7e
Status: Downloaded newer image for new001001001/task:latest
docker.io/new001001001/task:latest
ubuntu@ip-172-31-24-47:~$
i-0b120a44288dd8b4c (new-docker-assignment3-task)
PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47
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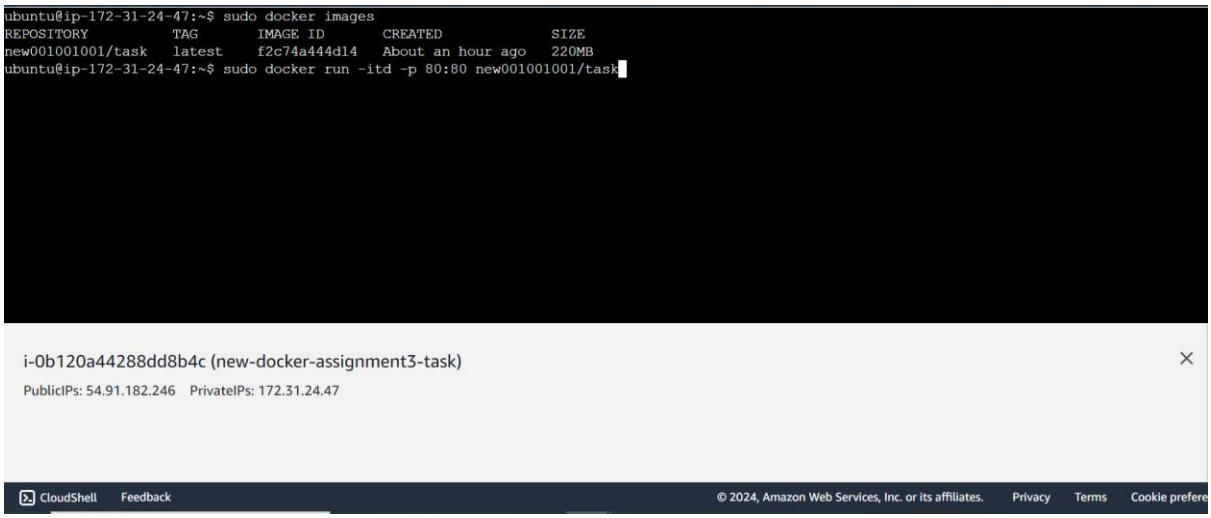
ubuntu@ip-172-31-24-47:~$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
new001001001/task latest f2c74a444d14 About an hour ago 220MB
ubuntu@ip-172-31-24-47:~$ sudo docker run -itd -p 80:80 new001001001/task
i-0b120a44288dd8b4c (new-docker-assignment3-task)
PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47
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```
ubuntu@ip-172-31-24-47:~$ sudo docker images
REPOSITORY          TAG       IMAGE ID       CREATED             SIZE
new001001001/task   latest    f2c74a444d14   About an hour ago   220MB
ubuntu@ip-172-31-24-47:~$ sudo docker run -itd -p 80:80 new001001001/task
b9495956a253bfa196978def5bc7e5bc837937a0b975721ba856b0743f0c07fa
ubuntu@ip-172-31-24-47:~$ sudo docker ps
CONTAINER ID   IMAGE                COMMAND       CREATED          STATUS          PORTS                                   NAMES
b9495956a253   new001001001/task    "/bin/bash"   13 seconds ago   Up 12 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp   gifted_williams
ubuntu@ip-172-31-24-47:~$
```

i-0b120a44288dd8b4c (new-docker-assignment3-task)

PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47


```
ubuntu@ip-172-31-24-47:~$ sudo docker images
REPOSITORY          TAG       IMAGE ID       CREATED             SIZE
new001001001/task   latest    f2c74a444d14   About an hour ago   220MB
ubuntu@ip-172-31-24-47:~$ sudo docker run -itd -p 80:80 new001001001/task
b9495956a253bfa196978def5bc7e5bc837937a0b975721ba856b0743f0c07fa
ubuntu@ip-172-31-24-47:~$ sudo docker ps
CONTAINER ID   IMAGE                COMMAND       CREATED          STATUS          PORTS                                   NAMES
b9495956a253   new001001001/task    "/bin/bash"   13 seconds ago   Up 12 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp   gifted_williams
ubuntu@ip-172-31-24-47:~$ sudo docker exec -it b9495956a253 bash
root@b9495956a253:/# apache2 -version
Server version: Apache/2.4.58 (Ubuntu)
Server built:   2024-04-07T07:02:29
root@b9495956a253:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive glo
bally to suppress this message
 *
root@b9495956a253:/#
```

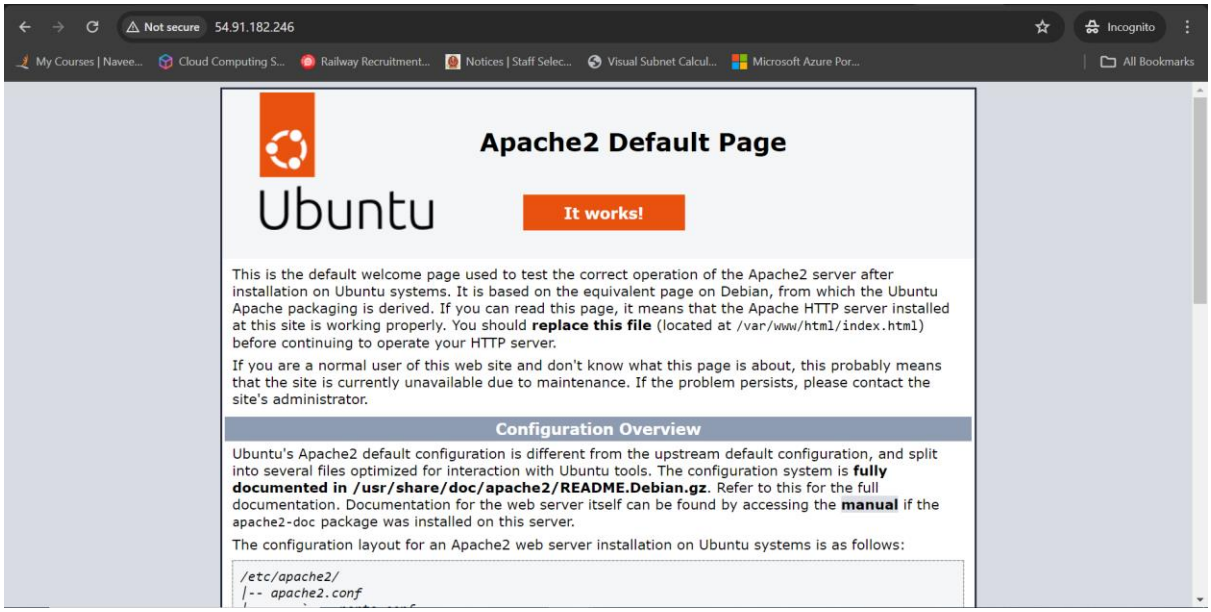
i-0b120a44288dd8b4c (new-docker-assignment3-task)

PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47


```
new001001001/task   latest    f2c74a444d14   About an hour ago   220MB
ubuntu@ip-172-31-24-47:~$ sudo docker run -itd -p 80:80 new001001001/task
b9495956a253bfa196978def5bc7e5bc837937a0b975721ba856b0743f0c07fa
ubuntu@ip-172-31-24-47:~$ sudo docker ps
CONTAINER ID   IMAGE                COMMAND       CREATED          STATUS          PORTS                                   NAMES
b9495956a253   new001001001/task    "/bin/bash"   13 seconds ago   Up 12 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp   gifted_williams
ubuntu@ip-172-31-24-47:~$ sudo docker exec -it b9495956a253 bash
root@b9495956a253:/# apache2 -version
Server version: Apache/2.4.58 (Ubuntu)
Server built:   2024-04-07T07:02:29
root@b9495956a253:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive glo
bally to suppress this message
 *
root@b9495956a253:/# service apache2 status
 * apache2 is running
root@b9495956a253:/#
```

i-0b120a44288dd8b4c (new-docker-assignment3-task)

PublicIPs: 54.91.182.246 PrivateIPs: 172.31.24.47


Not secure
54.91.182.246
Incognito
My Courses | Navee...
Cloud Computing S...
Railway Recruitment...
Notices | Staff Selec...
Visual Subnet Calcul...
Microsoft Azure Por...
All Bookmarks
Apache2 Default Page
Ubuntu
It works!
This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html) before continuing to operate your HTTP server.
If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.
Configuration Overview
Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the manual if the apache2-doc package was installed on this server.
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:
/etc/apache2/
|-- apache2.conf

Assignment – 4

Task to be performed

1. Create a Docker file with the following specs:
    - Ubuntu container
    - Apache2 installed
    - Apache2 should automatically run once the container starts
2. Submit the Docker file for assignment completion

Steps and Commands

- To create Docker file by running the command **sudo nano dockerfile**
- Provide the necessary script in dockerfile

```
FROM ubuntu
RUN apt update
RUN apt install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
```

- Save and exit from the dockerfile
- To see the created dockerfile by running the command **ls**
- To create the image from the dockefile by running the command **sudo docker build . –t (provide the name for creating image)**
- To see the Docker images by running the command **sudo docker images**
- To run the container and map the port my y running the command **sudo docker run –itd –p (provide the necessary port:80) (provide the name of created image)**
- To see the Apache2 page on browser put the (**public IP address:provide the port which was mapped during the creation of the container)** of instance in the Brower the Apache2 page will be reflected (The Apache2 page will be Automatically reflected in browser with help of ENTYPOINT mentioned in dockerfile)

```
ubuntu@ip-172-31-31-91:~$ sudo nano dockerfile
```


```
  GNU nano 6.2                                    dockerfile *
FROM ubuntu
RUN apt update
RUN apt install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
```

```
^G Help        ^O Write Out   ^W Where Is    ^K Cut         ^T Execute     ^C Location    M-U Undo       M-A Set Mark   M-] To Bracket
^X Exit        ^R Read File   ^\ Replace     ^U Paste       ^J Justify     ^/ Go To Line  M-E Redo       M-6 Copy       ^Q Where Was
```


```
ubuntu@ip-172-31-31-91:~$ sudo nano dockerfile
ubuntu@ip-172-31-31-91:~$ ls
dockerfile
ubuntu@ip-172-31-31-91:~$ sudo docker build . -t test
```

```
Enabling site 000-default.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
Processing triggers for libc-bin (2.39-0ubuntu8) ...
Processing triggers for ca-certificates (20240203) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
Removing intermediate container 0aa0bc6beafb
 ---> a87368bae875
Step 4/4 : ENTRYPOINT apachectl -D FOREGROUND
 ---> Running in 2468830637c5
Removing intermediate container 2468830637c5
 ---> d9b5a393e6be
Successfully built d9b5a393e6be
Successfully tagged test:latest
ubuntu@ip-172-31-31-91:~$
```

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```
ubuntu@ip-172-31-31-91:~$ sudo docker run -itd -p 88:80 test
60446c4e14d85e7e31aaac493d78ddb70109e38f5fa134395d6017147b789867
ubuntu@ip-172-31-31-91:~$
```

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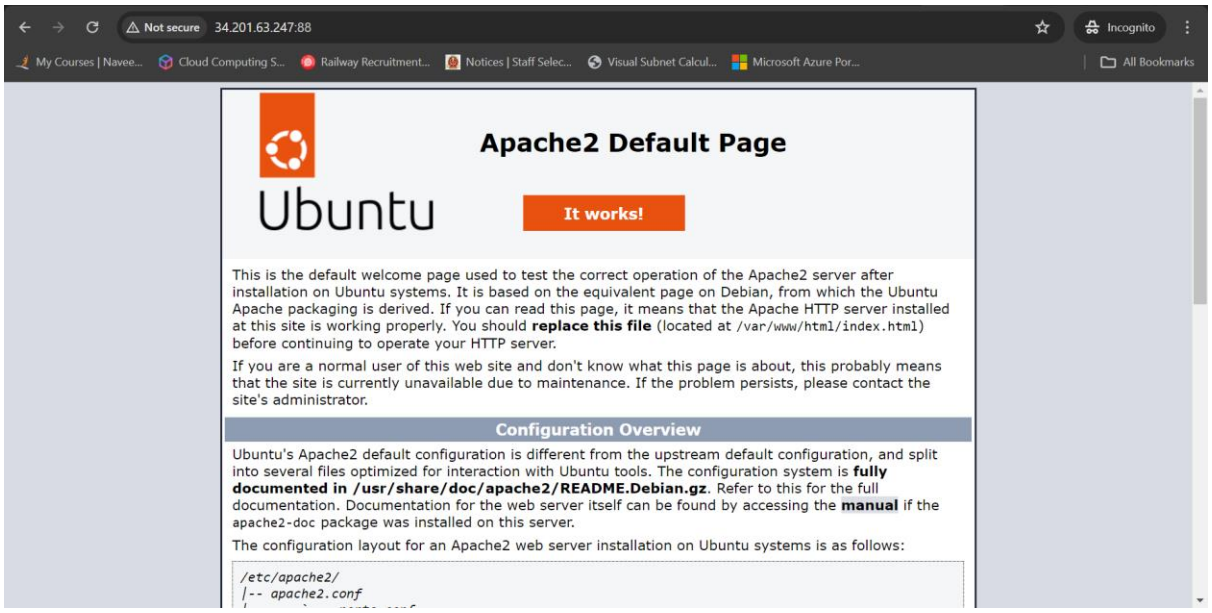


Assignment – 5

Task to be performed

1. Create a sample HTML file
2. Use the Dockerfile from the previous task
3. Replace this sample HTML file inside the Docker container with the default page

Steps and Commands

- To create Index.html by running the command sudo nano index.html
- Provide the necessary information in index.html

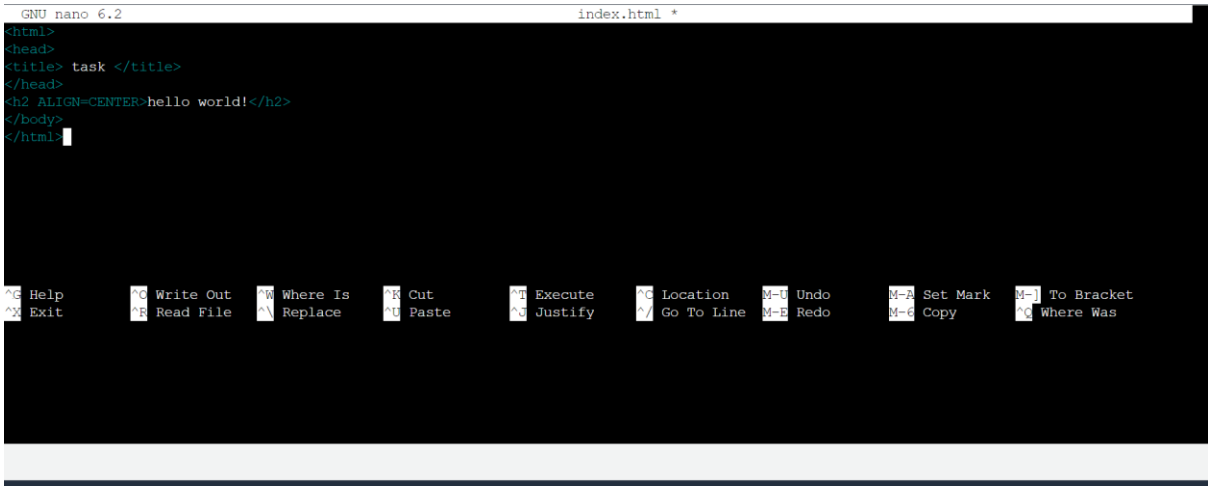
```
<html>
<head>
<title> task </title>
</head>
<h2 ALIGN=CENTER>hello world!</h2>
</body>
</html>
```

- Next save and exit from index.html
- Next to Open the dockerfile which was created in previous assignment 4 by running the command sudo nano dockerfile
- Edit the necessary script in dockerfile

```
FROM ubuntu
RUN apt update
RUN apt install apache2 –y
COPY index.html /var/www/html/
ENTRYPOINT apachectl -D FOREGROUND
```

- Save and exit from the dockerfile
- To see the created dockerfile and index.html by running the command **ls**
- To create the image from the dockefile by running the command **sudo docker build . –t (provide the name for creating image)**
- To see the Docker images by running the command **sudo docker images**
- To run the container and map the port my y running the command **sudo docker run –itd –p (provide the necessary port:80) (provide the name of created image)**

- To see the custom page on browser put the (**public IP address:provide the port which was mapped during the creation of the container)** of instance in the Brower the custom page will be reflected



```
  GNU nano 6.2                                  dockerfile *
FROM ubuntu
RUN apt update
RUN apt install apache2 -y
COPY index.html /var/www/html/
ENTRYPOINT apachectl -D FOREGROUND









                                [ Read 5 lines ]
^G Help       ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark  M-] To Bracket
^X Exit       ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line M-E Redo      M-6 Copy      ^Q Where Was
```

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```
ubuntu@ip-172-31-31-91:~$ sudo docker build . -t assignment5
```

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```
 ---> de52d803b224
Step 2/5 : RUN apt update
 ---> Using cache
 ---> 79247bc78e20
Step 3/5 : RUN apt install apache2 -y
 ---> Using cache
 ---> a87368bae875
Step 4/5 : COPY index.html /var/www/html/
 ---> Using cache
 ---> f5907c0945da
Step 5/5 : ENTRYPOINT apachectl -D FOREGROUND
 ---> Using cache
 ---> 5f2597085eaf
Successfully built 5f2597085eaf
Successfully tagged assignment5:latest
ubuntu@ip-172-31-31-91:~$ sudo docker run -itd -p 83:80 assignment5
a507f35c994a0d344a2bfe9cbc1d3cfebd4316351423ea14626cd00f44a95549
ubuntu@ip-172-31-31-91:~$
```

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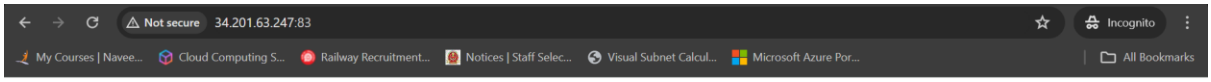
Not secure
34.201.63.247:83
Incognito
My Courses | Navee...
Cloud Computing S...
Railway Recruitment...
Notices | Staff Selec...
Visual Subnet Calcul...
Microsoft Azure Por...
All Bookmarks

hello world!