

## Docker Task -2

### Task Description:

Create a dockerfile, docker-compose file which when executed must display your basic details in the website.

```
ubuntu@ip-172-31-16-107:~$
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ chmod 400 /mnt/c/Users/Junaia/Downloads/docker.pem
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ ssh -i /mnt/c/Users/Junaia/Downloads/docker.pem ubuntu@3.104.104.124
Warning: Unprotected private key file!
Permissions 0555 for '/mnt/c/Users/Junaia/Downloads/docker.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key '/mnt/c/Users/Junaia/Downloads/docker.pem': bad permissions
ubuntu@3.104.104.124: Permission denied (publickey).
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ cp /mnt/c/Users/Junaia/Downloads/docker.pem ~/.ssh/
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ chmod 400 ~/.ssh/docker.pem
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ ls -l ~/.ssh/docker.pem
-r----- 1 junaia junaia 1678 Jan 29 15:04 /home/junaia/.ssh/docker.pem
junaia@BLAPTOP-GJ588BSP:/mnt/c/Users/Junaia$ ssh -i ~/.ssh/docker.pem ubuntu@3.104.104.124
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1018-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Thu Jan 29 15:04:55 UTC 2026

System load: 0.07          Temperatures:    -273.1 C
Usage of /:   25.9% of 6.71GB   Processes:    117
Memory usage: 23%           Users logged in: 0
Swap usage:   0%             IPv4 address for ens5: 172.31.16.107

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-172-31-16-107:~$ sudo apt update
Hit:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble InRelease

Get:45 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [925 kB]
Get:46 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [209 kB]
Get:47 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [74.3 kB]
Get:48 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.7 kB]
Get:49 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2369 kB]
Get:50 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [543 kB]
Get:51 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:52 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [536 B]
Get:53 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [28.8 kB]
Get:54 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [6492 B]
Get:55 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:56 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [396 B]
Fetched 39.5 MB in 1s (5910 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 packages can be upgraded. Run 'apt list --upgradable' to see them.

ubuntu@ip-172-31-16-107:~$ sudo apt install docker.io -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containedr dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroups-mount | cgroup-lite debotstrap docker-buildx docker-compose-v2 docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containedr dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 66 not upgraded.
Need to get 76.1 MB of archives.
After this operation, 288 MB of additional disk space will be used.
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 bridge-utils amd64 1.7.1-lubuntu2 [33.9 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 runc amd64 1.3.3-0ubuntu1-24.04.3 [8815 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 containedr amd64 1.7.28-0ubuntu1-24.04.2 [38.4 MB]
Get:5 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 dns-root-data all 2024071801-ubuntu24.04.1 [5918 B]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 dnsmasq-base amd64 2.90-2ubuntu1 [176 kB]
Get:7 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 docker.io amd64 28.2.2-0ubuntu1-24.04.1 [28.3 MB]
Get:8 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 ubuntu-fan all 0.12.16+24.04.1 [34.2 kB]
Fetched 76.1 MB in 1s (72.6 MB/s)
Preconfiguring packages ...
Selecting previously unselected package pigz.
(Reading database ... 71752 files and directories currently installed.)
Preparing to unpack .../0-pigz_2.8-1_amd64.deb ...
Unpacking pigz (2.8-1) ...
Selecting previously unselected package bridge-utils.
Preparing to unpack .../1-bridge-utils_1.7.1-lubuntu2_amd64.deb ...
Unpacking bridge-utils (1.7.1-lubuntu2) ...
Selecting previously unselected package runc.
Preparing to unpack .../2-runc_1.3.3-0ubuntu1-24.04.3_amd64.deb ...
Unpacking runc (1.3.3-0ubuntu1-24.04.3) ...
Selecting previously unselected package containedr.
Preparing to unpack .../3-containedr_1.7.28-0ubuntu1-24.04.2_amd64.deb ...
```

```
ubuntu@ip-172-31-16-107: ~  
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /usr/lib/systemd/system/docker.socket.  
Processing triggers for dbus (1.14.10-4ubuntu4.1) ...  
Processing triggers for man-db (2.12.0-4build2) ...  
Scanning processes...  
Scanning linux images...  
  
Running kernel seems to be up-to-date.  
  
No services need to be restarted.  
  
No containers need to be restarted.  
  
No user sessions are running outdated binaries.  
  
No VM guests are running outdated hypervisor (qemu) binaries on this host.  
ubuntu@ip-172-31-16-107:~$ sudo systemctl start docker  
sudo systemctl enable docker  
ubuntu@ip-172-31-16-107:~$ sudo usermod -aG docker ubuntu  
ubuntu@ip-172-31-16-107:~$ exit  
logout  
Connection to 3.104.104.124 closed.  
junaaid@LAPTOP-GU5B805P:/mnt/c/Users/Junaaid$ ssh -i ~/.ssh/docker.pem ubuntu@3.104.104.124  
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1018-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/pro  
  
System information as of Thu Jan 29 15:08:00 UTC 2026  
  
System load:  0.09           Temperature:    -273.1 C  
Usage of /:   33.7% of 6.71GB Processes:      116  
Memory usage: 28%           Users logged in: 0  
Swap usage:   0%            IPv4 address for ens5: 172.31.16.107  
  
Expanded Security Maintenance for Applications is not enabled.  
  
60 updates can be applied immediately.  
32 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
1 additional security update can be applied with ESM Apps.  
Learn more about enabling ESM Apps service at https://ubuntu.com/esm  
  
Last login: Thu Jan 29 15:04:56 2026 from 106.200.17.62  
ubuntu@ip-172-31-16-107:~$ sudo apt install docker-compose -y  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done
```

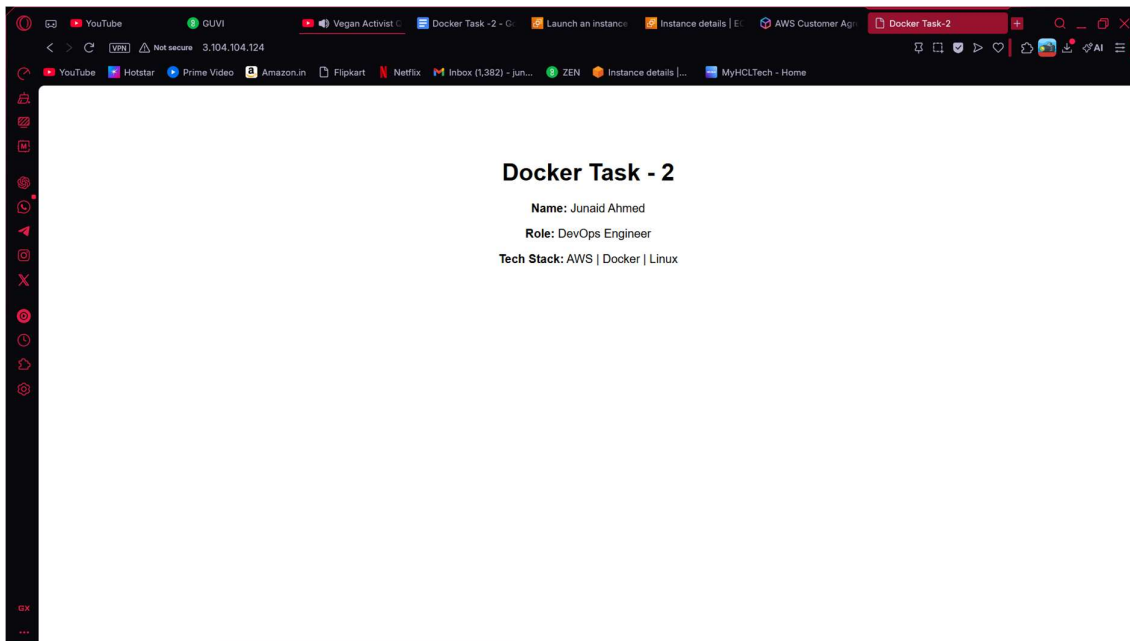
```
ubuntu@ip-172-31-16-107: ~/docker-task-2

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-16-107:~$ docker --version
docker-compose --version
Docker version 28.2.2, build 28.2.2-0ubuntu1~24.04.1
docker-compose version 1.29.2, build unknown
ubuntu@ip-172-31-16-107:~$ mkdir docker-task-2
cd docker-task-2
ubuntu@ip-172-31-16-107:~/docker-task-2$ cat <<EOF > index.html
<!DOCTYPE html>
<html>
<head>
  <title>Docker Task-2</title>
</head>
<body style="text-align:center; margin-top:100px; font-family:Arial;">
  <h1>Docker Task - 2</h1>
  <p><strong>Name:</strong> Junaid Ahmed</p>
  <p><strong>Role:</strong> DevOps Engineer</p>
  <p><strong>Tech Stack:</strong> AWS | Docker | Linux</p>
</body>
</html>
EOF
ubuntu@ip-172-31-16-107:~/docker-task-2$ cat <<EOF > Dockerfile
FROM nginx:latest
COPY index.html /usr/share/nginx/html/index.html
EXPOSE 80
EOF
ubuntu@ip-172-31-16-107:~/docker-task-2$ cat <<EOF > docker-compose.yml
version: "3.8"

services:
  web:
    build: .
    ports:
      - "80:80"
EOF
ubuntu@ip-172-31-16-107:~/docker-task-2$ docker-compose up -d
Creating network "docker-task-2_default" with the default driver
Building web
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
             Install the buildx component to build images with BuildKit:
             https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  4.096kB
Step 1/3 : FROM nginx:latest
latest: Pulling from library/nginx
119d43eec815: Pulling fs layer
700146c8ad64: Pulling fs layer
d989100b8a84: Pulling fs layer
500799c30424: Pulling fs layer
ubuntu@ip-172-31-16-107:~/docker-task-2$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
9caf2616b0ed   docker-task-2_web  "/docker-entrypoint..." 44 seconds ago Up 42 seconds 0.0.0.0:80->80/tcp, [::]:80->80/tcp   docker-task-2_web_1
ubuntu@ip-172-31-16-107:~/docker-task-2$
```



```
ubuntu@ip-172-31-16-107:~/docker-task-2$ cat Dockerfile
FROM nginx:latest
COPY index.html /usr/share/nginx/html/index.html
EXPOSE 80
ubuntu@ip-172-31-16-107:~/docker-task-2$ ~
```

```
ubuntu@ip-172-31-16-107:~/docker-task-2$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
docker-task-2_web    latest          0f226b3b99e7    4 minutes ago  161MB
nginx                latest          4af177a024eb    2 weeks ago    161MB
ubuntu@ip-172-31-16-107:~/docker-task-2$
```