

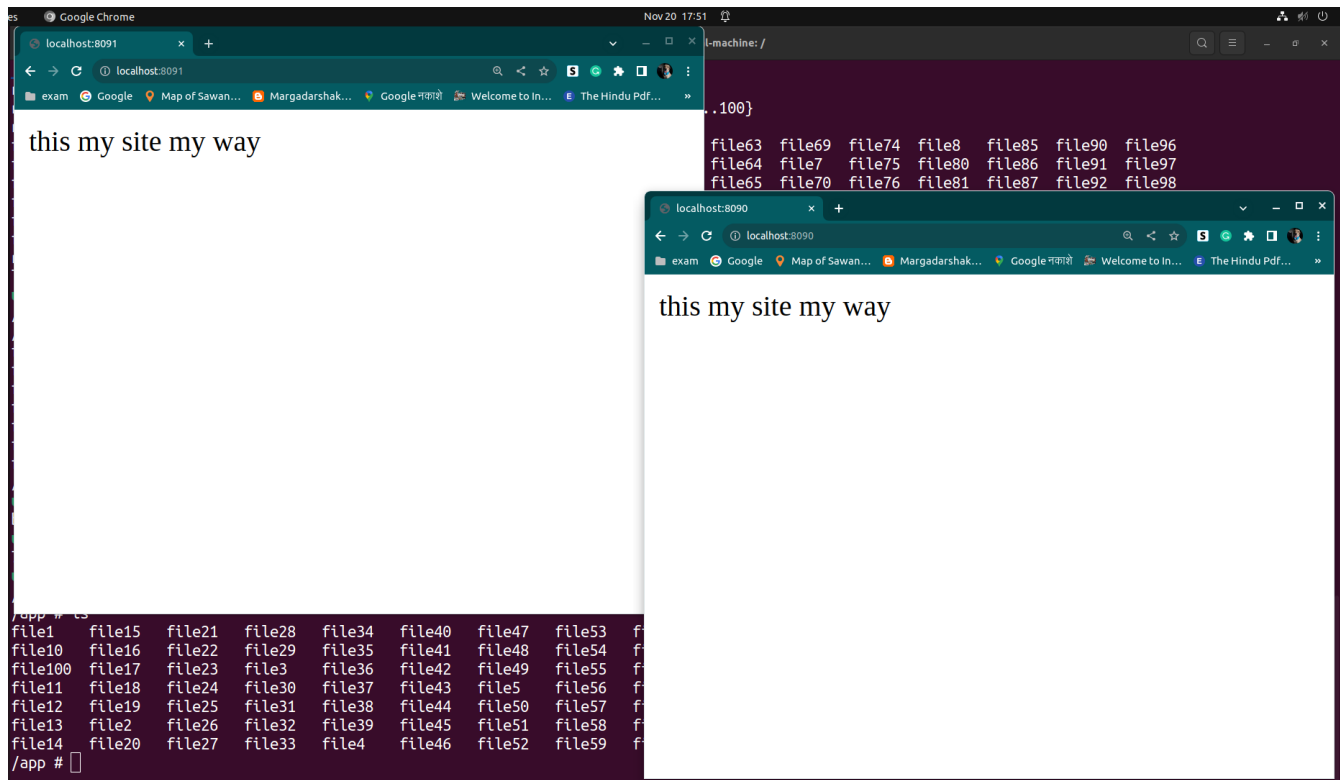
Question1

```
Activities Terminal Nov 21 17:10 ubuntu@ubuntu-virtual-machine: ~/devops/assign6/ques1

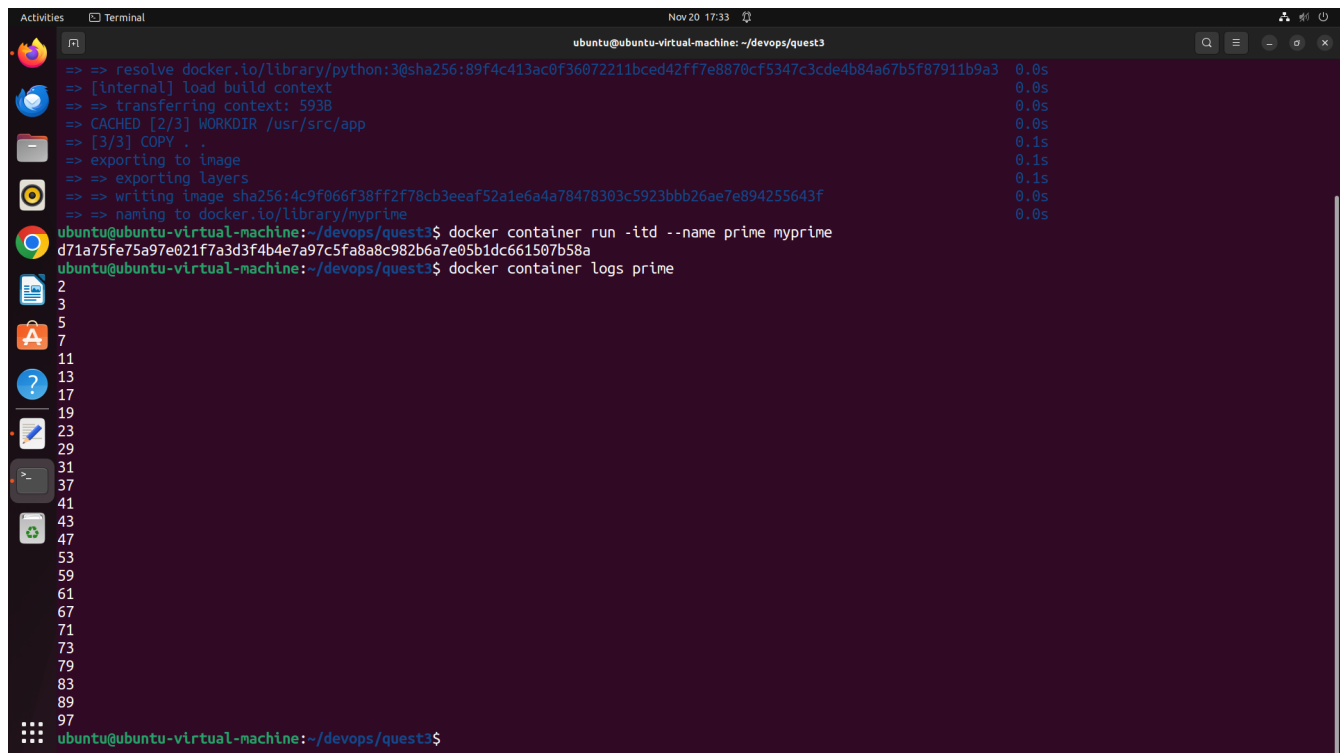
pub9dc0nmndoeqbrwi0p5uhak
overall progress: 1 out of 1 tasks
1/1: running
verify: Service converged
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ docker service scale myservice=10
myservice scaled to 10
overall progress: 10 out of 10 tasks
1/10: running
2/10: running
3/10: running
4/10: running
5/10: running
6/10: running
7/10: running
8/10: running
9/10: running
10/10: running
verify: Service converged
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ curl localhost:8090
<html><body><h1>It works!</h1></body></html>
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ docker service ls
ID NAME MODE REPLICAS IMAGE PORTS
pub9dc0nmndo myservice replicated 10/10 httpd:latest *:8090->80/tcp
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ docker service scale myservice=2
myservice scaled to 2
overall progress: 2 out of 2 tasks
1/2: running
2/2: running
verify: Service converged
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ curl localhost:8090
<html><body><h1>It works!</h1></body></html>
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$ docker service ls
ID NAME MODE REPLICAS IMAGE PORTS
pub9dc0nmndo myservice replicated 2/2 httpd:latest *:8090->80/tcp
ubuntu@ubuntu-virtual-machine:~/devops/assign6/ques1$
```

```
Activities Google Chrome Nov 20 15:19 localhost:8081 localhost:8081
localhost:8081
Pravin Sawant C1-80471
localhost:8080
localhost:8080
Pravin Sawant C1-80471
Usage: docker container run [OPTIONS] IMAGE [COMMAND] [ARG...]
Create and run a new container from an image
80: command not found
ubuntu@ubuntu-virtual-machine:~/devops/quest1$ docker container run -itd
ubuntu@ubuntu-virtual-machine:~/devops/quest1$ docker container run -itd
3fe25e9d2de17f4fdb3aaadc02f321607d266c11857b36f296c0101f36f20313
ubuntu@ubuntu-virtual-machine:~/devops/quest1$ docker container ls
CONTAINER ID IMAGE COMMAND CREATED STATUS
3fe25e9d2de1 mywebsite "httpd-foreground" About a minute ago Up Al
767353cb2979 mywebsite "httpd-foreground" 3 minutes ago Up 3
ubuntu@ubuntu-virtual-machine:~/devops/quest1$
```

Question 2



Question3



Question 4

```
ubuntu@ubuntu-virtual-machine:~/devops$ mkdir ques4
ubuntu@ubuntu-virtual-machine:~/devops$ cd ques4
ubuntu@ubuntu-virtual-machine:~/devops/ques4$ docker image pull busybox
Using default tag: latest
latest: Pulling from library/busybox
3f4d90098f5b: Pull complete
Digest: sha256:3fbc632167424a6d997e74f52b878d7cc478225cfffac6bc977eedfe51c7f4e79
Status: Downloaded newer image for busybox:latest
docker.io/library/busybox:latest
ubuntu@ubuntu-virtual-machine:~/devops/ques4$ docker volume create myvolume
myvolume
ubuntu@ubuntu-virtual-machine:~/devops/ques4$ docker container run -itd --name busy -v myvolume:/app busybox
4aba480a6c7cc88d17f9703454f288c08a9925cbbe755a758a684bdd3b87ad2c
ubuntu@ubuntu-virtual-machine:~/devops/ques4$ docker container exec -it busy sh
/ # cd /app
/app # exit
```

```
Activities Terminal Nov 20 17:45
ubuntu@ubuntu-virtual-machine: /
su: Authentication failure
ubuntu@ubuntu-virtual-machine:/$ su -
Password:
su: Authentication failure
ubuntu@ubuntu-virtual-machine:/$ su -
Password:
su: Authentication failure
ubuntu@ubuntu-virtual-machine:/$ sudo -i
root@ubuntu-virtual-machine:~# cd /var/lib/docker/volumes
root@ubuntu-virtual-machine:/var/lib/docker/volumes# ls
95bf5b16c288c68ca6556bf2f7cfb7748523f879f511a471a7c2a85c54cd8799  f5e102221a37888d3958c11e1864d0610f988582b28148d631720489a6c2a655  myvolume
backingFsBlockDev  metadata.db
e8a462d9ec9eb94a01229e06da5ca5f11a50fd61ccf694a324652acc9989297b6  mysql-volume
root@ubuntu-virtual-machine:/var/lib/docker/volumes# cd myvolume
root@ubuntu-virtual-machine:/var/lib/docker/volumes/myvolume# ls
_data
root@ubuntu-virtual-machine:/var/lib/docker/volumes/myvolume# cd _data
root@ubuntu-virtual-machine:/var/lib/docker/volumes/myvolume/_data# touch file{1..100}
root@ubuntu-virtual-machine:/var/lib/docker/volumes/myvolume/_data# ls
file1  file14  file2  file25  file30  file36  file41  file47  file52  file58  file63  file69  file74  file8  file85  file90  file96
file10  file15  file20  file26  file31  file37  file42  file48  file53  file59  file64  file70  file75  file80  file86  file91  file97
file100  file16  file21  file27  file32  file38  file43  file49  file54  file60  file65  file71  file76  file81  file87  file92  file98
file11  file17  file22  file28  file33  file39  file44  file5  file55  file66  file72  file77  file82  file88  file93  file94  file99
file12  file18  file23  file29  file34  file4  file45  file50  file56  file61  file67  file72  file78  file83  file89  file94
file13  file19  file24  file3  file35  file40  file46  file51  file57  file62  file68  file73  file79  file84  file9  file95
root@ubuntu-virtual-machine:/var/lib/docker/volumes/myvolume/_data# exit
logout
ubuntu@ubuntu-virtual-machine:/$ docker container exec -it busy sh
/ # cd /app
/app # ls
file1  file15  file21  file28  file34  file40  file47  file53  file6  file66  file72  file79  file85  file91  file98
file10  file16  file22  file29  file35  file41  file48  file54  file60  file67  file73  file8  file86  file92  file99
file100  file17  file23  file3  file36  file42  file49  file55  file61  file68  file74  file80  file87  file93
file11  file18  file24  file30  file37  file43  file5  file56  file62  file69  file75  file81  file88  file94
file12  file19  file25  file31  file38  file44  file50  file57  file63  file7  file76  file82  file89  file95
file13  file2  file26  file32  file39  file45  file51  file58  file64  file70  file77  file83  file9  file96
file14  file20  file27  file33  file4  file46  file52  file59  file65  file71  file78  file84  file90  file97
/app #
```

```
/app # exit
ubuntu@ubuntu-virtual-machine:/$ docker container rm --force busy
busy
ubuntu@ubuntu-virtual-machine:/$ docker container run -itd --name busy1 -v myvolume:/app busybox
728d26b2d24515af0f46f18ef1641fad21bf94bdc3051a4b39f23a07160d305e
ubuntu@ubuntu-virtual-machine:/$ docker container exec -it busy1 sh
/ # cd /app
/app # ls
file1  file15  file21  file28  file34  file40  file47  file53  file6  file66  file72  file79  file85  file91  file98
file10  file16  file22  file29  file35  file41  file48  file54  file60  file67  file73  file8  file86  file92  file99
file100  file17  file23  file3  file36  file42  file49  file55  file61  file68  file74  file80  file87  file93
file11  file18  file24  file30  file37  file43  file5  file56  file62  file69  file75  file81  file88  file94
file12  file19  file25  file31  file38  file44  file50  file57  file63  file7  file76  file82  file89  file95
file13  file2  file26  file32  file39  file45  file51  file58  file64  file70  file77  file83  file9  file96
file14  file20  file27  file33  file4  file46  file52  file59  file65  file71  file78  file84  file90  file97
/app #
```

Question 5

```
Activities Terminal Nov 21 15:42
ubuntu@ubuntu-virtual-machine: ~/devops/ques5

Bye
bash-4.4# exit
exit
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker volume ls
DRIVER      VOLUME NAME
local       ac90f3c828a38ea59843da8ac2ab67b842dee9b2ef100747ec7a20e74bb39e58
local       minikube
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ vi Dockerfile
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker image build -t mydb1 .
[+] Building 0.1s (7/7) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 145B                             0.0s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                    0.0s
=> [internal] load metadata for docker.io/library/mysql:latest  0.0s
=> [internal] load build context                                0.0s
=> => transferring context: 30B                                    0.0s
=> [1/2] FROM docker.io/library/mysql                          0.0s
=> CACHED [2/2] COPY mydb.sql /docker-entrypoint-initdb.d/     0.0s
=> exporting to image                                           0.0s
=> => exporting layers                                           0.0s
=> => writing image sha256:e038f24b67d627742756b2dfdd85d021f99e9583f97bcb9483d330cf11cd67d6 0.0s
=> => naming to docker.io/library/mydb1                         0.0s
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker volume create volume2
volume2
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker container run -itd --name mydbb -v volume2:/var/lib/mysql/ mydb1
fb0b4538d6f4ea9240b1ff5ccc7bf053cacec759811cda9dcde38c8168d7f963
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker container ls
CONTAINER ID   IMAGE     COMMAND                  CREATED      STATUS      PORTS      NAMES
fb0b4538d6f4   mydb1    "docker-entrypoint.s..." 18 seconds ago Up 18 seconds 3306/tcp, 33060/tcp mydbb
6dde55fe8aec   mydb     "docker-entrypoint.s..." 7 minutes ago  Up 6 minutes  3306/tcp, 33060/tcp mydb
ubuntu@ubuntu-virtual-machine:~/devops/ques5$ docker container exec -it mydbb bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.2.0 MySQL Community Server - GPL

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
```

```
Activities Terminal Nov 21 15:43
ubuntu@ubuntu-virtual-machine: ~/devops/ques5

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mydb1 |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)

mysql> use mydb1;
Reading table information for completion of table and column names
You can turn off this feature with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_mydb1 |
+-----+
| company |
+-----+
1 row in set (0.00 sec)

mysql> select * from company;
+----+-----+
| id | name |
+----+-----+
| 1 | person1 |
| 2 | person2 |
| 3 | person3 |
| 4 | person4 |
+----+-----+
4 rows in set (0.01 sec)

mysql>
```

```
Activities Terminal Nov 21 15:47
Screenshot captured
You can paste the image from the clipboard.

ubuntu@ubuntu-virtual-machine: ~/devops/ques5$ docker container rm --force mydbb
mydbb
ubuntu@ubuntu-virtual-machine: ~/devops/ques5$ docker container run -itd --name mydata -v volume2:/var/lib/mysql/ mydb1
ed24d245ae97f666e4016d3001f2772111258e8a109f77ec056fc96109d9b
ubuntu@ubuntu-virtual-machine: ~/devops/ques5$ docker container exec -it mydata bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.2.0 MySQL Community Server - GPL

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mydb1 |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)

mysql> use mydb1;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_mydb1 |
+-----+
| company |
+-----+
1 row in set (0.00 sec)

mysql> select * from person;
ERROR 1146 (42S02): Table 'mydb1.person' doesn't exist
mysql> select * from company;
+-----+
| id | name |
+-----+
| 1 | person1 |
| 2 | person2 |
| 3 | person3 |
+-----+
```

Question 6

```
Activities Terminal Nov 28 09:57
ubuntu@c1-80471-pravin: ~/devops/assign5

ubuntu@c1-80471-pravin: ~/devops/assign5
Setting up python3-dockerpty (0.4.1-2) ...
Setting up python3-docker (5.0.3-1) ...
Setting up python3-jq (3.2.0-0ubuntu2) ...
Setting up docker-compose (1.29.2-1) ...
Processing triggers for man-db (2.10.2-1) ...
ubuntu@c1-80471-pravin: ~/devops/assign5$ docker-compose up -d
ERROR: Version "v1" in "/docker-compose.yml" is invalid.
ubuntu@c1-80471-pravin: ~/devops/assign5$ vim docker-compose.yml
ubuntu@c1-80471-pravin: ~/devops/assign5$ docker-compose up -d
ERROR: Version "v3" in "/docker-compose.yml" is invalid.
ubuntu@c1-80471-pravin: ~/devops/assign5$ vim docker-compose.yml
ubuntu@c1-80471-pravin: ~/devops/assign5$ docker-compose up -d
WARNING: The docker Engine you're using is running in swarm mode.

Compose does not use swarm mode to deploy services to multiple nodes in a swarm. All containers will be scheduled on the current node.

To deploy your application across the swarm, use 'docker stack deploy'.

Creating network "assign5_default" with the default driver
Pulling nginx (nginx)...
latest: Pulling from library/nginx
Digest: sha256:10d1f5b58f74683ad34eb2927e07dab1e90f10af243f151bb50aa5dbb4d62ee
Status: Downloaded newer image for nginx:latest
Creating assign5_httpd_1 ...
Creating assign5_httpd_1 ... error
Creating assign5_bustbox_1 ...
Creating assign5_nginx_1 ...
WARNING: Host is already in use by another container
Creating assign5_mysql_1 ... done
ERROR: for assign5_httpd_1 Cannot start service httpd: driver failed programming external connectivity on endpoint assign5_httpd_1 (5702f70f8d4c797ca9623539321967792b6e44de654ea3d49c3a8c70bb0cef9): Error starting userland proxy: listen tcp4 0.0.0.0:9090: bind: address already in use
Creating assign5_nginx_1 ... error
Creating assign5_bustbox_1 ... done
g userland proxy: listen tcp4 0.0.0.0:8080: bind: address already in use
ERROR: for httpd Cannot start service httpd: driver failed programming external connectivity on endpoint assign5_httpd_1 (5702f70f8d4c797ca9623539321967792b6e44de654ea3d49c3a8c70bb0cef9): Error starting userland proxy: listen tcp4 0.0.0.0:9090: bind: address already in use
ERROR: for nginx Cannot start service nginx: driver failed programming external connectivity on endpoint assign5_nginx_1 (3c2080abd49b0eb508a81a73f187309b94694aba6457ff56035f8c83d7246888): Error starting userland proxy: listen tcp4 0.0.0.0:8080: bind: address already in use
ERROR: Encountered errors while bringing up the project.
Stopping assign5_mysql_1 ... done
Removing assign5_mysql_1 ... done
Removing assign5_bustbox_1 ... done
Removing assign5_mysql_1 ... done
Removing assign5_httpd_1 ... done
Removing network assign5_default
ubuntu@c1-80471-pravin: ~/devops/assign5$
```