

Big Data Mining in Healthcare

Assignment-1

Group-15

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Submitted to : Dr. GPS Raghava

Container Link: docker pull richa20104/group15_assignment1_bdmh:question1234

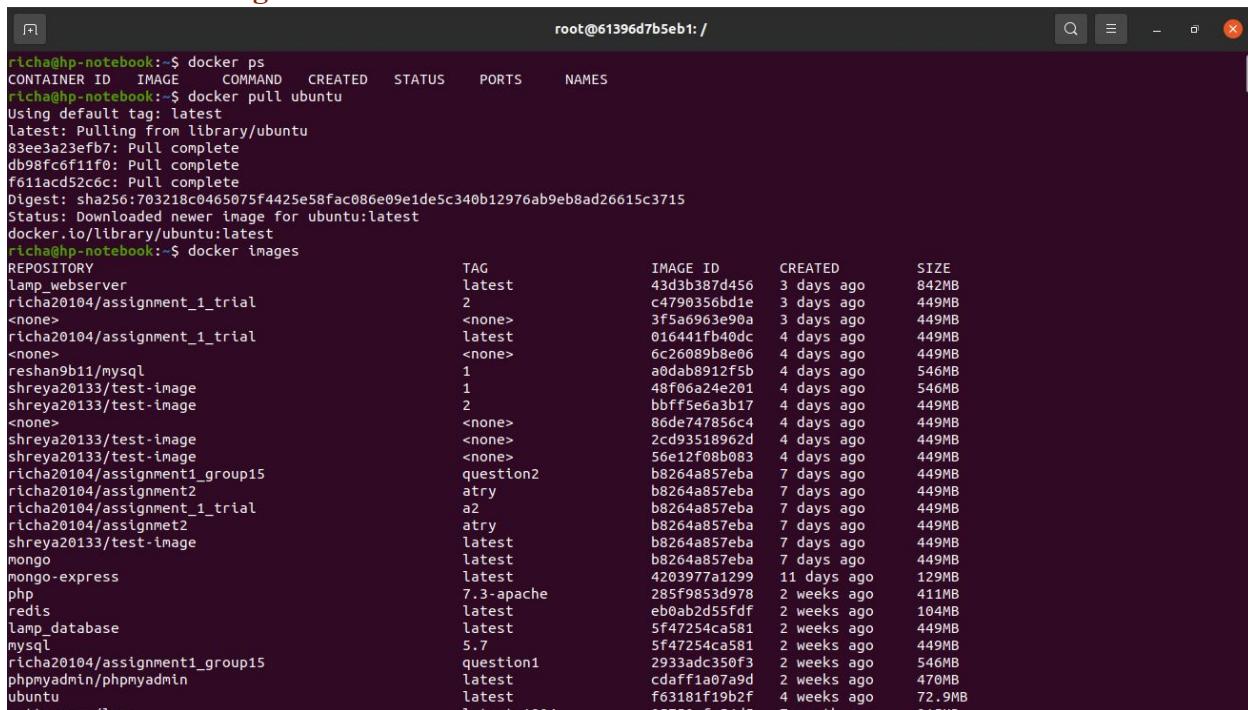
Instructions Script To Run :

1. Open Terminal
2. docker pull richa20104/group15_assignment1_bdmh:question1234
3. docker ps
4. docker run -it --rm -p 8009:80 richa20104/group15_assignment1_bdmh:question1234
5. service apache2 start
6. service mysql start
7. mysql -uroot1 -p
8. enter password: password
9. show databases;
10. use mydb;
11. show tables;
12. select * from instructor;
13. select * from student;
14. exit
15. service mongodb start
16. mongo
17. show dbs
18. use mgdb
19. show collections
20. db.mgdb_col.find()
21. To open website: <http://localhost:8009/>
22. click on bdmh_project
23. Click on *Be Tutor* to fill form. User can check the database by *Our instructors* page.

Q1. Create a database name mydb in MySQL and save the above table in mydb; show application of 4 mysql commands.

STEPS INVOLVED:

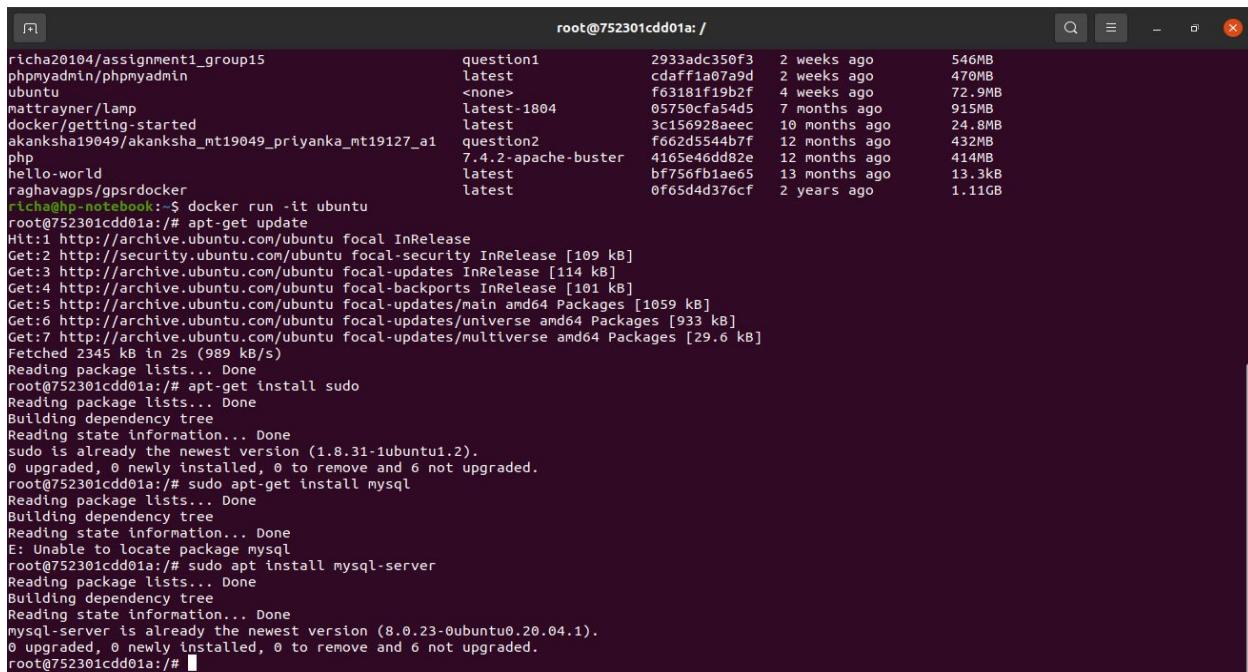
- ❖ Firstly we are checking all the running containers using docker ps
docker ps: used to check all the running containers.
- ❖ Pulling ubuntu image from docker hub.
docker pull ubuntu.
- ❖ To check that the ubuntu image is installed or not.
docker images.



```
root@61396d7b5eb1:/# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
root@61396d7b5eb1:/# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
83ee3a23efb7: Pull complete
db98fc0f11f0: Pull complete
f611acd52c6c: Pull complete
Digest: sha256:703218c0465075f4425e58fac086e09e1de5c340b12976ab9eb8ad26615c3715
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
root@61396d7b5eb1:/# docker images
REPOSITORY          TAG      IMAGE ID      CREATED       SIZE
lamp_webserver     latest   43d3b387d456  3 days ago   842MB
richa20104/assignment_1_trial 2        c4790356bd1e  3 days ago   449MB
<none>              <none>  3f5a6963e90a  3 days ago   449MB
richa20104/assignment_1_trial  latest   016441fb40dc  4 days ago   449MB
<none>              <none>  6c26089b8e06  4 days ago   449MB
reshan9b11/mysql   1        a0dab8912f5b  4 days ago   546MB
shreya2013/test-image 1        48f06a24e201  4 days ago   546MB
shreya20133/test-image 2        bbf5e6a3b17  4 days ago   449MB
<none>              <none>  86de747856c4  4 days ago   449MB
shreya20133/test-image  <none>  2cd93518962d  4 days ago   449MB
shreya20133/test-image  <none>  56e12f08b083  4 days ago   449MB
richa20104/assignment1_group15 question2  b8264a857eba  7 days ago   449MB
richa20104/assignment2    atry    b8264a857eba  7 days ago   449MB
richa20104/assignment_1_trial  a2      b8264a857eba  7 days ago   449MB
richa20104/asstgmet2    atry    b8264a857eba  7 days ago   449MB
shreya20133/test-image  latest   b8264a857eba  7 days ago   449MB
mongo                latest   b8264a857eba  7 days ago   449MB
mongo-express         latest   4203977aa1299  11 days ago  129MB
php                  7.3-apache 285f9853d978  2 weeks ago  411MB
redis               latest   eb0ab2d55fdf  2 weeks ago  104MB
lamp_database        latest   5f47254ca581  2 weeks ago  449MB
mysql               5.7      5f47254ca581  2 weeks ago  546MB
richa20104/assignment1_group15 question1  2933adc350f3  2 weeks ago  546MB
phpmyadmin/phpmyadmin latest   cdaaff1a07a9d  2 weeks ago  470MB
ubuntu              latest   f63181f19b2f  4 weeks ago  72.9MB
total: 1004
```

- ❖ Checking if the container is available or not. For this purpose firstly doing **docker ps**, if the container is running then it will display the details about the container i.e. container id, image id, creation time, port number, and container name.
- ❖ If pulled container details are not getting displayed by the above command, it means docker is not available or not running, so to check the availability of container using :
docker ps -a: displaying the list of all the containers.
- ❖ After that, if the container is available it means the container image is successfully pulled from docker, and then we have to start that container using **docker start container_id**.
- ❖ Again do **docker ps** to check if the container started or not.

- ❖ After successfully pulling and starting the container, we need to run that container to get into that container to perform all the operations: **docker run -it ubuntu**.
 ubuntu: image name
 run: to run the container.
 -it : to run the container in interactive mode.
- ❖ After this step the container open and now we have to install packages of mysql and MongoDB to databases respectively.



The screenshot shows a terminal window titled "root@752301cdd01a:/". It displays the output of several commands:

```

richa@20104/assignment1_group15          question1      2933adc350f3  2 weeks ago   546MB
phpmyadmin/phpmyadmin                  latest         cdaaff1a07a9d  2 weeks ago   470MB
ubuntu                                <none>        f63181f19b2f  4 weeks ago   72.9MB
mattrayner/lamp                         latest         05750cfaf54d5 7 months ago  915MB
docker/getting-started                 latest         3c156928aeec  10 months ago  24.8MB
akanksha19049/akanksha_mt19049_priyanka_mt19127_a1  question2      f662d5544b7f  12 months ago  432MB
php                                    7.4.2-apache-buster  latest         4165e46dd82e  12 months ago  414MB
hello-world                            latest         bf756fb1ae65  13 months ago  13.3kB
raghavags/gpsr docker                  latest         0f65dd4d376cf  2 years ago   1.11GB

richa@hp-notebook:~$ docker run -it ubuntu
root@752301cdd01a:/# apt-get update
Hit:1 http://archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://archive.ubuntu.com/ubuntu focal-security InRelease [109 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://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1059 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [933 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [29.6 kB]
Fetched 2345 kB in 2s (989 kB/s)
Reading package lists... Done
root@752301cdd01a:/# apt-get install sudo
Reading package lists... Done
Building dependency tree
Reading state information... Done
sudo is already the newest version (1.8.31-1ubuntu1.2).
0 upgraded, 0 newly installed, 0 to remove and 6 not upgraded.
root@752301cdd01a:/# sudo apt-get install mysql
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package mysql
root@752301cdd01a:/# sudo apt install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
mysql-server is already the newest version (8.0.23-0ubuntu0.20.04.1).
0 upgraded, 0 newly installed, 0 to remove and 6 not upgraded.
root@752301cdd01a:/#

```

- ❖ **apt-get update**: Updating all the available packages.
apt-get install sudo: To run all the commands with security privileges, installing sudo.
sudo apt install mysql-server: installing package MySQL-server.
 - ❖ After installing MySQL server we need to start that server : **mysql -uroot1 -p**.
 -uroot1: this command used to specify user name.
 -p: this command is used to specify password.
 - ❖ After that we will enter the password “root” for root user and if some error is encountered in starting the mysql server , it means firstly we have to stop previously running sql servers and start it again.
 - ❖ **/etc/init.d/mysql stop**: To stop the server.
/etc/init.d/mysql start: To again start the server.
 - ❖ After the above step: Mysql image will start and now we have to create a database in MySQL and perform the required query operations.
- **show databases;**- Displaying the list of all the available databases.

- **create database mydb;**- creating new database named as mydb.
- **use mydb;**- to start that database.

```

root@752301cdd01a:/# mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.23-0ubuntu0.20.04.1 (Ubuntu)

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owners.

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

mysql> show databases;
+-----+
| Database |
+-----+
| db      |
| information_schema |
| mysql   |
| performance_schema |
| sys     |
+-----+
5 rows in set (0.01 sec)

mysql> create database mydb;
Query OK, 1 row affected (0.01 sec)

mysql> use mydb;
Database changed

mysql> create table instructor(
    -->   instructor_id INT NOT NULL AUTO_INCREMENT,
    -->   f_name VARCHAR(50) NOT NULL,
    -->   l_name VARCHAR(50) NOT NULL,
    -->   mob_no bigint(10) NOT NULL,
    -->   address VARCHAR(100) NOT NULL,
    -->   email VARCHAR(100) NOT NULL,
    -->   qualification VARCHAR(50),
    -->   institute_name VARCHAR(100),
    -->   experience INTEGER NOT NULL,
    -->   achievement VARCHAR(100) NOT NULL,
    -->   expected_salary INTEGER,
    -->   dance_type VARCHAR(100) NOT NULL,
    -->   date_of_birth DATE,
    -->   PRIMARY KEY ( instructor_id )
    --> );

```

- ❖ After performing all the above operations, now we need to create the table for mysql and add values in that table.

- **To create mysql table database:** -

```

create table instructor(
    instructor_id INT NOT NULL AUTO_INCREMENT,
    f_name VARCHAR(50) NOT NULL,
    l_name VARCHAR(50) NOT NULL,
    mob_no bigint(10) NOT NULL,
    address VARCHAR(100) NOT NULL,
    email VARCHAR(100) NOT NULL,
    qualification VARCHAR(50),
    institute_name VARCHAR(100),
    experience INTEGER NOT NULL,
    achievement VARCHAR(100) NOT NULL,
    expected_salary INTEGER,
    dance_type VARCHAR(100) NOT NULL,
    date_of_birth DATE,
    PRIMARY KEY ( instructor_id )
);

```

- **show tables;**- Displaying the list of all the available tables.

- **show columns from the instructor;**- Displaying the list of all the available attributes in the instructor table.

```

root@752301cdd01a: / 
--> CREATE TABLE `instructor` (
-->   `institute_name` VARCHAR(100) ,
-->   `experience` INTEGER NOT NULL,
-->   `achievement` VARCHAR(100) NOT NULL,
-->   `expected_salary` INTEGER,
-->   `dance_type` VARCHAR(100) NOT NULL,
-->   `date_of_birth` DATE,
-->   PRIMARY KEY ( `instructor_id` )
--> );
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> show tables
-> ;
+-----+
| Tables_in_mydb |
+-----+
| instructor |
+-----+
1 row in set (0.00 sec)

mysql> show columns from instructor;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+
| instructor_id | int        | NO   | PRI | NULL    | auto_increment
| f_name      | varchar(50) | NO   |     | NULL    |                |
| l_name      | varchar(50) | NO   |     | NULL    |                |
| mob_no      | bigint     | NO   |     | NULL    |                |
| address      | varchar(100) | NO  |     | NULL    |                |
| email        | varchar(100) | NO  |     | NULL    |                |
| qualification | varchar(50) | YES  |     | NULL    |                |
| institute_name | varchar(100) | YES  |     | NULL    |                |
| experience    | int         | NO  |     | NULL    |                |
| achievement    | varchar(100) | NO  |     | NULL    |                |
| expected_salary | int        | YES  |     | NULL    |                |
| dance_type    | varchar(100) | NO  |     | NULL    |                |
| date_of_birth | date        | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

```

- **To add values in the instructor table:** -

INSERT INTO instructor
 (f_name,l_name,mob_no,address,email,qualification,institute_name,
 experience,achievement,expected_salary,dance_type,date_of_birth)
 VALUES
 ("John", "Poul", 9988776655,"Nehru place New
 Delhi","johnpoul@gmail.com","B.S", "Delhi University",2,"SDPM
 Adwards",35000,"Jazz",'1994-09-09');

```

root@752301cdd01a:/
| dance_type      | varchar(100) | NO   |          | NULL    |          |
| date_of_birth   | date         | YES  |          | NULL    |          |
+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

mysql> INSERT INTO instructor
->     (f_name,l_name,mob_no,address,email,qualification,institute_name,
->      experience,achievement,expected_salary,dance_type,date_of_birth)
->      VALUES
->      ("John", "Poul", 9988776655,"Nehru place New Delhi","johnpoul@gmail.com","B.S",
->      "Delhi University",2,"SDPM Adwards",35000,"Jazz",'1994-09-09');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO instructor
->     (f_name,l_name,mob_no,address,email,qualification,institute_name,
->      experience,achievement,expected_salary,dance_type,date_of_birth)
->      VALUES
->      ("Jary", "MArk", 7788994455,"Kalkaji New Delhi","jerrymark@gmail.com","M.S",
->      "Jadavpur University",5,"SDPM Adwards",45000,"Ballet",'1992-08-08');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO instructor
->     (f_name,l_name,mob_no,address,email,qualification,institute_name,
->      experience,achievement,expected_salary,dance_type,date_of_birth)
->      VALUES
->      ("Sanja", "Markovic", 8877445566,"Kalkaji New Delhi","sanjamark@gmail.com","M.S",
->      "Jadavpur University",4,"RRKM Adwards",40000,"Ballet",'1992-08-08');
Query OK, 1 row affected (0.01 sec)

mysql>

```

➤ **To display created table:** -

select * from instructor order by expected_salary;

❖ **Queries Performed:** -

- select * from instructor order by expected_salary;
- select f_name,mob_no from instructor where qualification = 'M.S';
- select count(*) from instructor where experience > 2;
- update instructor set experience=10 where f_name="john"
- delete from instructor where expected salary>42000

❖ **Creating Student Table:**

```

create table student(
    student_id INT NOT NULL AUTO_INCREMENT,
    f_name VARCHAR(50) NOT NULL,
    l_name VARCHAR(50) NOT NULL,
    mob_no bigint(10) NOT NULL,
    address VARCHAR(100) NOT NULL,
    email VARCHAR(100) NOT NULL,
    gender VARCHAR(50) ,
    expected_fees INTEGER,
    dance_type VARCHAR(100) NOT NULL,
    medical_cond VARCHAR(100) NOT NULL,
    date_of_birth DATE,
    PRIMARY KEY ( student_id ));

```

```

root@752301cdd01a:/ 
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO instructor
->   (f_name,l_name,mob_no,address,email,qualification,institute_name,
->    experience,achievement,expected_salary,dance_type,date_of_birth)
->    VALUES
->   ("Sanja", "Markovic", 8877445566,"KalkaJI New Delhi", "sanjamark@gmail.com","M.S",
->    "Jadavpur University",4,"RRKM Adwards",40000,"Ballet", '1992-08-08');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO instructor
->   (f_name,l_name,mob_no,address,email,qualification,institute_name,
->    experience,achievement,expected_salary,dance_type,date_of_birth)
->    VALUES
->   ("Era", "Sharma", 7877445566,"Govindpuri New Delhi","erasharmak@gmail.com","B.S",
->    "SRM University",1,"Best college",25000,"Ballet", '1996-08-08');
Query OK, 1 row affected (0.01 sec)

mysql> select * from instructor;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| instructor_id | f_name | l_name | mob_no | address           | email            | qualification | institute_name | experien
ce | achievement | expected_salary | dance_type | date_of_birth |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | John   | Poul  | 9988776655 | Nehru place New Delhi | johnpoul@gmail.com | B.S          | Delhi University | |
| 2 | SDPM Adwards | 35000 | Jazz   | 1994-09-09 |                |                |                |                |
| 3 | Jary   | MArk  | 7788994455 | KalkaJI New Delhi   | jerrymark@gmail.com | M.S          | Jadavpur University |
| 4 | SDPM Adwards | 45000 | Ballet | 1992-08-08 |                |                |                |                |
| 5 | Sanja  | Markovic | 8877445566 | KalkaJI New Delhi   | sanjamark@gmail.com | M.S          | Jadavpur University |
| 4 | RRKM Adwards | 40000 | Ballet | 1992-08-08 |                |                |                |                |
| 1 | Best college | 25000 | Ballet | 1996-08-08 |                |                |                |                |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> 

```

```

root@752301cdd01a:/ 
5 | SDPM Adwards | 45000 | Ballet | 1992-08-08 | 
| 3 | Sanja | Markovic | 8877445566 | KalkaJI New Delhi | sanjamark@gmail.com | M.S | Jadavpur University |
4 | RRKM Adwards | 40000 | Ballet | 1992-08-08 | 
| 4 | Era | Sharma | 7877445566 | Govindpuri New Delhi | erasharmak@gmail.com | B.S | SRM University |
1 | Best college | 25000 | Ballet | 1996-08-08 | 
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from instructor order by expected_salary;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| instructor_id | f_name | l_name | mob_no | address           | email            | qualification | institute_name | experien
ce | achievement | expected_salary | dance_type | date_of_birth |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 4 | Era   | Sharma | 7877445566 | Govindpuri New Delhi | erasharmak@gmail.com | B.S | SRM University | |
| 1 | Best college | 25000 | Ballet | 1996-08-08 |                |                |                |                |
| 1 | John  | Poul  | 9988776655 | Nehru place New Delhi | johnpoul@gmail.com | B.S | Delhi University | 
| 2 | SDPM Adwards | 35000 | Jazz   | 1994-09-09 |                |                |                |                |
| 3 | Sanja  | Markovic | 8877445566 | KalkaJI New Delhi   | sanjamark@gmail.com | M.S | Jadavpur University |
| 4 | RRKM Adwards | 40000 | Ballet | 1992-08-08 |                |                |                |                |
| 2 | Jary  | MArk  | 7788994455 | KalkaJI New Delhi   | jerrymark@gmail.com | M.S | Jadavpur University |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select f_name,mob_no from instructor where qualification = 'M.S';
+-----+-----+
| f_name | mob_no |
+-----+-----+
| Jary  | 7788994455 |
| Sanja | 8877445566 |
+-----+-----+
2 rows in set (0.00 sec)

mysql> 

```

❖ Adding data in the student table.

INSERT INTO student

(f_name,l_name,mob_no,address,email,gender,expected_fees,
dance_type,medical_cond,date_of_birth)

VALUES

```
("Sakshi", "Mehra", 9988856655,"Anand Vihar,  
Delhi","sakshimehra@gmail.com","Female",  
2000,"Ballet","NA",'1997-09-09');
```

```
select *from student;
```

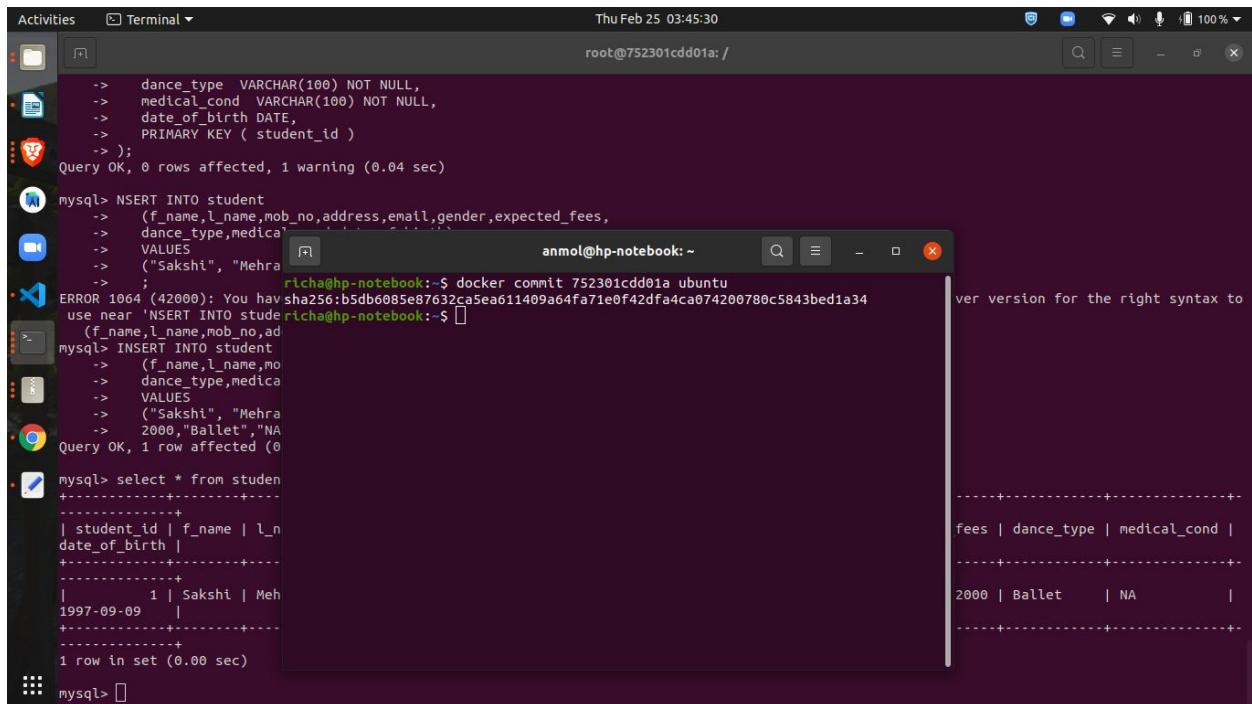
```
root@752301cdd01a: /  
-->     dance_type  VARCHAR(100) NOT NULL,  
-->     medical_cond  VARCHAR(100) NOT NULL,  
-->     date_of_birth DATE,  
-->     PRIMARY KEY ( student_id )  
--> );  
Query OK, 0 rows affected, 1 warning (0.04 sec)  
  
mysql> NSERT INTO student  
-->     ('f_name,l_name,mob_no,address,email,gender,expected_fees,  
-->     dance_type,medical_cond,date_of_birth)  
-->     VALUES  
-->     ("Sakshi", "Mehra", 9988856655,"Anand Vihar, Delhi","sakshimehra@gmail.com","Female",  
-->     ;  
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to  
use near 'NSERT INTO student  
(f_name,l_name,mob_no,address,email,gender,expected_fees,' at line 1  
mysql> INSERT INTO student  
-->     ('f_name,l_name,mob_no,address,email,gender,expected_fees,  
-->     dance_type,medical_cond,date_of_birth)  
-->     VALUES  
-->     ("Sakshi", "Mehra", 9988856655,"Anand Vihar, Delhi","sakshimehra@gmail.com","Female",  
-->     2000,"Ballet","NA",'1997-09-09');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> select * from student;  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| student_id | f_name | l_name | mob_no | address | email | gender | expected_fees | dance_type | medical_cond |  
date_of_birth |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 1 | Sakshi | Mehra | 9988856655 | Anand Vihar, Delhi | sakshimehra@gmail.com | Female | 2000 | Ballet | NA |  
1997-09-09 |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
1 row in set (0.00 sec)  
  
mysql> ■
```

```
root@752301cdd01a: /  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql> create table student(  
-->     student_id INT NOT NULL AUTO_INCREMENT,  
-->     f_name VARCHAR(50) NOT NULL,  
-->     l_name VARCHAR(50) NOT NULL,  
-->     mob_no bigint(10) NOT NULL,  
-->     address VARCHAR(100) NOT NULL,  
-->     email VARCHAR(100) NOT NULL,  
-->     gender VARCHAR(50) ,  
-->     expected_fees INTEGER,  
-->     dance_type VARCHAR(100) NOT NULL,  
-->     medical_cond VARCHAR(100) NOT NULL,  
-->     date_of_birth DATE,  
-->     PRIMARY KEY ( student_id )  
--> );  
Query OK, 0 rows affected, 1 warning (0.04 sec)  
  
mysql> NSERT INTO student  
-->     ('f_name,l_name,mob_no,address,email,gender,expected_fees,  
-->     dance_type,medical_cond,date_of_birth)  
-->     VALUES  
-->     ("Sakshi", "Mehra", 9988856655,"Anand Vihar, Delhi","sakshimehra@gmail.com","Female",  
-->     ;  
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to  
use near 'NSERT INTO student  
(f_name,l_name,mob_no,address,email,gender,expected_fees,' at line 1  
mysql> INSERT INTO student  
-->     ('f_name,l_name,mob_no,address,email,gender,expected_fees,  
-->     dance_type,medical_cond,date_of_birth)  
-->     VALUES  
-->     ("Sakshi", "Mehra", 9988856655,"Anand Vihar, Delhi","sakshimehra@gmail.com","Female",  
-->     2000,"Ballet","NA",'1997-09-09');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> ■
```

- ❖ After the creation of a database mydb and tables instructor, student inside that database now we need to commit the changes made in the container.

To commit the changes :

- Open a new terminal window.
- docker ps: to check the Running containers.
- **docker commit container_id container_name.**



```

Activities Terminal Thu Feb 25 03:45:30
root@752301cdd01a:/
--> dance_type VARCHAR(100) NOT NULL,
--> medical_cond VARCHAR(100) NOT NULL,
--> date_of_birth DATE,
--> PRIMARY KEY ( student_id )
--> );
Query OK, 0 rows affected, 1 warning (0.04 sec)

mysql> INSERT INTO student
-->   (f_name,l_name,mob_no,address,email,gender,expected_fees,
-->   dance_type,medical_cond)
--> VALUES
-->   ("Sakshi", "Mehra"
-->   ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'INSERT INTO student' at line 1
richa@hp-notebook:~$ docker commit 752301cdd01a ubuntu
ver version for the right syntax to
use near 'INSERT INTO student' at line 1
richa@hp-notebook:~$ 
mysql> INSERT INTO student
-->   (f_name,l_name,mob_no,address,email,gender,expected_fees,
-->   dance_type,medical_cond)
--> VALUES
-->   ("Sakshi", "Mehra"
-->   2000,"Ballet","NA
Query OK, 1 row affected (0.00 sec)

mysql> select * from student
+-----+-----+-----+
| student_id | f_name | l_name |
+-----+-----+-----+
|          1 | Sakshi | Mehra |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> 

```

- ❖ Now we will check is database saved or not.
 - **exit:** Used to get out of mysql image.
 - **exit:** This exit is to get out of ubuntu image.
 - **docker ps :** Checking all the running container.
 - **docker run -it ubuntu:** To get into ubuntu container
 - **mysql -uroot -p :** to start mysql server.
 - if not started then: **/etc/init.d/mysql stop**
/etc/init.d/mysql/start
 - **show databases;**
 - **use mydb;**
 - **show tables;**
 - **select * from instructor;**

```
richa@hp-notebook:~$ docker run -it ubuntu
root@ecfae267979f:/# mysql -uroot -p
Enter password:
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysql/mysqld.sock' (2)
root@ecfae267979f:/# /etc/init.d/mysql stop
 * Stopping MySQL database server mysqld
root@ecfae267979f:/# /etc/init.d/mysql start
 * Starting MySQL database server mysqld
su: warning: cannot change directory to /nonexistent: No such file or directory
root@ecfae267979f:/# mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.23-0ubuntu0.20.04.1 (Ubuntu)

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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          |
+----+-----+
| db                |
| information_schema |
| mydb              |
| mysql              |
| performance_schema |
| sys                |
+----+-----+
6 rows in set (0.01 sec)

mysql> show tables;
```

Q2. Create a database name mgdb in MongoDB and save above table in mgdb; show application of 4 MongoDB commands.

STEPS INVOLVED:

- ❖ We use the same base image ubuntu which was pulled in Q1. We run this image using: **docker run -it ubuntu**.
- ❖ To install all updates: **apt-get update**
- ❖ To install mongodb on the ubuntu base image: **apt-get install mongodb**.
- ❖ To start mongodb database inside container: **service mongodb start**.
- ❖ To enter mongodb shell version : **mongo**

```
Bye
root@ecfae267979f:/# exit
exit
richa@hp-notebook:~$ docker run -it ubuntu
root@a4b64cf0b737:/# apt-get update
Hit:1 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease
Reading package lists... Done
root@a4b64cf0b737:/# apt-get install mongodb
Reading package lists... Done
Building dependency tree
Reading state information... Done
mongodb is already the newest version (1:3.6.9+really3.6.8+90-g8e540c0b6d-0ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 6 not upgraded.
root@a4b64cf0b737:/# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
2021-02-24T22:21:55.072+0000 W NETWORK  [thread1] Failed to connect to 127.0.0.1:27017, in(checking socket for error after poll), reason: Connection refused
2021-02-24T22:21:55.075+0000 E QUERY    [thread1] Error: couldn't connect to server 127.0.0.1:27017, connection attempt failed :
connect@src/mongo/shell/mongo.js:257:13
@connect():1:6
exception: connect failed
root@a4b64cf0b737:/# service mongodb start
 * Starting database mongodb
root@a4b64cf0b737:/# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("d3eb4dd7-2ebc-44e4-a755-835e75553206") }
MongoDB server version: 3.6.8
Server has startup warnings:
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten]
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten] ** WARNING: Access control is not enabled for the database.
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten] **             Read and write access to data and configuration is unrestricted.
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten]
> 
```

- ❖ To list all databases in mongodb server: **show dbs**

```
richa@hp-notebook:~$ docker run -it ubuntu
root@a4b64cf0b737:/# apt-get update
Hit:1 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease
Reading package lists... Done
root@a4b64cf0b737:/# apt-get install mongodb
Reading package lists... Done
Building dependency tree
Reading state information... Done
mongodb is already the newest version (1:3.6.9+really3.6.8+90-g8e540c0b6d-0ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 6 not upgraded.
root@a4b64cf0b737:/# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
2021-02-24T22:21:55.075+0000 W NETWORK  [thread1] Failed to connect to 127.0.0.1:27017, in(checking socket for error after poll), reason: Connection refused
2021-02-24T22:21:55.075+0000 E QUERY    [thread1] Error: couldn't connect to server 127.0.0.1:27017, connection attempt failed :
connect@src/mongo/shell/mongo.js:257:13
@connect():1:6
exception: connect failed
root@a4b64cf0b737:/# service mongodb start
 * Starting database mongodb
root@a4b64cf0b737:/# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("d3eb4dd7-2ebc-44e4-a755-835e75553206") }
MongoDB server version: 3.6.8
Server has startup warnings:
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten]
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten] ** WARNING: Access control is not enabled for the database.
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten] **             Read and write access to data and configuration is unrestricted.
2021-02-24T22:22:20.619+0000 I CONTROL  [initandlisten]
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
```

- ❖ To create new database : **use mgdb**

- ❖ To switch to newly created database: **db**
- ❖ To save a collection : **db.mgdb_col.save({id:1,fname: ‘puneet’,lname: ‘pathak’,dob: ‘7-9-97’, city: ‘mumbai’, exp: ‘7years’ })**
- Similarly, a total of 6 records are inserted as shown below
- ❖ To list all inserted documents in the collection: **db.mgdb_col.find().pretty()**

```
root@a4b64cf0b737:/ 
admin 0.000GB
config 0.000GB
local 0.000GB
mongotry 0.000GB
> use mgdb
switched to db mgdb
> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
mongotry 0.000GB
> db
mgdb
> db.mgdb_col.save({id:1,fname:"puneet",lname:"pathak",dob:"7-9-97",city:"mumbai",exp:"7years"})
WriteResult({ "nInserted" : 1 })
> db.mgdb_col.save({id:2,fname:"dharmesh",lname:"mishra",dob:"9-10-96",city:"delhi",exp:"9years"})
WriteResult({ "nInserted" : 1 })
> db.mgdb_col.save({id:3,fname:"raghav",lname:"juyal",dob:"3-3-93",city:"dehradoon",exp:"15years"})
WriteResult({ "nInserted" : 1 })
> db.mgdb_col.save({id:4,fname:"remo",lname:"dsouza",dob:"6-1-90",city:"mumbai",exp:"20years"})
WriteResult({ "nInserted" : 1 })
> db.mgdb_col.save({id:5,fname:"shakti",lname:"mohan",dob:"5-2-99",city:"pune",exp:"5years"})
WriteResult({ "nInserted" : 1 })
> db.mgdb_col.save({id:6,fname:"vertika",lname:"jha",dob:"5-2-99",city:"bihar",exp:"3years"})
WriteResult({ "nInserted" : 1 })
> show collections
mgdb_col
> db.mgdb_col.find().pretty()
{
  "_id" : ObjectId("6036d2e089ca63029fbdc8d8"),
  "id" : 1,
  "fname" : "puneet",
  "lname" : "pathak",
  "dob" : "7-9-97",
  "city" : "mumbai",
  "exp" : "7years"
}
{
  "_id" : ObjectId("6036d33089ca63029fbdc8da"),
  "id" : 3,
  "fname" : "raghav",
  "lname" : "juyal",
  "dob" : "3-3-93",
  "city" : "dehradoon",
  "exp" : "15years"
}
{
  "_id" : ObjectId("6036d35489ca63029fbdc8db"),
  "id" : 4,
  "fname" : "remo",
  "lname" : "dsouza",
  "dob" : "6-1-90",
  "city" : "mumbai",
  "exp" : "20years"
}
{
  "_id" : ObjectId("6036d37989ca63029fbdc8dc"),
  "id" : 5,
  "fname" : "shakti",
  "lname" : "mohan",
  "dob" : "5-2-99",
  "city" : "pune",
  "exp" : "5years"
}
{
  "_id" : ObjectId("6036d3a589ca63029fbdc8dd"),
  "id" : 6,
  "fname" : "vertika",
  "lname" : "jha",
  "dob" : "5-2-99",
  "city" : "bihar",
  "exp" : "3years"
}
> 
```

```
root@a4b64cf0b737:/ 
}
{
  "_id" : ObjectId("6036d33089ca63029fbdc8da"),
  "id" : 3,
  "fname" : "raghav",
  "lname" : "juyal",
  "dob" : "3-3-93",
  "city" : "dehradoon",
  "exp" : "15years"
}
{
  "_id" : ObjectId("6036d35489ca63029fbdc8db"),
  "id" : 4,
  "fname" : "remo",
  "lname" : "dsouza",
  "dob" : "6-1-90",
  "city" : "mumbai",
  "exp" : "20years"
}
{
  "_id" : ObjectId("6036d37989ca63029fbdc8dc"),
  "id" : 5,
  "fname" : "shakti",
  "lname" : "mohan",
  "dob" : "5-2-99",
  "city" : "pune",
  "exp" : "5years"
}
{
  "_id" : ObjectId("6036d3a589ca63029fbdc8dd"),
  "id" : 6,
  "fname" : "vertika",
  "lname" : "jha",
  "dob" : "5-2-99",
  "city" : "bihar",
  "exp" : "3years"
}
> 
```

❖ Queries Performed: -

- Insert document in created collection(mgdb_col)
- Update document in created collection(mgdb_col)
- Find all documents in collection and Find document by ID in collection

- Sort documents in collection by a certain field (here, experience)
 - Delete document from collection
- ❖ To insert documents in the collection: **db.mgdb_col.insertOne({id:7, fname: 'himanshu', lname: 'dulani', dob: '5-7-96', city: 'mumbai', exp: '4years'})**

```
> db.mgdb_col.insertOne({id:7, fname:"himanshu",lname:"dulani",dob:"5-7-96",city:"mumbai",exp:"4years"})
{
  "acknowledged" : true,
  "insertedId" : ObjectId("6036d45b89ca63029fbdc8de")
}
> db.mgdb_col.find().pretty()
{
  "_id" : ObjectId("6036d2e089ca63029fbdc8d8"),
  "id" : 1,
  "fname" : "puneet",
  "lname" : "pathak",
  "dob" : "7-9-97",
  "city" : "mumbai",
  "exp" : "7years"
}
{
  "_id" : ObjectId("6036d30689ca63029fbdc8d9"),
  "id" : 2,
  "fname" : "dharmesh",
  "lname" : "misra",
  "dob" : "9-10-96",
  "city" : "delhi",
  "exp" : "9years"
}
{
  "_id" : ObjectId("6036d33089ca63029fbdc8da"),
  "id" : 3,
  "fname" : "raghav",
  "lname" : "juyal",
  "dob" : "3-3-93",
  "city" : "dehradoon",
  "exp" : "15years"
}
{
  "_id" : ObjectId("6036d35489ca63029fbdc8db"),
  "id" : 4,
```

```
{
  "_id" : ObjectId("6036d35489ca63029fbdc8db"),
  "id" : 4,
  "fname" : "remo",
  "lname" : "dsouza",
  "dob" : "6-1-90",
  "city" : "mumbai",
  "exp" : "20years"
}
{
  "_id" : ObjectId("6036d37989ca63029fbdc8dc"),
  "id" : 5,
  "fname" : "shakti",
  "lname" : "mohan",
  "dob" : "5-2-99",
  "city" : "pune",
  "exp" : "5years"
}
{
  "_id" : ObjectId("6036d3a589ca63029fbdc8dd"),
  "id" : 6,
  "fname" : "vertika",
  "lname" : "jha",
  "dob" : "5-2-99",
  "city" : "bhihar",
  "exp" : "3years"
}
{
  "_id" : ObjectId("6036d45b89ca63029fbdc8de"),
  "id" : 7,
  "fname" : "himanshu",
  "lname" : "dulani",
  "dob" : "5-7-96",
  "city" : "mumbai",
  "exp" : "4years"
}
```

- ❖ To update documents in the collection: **db.mgdb_col.updateOne({id:2}, {\$set:{exp:5}})**
Similarly other documents are updated

```

root@a4b64cf0b737:/ 
> db.mgdb_col.updateOne({id:2},{set:{exp:5}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.updateOne({id:3},{set:{exp:15}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.updateOne({id:4},{set:{exp:0}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.updateOne({id:5},{set:{exp:0}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.updateOne({id:6},{set:{exp:7}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.updateOne({id:7},{set:{exp:6}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.mgdb_col.find()
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3
}
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"), "id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5
}
{ "_id" : ObjectId("6036d33089ca63029fbdc8da"), "id" : 3, "fname" : "raghav", "lname" : "juyal", "dob" : "3-3-93", "city" : "dehradoon", "exp" : 15
}
{ "_id" : ObjectId("6036d35489ca63029fbdc8db"), "id" : 4, "fname" : "remo", "lname" : "dsouza", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6
}
{ "_id" : ObjectId("6036d37989ca63029fbdc8dc"), "id" : 5, "fname" : "shakti", "lname" : "mohan", "dob" : "5-2-99", "city" : "pune", "exp" : 9
}
{ "_id" : ObjectId("6036d3a589ca63029fbdc8dd"), "id" : 6, "fname" : "vertika", "lname" : "jha", "dob" : "5-2-99", "city" : "bhitar", "exp" : 7
}
{ "_id" : ObjectId("6036d45b89ca63029fbdc8de"), "id" : 7, "fname" : "himanshu", "lname" : "dulani", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6
}
> db.mgdb_col.find({id:2})
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"),
  "id" : 2,
  "fname" : "dharmesh",
  "lname" : "mishra",
  "dob" : "9-10-96",
  "city" : "delhi",
  "exp" : 5
}
> db.mgdb_col.find({id:2}).pretty()
{
  "_id" : ObjectId("6036d30689ca63029fbdc8d9"),
  "id" : 2,
  "fname" : "dharmesh",
  "lname" : "mishra",
  "dob" : "9-10-96",
  "city" : "delhi",
  "exp" : 5
}
>

```

- ❖ To find documents in the collection: **db.mgdb_col.find()**
- ❖ To find documents in the collection by a field i.e. id : **db.mgdb_col.find({id:2})**
- ❖ To sort documents in the collection by experience : **db.mgdb_col.find().sort({exp:1})**

```

root@a4b64cf0b737:/ 
> db.mgdb_col.find()
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3
}
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"), "id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5
}
{ "_id" : ObjectId("6036d33089ca63029fbdc8da"), "id" : 3, "fname" : "raghav", "lname" : "juyal", "dob" : "3-3-93", "city" : "dehradoon", "exp" : 15
}
{ "_id" : ObjectId("6036d35489ca63029fbdc8db"), "id" : 4, "fname" : "remo", "lname" : "dsouza", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6
}
{ "_id" : ObjectId("6036d37989ca63029fbdc8dc"), "id" : 5, "fname" : "shakti", "lname" : "mohan", "dob" : "5-2-99", "city" : "pune", "exp" : 9
}
{ "_id" : ObjectId("6036d3a589ca63029fbdc8dd"), "id" : 6, "fname" : "vertika", "lname" : "jha", "dob" : "5-2-99", "city" : "bhitar", "exp" : 7
}
{ "_id" : ObjectId("6036d45b89ca63029fbdc8de"), "id" : 7, "fname" : "himanshu", "lname" : "dulani", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6
}
> db.mgdb_col.find({id:2})
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"),
  "id" : 2,
  "fname" : "dharmesh",
  "lname" : "mishra",
  "dob" : "9-10-96",
  "city" : "delhi",
  "exp" : 5
}
> db.mgdb_col.find({id:2}).pretty()
{
  "_id" : ObjectId("6036d30689ca63029fbdc8d9"),
  "id" : 2,
  "fname" : "dharmesh",
  "lname" : "mishra",
  "dob" : "9-10-96",
  "city" : "delhi",
  "exp" : 5
}
> db.mgdb_col.find().sort({exp:1})
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3
}
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"), "id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5
}
{ "_id" : ObjectId("6036d35489ca63029fbdc8db"), "id" : 4, "fname" : "remo", "lname" : "dsouza", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6
}
{ "_id" : ObjectId("6036d45b89ca63029fbdc8de"), "id" : 7, "fname" : "himanshu", "lname" : "dulani", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6
}
{ "_id" : ObjectId("6036d3a589ca63029fbdc8dd"), "id" : 6, "fname" : "vertika", "lname" : "jha", "dob" : "5-2-99", "city" : "bhitar", "exp" : 7
}
{ "_id" : ObjectId("6036d37989ca63029fbdc8dc"), "id" : 5, "fname" : "shakti", "lname" : "mohan", "dob" : "5-2-99", "city" : "pune", "exp" : 9
}
{ "_id" : ObjectId("6036d33089ca63029fbdc8da"), "id" : 3, "fname" : "raghav", "lname" : "juyal", "dob" : "3-3-93", "city" : "dehradoon", "exp" : 15
}
>

```

- ❖ To delete documents in the collection : **db.mgdb_col.deleteOne({id:3})**

```
root@a4b64cf0b737:/ 
{"id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5}
} > db.mgdb_col.find().sort([{"exp":1}]
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3 }
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"), "id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5 }
{ "_id" : ObjectId("6036d35489ca63029fbdc8db"), "id" : 4, "fname" : "remo", "lname" : "dsouza", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6 }
{ "_id" : ObjectId("6036d45b89ca63029fbdc8de"), "id" : 7, "fname" : "himanshu", "lname" : "dulant", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6 }
{ "_id" : ObjectId("6036d3a589ca63029fbdc8d"), "id" : 6, "fname" : "vertika", "lname" : "jha", "dob" : "5-2-99", "city" : "bhitar", "exp" : 7 }
{ "_id" : ObjectId("6036d37989ca63029fbdc8dc"), "id" : 5, "fname" : "shakti", "lname" : "mohan", "dob" : "5-2-99", "city" : "pune", "exp" : 9 }
{ "_id" : ObjectId("6036d33089ca63029fbdc8da"), "id" : 3, "fname" : "raghav", "lname" : "juyal", "dob" : "3-3-93", "city" : "dehradoon", "exp" : 15 }
> db.mgdb_col.deleteOne({id:3}).find()
2021-02-24T22:40:41.605+0000 E QUERY [thread1] TypeError: db.mgdb_col.deleteOne(...).find is not a function :
@shell:1:1
> db.mgdb_col.find().deleteOne({id:3})
2021-02-24T22:40:53.449+0000 E QUERY [thread1] TypeError: db.mgdb_col.find(...).deleteOne is not a function :
@shell:1:1
> db.mgdb_col.deleteOne({id:3})
{ "acknowledged" : true, "deletedCount" : 0 }
> db.mgdb_col.find()
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3 }
{ "_id" : ObjectId("6036d30689ca63029fbdc8d9"), "id" : 2, "fname" : "dharmesh", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5 }
{ "_id" : ObjectId("6036d35489ca63029fbdc8db"), "id" : 4, "fname" : "remo", "lname" : "dsouza", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6 }
{ "_id" : ObjectId("6036d37989ca63029fbdc8dc"), "id" : 5, "fname" : "shakti", "lname" : "mohan", "dob" : "5-2-99", "city" : "pune", "exp" : 9 }
{ "_id" : ObjectId("6036d3a589ca63029fbdc8d"), "id" : 6, "fname" : "vertika", "lname" : "jha", "dob" : "5-2-99", "city" : "bhitar", "exp" : 7 }
{ "_id" : ObjectId("6036d45b89ca63029fbdc8de"), "id" : 7, "fname" : "himanshu", "lname" : "dulant", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6 }
>
```

- ❖ Now, before exiting the mongodb shell, the containers are committed in a new terminal as shown below

```
anmol@hp-notebook:~ 
richa@hp-notebook:~$ docker commit 752301cdd01a ubuntu
sha256:b5db6085e87632ca5ea611409a64fa71e0f42dfa4ca074200780c5843bed1a34
richa@hp-notebook:~$ docker commit a4b64cf0b737 ubuntu
sha256:70d19d5a0aecffe1758f15228fa3cba27c05af05fddb3303c3797b2e35b80e65
richa@hp-notebook:~$
```

```

Thu Feb 25 04:13:21
root@a4b64cf0b737:~ /Activities Terminal Thu Feb 25 04:13:21

> db.mgdb_col.find().sort({exp:1})
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d8"), "id" : 1, "fname" : "puneet", "lname" : "pathak", "dob" : "7-9-97", "city" : "mumbai", "exp" : 3 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8d9"), "id" : 2, "fname" : "dharmash", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8da"), "id" : 3, "fname" : "louza", "lname" : "dulani", "dob" : "6-1-90", "city" : "mumbai", "exp" : 6 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8db"), "id" : 4, "fname" : "jha", "lname" : "mohan", "dob" : "5-2-99", "city" : "bhihar", "exp" : 7 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8dc"), "id" : 5, "fname" : "mohan", "lname" : "pune", "dob" : "5-2-99", "city" : "pune", "exp" : 9 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8dd"), "id" : 6, "fname" : "jyoti", "lname" : "dulani", "dob" : "5-7-96", "city" : "mumbai", "exp" : 6 }
{ "_id" : ObjectId("6036d2e089ca63029fbdc8de"), "id" : 7, "fname" : "louza", "lname" : "mishra", "dob" : "9-10-96", "city" : "delhi", "exp" : 5 }

anmol@hp-notebook: ~ docker commit 752301cdd01a ubuntu
richa@hp-notebook: ~ docker commit a4b64cf0b737 ubuntu
richa@hp-notebook: ~ docker commit 175bf15228fa3cba27c05af05fdb3303c3797b2e35b80e65

15 }

> db.m
2021-0
@shell
> db.m
2021-0
@shell
> db.m
{ "_id"
}
{ "_id"
5 }
{ "_id"
{ "_id"
{ "_id"
{ "_id"
6 }

> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
mgdb 0.000GB
mongotry 0.000GB

```

- ❖ To provide tag to the pulled base ubuntu image: **docker tag ubuntu:latest username/reponame:tag**
- ❖ To push the container to docker hub : **docker push username/reponame:tag**

```

shreya20133/test-image <none> 56e12f08b083 4 days ago 449MB
richa20104/assignment_1_trial a2 b8264a857eba 7 days ago 449MB
richa20104/assignmetn2 atray b8264a857eba 7 days ago 449MB
shreya20133/test-image latest b8264a857eba 7 days ago 449MB
mongo latest b8264a857eba 7 days ago 449MB
richa20104/assignment1_group15 question2 b8264a857eba 7 days ago 449MB
richa20104/assignment2 atray b8264a857eba 7 days ago 449MB
mongo-express latest 4203977a1299 11 days ago 129MB
php 7.3-apache 285f9853d978 2 weeks ago 411MB
redis latest eb0ab2d55fdf 2 weeks ago 104MB
lamp_database latest 5f47254ca581 2 weeks ago 449MB
mysql 5.7 5f47254ca581 2 weeks ago 449MB
richa20104/assignment1_group15 question1 2933adc350f3 2 weeks ago 546MB
phpmyadmin/phpmyadmin latest cdaff1a07a9d 2 weeks ago 470MB
ubuntu <none> f63181f19b2f 4 weeks ago 72.9MB
matrainer/lamp latest-1804 05750cf54d5 7 months ago 915MB
docker/getting-started latest 3c156928aec 10 months ago 24.8MB
akanksha19049/akanksha_mt19049_priyanka_mt19127_a1 question2 f662d5544b7f 12 months ago 432MB
php 7.4.2-apache-buster 4165e46dd82e 12 months ago 414MB
hello-world latest bf756fb1ae65 13 months ago 13.3KB
raghavags/gpsrdocker latest 0f65dd4376cf 2 years ago 1.11GB

richa@hp-notebook: ~ docker tag ubuntu:latest richa20104/BDMH_Assignment1_Group15:Question12
Error parsing reference: "richa20104/BDMH_Assignment1_Group15:Question12" is not a valid repository/tag: invalid reference format: repository name must be lowercase
richa@hp-notebook: ~ docker tag ubuntu:latest richa20104/bdmh_assignment1_group15:question12
richa@hp-notebook: ~ docker push richa20104/bdmh_assignment1_group15:question12
The push refers to repository [docker.io/richa20104/bdmh_assignment1_group15]
0681accc3956: Pushed
99948073286c: Pushed
dbaa5a2b2f569: Mounted from richa20104/assignment2
31a33919cd3c: Mounted from richa20104/assignment2
7c9c55ba0f22: Mounted from richa20104/assignment2
71376c459060: Mounted from richa20104/assignment2
02473af3d360b: Mounted from richa20104/assignment2
dbfc20f42a39: Mounted from richa20104/assignment2
9f32931c9d28: Mounted from richa20104/assignment2
question12: digest: sha256:e6c3b010ba6acd39391eb2b8537999781abfe434dd42c8e13e82a0514ccf539a size: 2210
richa@hp-notebook: ~

```

Checking Persistence of Database after pulling container from docker hub

When the image is pulled from dockerhub again the database for mysql and mongodb persists as shown below.

```
root@097f28e6bc6d:/ 
richa@hp-notebook:~$ docker pull richa20104/bdmh_assignment1_group15:question12
question12: Pulling from richa20104/bdmh_assignment1_group15
Digest: sha256:e6c3b010ba6acd39391eb2b8537999781abfe434dd42c8e13e82a514ccf539a
Status: Image is up to date for richa20104/bdmh_assignment1_group15:question12
docker.io/richa20104/bdmh_assignment1_group15:question12
richa@hp-notebook:~$ docker run -it richa20104/bdmh_assignment1_group15:question12
root@097f28e6bc6d:/# mysql -uroot -p
Enter password:
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysql/mysqld.sock' (2)
root@097f28e6bc6d:/# /etc/init.d/mysql stop
 * Stopping MySQL database server mysqld
root@097f28e6bc6d:/# /etc/init.d/mysql start
 * Starting MySQL database server mysqld
su: warning: cannot change directory to /nonexistent: No such file or directory
[ OK ]
root@097f28e6bc6d:/# mysql -uroot -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.23-0ubuntu0.20.04.1 (Ubuntu)

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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 |
+-----+
| db      |
| information_schema |
| mydb    |
| mysql   |
+-----+
```

```
root@097f28e6bc6d:/ 
| performance_schema |
| sys                |
+-----+
6 rows in set (0.01 sec)

mysql> show tables;
ERROR 1046 (3D000): No database selected
mysql> use mydb;
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_mydb |
+-----+
| instructor     |
| student         |
+-----+
2 rows in set (0.01 sec)

mysql> select * from instructor;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| instructor_id | f_name | l_name | mob_no | address          | email           | qualification | institute_name | experien
ce |
| achievement | expected_salary | dance_type | date_of_birth |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | John   | Poul  | 9988776655 | Nehru place New Delhi | johnpoul@gmail.com | B.S.        | Delhi University | 
10 | SDPM Adwars | 35000 | Jazz   | 1994-09-09 |                     |
| 3 | Sanja  | Markovic | 8877445566 | Kalkaji New Delhi | sanjamark@gmail.com | M.S.        | Jadavpur University | 
4 | RRKM Adwars | 40000  | Ballet  | 1992-08-08 |                     |
| 4 | Era    | Sharma | 7877445566 | Govindpuri New Delhi | erasharmak@gmail.com | B.S.        | SRM University | 
1 | Best college | 25000 | Ballet  | 1996-08-08 |                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> select * from student;
```

```
root@097f28e6bc6d:/ # mysql> exit
Bye
root@097f28e6bc6d:/ # mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
2021-02-24T22:56:21.491+0000 W NETWORK  [thread1] Failed to connect to 127.0.0.1:27017, in(checking socket for error after poll), reason: Connection refused
2021-02-24T22:56:21.493+0000 E QUERY   [thread1] Error: couldn't connect to server 127.0.0.1:27017, connection attempt failed :
connect@src/mongo/shell/mongo.js:257:13
@connect):1:6
exception: connect failed
root@097f28e6bc6d:/ # service mongodb start
 * Starting database mongodb
root@097f28e6bc6d:/ # mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
2021-02-24T22:56:35.449+0000 W NETWORK  [thread1] Failed to connect to 127.0.0.1:27017, in(checking socket for error after poll), reason: Connection refused
2021-02-24T22:56:35.450+0000 E QUERY   [thread1] Error: couldn't connect to server 127.0.0.1:27017, connection attempt failed :
connect@src/mongo/shell/mongo.js:257:13
@connect):1:6
exception: connect failed
root@097f28e6bc6d:/ # service mongodb start
 * Starting database mongodb
root@097f28e6bc6d:/ # mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("17d48627-460c-4017-b94b-3482fdaf6a2") }
MongoDB server version: 3.6.8
Server has startup warnings:
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten]
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten] ** WARNING: Access control is not enabled for the database.
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten] ** Read and write access to data and configuration is unrestricted.
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten]
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
```

```
root@097f28e6bc6d:/ # 2021-02-24T22:56:35.450+0000 E QUERY   [thread1] Error: couldn't connect to server 127.0.0.1:27017, connection attempt failed :
connect@src/mongo/shell/mongo.js:257:13
@connect):1:6
exception: connect failed
root@097f28e6bc6d:/ # service mongodb start
 * Starting database mongodb
root@097f28e6bc6d:/ # mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("17d48627-460c-4017-b94b-3482fdaf6a2") }
MongoDB server version: 3.6.8
Server has startup warnings:
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten]
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten] ** WARNING: Access control is not enabled for the database.
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten] ** Read and write access to data and configuration is unrestricted.
2021-02-24T22:56:35.672+0000 I CONTROL  [initandlisten]
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
mgdb       0.000GB
mongotry   0.000GB
> show collections
> use mgdb
switched to db mgdb
> show collections
mgdb_col
> db.mgdb_col.find()
[{"_id": ObjectId("6036d2e089ca63029fbdc8d8")}, {"id": 1, "fname": "puneet", "lname": "pathak", "dob": "7-9-97", "city": "mumbai", "exp": 3}]
[{"_id": ObjectId("6036d30689ca63029fbdc8d9")}, {"id": 2, "fname": "dharmesh", "lname": "mishra", "dob": "9-10-96", "city": "delhi", "exp": 5}]
[{"_id": ObjectId("6036d35489ca63029fbdc8db")}, {"id": 4, "fname": "remo", "lname": "dsouza", "dob": "6-1-90", "city": "mumbai", "exp": 6}]
[{"_id": ObjectId("6036d37989ca63029fbdc8dc")}, {"id": 5, "fname": "shakti", "lname": "mohan", "dob": "5-2-99", "city": "pune", "exp": 9}]
[{"_id": ObjectId("6036d3a589ca63029fbdc8dd")}, {"id": 6, "fname": "vertika", "lname": "jha", "dob": "5-2-99", "city": "bhitar", "exp": 7}]
[{"_id": ObjectId("6036d45b89ca63029fbdc8de")}, {"id": 7, "fname": "himanshu", "lname": "dulani", "dob": "5-7-96", "city": "mumbai", "exp": 6}]
> 
```

Q 3: Develop a web site using HTML, CSS and Javascript

We used LAMP software to develop the website and host on a local machine using docker container.

Following are the technology used by

HTML : It is used to display the content of the website. We used a large variety of tags for our Website development like anchor tag, headline tag, link tag ,image tag e.t.c.

CSS : We used CSS to make our website more interactive, by providing different layouts, colors e.t.c. we used both internal and external CSS.

Javascript : We used javascript to perform small business logic like validation checking for emails, validation checking of input boxes. We also used javascript to show location by using mapbox API.

Bootstrap : We also used bootstrap to make our website dynamic with different device layout.

PHP : We used php as a backend for database connection. It is also used to insert the data into a database after taking input from forms on the website.All the database related logic is implemented using php.

Website Description :

We built a website named *Shazam Dance Academy* where clients can visit and get queries related to taking dance classes. Apart from this we also provide a section where an instructor who wishes to become a dance teacher can submit their interest. Students (clients) can visit the website and get the information about the different instructors. We also provide **about us** section where details about the dance academy are mentioned. We provide the contact details which include the map address, telephone number and emails.

At the home page we also provide top three students of the month. We also list down the different brands from which we got the sponsorship.We also used bootstrap **carousel** to provide slideshow components with images which make the website more interactive.

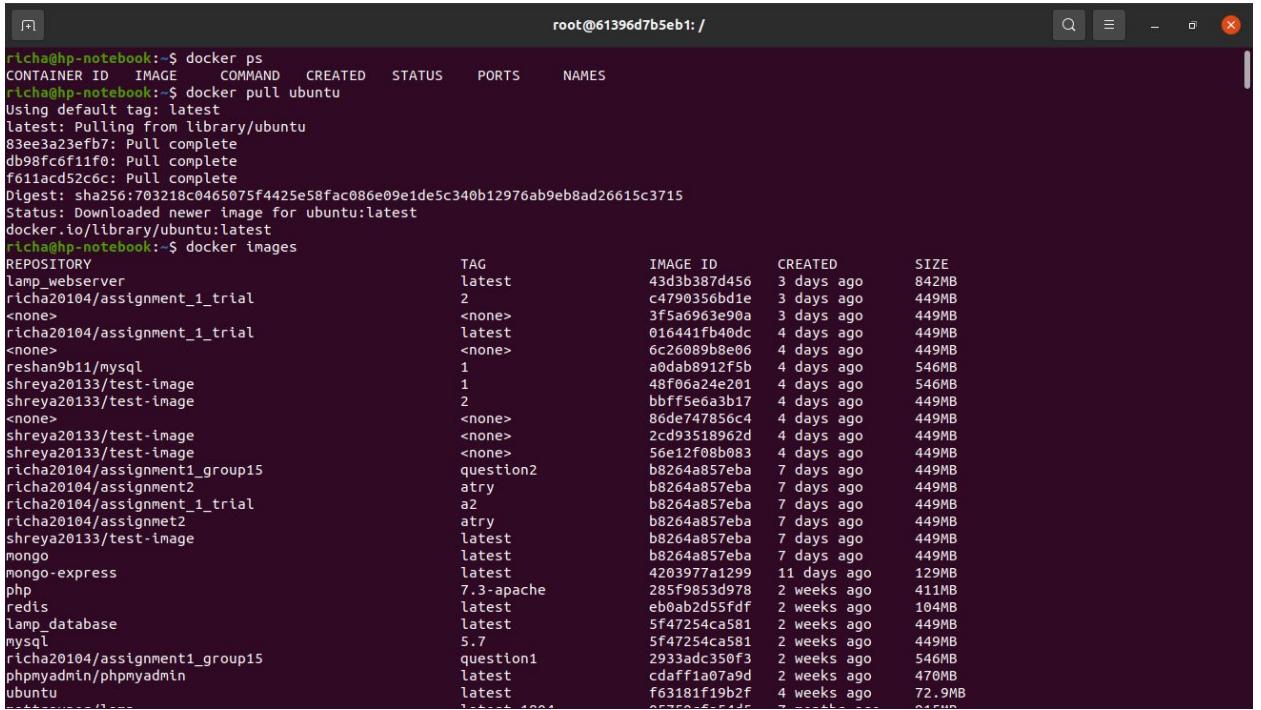
Installing Lamp in ubuntu image:

1. docker run -it ubuntu
2. apt-get update
3. \$ apt-get update
4. \$ apt-get install nano curl software-properties-common -y
5. \$ apt-get install apache2 -y
6. \$ service apache2 start

7. \$ add-apt-repository ppa:ondrej/php
8. \$ apt-get update

9. \$ apt-get install php7.4 php7.4-mbstring php7.4-intl php7.4-simplexml php7.4-sqlite php7.4-mysql php7.4-mysqli
10. \$ apt-get install mysql-server
11. \$ service mysql start

12. \$ add-apt-repository ppa:phpmyadmin/ppa
13. \$ apt-get update
14. \$ apt-get install phpmyadmin -y



```

root@61396d7b5eb1: ~
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
richa@hp-notebook: ~$ docker ps
Using default tag: latest
latest: Pulling from library/ubuntu
83ee3a23efb7: Pull complete
db98fc6f11f0: Pull complete
f611acd52c6c: Pull complete
Digest: sha256:703218c0465075f4425e58fac086e09e1de5c340b12976ab9eb8ad26615c3715
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
richa@hp-notebook: ~$ docker pull ubuntu
REPOSITORY          TAG      IMAGE ID      CREATED        SIZE
lamp_webserver     latest   43d3b387d456  3 days ago   842MB
richa20104/assignment_1_trial 2       c4790356bd1e  3 days ago   449MB
<none>              <none>  3f5a6963e99a  3 days ago   449MB
richa20104/assignment_1_trial  latest   016441fb40dc  4 days ago   449MB
<none>              <none>  6c26089b8e06  4 days ago   449MB
reshan9b11/mysql    1       a0dab8912f5b  4 days ago   546MB
shreya20133/test-image 1       48f06a24e201  4 days ago   546MB
shreya20133/test-image 2       bbf5e6a3b17   4 days ago   449MB
<none>              <none>  86de747856c4  4 days ago   449MB
shreya20133/test-image  <none>  2cd93518962d  4 days ago   449MB
shreya20133/test-image  <none>  56e12f08b083  4 days ago   449MB
richa20104/assignment1_group15 question2  b8264a857eba  7 days ago   449MB
richa20104/assignment2   atry   b8264a857eba  7 days ago   449MB
richa20104/assignment_1_trial a2     b8264a857eba  7 days ago   449MB
richa20104/assignment2   atry   b8264a857eba  7 days ago   449MB
shreya20133/test-image  latest  b8264a857eba  7 days ago   449MB
mongo                latest  b8264a857eba  7 days ago   449MB
mongo-express         latest  4203977a1299  11 days ago  129MB
php                  7.3-apache 285f9853d978  2 weeks ago  411MB
redis                latest  eb0ab2d55fdf  2 weeks ago  104MB
lamp_database        latest  5f47254ca581  2 weeks ago  449MB
mysql                5.7    5f47254ca581  2 weeks ago  449MB
richa20104/assignment1_group15 question1  2933adc350f3  2 weeks ago  546MB
phpmyadmin/phpmyadmin latest  cdaffia07a9d   2 weeks ago  470MB
ubuntu               latest  f63181f19bzf  4 weeks ago  72.9MB

```

```
richa20104/assignment_1_trial          a2                  b8264a857eba  7 days ago  449MB
richa20104/assignmet2                 atry                b8264a857eba  7 days ago  449MB
shreya20133/test-image                latest               b8264a857eba  7 days ago  449MB
mongo                                latest               b8264a857eba  7 days ago  449MB
mongo-express                         latest              4203977aa1299 11 days ago  129MB
php                                  7.3-apache        285f9853d978  2 weeks ago  411MB
redis                                latest              eb0ab2d55fdf  2 weeks ago  104MB
lamp_database                         latest              5f47254ca581  2 weeks ago  449MB
mysql                                5.7                5f47254ca581  2 weeks ago  449MB
richa20104/assignment1_group15        question1         2933adc350f3  2 weeks ago  546MB
phpmyadmin/phpmyadmin                 latest              cdaaff1a07a9d  2 weeks ago  470MB
ubuntu                               latest              f63181f19b2f  4 weeks ago  72.9MB
mattrayner/lamp                       latest              05750cfa54d5  7 months ago  915MB
docker/getting-started                latest              3c156928aec 10 months ago  24.8MB
akanksha19049/akanksha_mt19049_priyanka_mt19127_a1 question2         f662d5544b7f 12 months ago  432MB
php                                  7.4.2-apache-buster 4165e46dd82e 12 months ago  414MB
hello-world                           latest              bf756fb1ae65 13 months ago  13.3kB
raghavagps/gpsrdocker                latest              0f65d4d376cf  2 years ago  1.11GB
richa@hp-notebook:~$ docker run -ti --name lampbdmh ubuntu bash
root@61396d7b5eb1:/# apt-get update
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://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [21.6 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [650 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [177 kB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [670 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [933 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [209 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1059 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [29.6 kB]
Get:17 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [4301 B]
Fetched 17.2 MB in 5s (3597 kB/s)
Reading package lists... Done
```

```
root@61396d7b5eb1: /  
Setting up python3-requests (2.22.0-2ubuntu1) ...  
Setting up networkd-dispatcher (2.0.1-1) ...  
Created symlink /etc/systemd/system/multi-user.target.wants/networkd-dispatcher.service → /lib/systemd/system/networkd-dispatcher.service.  
Setting up gsettings-desktop-schemas (3.36.0-1ubuntu1) ...  
Setting up libldap2-2.4-2:amd64 (2.4.49+dfsg-2ubuntu1.7) ...  
Setting up python3-requests-unixsocket (0.2.0-2) ...  
Setting up dirmngr (2.2.19-3ubuntu2.1) ...  
Created symlink /etc/systemd/user/sockets.target.wants/dirmngr.socket → /usr/lib/systemd/user/dirmngr.socket.  
Setting up libcurl4:amd64 (7.68.0-1ubuntu2.4) ...  
Setting up curl (7.68.0-1ubuntu2.4) ...  
Setting up glib-networking:amd64 (2.64.2-1ubuntu0.1) ...  
Setting up libsoup2.4-1:amd64 (2.70.0-1) ...  
Setting up gpg-wks-client (2.2.19-3ubuntu2.1) ...  
Setting up libappstream4:amd64 (0.12.10-2) ...  
Setting up gnupg (2.2.19-3ubuntu2.1) ...  
Setting up packagekit (1.1.13-2ubuntu1.1) ...  
invoke-rc.d: could not determine current runlevel  
invoke-rc.d: policy-rc.d denied execution of force-reload.  
Failed to open connection to "system" message bus: Failed to connect to socket /var/run/dbus/system_bus_socket: No such file or directory  
Created symlink /etc/systemd/user/sockets.target.wants/pk-debconf-helper.socket → /usr/lib/systemd/user/pk-debconf-helper.socket.  
Setting up packagekit-tools (1.1.13-2ubuntu1.1) ...  
Setting up software-properties-common (0.98.9.4) ...  
Processing triggers for systemd (245.4-4ubuntu3.4) ...  
Processing triggers for libc-bin (2.31-0ubuntu9.1) ...  
Processing triggers for ca-certificates (20210119~20.04.1) ...  
Updating certificates in /etc/ssl/certs...  
0 added, 0 removed; done.  
Running hooks in /etc/ca-certificates/update.d...  
done.  
Processing triggers for dbus (1.12.16-2ubuntu2.1) ...  
root@61396d7b5eb1:/# apt-get install apache -y  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
Package apache is not available, but is referred to by another package.  
This may mean that the package is missing, has been obsoleted, or  
is only available from another source
```

```
root@61396d7b5eb1: /  
text -y  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
Note, selecting 'php7.4-xml' instead of 'php7.4-simplexml'  
Note, selecting 'php7.4-common' instead of 'php7.4-gettext'  
E: Unable to locate package php7.4-mysqli  
E: Couldn't find any package by glob 'php7.4-mysqli'  
E: Couldn't find any package by regex 'php7.4-mysqli'  
root@61396d7b5eb1:/# apt-get install php7.4 php7.4-mbstring php7.4-intl php7.4-simplexml php7.4-sqlite3 php7.4-mysql php7.4-gettext -y  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
Note, selecting 'php7.4-xml' instead of 'php7.4-simplexml'  
Note, selecting 'php7.4-common' instead of 'php7.4-gettext'  
The following additional packages will be installed:  
 libapache2-mod-php7.4 libbss0 libedit2 libbonig5 libsodium23  
 libxslt1.1 php-common php7.4-cli php7.4-json php7.4-opcache  
 php7.4-readline psmisc  
Suggested packages:  
 php-pear  
The following NEW packages will be installed:  
 libapache2-mod-php7.4 libbss0 libedit2 libbonig5 libsodium23  
 libxslt1.1 php-common php7.4-cli php7.4-common php7.4-intl  
 php7.4-json php7.4-mbstring php7.4-mysql php7.4-opcache  
 php7.4-readline php7.4-sqlite3 php7.4-xml psmisc  
0 upgraded, 19 newly installed, 0 to remove and 12 not upgraded.  
Need to get 5506 kB of archives.  
After this operation, 23.0 MB of additional disk space will be used.  
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 libbss0 amd64 0.10.0-1 [45.4 kB]  
Get:2 http://ppa.launchpad.net/ondrej/php/ubuntu focal/main amd64 php-common all 2:81+ubuntu20.04.1+deb.sury.org+1 [16.2 kB]  
Get:3 http://archive.ubuntu.com/ubuntu focal/main amd64 libsodium23 amd64 1.0.18-1 [150 kB]  
Get:4 http://ppa.launchpad.net/ondrej/php/ubuntu focal/main amd64 php7.4-common amd64 7.4.15-7+ubuntu20.04.1+deb.sury.org+1 [1017 kB]  
Get:5 http://archive.ubuntu.com/ubuntu focal/main amd64 libedit2 amd64 3.1-20191231-1 [87.0 kB]  
Get:6 http://archive.ubuntu.com/ubuntu focal/main amd64 psmisc amd64 23.3-1 [53.3 kB]  
Get:7 http://archive.ubuntu.com/ubuntu focal/universe amd64 libbonig5 amd64 6.9.4-1 [142 kB]  
Get:8 http://archive.ubuntu.com/ubuntu focal/main amd64 libxslt1.1 amd64 1.1.34-4 [152 kB]  
Get:9 http://ppa.launchpad.net/ondrej/php/ubuntu focal/main amd64 php7.4-json amd64 7.4.15-7+ubuntu20.04.1+deb.sury.org+1 [19.2 kB]  
Get:10 http://ppa.launchpad.net/ondrej/php/ubuntu focal/main amd64 php7.4-opcache amd64 7.4.15-7+ubuntu20.04.1+deb.sury.org+1 [100 kB]
```

```
[+] root@61396d7b5eb1:/  
update_screen_npm: switch to Pictures  
invoke-rc.d: could not determine current runlevel  
invoke-rc.d: policy-rc.d denied execution of restart.  
apache2_invoke: Enable module php7.4  
invoke-rc.d: could not determine current runlevel  
invoke-rc.d: policy-rc.d denied execution of restart.  
Setting up php7.4 (7.4.15-7ubuntu20.04.1+deb.sury.org+1) ...  
Processing triggers for libc-bin (2.31-0ubuntu9.1) ...  
Processing triggers for libapache2-mod-php7.4 (7.4.15-7ubuntu20.04.1+deb.sury.org+1) ...  
root@61396d7b5eb1:/# apt-get install mysql-server  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl  
libevent-core-2.1-7 libevent-pthreads-2.1-7 libfcgi-perl  
libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl  
libhttp-date-perl libhttp-message-perl libio-html-perl  
liblwp-mediatypes-perl libmecab2 libnumua libtimedate-perl  
liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils  
mysql-client-8.0 mysql-client-core-8.0 mysql-common  
mysql-server-8.0 mysql-server-core-8.0  
Suggested packages:  
libdata-dump-perl libipc-sharedcache-perl libwww-perl mailx tinyca  
The following NEW packages will be installed:  
libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl  
libevent-core-2.1-7 libevent-pthreads-2.1-7 libfcgi-perl  
libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl  
libhttp-date-perl libhttp-message-perl libio-html-perl  
liblwp-mediatypes-perl libmecab2 libnumua libtimedate-perl  
liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils  
mysql-client-8.0 mysql-client-core-8.0 mysql-common mysql-server  
mysql-server-8.0 mysql-server-core-8.0  
0 upgraded, 27 newly installed, 0 to remove and 12 not upgraded.  
Need to get 30.9 MB of archives.  
After this operation, 250 MB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 mysql-common all 5.8+1.0.5ubuntu2 [7496 B]
```

```
[+] root@61396d7b5eb1:/  
Do not use these packages on production! Wait until they are released through the official ubuntu-channels.  
More info: https://launchpad.net/~phmyadmin/+archive/ubuntu/ppa  
Press [ENTER] to continue or Ctrl-c to cancel adding it.  
  
Hit:1 http://ppa.launchpad.net/ondrej/ubuntu focal InRelease  
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease  
Hit:3 http://security.ubuntu.com/ubuntu focal-security InRelease  
Get:4 http://ppa.launchpad.net/phmyadmin/ubuntu focal InRelease [18.1 kB]  
Hit:5 http://archive.ubuntu.com/ubuntu focal-updates InRelease  
Get:6 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]  
Get:7 http://ppa.launchpad.net/phmyadmin/ubuntu focal/main amd64 Packages [2021 kB]  
Fetched 121 kB in 2s (58.7 kB/s)  
Reading package lists... Done  
root@61396d7b5eb1:/# apt-get install phpmyadmin -y  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
dbconfig-common dbconfig-mysql fontconfig-config fonts-dejavu-core  
icc-profiles-free javascript-common libfontconfig1 libfreetype6  
libgd3 libjbig0 libjpeg-turbo8 libjpeg8 libjs-codemirror  
libjs-jquery libjs-jquery-mousewheel libjs-jquery-timepicker  
libjs-jquery-ui libjs-openlayers libjs-sphinxdoc libjs-underscore  
libmcrypt4 libpng16-16 libtiff5 libwebp6 libx11-data  
libxau libxcb libxdmcp libxml2 libzip4 php-bz2 php-curl php-gd  
php-google-recaptcha php-mariadb-mysql-kbs php-mcrypt php-mysql  
php-phmyadmin-motranslator php-phmyadmin-shapefile  
php-phmyadmin-sql-parser php-phseclib php-psr-cache  
php-psr-container php-psr-log php-symfony-cache  
php-symfony-cache-contracts php-symfony-config  
php-symfony-dependency-injection php-symfony-expression-language  
php-symfony-filesystem php-symfony-service-contracts  
php-symfony-var-exporter php-symfony-yaml php-tcpdf php-twig  
php-twig-l10n-extension php-zip php8.0-bz2 php8.0-common  
php8.0-curl php8.0-gd php8.0-mcrypt php8.0-mysql php8.0-zip  
Suggested packages:  
libgd-tools libjs-requirejs libjs-jquery-ui-docs libmcrypt-dev  
mcrypt php-dbase php-libodium php-gmp php-symfony-finder
```

```
[+] anmol@hp-notebook:~  
to run phpMyAdmin.  
 1. apache2 2. lighttpd  
(Enter the items you want to select, separated by spaces.)  
Web server to reconfigure automatically: 1  
dbconfig-common: writing config to /etc/dbconfig-common/phmyadmin.conf  
Creating config file /etc/dbconfig-common/phmyadmin.conf with new version  
  
Creating config file /etc/phmyadmin/config-db.php with new version  
checking privileges on database phmyadmin for phmyadmin@localhost: user creation needed.  
granting access to database phmyadmin for phmyadmin@localhost: success.  
verifying access for phmyadmin@localhost: success.  
creating database phmyadmin: success.  
verifying database phmyadmin exists: success.  
populating database via sql... done.  
dbconfig-common: flushing administrative password  
apache2_invoke: Enable configuration phmyadmin  
invoke-rc.d: could not determine current runlevel  
invoke-rc.d: policy-rc.d denied execution of reload.  
Setting up php8.0-gd (8.0.2-7+ubuntu20.04.1+deb.sury.org+1) ...  
debconf: unable to initialize frontend: Dialog  
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 76.)  
debconf: falling back to frontend: Readline  
  
Creating config file /etc/php/8.0/mods-available/gd.ini with new version  
Setting up php-gd (2:8.0+81+ubuntu20.04.1+deb.sury.org+1) ...  
Processing triggers for libc-bin (2.31-0ubuntu9.1) ...  
root@61396d7b5eb1:/# exit  
exit  
richa@hp-notebook:~$ docker ps -a  
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  
61396d7b5eb1 ubuntu "bash" 49 minutes ago Exited (0) 5 seconds ago lampdmh  
richa@hp-notebook:~$
```

Steps to load website in Container:

```

root@03624ab89947: /          anmol@hp-notebook: ~          root@f74d073822b4: /          root@4ce437f50d11: /
richa@hp-notebook: $ docker ps
CONTAINER ID   IMAGE           COMMAND      CREATED     STATUS      PORTS          NAMES
03624ab89947   edited_lamp6   "bash"       54 minutes ago   Up 54 minutes   0.0.0.0:8006->80/tcp   zealous_jemison
81e90d425a99   richa20104/assignment2:1   "bash"       14 hours ago    Up 14 hours   0.0.0.0:8080->80/tcp   cool_leakey
198e67a52e7e   f63181f19b2f   "bash"       15 hours ago    Up 15 hours
0837d7d7e1c8   f63181f19b2f   "/bin/bash"  29 hours ago    Up 28 hours
885a70fadffa   redis:latest   "docker-entrypoint.s..."  40 hours ago   Up 40 hours    127.0.0.1:6379->6379/tcp   lamp-redis
richa@hp-notebook: $ docker commit 198e67a52e7e final_website_bdmh
sha256:bf17107c4ff6aafab2f9eb43758eb0eb224f9de4ab8171803616201dee8c268f
richa@hp-notebook: $ docker ps
CONTAINER ID   IMAGE           COMMAND      CREATED     STATUS      PORTS          NAMES
03624ab89947   edited_lamp6   "bash"       About an hour ago   Up About an hour   0.0.0.0:8006->80/tcp   zealous_jem
81e90d425a99   richa20104/assignment2:1   "bash"       14 hours ago    Up 14 hours   0.0.0.0:8080->80/tcp   cool_leakey
198e67a52e7e   f63181f19b2f   "bash"       15 hours ago    Up 15 hours
0837d7d7e1c8   f63181f19b2f   "/bin/bash"  29 hours ago    Up 28 hours
885a70fadffa   redis:latest   "docker-entrypoint.s..."  40 hours ago   Up 40 hours    127.0.0.1:6379->6379/tcp   lamp-redis
richa@hp-notebook: $ docker commit 198e67a52e7e final_website_bdmh1
sha256:fb33d52f1e6eed9c584362d0740af7d2e5502d91969997728c2443c25b7eb6cd
richa@hp-notebook: $ docker commit 198e67a52e7e finallamp
sha256:da8d91fbfc0d8225db0897635fd84376cb0ecfd9334c9f1e26f826b252efab4f
richa@hp-notebook: $ docker commit finallamp
sha256:33e9c1d120f5497eb62d2b16b65abfb45d74a43d9366e670e90de4c7ab6eeda4
richa@hp-notebook: $ docker commit 03624ab89947 f63181f19b2f
sha256:ff2737bc2df3fa2f46f64cf75c7753fc408113d7f013285739f5046ab91e1e
richa@hp-notebook: $ docker commit 3624ab89947 f63181f19b2f
Error response from daemon: No such container: 3624ab89947
richa@hp-notebook: $ docker commit 03624ab89947 f63181f19b2f
sha256:2a8ff803c1749eabd4f007de4e1ab3906a578046fb4b5e6c503b9470c80a2db5
richa@hp-notebook: $ 

root@03624ab89947: /          anmol@hp-notebook: ~          root@f74d073822b4: /          root@4ce437f50d11: /
anmol@hp-notebook: ~
CONTAINER ID   IMAGE           COMMAND      CREATED     STATUS      PORTS          NAMES
81e90d425a99   richa20104/assignment2:1   "bash"       14 hours ago    Up 14 hours   0.0.0.0:8080->80/tcp   cool_leakey
198e67a52e7e   f63181f19b2f   "bash"       15 hours ago    Up 15 hours
0837d7d7e1c8   f63181f19b2f   "/bin/bash"  29 hours ago    Up 28 hours
885a70fadffa   redis:latest   "docker-entrypoint.s..."  40 hours ago   Up 40 hours    127.0.0.1:6379->6379/tcp   lamp-redis
richa@hp-notebook: $ docker commit 198e67a52e7e final_website_bdmh1
sha256:fb33d52f1e6eed9c584362d0740af7d2e5502d91969997728c2443c25b7eb6cd
richa@hp-notebook: $ docker commit 198e67a52e7e finallamp
sha256:da8d91fbfc0d8225db0897635fd84376cb0ecfd9334c9f1e26f826b252efab4f
richa@hp-notebook: $ docker commit finallamp
sha256:33e9c1d120f5497eb62d2b16b65abfb45d74a43d9366e670e90de4c7ab6eeda4
richa@hp-notebook: $ docker commit 03624ab89947 f63181f19b2f
sha256:ff2737bc2df3fa2f46f64cf75c7753fc408113d7f013285739f5046ab91e1e
richa@hp-notebook: $ docker commit 3624ab89947 f63181f19b2f
Error response from daemon: No such container: 3624ab89947
richa@hp-notebook: $ docker commit 03624ab89947 f63181f19b2f
sha256:2a8ff803c1749eabd4f007de4e1ab3906a578046fb4b5e6c503b9470c80a2db5
richa@hp-notebook: $ docker ps
CONTAINER ID   IMAGE           COMMAND      CREATED     STATUS      PORTS          NAMES
4ce437f50d11   f63181f19b2f   "bash"       6 minutes ago   Up 6 minutes   0.0.0.0:8008->80/tcp   romantic_einstein
f74d073822b4   final_website_bdmh1   "bash"       29 minutes ago   Up 28 minutes   0.0.0.0:8007->80/tcp   dreamy_newton
03624ab89947   edited_lamp6   "bash"       2 hours ago    Up 2 hours    0.0.0.0:8006->80/tcp   zealous_jemison
81e90d425a99   richa20104/assignment2:1   "bash"       15 hours ago    Up 15 hours   0.0.0.0:8080->80/tcp   cool_leakey
198e67a52e7e   f63181f19b2f   "bash"       16 hours ago    Up 16 hours
0837d7d7e1c8   f63181f19b2f   "/bin/bash"  30 hours ago    Up 29 hours
885a70fadffa   redis:latest   "docker-entrypoint.s..."  41 hours ago   Up 41 hours    127.0.0.1:6379->6379/tcp   lamp-redis
richa@hp-notebook: $ docker tag f63181f19b2f richa20104/group15_assignment1_bdmh:question1234
richa@hp-notebook: $ docker push richa20104/group15_assignment1_bdmh:question1234
The push refers to repository [docker.io/richa20104/group15_assignment1_bdmh]
de2d4a1fd8b7: Pushing [>] 18.61MB/1.501GB
68eda37a8289: Pushing [>] 22.55MB/875.8MB
02473afdf360b: Mounted from richa20104/bdmh_assignment1_group15
dbf2c0f42a39: Mounted from richa20104/bdmh_assignment1_group15
9f32931c9d28: Mounted from richa20104/bdmh_assignment1_group15

```

Q 4: Web page for browsing data in MySQL

We used php to connect with the database and fetch the table and show the result. When we click on *our instructor* or *Find the Teacher* we can see the list of teachers in non increasing order based on their experience. Following are the snapshots from the Website.

Fetching/Browsing the data from database :

The screenshot shows a web browser window with multiple tabs open at the top. The active tab is titled "List of Tutor" and has the URL http://localhost:8009/bdmh_project/list_of_tutor.php. The main content area displays a table with a decorative background of blue and pink bubbles. The table has columns: First Name, Email Address, Experience, Achievement, Qualification, and Specialization. The data is as follows:

First Name	Email Address	Experience	Achievement	Qualification	Specialization
Shakti	m@gmail.com	7	Winner	B.E.	All
Jary	jerrymark@gmail.com	5	SDPM Adwars	M.S	Ballet
Sanja	sanjamark@gmail.com	4	RRKM Adwars	M.S	Ballet
John	johnpoul@gmail.com	2	SDPM Adwars	B.S	Jazz
Era	erasharmak@gmail.com	1	Best college	B.S	Ballet

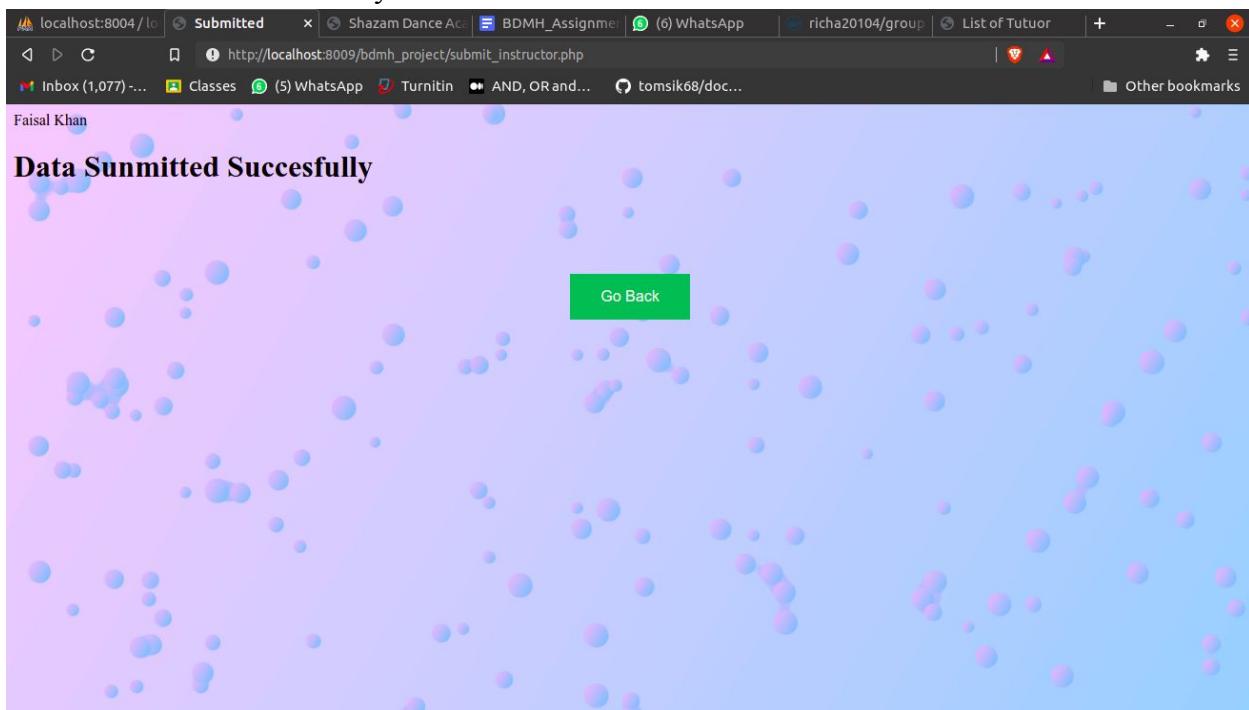
At the bottom center of the page is a dark button labeled "Go Back".

After that We add we add new tutor :

The screenshot shows a web browser window with multiple tabs open at the top. The active tab is titled "Shazam DA" and has the URL <http://localhost:8004/>. The main content area features a dark-themed form with white input fields. The title of the form is "Please Fill your Details". The form contains five input fields with validation requirements indicated by asterisks (*):

- First Name*
- Last Name*
- Mobile Number *
- Address*
- Email Address*

Data Submitted successfully for Faisal Khan and new data is reflected on the website



A screenshot of a web browser window. The title bar says "List of Tutuor" and the address bar shows "http://localhost:8009/bdmh_project/list_of_tutor.php". The main content area has a light blue background with a pattern of floating bubbles. It displays the heading "List of Instructor" in bold green font. Below the heading is a table with a black border and alternating pink and white rows. The table has columns for First Name, Email Address, Experience, Achievement, Qualification, and Specialization.

First Name	Email Address	Experience	Achievement	Qualification	Specialization
Shakti	m@gmail.com	7	Winner	B.E.	All
Faisal	faisal@gmail.com	6	Runner-up Dance Plus	M.TECH	Hip-Hop
Jary	jerrymark@gmail.com	5	SDPM Adwards	M.S	Ballet
Sanja	sanjamark@gmail.com	4	RRKM Adwards	M.S	Ballet
John	johnpoul@gmail.com	2	SDPM Adwards	B.S	Jazz
Era	erasharmak@gmail.com	1	Best college	B.S	Ballet

In the bottom right corner, there is a dark brown rectangular button with the white text "Go Back".

Checking Persistence of MySql,Mongodb databases and Website (data & UI) after pulling container from Docker hub:

```
Windows PowerShell
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PS C:\Program Files\Docke...> docker pull richa20104/group15_assignment1_bdmh:question1234
question1234: Pulling from richa20104/group15_assignment1_bdmh
83ee3a23efb7: Already exists
db98fc6f11f0: Already exists
f611acd52c6c: Already exists
0179fb92ac8b: Pull complete
ble8d7b4163f: Pull complete
Digest: sha256:32ecb3dc34e921b7b837f9b3b127713b4aa8075afcefc7a83757a64b5d5063db
Status: Downloaded newer image for richa20104/group15_assignment1_bdmh:question1234
PS C:\Program Files\Docke...>
PS C:\Program Files\Docke...> docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
NAMES
```

```
Windows PowerShell
PS C:\Program Files\Docke...> docker run -it --rm -p 8009:80 richa20104/group15_assignment1_bdmh:question1234
root@3e4e636bc462:/# 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 globally to suppress this message
 *
root@3e4e636bc462:/# service mysql start
mysqld: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
 * Starting MySQL database server mysqld
mysqld: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
su: warning: cannot change directory to /nonexistent: No such file or directory
mysqld: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
mysqld: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
mysqld: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
[ OK ]
root@3e4e636bc462:/# mysql
mysql: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.23-Ubuntu0.20.04.1 (Ubuntu)

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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 |
| mydb |
| mysql |
| performance_schema |
| phpmyadmin |
| sys |
+-----+
```

```
root@13515045dab8:/# mysql -uroot -p
mysql: [Warning] World-writable config file '/etc/mysql/my.cnf' is ignored.
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.23-Ubuntu0.20.04.1 (Ubuntu)

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owners.

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

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mydb |
| mysql |
| performance_schema |
| phpmyadmin |
| sys |
+-----+
6 rows in set (0.00 sec)

mysql> use mydb;
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
```

```
Windows PowerShell
mysql> show tables;
+-----+
| Tables_in_mydb |
+-----+
| instructor
| student
+-----+
2 rows in set (0.00 sec)

mysql> select * from instructor;
+-----+
| instructor_id | f_name | l_name | mob_no | address | email | qualification | instit
ute_name | experience | achievement | expected_salary | dance_type | date_of_birth | ut
+-----+
| University | 1 | John | Poul | 9988776655 | Nehru place New Delhi | johnpoul@gmail.com | B.S | Delhi
| ur University | 2 | Jary | MARK | SDPM Edwards | 35000 | Jazz | 1994-09-09 | Jerrymark@gmail.com | M.S | Jadavp
| ur University | 3 | Sanja | Markovic | SDPM Edwards | 45000 | Ballet | 1992-08-08 | sanjamark@gmail.com | M.S | Jadavp
| iversity | 4 | Era | Sharma | RRMK Adwars | 40000 | Ballet | 1992-08-08 | erasharmak@gmail.com | B.S | SRM Un
| umbai | 5 | Shakti | Mohan | Best college | 25000 | Govindpuri New Delhi | 1996-08-08 | m@qmail.com | B.E. | MTU, m
| umber | 7 | Winner | | 777777 | Mumbai | 1998-02-02 | All | 1998-02-02 |
+-----+
5 rows in set (0.00 sec)

mysql> select * from student;
+-----+
| student_id | f_name | l_name | mob_no | address | email | gender | expected_fees | danc
e_type | medical_cond | date_of_birth |
+-----+
| Sakshi | Mehra | 9988856655 | Anand Vihar, Delhi | sakshimehra@gmail.com | Female | 2000 | Ball
+-----+
1 row in set (0.00 sec)

Activate Windows
Go to PC settings to activate Windows.
```

```

Windows PowerShell

mysql> select * from student;
+-----+-----+-----+-----+-----+-----+-----+-----+
| student_id | f_name | l_name | mob_no | address | email | gender | expected_fees | dance_type |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Sakshi | Mehra | 9988856655 | Anand Vihar, Delhi | sakshimehra@gmail.com | Female | 2000 | Ball |
| et | NA | 1997-09-09 |          |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.01 sec)

mysql> exit
Bye
root@13515045dab8:/# service mongodb start;
* Starting database mongodb
root@13515045dab8:/# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("94f96036-e5ed-49f6-9e5e-dc58192017d7") }
MongoDB server version: 3.6.8
Server has startup warnings:
2021-02-26T16:26:39.803+0400 I CONTROL [initandlisten]
2021-02-26T16:26:39.803+0400 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2021-02-26T16:26:39.803+0400 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2021-02-26T16:26:39.803+0400 I CONTROL [initandlisten]
> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
mgdb 0.000GB
> use mgdb
switched to db mgdb
> db

```

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```

Windows PowerShell

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> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
mgdb 0.000GB
> use mgdb
switched to db mgdb
> db
mgdb
> show collections;
mgdb_col
> db.mgdb_col.find()
[{"_id": ObjectId("6038d6ad2619f03ade7263cc"), "id": 1, "fname": "puneet", "lname": "pathak", "dob": "7-9-97", "city": "mumbai", "exp": "7years"}, {"_id": ObjectId("6038d6f32619f03ade7263cd"), "id": 2, "fname": "dharmesh", "lname": "mishra", "dob": "9-10-96", "city": "delhi", "exp": "9years"}, {"_id": ObjectId("6038d7152619f03ade7263ce"), "id": 3, "fname": "raghav", "lname": "juyal", "dob": "3-3-93", "city": "dehradoon", "exp": "15years"}, {"_id": ObjectId("6038d7392619f03ade7263cf"), "id": 4, "fname": "remo", "lname": "dsouza", "dob": "6-1-90", "city": "mumbai", "exp": "20years"}, {"_id": ObjectId("6038d7662619f03ade7263d0"), "id": 5, "fname": "shakti", "lname": "mohan", "dob": "5-2-99", "city": "pune", "exp": "5years"}, {"_id": ObjectId("6038d7842619f03ade7263d1"), "id": 6, "fname": "vertika", "lname": "jha", "dob": "15-12-99", "city": "bihar", "exp": "3years"}]

```

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Apache/2.4.41 (Ubuntu) Server at 192.168.99.100 Port 8009

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shazamda@company.com 010-020-0340

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References :

<https://getbootstrap.com/docs/4.0/components/carousel/>

<https://www.w3schools.com/css/default.asp>

<https://www.w3schools.com/js/default.asp>

<https://docs.mapbox.com/api/overview/>

<https://docs.docker.com/get-started/overview/>