Mysql

Use below commands to install
sudo apt update
sudo mysql_secure_installation
 utility (2 y n n n y)
sudo apt update
sudo apt upgrade
(Y)
To start mysql.
sudo systemctl start mysql
sudo mysql -u root

Create USER 'username'@'localhost' identified by 'welcome'; *to create a user who's name is user @ localhost, we use identified means assigning the password to newly created user.*

GRANT ALL PRIVILEGES ON database_name.* TO 'username'@'localhost'; *in our case username is nayan and database is * so it will be (*.*)*
Use **exit** to exit the mysql server.
Use **sudo mysql -u nayan -p** to enter in database we just using password.

```
user@user-virtual-machine:~$ sudo mysql -u nayan -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.26-0ubuntu0.20.04.3 (Ubuntu)

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owners.

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

mysql>
```
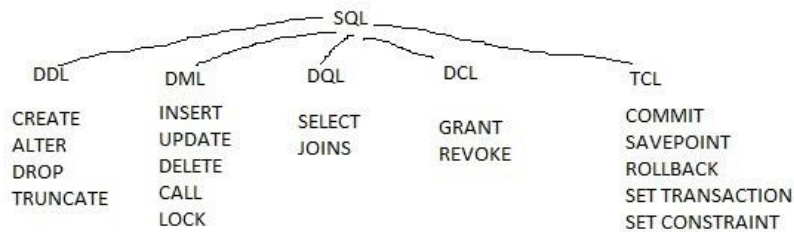
Use **SELECT USER();** to check which user I am using right now.

```
mysql>  SELECT USER();
+----------------+
| USER()         |
+----------------+
| root@localhost |
+----------------+
1 row in set (0.00 sec)
```

Use **SELECT DATABASE();** *to see which database I am currently using.*

```
mysql> USE demo;
Database changed
mysql> SELECT DATABASE();
+------------+
| DATABASE() |
+------------+
| demo       |
+------------+
1 row in set (0.00 sec)
```

```
                        ___ SQL ___
        _____/      |    |    _____
   DDL          DML      DQL   DCL              TCL

 CREATE       INSERT    SELECT   GRANT        COMMIT
 ALTER        UPDATE    JOINS    REVOKE       SAVEPOINT
 DROP         DELETE                          ROLLBACK
 TRUNCATE     CALL                            SET TRANSACTION
              LOCK                            SET CONSTRAINT
```

CREATE DATABASE database; *to create a new database.*
USE databasename; *to use the database we created.*
Use **ctrl L or clear scr;** *to clear the screen.*

```
mysql> CREATE DATABASE temp1;
Query OK, 1 row affected (0.02 sec)

mysql> USE temp1;
Database changed
mysql> SELECT DATABASE();
+------------+
| DATABASE() |
+------------+
| temp1      |
+------------+
1 row in set (0.00 sec)
```

**CREATE TABLE EmpData (Emp_id int, Fname varchar (70), Lname varchar (70), city
varchar (200), Cnumber int, Salary int, email varchar(100), Gender varchar (70), Dep varchar
(100));** *to create a table with table name given in parenthesis.*

```
mysql> CREATE TABLE EmpData(Emp_id int, Fname varchar(70), Lname varchar(70), c
ity varchar(200), Cnumber int, Salary int, email varchar(100), Gender varchar(7
0), Dep varchar (100) );
```

**Insert into EmpData values (1, 'Nayan', 'Gadhari', 'Mumbai', 1234567890, 25000,
'gadharinayan@gmail.com', 'Male', 'IT');**

```
mysql> INSERT into EmpData values (1,'nayan','gadhari','mumbai',7718005783,2500
0,'gadharinayan@gmail.com','male','IT');
ERROR 1264 (22003): Out of range value for column 'Cnumber' at row 1
mysql> INSERT into EmpData values (1,'nayan','gadhari','mumbai',420,25000,'gadh
arinayan@gmail.com','male','IT');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM  EmpData;
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
| Emp_id | Fname | Lname   | city    | Cnumber | Salary | email
 | Gender | Dep   |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
|       1 | nayan | gadhari | mumbai |     420 |  25000 | gadharinayan@gmail.com
 | male   | IT    |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
1 row in set (0.00 sec)
```

UPDATE EmpData set Emp_id =1; where Fname = 'Nayan' and Lname = 'Gadhari'

```
-+--------+------+
| Emp_id | Fname | Lname   | city    | Cnumber | Salary | email
 | Gender | Dep   |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
|       1 | nayan | gadhari | mumbai |     420 |  25000 | gadharinayan@gmail.com
 | male   | IT    |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
1 row in set (0.00 sec)

mysql> UPDATE Empdata set email = 'nayan_gadhari@thbs.com' WHERE Emp_id = 1;
ERROR 1146 (42S02): Table 'temp1.Empdata' doesn't exist
mysql> UPDATE EmpData set email = 'nayan_gadhari@thbs.com' WHERE Emp_id = 1;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM EmpData;
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
| Emp_id | Fname | Lname   | city    | Cnumber | Salary | email
 | Gender | Dep   |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
|       1 | nayan | gadhari | mumbai |     420 |  25000 | nayan_gadhari@thbs.com
 | male   | IT    |
+----------+--------+---------+---------+---------+--------+-----------------------
-+--------+------+
1 row in set (0.00 sec)
```

SELECT * FROM EmpData ORDER BY Salary Desc; *to sort table according to salary in descending order.*

```
mysql>
mysql> SELECT * FROM EmpData ORDER BY Salary Desc;
+--------+---------+---------+----------------+---------+---------+--------
----------------+--------+----------+
| Emp_id | Fname   | Lname   | city           | Cnumber | Salary  | email
                | Gender | Dep      |
+--------+---------+---------+----------------+---------+---------+--------
----------------+--------+----------+
|      6 | Steve   | Roggers | Broklyn        |     987 | 7697800 | setee_r
rs@gmail.com    | M       | Accounts  |
|      9 | Tony    | Stark   | New York       |     225 |  169290 | tony_st
gmail.com       | M       | Finance   |
|      3 | Natasha | Romanof | St. Petersberg |     783 |  100000 | natasha
anof@gmail.com  | F       | HR        |
|      5 | Bruse   | Banner  | Kolkata        |     536 |   76900 | bruse_b
r@gmail.com     | M       | BOD       |
|      2 | barry   | allen   | mumbai         |     783 |   67000 | barry_a
@gmail.com      | M       | Opreation |
|      1 | nayan   | gadhari | mumbai         |     420 |   25000 | nayan_g
ri@thbs.com     | male    | IT        |
|      4 | Hope    | Wasp    | New Jersy      |     783 |   10000 | hope_wa
mail.com        | F       | IT        |
+--------+---------+---------+----------------+---------+---------+--------
----------------+--------+----------+
7 rows in set (0.00 sec)
```

SELECT COUNT(city) FROM EmpData WHERE Salary >= 25000 and Dep = 'IT';

```
mysql> SELECT COUNT(Salary) FROM EmpData WHERE Salary >= 25000 and Dep = 'IT';
+---------------+
| COUNT(Salary) |
+---------------+
|             1 |
+---------------+
1 row in set (0.01 sec)
```

SELECT SUM(Salary) AS 'Total Salary' FROM
EmpData; SELECT AVG(Salary) AS 'Average
Salary' FROM EmpData; SELECT MIN(Salary) AS
'Minimum Salary' FROM EmpData; SELECT
MAX(Salary) AS 'Maximum Salary' FROM EmpData;

```
mysql> SELECT MAX(Salary) AS 'MAXIMUM SALARY' FROM EmpData;
+----------------+
| MAXIMUM SALARY |
+----------------+
|        7697800 |
+----------------+
1 row in set (0.00 sec)
```

SELECT * FROM EmpData WHERE Salary = (SELECT MIN(Salary) FROM EmpData) ;

```
mysql> SELECT * FROM EmpData WHERE Salary = (SELECT MAX(Salary) FROM EmpData);
+--------+-------+---------+---------+---------+---------+--------------------
----+--------+---------+
| Emp_id | Fname | Lname   | city    | Cnumber | Salary  | email
    | Gender | Dep     |
+--------+-------+---------+---------+---------+---------+--------------------
----+--------+---------+
|      6 | Steve | Roggers | Broklyn |     987 | 7697800 | setee_roggers@gmail.
com | M      | Accounts |
+--------+-------+---------+---------+---------+---------+--------------------
----+--------+---------+
1 row in set (0.00 sec)
```