# Database administration commands

**Creating user :**
mysql> create user student@localhost identified by '1234';


mysql> select user,host from mysql.user;

```
+------------------+-----------+
| user             | host      |
+------------------+-----------+
| mysql.infoschema | localhost |
| mysql.session    | localhost |
| mysql.sys        | localhost |
| root             | localhost |
| student          | localhost |
+------------------+-----------+
```


**Creating role :**
mysql> create role admin;


**Granting priveleges to role :**
grant all on *.* to admin;


**Assigning role to user :**
grant admin to student@localhost with admin option;

**Login as a student@localhost :**
Activating the role that assigned to student;

mysql> Set role admin;

mysql> use student_society;
mysql> select * from student;

```
+---------+--------+-----------+------------+------------+
| Roll_no | Name   | Course    | DOB        | Mobile_no  |
+---------+--------+-----------+------------+------------+
| x00005  | Ansh   | CS        | 2003-10-19 | 9999999999 |
| x00006  | Chetan | Chemistry | 2001-12-30 | 9999999999 |
| x00007  | Bhavik | Physics   | 2002-04-25 | 9999999999 |
| x00008  | Aman   | Maths     | 2005-02-21 | 9999999999 |
| x00009  | Aarav  | CS        | 2004-10-06 | 9999999999 |
| y00005  | Vishal | CS        | 2004-10-08 | 9999999999 |
| y00006  | Sujal  | Chemistry | 2004-10-06 | 9999999999 |
| y00007  | Sachin | Maths     | 2005-08-06 | 9999999999 |
| y00008  | Sarthak| Physics   | 2005-08-28 | 9999999999 |
| y00009  | Alok   | Chemistry | 2004-08-28 | 9999999999 |
| z00005  | Arun   | Maths     | 2002-10-28 | 9999999999 |
| z00006  | Rahul  | CS        | 2004-08-30 | 9999999999 |
| z00007  | Sourabh| CS        | 2004-09-30 | 9999999999 |
| z00008  | Tanuj  | Chemistry | 2004-04-08 | 9999999999 |
| z00009  | Mayank | Physics   | 2004-06-10 | 9999999999 |
+---------+--------+-----------+------------+------------+
```


**Revoking privileges from role :**

mysql> revoke all on *.* from admin;

Now user can't use any privileges that were assigned to the role admin

mysql> select user from mysql.user;

```
ERROR 1142 (42000): SELECT command denied to user 'student'@'localhost' for table 'user'
```


**Creating index :**
```
mysql> show indexes from student;
+---------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table   | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
| Visible | Expression |          |              |             |           |             |          |        |      |            |         |               |
+---------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| student |          0 | PRIMARY  |            1 | Roll_no     | A         |          15 |     NULL |   NULL |      | BTREE      |         |               |
| YES     | NULL       |          |              |             |           |             |          |        |      |            |         |               |
```

mysql> create index student_name_index on student(name);

```
mysql> show indexes from student;
+---------+------------+--------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------
| Table   | Non_unique | Key_name           | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+---------+------------+--------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------
| student |          0 | PRIMARY            |            1 | Roll_no     | A         |          15 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| student |          1 | student_name_index |            1 | Name        | A         |          15 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
+---------+------------+--------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------
```

mysql> create index student_name_index on student(name);