Setting Up Databases on Ubuntu OS:

apt-get install mysql-server

mysql → to see if the SQL server installed properly or not

```
Created symlink /etc/systemd/system/multi-user.target.wants/mysql.
service → /lib/systemd/system/mysql.service.
Setting up mysql-server (8.0.35-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
root@ubuntu1:/home/simran# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current inpu
t statement.

mysql>
```

show databases;

```
Type 'help;' or '\h' for help. Type '\c' to clear the current inp
t statement.

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

mysql>
```

quit; → if you just want to exit from MySQL

Try to start MySQL with all privileges

mysql -u root -p

```
Bye
root@ubuntu1:/home/simran# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current inpu
t statement.

mysql>
```
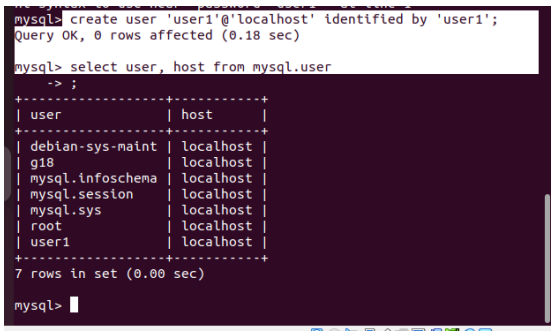

```
mysql> use new;
Database changed
mysql> create table employees(sno varchar(5) primary key, name var
char(30), age int);
Query OK, 0 rows affected (0.13 sec)

mysql> show tables;
+--------------+
| Tables_in_new |
+--------------+
| employees     |
+--------------+
1 row in set (0.01 sec)

mysql> desc employees;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| sno   | varchar(5)  | NO   | PRI | NULL    |       |
| name  | varchar(30) | YES  |     | NULL    |       |
| age   | int         | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
3 rows in set (0.02 sec)

mysql> exit
Bye
```

Create a user:

Create user ‘user1’@’localhost’ identified by ‘user1’;

See the list of users

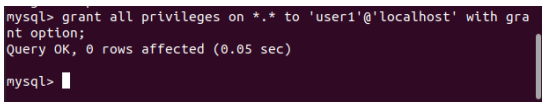
Select user, host from mysql.user;

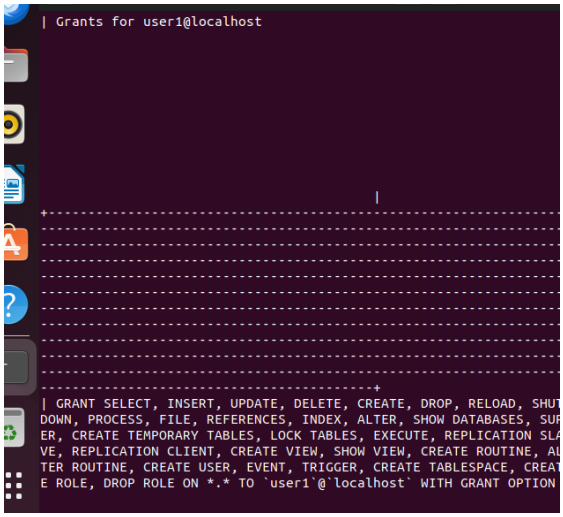


Check the list of priviliges for users:

Show grants for ‘root’@’localhost’;

Grant all privileges on *.* to ‘user1’@’localhost’ with grant option;





How to setup PostgreSQL in Ubuntu:

apt-get update

apt-get install postgresql-contrib →installing PostgreSQL with some additional utilities

after installation now check the configuration files of postgresql

cd /etc/postgresql

```
root@ubuntu1:/home/simran# cd /etc/postgresql
root@ubuntu1:/etc/postgresql# ls
14
root@ubuntu1:/etc/postgresql# cd 14
root@ubuntu1:/etc/postgresql/14# ls
main
root@ubuntu1:/etc/postgresql/14# cd main
root@ubuntu1:/etc/postgresql/14/main# ls
conf.d       pg_ctl.conf  pg_ident.conf    start.conf
environment  pg_hba.conf  postgresql.conf
root@ubuntu1:/etc/postgresql/14/main#
```

Check the status of postgresql

service postgresql

```
root@ubuntu1:/etc/postgresql/14/main# service postgresql
Usage: /etc/init.d/postgresql {start|stop|restart|reload|force-rel
oad|status} [version ..]
root@ubuntu1:/etc/postgresql/14/main#
```

These options we can use for the service PostgreSQL

service postgresql status

```
root@ubuntu1:/etc/postgresql/14/main# service postgresql
Usage: /etc/init.d/postgresql {start|stop|restart|reload|force-rel
oad|status} [version ..]
root@ubuntu1:/etc/postgresql/14/main# service postgresql status
● postgresql.service - PostgreSQL RDBMS
     Loaded: loaded (/lib/systemd/system/postgresql.service; enab>
     Active: active (exited) since Tue 2023-12-05 13:42:39 IST; 3>
    Process: 5522 ExecStart=/bin/true (code=exited, status=0/SUCC>
   Main PID: 5522 (code=exited, status=0/SUCCESS)
        CPU: 5ms

Dec 05 13:42:39 ubuntu1 systemd[1]: Starting PostgreSQL RDBMS...
Dec 05 13:42:39 ubuntu1 systemd[1]: Finished PostgreSQL RDBMS.
lines 1-9/9 (END)
```

In order to work with postgresql need to switch to default user that is postgres

```
^C
root@ubuntu1:/etc/postgresql/14/main# su postgres
postgres@ubuntu1:/etc/postgresql/14/main$
```

We can use command line tool to enter the commands of postgresql

psql

```
root@ubuntu1:/etc/postgresql/14/main# su postgres
postgres@ubuntu1:/etc/postgresql/14/main$ psql
psql (14.9 (Ubuntu 14.9-0ubuntu0.22.04.1))
Type "help" for help.

postgres=#
```

Check the databases present bydefault

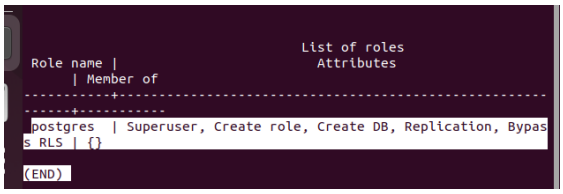
\l

```
                                List of databases
   Name    |  Owner   | Encoding | Collate | Ctype |   Access priv
ileges
-----------+----------+----------+---------+-------+-------------
---------
 postgres  | postgres | UTF8     | en_IN   | en_IN |
 template0 | postgres | UTF8     | en_IN   | en_IN | =c/postgres
         +
           |          |          |         |       | postgres=CTc/
postgres
 template1 | postgres | UTF8     | en_IN   | en_IN | =c/postgres
         +
           |          |          |         |       | postgres=CTc/
postgres
(3 rows)

(END)
```

These are the default databases.

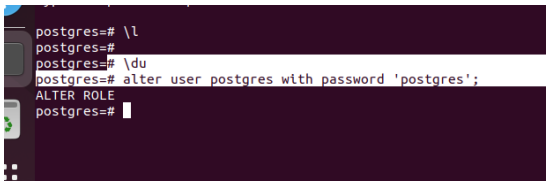
Now to list-out the users we can use **\du**

Right now only postgres is the existing user



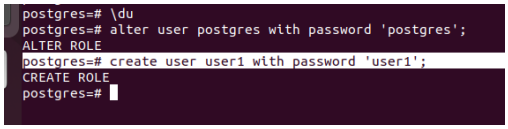
we can change the password for default user

alter user postgres with password ‘postgres’;



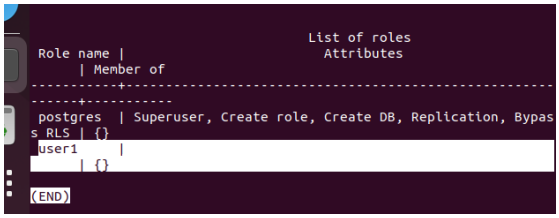
Let’s create a new user

create user user1 with password ‘user1’;



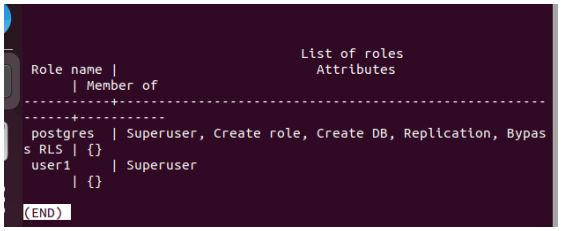
\du

User1 got added in the list



Giving user1 the role of SUPERUSER

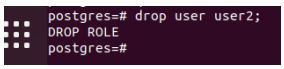
alter user user1 with superuser;

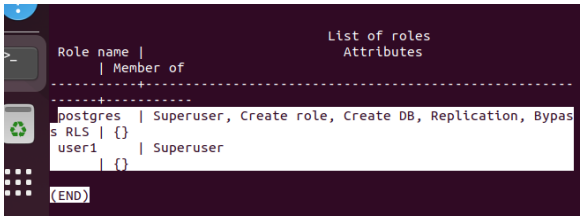


Now we have created another user ‘user2’

How to delete any user

Drop user user2;





We left with only 2 users now.

By using ‘man psql’ you will see all the options available