Create a database in PostgreSQL

To create a database in PostgreSQL **create database** statement is used

syntax :

> postgresql=#create database databasename ;

e.g Postgresql> create database college ;

```
postgres=# CREATE DATABASE college;
CREATE DATABASE
postgres=#
```

To view databases :

To view database **\l** command is used.

> Postgresql=#/l databases;

```
postgres=# \l
                               List of databases
    Name    |  Owner   | Encoding | Collate | Ctype |    Access privileges
------------+----------+----------+---------+-------+------------------------
 balbharti  | postgres | UTF8     | en_IN   | en_IN |
 college    | postgres | UTF8     | en_IN   | en_IN |
 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
(5 rows)
```

To connect database :

To connect database **\c** command is used.

> postgresql=# \c;

e.g \c college;

```
postgres=# \c college;
You are now connected to database "college" as user "postgres".
college=#
```

To create table :

To create table in database **Create table** command is used

databasename = # create table tablename (fieldname Datatype, fieldname Datatype);

```
college=# CREATE TABLE XI (Roll_no integer, Student_name text);
CREATE TABLE
college=#
```

To insert data in table :

To insert data in a table insert into command is used.

databsename=# insert into tablename (field name)values(data1,'data1')

```
college=# INSERT INTO XI (Roll_no,Student_name) VALUES(101,'Sachin');
INSERT 0 1
college=#
```

To view inserted data :

To view inserted data select * from command is used.

database name=#select * from table name.

```
college=# SELECT * FROM XI;
 roll_no | student_name
---------+--------------
     101 | Sachin
(1 row)
```

To update table:

To update table UPDATE command is used.

databasename=# update table_name SET column_name=Value WHERE Reference_Column_name=Value

```
college=# UPDATE XI SET Roll_no = '1001' WHERE Student_name = 'Sachin';
UPDATE 1
college=#
```

To add Primary Key:

To add primary key to already created table, we can use following command.

or we can create primary key during table creation.

> ALTER TABLE tablename ADD PRIMARY KEY (column_name);

```
college=# ALTER TABLE XI ADD PRIMARY KEY (Roll_no);
ALTER TABLE
college=# █
```

To add Foreign Key:

To add foreign key to while creating table, we can use the following command or we can create foreign key during table creation.

> ALTER TABLE table_name ADD FOREIGN KEY (current_column_name)
> REFERENCES refered_table_name (referedtable_primarycolumn_name);

One to One relationship

```
college=# CREATE TABLE Marks (record_no integer PRIMARY KEY, total_marks integer,result
 text,roll_no integer, FOREIGN KEY (roll_no)  REFERENCES XI(Roll_no));
CREATE TABLE
college=# █
```

Lets see the result of both table 'XI' and 'Marks' with one-to-one relationship.

```
college=# SELECT XI.Roll_no,XI.student_name,Marks.total_marks,Marks.result FROM XI,Marks where
XI.Roll_no=Marks.roll_no;
 roll_no | student_name | total_marks | result
---------+--------------+-------------+--------
    1001 | Sachin       |         230 | PASS
(1 row)
```

Do you know ?

\c   Connect to database

\l   List all the databases

\dt List all the tables from database

\d   To view structure of table.

To delete table :

To delete table, DROP command is used.

```
databasename=# DROP tablename;
```

```
postgres=# DROP TABLE Marks;
DROP TABLE
```

To delete database :

Drop command is used to delete database also.

```
postgresql=# drop database  database name;
```

```
postgres=# DROP DATABASE college;
DROP DATABASE
```

Note : Before deleting the current database you have to come out from that database

■□■

Skill Set 6 - PostgreSQL

SOP 1 : Create a database, using postgreSQL named hospital.

- In this database, create a table of patients with the following fields Patient_ID, Patients_Name, Address, Room_number and Doctor's_name.

- Give appropriate data type for each field.

Patient_ID	Patient_name	Address	Room_number	Doctor's_name

SOP 2 : Create a database using postgreSQL named School-master.

- In this database create a table of students with the following fields student_ID, student_name, Address, Phone_number, Date_of_Birth.

- Give appropriate data type for each field. Enter at least 5 records.

SOP 3 : Given the list of fields : EmpId, EmpName, EmpDepartment, SalaryId, SalaryAmount, Bonus in the tables Employee and Salary respectively. Define primary key, foreign key and segregate for above fields into employee and salary table. Also create one-to-one relationship between Employee and Salary Table.

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