CREATING A DATABASE:-

```
SQL Shell (psql)
Port [5432]:
Username [postgres]:
Password for user postgres:
psql (17.5)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.

postgres=# create database Test;
CREATE DATABASE
postgres=# \l
                                                    List of databases
   Name    |  Owner   | Encoding | Locale Provider |          Collate           |           Ctype            | Locale | ICU Rules |   Access privileges
-----------+----------+----------+-----------------+----------------------------+----------------------------+--------+-----------+-----------------------
 demodb    | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           |
 postgres  | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           |
 template0 | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           | =c/postgres          +
           |          |          |                 |                            |                            |        |           | postgres=CTc/postgres
 template1 | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           | =c/postgres          +
           |          |          |                 |                            |                            |        |           | postgres=CTc/postgres
 test      | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           |
(5 rows)
```

DELETING A DATABASE:-

```
postgres=# drop database Test;
DROP DATABASE
```

```
demodb=# \l
                                                    List of databases
   Name    |  Owner   | Encoding | Locale Provider |          Collate           |           Ctype            | Locale | ICU Rules |   Access privileges
-----------+----------+----------+-----------------+----------------------------+----------------------------+--------+-----------+-----------------------
 demodb    | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           |
 postgres  | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           |
 template0 | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           | =c/postgres          +
           |          |          |                 |                            |                            |        |           | postgres=CTc/postgres
 template1 | postgres | UTF8     | libc            | English_United States.1252 | English_United States.1252 |        |           | =c/postgres          +
           |          |          |                 |                            |                            |        |           | postgres=CTc/postgres
(4 rows)
```

CREATING A TABLE:-

```
postgres=# \c demodb
You are now connected to database "demodb" as user "postgres".
demodb=# CREATE TABLE EMPLOYEE(Name text, ID int, age int);
CREATE TABLE
demodb=# \d
          List of relations
 Schema |   Name    | Type  |  Owner
--------+-----------+-------+----------
 public | employee  | table | postgres
 public | stu       | table | postgres
 public | student   | table | postgres
 public | students  | table | postgres
(4 rows)
```

DELETING A TABLE:-

```
demodb=# drop table employee;
DROP TABLE
demodb=# \d
          List of relations
 Schema |   Name   | Type  |  Owner
--------+----------+-------+----------
 public | stu      | table | postgres
 public | student  | table | postgres
 public | students | table | postgres
(3 rows)
```

DATA INSERTING INTO TABLE:-

```
demodb=# INSERT INTO EMP(Name, ID, Age) VALUES('Ketan',1,20);
INSERT 0 1
demodb=# INSERT INTO EMP(Name, ID, Age) VALUES('Megha',2,22);
INSERT 0 1
demodb=# INSERT INTO EMP(Name, ID, Age) VALUES('Vishal',3,20);
INSERT 0 1
```

RETRIVING DATA FROM TABLE:-

```
demodb=# SELECT * FROM EMP;
  name  | id | age
--------+----+-----
 Ketan  |  1 |  20
 Megha  |  2 |  22
 Vishal |  3 |  20
(3 rows)


demodb=# SELECT NAME FROM EMP;
  name
--------
 Ketan
 Megha
 Vishal
(3 rows)


demodb=# SELECT NAME FROM EMP WHERE AGE=20;
  name
--------
 Ketan
 Vishal
(2 rows)
```

DELETING CONTENT IN TABLE:-

```
demodb=# TRUNCATE TABLE EMP;
TRUNCATE TABLE
```

```
demodb=# SELECT * FROM EMP;
 name | id | age
------+----+-----
(0 rows)
```

CONNECTING TO DATABSE:-

```
import psycopg2
# def table():
connect = psycopg2.connect(
```

```
        dbname= "postgres",
        user = "postgres",
        password = "Aashu@191010",
        host = "localhost",
        port = "5432"
    )
print("Database connected successfully")
```

```
PS D:\Python> python -u "d:\Python\tempCodeRunnerFile.py"
Database connected successfully
```

CREATING TABLE USING PYTHON:-

```
import psycopg2
def table():
    connect = psycopg2.connect(
            dbname= "postgres",
            user = "postgres",
            password = "Aashu@191010",
            host = "localhost",
            port = "5432"
        )
    cursor = connect.cursor()
        # Test the connection
    cursor.execute('''create table Test1(Name text,ID int,age int);''')
    print("Table created successfully")

    connect.commit()
    connect.close()
table()
```

```
PS D:\Python> python -u "d:\Python\tempCodeRunnerFile.py"
Table created successfully
```

INSERTING THE DATA USING PYTHON:-

```
def data():
    connect = psycopg2.connect(
        dbname= "postgres",
        user = "postgres",
        password = "Aashu@191010",
        host = "localhost",
```

```
        port = "5432"
    )

    cursor = connect.cursor()

    # Test the connection
    # Insert data into the table
    cursor.execute('''insert into Test1(Name, ID, age) values('sam',1,27);''')
    print("data added successfully")

    connect.commit()
    connect.close()

data()
```

```
PS D:\Python> python -u "d:\Python\tempCodeRunnerFile.py"
data added successfully
```

EXTRACTING DATA FROM DATABASE:-

```
def extract():
    connect = psycopg2.connect(
        dbname= "postgres",
        user = "postgres",
        password = "Aashu@191010",
        host = "localhost",
        port = "5432"
    )

    cursor = connect.cursor()
    # Test the connection
    # extract data from the table
    cursor.execute('''select * from Test1;''')
    # print(cursor.fetchone())
    show = cursor.fetchone()
    print("Name:", show[0])
    print("ID:", show[1])
    print("Age:", show[2])

    # print(cursor.fetchall())
    # print("data added successfully")
```

```
    connect.commit()
    connect.close()
extract()
```

```
PS D:\Python> python -u "d:\Python\connect_db.py"
Name: sam
ID: 1
Age: 27
```

ADDING INPUT FROM USER:-

```
def data():
    connect = psycopg2.connect(
        dbname= "postgres",
        user = "postgres",
        password = "Aashu@191010",
        host = "localhost",
        port = "5432"
    )

    cursor = connect.cursor()
    #user input for data
    name = input("Enter name: ")
    id = int(input("Enter ID: "))
    age = int(input("Enter age: "))

    query = '''insert into Test1(Name, ID, age) values(%s, %s, %s);'''
    cursor.execute(query, (name, id, age))
#     # Test the connection
#     # Insert data into the table
#     cursor.execute('''insert into Test1(Name, ID, age) values('sam',1,27);''')
#     print("data added successfully")

    connect.commit()
    connect.close()

data()
```

EXTRACTING DATA IN TEST1 TABLE:-

```
def extract():
    connect = psycopg2.connect(
```

```
        dbname= "postgres",
        user = "postgres",
        password = "Aashu@191010",
        host = "localhost",
        port = "5432"
    )

    cursor = connect.cursor()
    # Test the connection
    # extract data from the table
    cursor.execute('''select * from Test1;''')
    show = cursor.fetchall()
    for i in show:
        print(i)
    print("data extracted successfully")
    connect.commit()
    connect.close()
extract()
```

```
PS D:\Python> python -u "d:\Python\connect_db.py"
('sam', 1, 27)
('Aashwini', 2, 24)
('Riya', 4, 23)
('Mahesh', 5, 24)
data extracted successfully
```