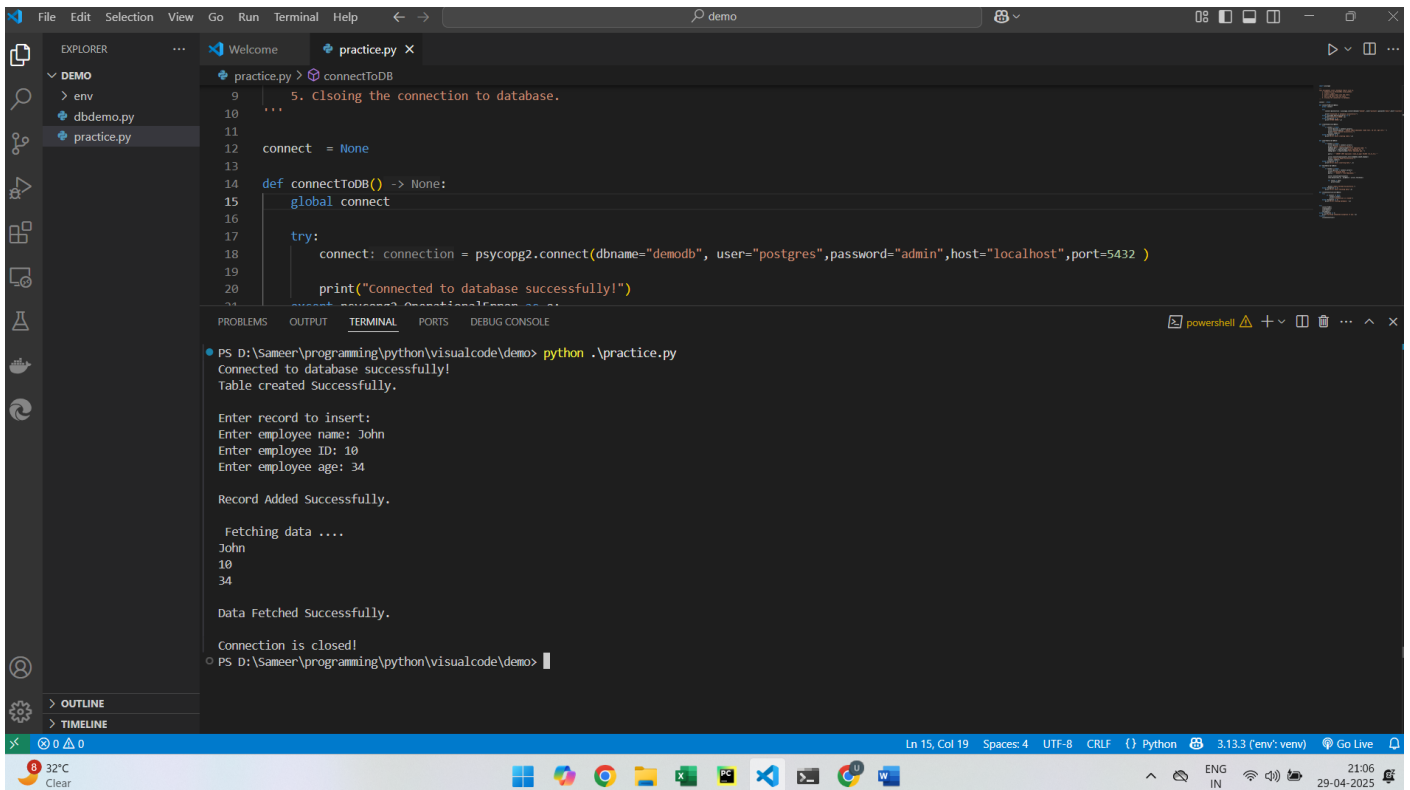


Assignment 7: Module 12: Building Database Apps with PostgreSQL & Python

Code:

```
File Edit Selection View Go Run Terminal Help demo
EXPLORER Welcome practice.py X
DEMO
> env
dbdemo.py
practice.py
1 import psycopg2
2
3 ...
4 This assignment covers database topics such as,
5 1. Connection to PostgreSQL using python.
6 2. Create a table.
7 3. Insert dynamic data into the table.
8 4. Retrieving data from the table
9 5. Closing the connection to database.
10 ...
11
12 connect = None
13
14 def connectToDB() -> None:
15     global connect
16
17     try:
18         connect = psycopg2.connect(dbname="demodb", user="postgres", password="admin", host="localhost", port=5432 )
19
20         print("Connected to database successfully!")
21     except psycopg2.OperationalError as e:
22         print("Connection ERROR:",e)
23     except Exception as e:
24         print("OTHER ERROR:",e)
25
26
27 def createTable() -> None:
28     try:
29         if connect != None:
30             cursor = connect.cursor()
31             cursor.execute(query="CREATE TABLE employees (name text, id int, age int);")
32             print("Table created Successfully.")
33             connect.commit()
34     except Exception as e:
35         print("Error while creating table.",e)
36
37
38 def insertData() -> None:
39     try:
40         if connect != None:
41             cursor = connect.cursor()
42             print("\nEnter record to insert:")
43             empName = input(prompt="Enter employee name: ")
44             empID = input(prompt="Enter employee ID: ")
45             empAge = input(prompt="Enter employee age: ")
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```

OutPut:



The screenshot shows the Visual Studio Code interface with a file explorer on the left showing a project named 'demo' containing 'env', 'dbdemo.py', and 'practice.py'. The main editor displays 'practice.py' with the following code:

```
9 | 5. Closing the connection to database.
10 | ...
11 |
12 | connect = None
13 |
14 | def connectToDB() -> None:
15 |     global connect
16 |
17 |     try:
18 |         connect: connection = psycopg2.connect(dbname="demodb", user="postgres", password="admin", host="localhost", port=5432 )
19 |
20 |         print("Connected to database successfully!")
21 |         return connect
22 |     except:
23 |         print("Error connecting to database")
24 |
```

The terminal output shows the execution of the script:

```
PS D:\Sameer\programming\python\visualcode\demo> python .\practice.py
Connected to database successfully!
Table created Successfully.

Enter record to insert:
Enter employee name: John
Enter employee ID: 10
Enter employee age: 34

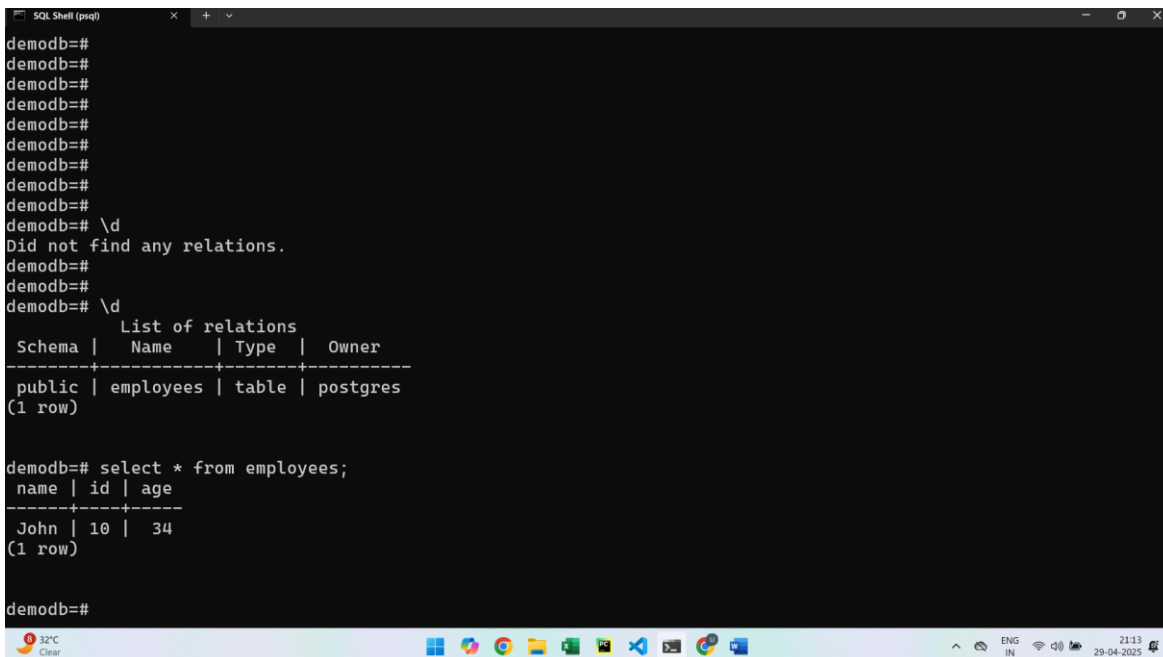
Record Added Successfully.

Fetching data ....
John
10
34

Data Fetched Successfully.

Connection is closed!
PS D:\Sameer\programming\python\visualcode\demo>
```

SQL command shell:



The screenshot shows a SQL command shell window with the following commands and output:

```
demodb=#
demodb=#
demodb=#
demodb=#
demodb=# \d
Did not find any relations.
demodb=#
demodb=# \d
List of relations
Schema | Name | Type | Owner
-----+-----+-----+-----
public | employees | table | postgres
(1 row)

demodb=# select * from employees;
 name | id | age
-----+---+---
 John | 10 | 34
(1 row)

demodb=#
```