

```
psql (17.4 (Homebrew))
```

```
Type "help" for help.
```

```
[postgres=# \c
```

```
You are now connected to database "postgres" as user "nisha".
```

```
[postgres=# \l
```

List of databases

Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules
postgres	nisha	UTF8	libc	C	C		
template0	nisha	UTF8	libc	C	C		
template1	nisha	UTF8	libc	C	C		

```
(3 rows)
```

```
[postgres=# create database learn_python;
```

```
CREATE DATABASE
```

```
[postgres=# \l
```

List of databases

Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules
learn_python	nisha	UTF8	libc	C	C		
postgres	nisha	UTF8	libc	C	C		
template0	nisha	UTF8	libc	C	C		
template1	nisha	UTF8	libc	C	C		

```
(4 rows)
```

```
[postgres=# \c learn_python
```

```
You are now connected to database "learn_python" as user "nisha".
```

```
learn_python=# 
```

```
psql (17.4 (Homebrew))
Type "help" for help.
```

```
[postgres=# \c
You are now connected to database "postgres" as user "nisha".
[postgres=# \l
```

List of databases								
Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules	
postgres	nisha	UTF8	libc	C	C			
template0	nisha	UTF8	libc	C	C			
template1	nisha	UTF8	libc	C	C			

(3 rows)

```
[postgres=# create database learn_python;
CREATE DATABASE
[postgres=# \l
```

List of databases								
Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules	
learn_python	nisha	UTF8	libc	C	C			
postgres	nisha	UTF8	libc	C	C			
template0	nisha	UTF8	libc	C	C			
template1	nisha	UTF8	libc	C	C			

(4 rows)

```
[postgres=# \c learn_python
You are now connected to database "learn_python" as user "nisha".
learn_python=# 
```

```
[postgres=# create database test;
ERROR:  syntax error at or near "clear"
LINE 1: clear
^
```

```
[postgres=# create database test;
CREATE DATABASE
[postgres=# \l
```

List of databases									
Name	Owner	Encoding	Locale	Provider	Collate	Ctype	Locale	ICU Rule	
learn_python	nisha	UTF8	libc		C	C			
postgres	nisha	UTF8	libc		C	C			
template0	nisha	UTF8	libc		C	C			
template1	nisha	UTF8	libc		C	C			
test	nisha	UTF8	libc		C	C			

(5 rows)

```
[postgres=# drop database test;
DROP DATABASE
[postgres=# \l
```

List of databases									
Name	Owner	Encoding	Locale	Provider	Collate	Ctype	Locale	ICU Rule	
learn_python	nisha	UTF8	libc		C	C			
postgres	nisha	UTF8	libc		C	C			
template0	nisha	UTF8	libc		C	C			
template1	nisha	UTF8	libc		C	C			

(4 rows)

```
[postgres=# \l
```

List of databases

Name	Owner	Encoding	Locale	Provider	Collate	Ctype	Locale	ICU Rules
learn_python	nisha	UTF8		libc	C	C		
postgres	nisha	UTF8		libc	C	C		
template0	nisha	UTF8		libc	C	C		
template1	nisha	UTF8		libc	C	C		

(4 rows)

```
[postgres=# \c learn_python
```

You are now connected to database "learn_python" as user "nisha".

```
[learn_python=# create table student(name text, number int, age int);
```

CREATE TABLE

```
[learn_python=# \d
```

List of relations

Schema	Name	Type	Owner
public	student	table	nisha

(1 row)

```
[learn_python=# insert into student(name, number,age) values('sam', 45, 12);
INSERT 0 1
[learn_python=# insert into student(name, number,age) values('john',34, 15);
INSERT 0 1
[learn_python=# \d
      List of relations
 Schema |   Name    | Type  | Owner
-----+-----+-----+-----
 public | student | table | nisha
(1 row)
```

```
|learn_python=# \c learn_python
You are now connected to database "learn_python" as user "nisha".
|learn_python=# select * from student;
   name | number | age
-----+-----+-----
 sam  |      45 |   12
 john |      34 |   15
(2 rows)

|learn_python=# select name from student;
   name
-----
 sam
 john
(2 rows)

|learn_python=# select name from student where age=12;
   name
-----
 sam
(1 row)

|learn_python=# select name from student where number=45;
   name
-----
 sam
(1 row)

|learn_python=# select number from student where age=15;
   number
-----
 34
(1 row)

|learn_python=# select number from student where name='john';
   number
-----
 34
(1 row)
```

```
[learn_python=# truncate table student;
TRUNCATE TABLE
[learn_python=# \d
      List of relations
 Schema |   Name    | Type  | Owner
-----+-----+-----+-----
 public | student | table | nisha
(1 row)

[learn_python=# select * from student;
 name | number | age
-----+-----+-----
(0 rows)

learn_python=# █
```

EXPLORER

PYTHON-TUTORIAL

- > env
- > output.txt
- > README.md
- > sample.txt
- > Task-1.py
- > Task-2.py
- > Task-3.py
- > Task-4.py
- > Task-5.py
- > Task-6.py
- > Task-7.py
- > Task-8.py
- > Task-9.py
- > Task-10.py

Start

- New File...
- Open...
- Clone Git Repository...
- Connect to...

Recent

- Python ~/Workspace
- shell ~/Workspace
- nginx-poc ~/Workspace
- nginx /opt/homebrew/etc
- python-conda ~/Workspace/Python

More...

Walkthroughs

- Get Started with VS Code
Customize your editor, learn the basics, and start coding
- Learn the Fundamentals
- Get Started With GitLens Updated
- Get Started with Python Developme... Updated
- Get Started with Jupyter Notebooks Updated

Show welcome page on startup

TERMINAL

nisha@Nishas-MacBook-Pro python-tutorial % virtualenv env
created virtual environment CPython3.10.10.final.0-64 in 241ms
 creator CPython3Posix(dest=/Users/nisha/Workspace/Python/python-tutorial/env, clear=False
, no_vcs_ignore=False, global=False)
 seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy,
 app_data_dir=/Users/nisha/Library/Application Support/virtualenv)
 added seed packages: pip==24.0, setuptools==70.1.0, wheel==0.43.0
 activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivat
or,PythonActivator
nisha@Nishas-MacBook-Pro python-tutorial %

OUTLINE

TIMELINE

SHELL COMMANDS

main Launchpad

EXPLORER

PYTHON-TUTORIAL

- env
- bin
- lib
- .gitignore
- pyvenv.cfg
- output.txt
- README.md
- sample.txt
- Task-1.py
- Task-2.py
- Task-3.py
- Task-4.py
- Task-5.py
- Task-6.py
- Task-7.py
- Task-8.py
- Task-9.py
- Task-10.py

Welcome

Start

- New File...
- Open...
- Clone Git Repository...
- Connect to...

Recent

- Python ~/Workspace
- shell ~/Workspace

TERMINAL

```
nisha@Nishas-MacBook-Pro python-tutorial % source env/bin/activate
(env) nisha@Nishas-MacBook-Pro python-tutorial % deactivate
nisha@Nishas-MacBook-Pro python-tutorial % source env/bin/activate
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-1.py
Enter the first number:1
Enter the second number:2
Addition : 3
Subtraction : -1
Multiplication : 2
Division : 0.5
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

Walkthroughs

- Get Started with VS Code
Customize your editor, learn the basics, and start coding
- Learn the Fundamentals
- Get Started With GitLens Updated
- Get Started with Python Development Updated

OUTLINE

TIMELINE

SHELL COMMANDS

main Launchpad 0 △ 0

The screenshot shows the Visual Studio Code (VS Code) interface with a dark theme. The left sidebar displays a file tree under the 'PYTHON-TUTORIAL' folder, which includes an 'env' folder, a 'bin' folder, a 'lib' folder, a '.gitignore' file, a 'pyvenv.cfg' file, an 'output.txt' file, a 'README.md' file, a 'sample.txt' file, and ten Python script files named 'Task-1.py' through 'Task-10.py'. The top center features a 'Welcome' header with a 'Get Started' button. The right side has a 'Walkthroughs' section with three cards: 'Get Started with VS Code' (highlighted), 'Learn the Fundamentals', and 'Get Started With GitLens' and 'Get Started with Python Development' (both also highlighted). The main area contains a 'Start' section with options like 'New File...', 'Open...', 'Clone Git Repository...', and 'Connect to...'. Below it is a 'Recent' section listing 'Python ~/Workspace' and 'shell ~/Workspace'. A 'TERMINAL' tab is active, showing a terminal window with the following command and output:

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % pip install psycopg2
Collecting psycopg2
  Downloading psycopg2-2.9.10.tar.gz (385 kB)
    385.7/385.7 kB 4.9 MB/s eta 0:00:00
      Preparing metadata (setup.py) ... done
      Building wheels for collected packages: psycopg2
        Building wheel for psycopg2 (setup.py) ... done
        Created wheel for psycopg2: filename=psycopg2-2.9.10-cp310-cp310-macosx_10_9_universal2.whl size=241861 sh
a256=72206ccdc8947d3360cd3f8666b2f027a7f3e68c52b593b057c8cf01388a6d2
        Stored in directory: /Users/nisha/Library/Caches/pip/wheels/51/41/e0/2912ad51b01f454d26dfb26e5cc5923874656
749b9e83943a8
      Successfully built psycopg2
      Installing collected packages: psycopg2
      Successfully installed psycopg2-2.9.10

[notice] A new release of pip is available: 24.0 -> 25.0.1
[notice] To update, run: pip install --upgrade pip
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

The screenshot shows a Visual Studio Code (VS Code) interface with the following details:

- EXPLORER** view: A file tree titled "PYTHON-TUTORIAL". It contains a "env" folder with "bin" and "lib" subfolders, ".gitignore", "pyvenv.cfg", "output.txt", "README.md", and several "Task-1.py" through "Task-10.py" files.
- Task-11.py** file is open in the editor, showing Python code to connect to a PostgreSQL database named "learn_python" using the psycopg2 library. The code prints "connection successful".
- TERMINAL** view: Shows the command "python Task-11.py" being run twice in a zsh shell. Both runs result in the output "connection successful".
- STATUS BAR**: Shows the file is at Line 4, Column 26, with 4 spaces, using UTF-8 encoding, in Python mode, and is a 3.9.6 64-bit build. It also indicates Prettier is active.

The screenshot shows a Python development environment in VS Code. The left sidebar displays a file tree under 'PYTHON-TUTORIAL' containing a '.env' file, a 'bin' folder, a 'lib' folder, a '.gitignore' file, a 'pyvenv.cfg' file, an 'output.txt' file, a 'README.md' file, and several Python script files from 'Task-1.py' to 'Task-10.py'. The current file is 'Task-11.py', which contains the following code:

```
1 import psycopg2
2 conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres", h
3 print("connection successful")
4
5 cursor = conn.cursor()
6 cursor.execute('''create table employees(Name text, ID int, Age int);''')
7 print("table created")
8
9 conn.commit()
10 conn.close()
11
12
```

The terminal at the bottom shows the output of running the script:

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
table created
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

The status bar at the bottom indicates the code is at Line 2, Column 113, with 4 spaces, using UTF-8 encoding, and is written in Python 3.9.6 64-bit. Prettier is also listed as a formatter.

A screenshot of the Visual Studio Code (VS Code) interface, showing a Python script named `Task-11.py` being run against a PostgreSQL database.

The `Task-11.py` file contains the following code:

```
1 import psycopg2
2 conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
3 print("connection successful")
4
5 cur.execute("List of relations")
6 cur.execute("SELECT Schema, Name, Type, Owner FROM pg_catalog.pg_class WHERE.relname IN ('employees', 'student') AND relkind='r';")
7 print(cur.fetchall())
8 cur.close()
9 conn.close()
10 print("connection closed")
```

The terminal output shows the results of the `\d` command, listing two tables: `employees` and `student`, both owned by `nisha`:

```
learn_python-# \d
              List of relations
 Schema |      Name      | Type  | Owner
 public | employees   | table | nisha
 public | student     | table | nisha
(2 rows)
```

The status bar at the bottom indicates the file has 1 change (U) and the code is 3.9.6 64-bit, and it is prettier-formatted.

The screenshot shows a Visual Studio Code (VS Code) interface with a dark theme. The left sidebar contains a tree view of a project folder named 'PYTHON-TUTORIAL'. Inside this folder are several files: 'env', 'bin', 'lib', '.gitignore', 'pyvenv.cfg', 'output.txt', 'README.md', 'sample.txt', and multiple Python files named 'Task-1.py' through 'Task-10.py'. The file 'Task-11.py' is currently open in the main editor area.

The code in 'Task-11.py' is as follows:

```
1 import psycopg2
2
3 def table():
4     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
5     print("connection successful")
6
7     cursor = conn.cursor()
8     cursor.execute('''create table employees(Name text, ID int, Age int);''')
9     print("table created")
10
11    conn.commit()
12
13    conn.close()
```

Below the editor, the status bar shows '1, U' next to the file name 'Task-11.py'. The bottom right corner of the status bar has a small circular icon with a question mark.

In the bottom right corner of the screen, there is a floating terminal window titled 'TERMINAL'. It displays the command-line output of running the script:

```
> ~ TERMINAL
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
table created
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

The screenshot shows a Visual Studio Code (VS Code) interface with the following details:

- Explorer View:** Shows a folder named "PYTHON-TUTORIAL" containing subfolders "env", "bin", "lib", ".gitignore", "pyvenv.cfg", and files "output.txt", "README.md", "sample.txt", and multiple "Task-1.py" through "Task-10.py".
- Editor View:** The active file is "Task-11.py". The code is as follows:

```
14 def data():
15     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
16     print("connection successful")
17
18     cursor = conn.cursor()
19     cursor.execute(''insert into employees(Name, ID, Age) values('sam', 45, 12)'')
20     print("Data saved")
21
22     conn.commit()
23     conn.close()
24
25 data()
26
```

- Terminal View:** Shows the output of running the script:

```
> ~ TERMINAL
> (env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
table created
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
Data saved
(env) nisha@Nishas-MacBook-Pro python-tutorial % █
```

python-tutorial

EXPLORER

PYTHON-TUTORIAL

- env
- bin
- lib
 - .gitignore
 - pyvenv.cfg
- output.txt
- README.md
- sample.txt
- Task-1.py
- Task-2.py
- Task-3.py
- Task-4.py
- Task-5.py
- Task-6.py
- Task-7.py
- Task-8.py
- Task-9.py
- Task-10.py
- Task-11.py

Welcome Task-11.py 1, U

```
14 def data():
15
16
17
18
19
20 [learn_python-# \d
21     List of relations
22     Schema |    Name    | Type | Owner
23     public | employees | table | nisha
24     public | student   | table | nisha
25 (2 rows)
26
27 (env) nisha
28 connect
29 table
30 [learn_python-# select * from employees;
31 (env) nisha
32 connect
33 Data sa
34 (env) nisha
35 [learn_python-# select * from employees;
36     name | id | age
37     -----+---+---
38     sam   | 45 | 12
39 (1 row)
40
41 learn_python=#
42
```

TERMINAL

nisha — psql postgres — 80x24

Ln 25, Col 7 Spaces: 4 UTF-8 LF {} Python 3.9.6 64-bit Prettier

A screenshot of the Visual Studio Code (VS Code) interface, showing a Python script named `Task-11.py` being run against a PostgreSQL database.

The `Task-11.py` file contains the following Python code:

```
def extract():
    conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
    print("connection successful")

    cursor = conn.cursor()
    cursor.execute('''select * from employees''')
    print("data fetched")
    print(cursor.fetchone())

    conn.commit()
    conn.close()

extract()
```

The `TERMINAL` tab shows the output of running the script:

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
('sam', 45, 12)
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

A screenshot of the Visual Studio Code (VS Code) interface. The left sidebar shows a file tree with a project named 'PYTHON-TUTORIAL' containing an 'env' folder and several Python files (Task-1.py through Task-11.py), along with README.md and sample.txt. The current file is 'Task-11.py'. The main editor area displays the following Python code:

```
25 def extract():
26     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
27     print("connection successful")
28     cursor = conn.cursor()
29     cursor.execute('''select * from employees''')
30     print("data fetched")
31     data = cursor.fetchone()
32     print(data[0])
33
34     conn.commit()
35     conn.close()
36
37 extract()
38
```

The status bar at the bottom indicates the file is 1, U. Below the editor is a terminal window titled 'TERMINAL' showing the output of running the script:

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
sam
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

The screenshot shows a Microsoft Visual Studio Code (VS Code) interface. The left sidebar contains icons for Explorer, Search, Find, Git, File, Help, and Recent Files. The Explorer view shows a project folder named 'PYTHON-TUTORIAL' containing an 'env' folder with subfolders 'bin' and 'lib', a '.gitignore' file, a 'pyenv.cfg' file, an 'output.txt' file, a 'README.md' file, a 'sample.txt' file, and several Python files: 'Task-1.py', 'Task-2.py', 'Task-3.py', 'Task-4.py', 'Task-5.py', 'Task-6.py', 'Task-7.py', 'Task-8.py', 'Task-9.py', 'Task-10.py', and 'Task-11.py'. The 'Task-11.py' file is currently open in the main editor area.

The code in 'Task-11.py' is as follows:

```
25 def extract():
26     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
27     print("connection successful")
28     cursor = conn.cursor()
29     cursor.execute('''select * from employees''')
30     print("data fetched")
31     data = cursor.fetchone()
32     print(data[1])
33
34     conn.commit()
35     conn.close()
36
37 extract()
38
```

The terminal at the bottom shows the execution of the script:

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
sam
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
45
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

A screenshot of the Visual Studio Code (VS Code) interface. The left sidebar shows a file tree with a folder named 'PYTHON-TUTORIAL' containing files like 'Task-1.py' through 'Task-10.py', 'output.txt', 'README.md', and configuration files. The main editor area displays Python code for connecting to a PostgreSQL database and fetching employee data. The terminal at the bottom shows the execution of this script and its successful output.

python-tutorial

EXPLORER

PYTHON-TUTORIAL

- env
- bin
- lib
- .gitignore
- pyvenv.cfg
- output.txt
- README.md
- sample.txt
- Task-1.py
- Task-2.py
- Task-3.py
- Task-4.py
- Task-5.py
- Task-6.py
- Task-7.py
- Task-8.py
- Task-9.py
- Task-10.py

Task-11.py 1, U

Welcome Task-11.py 1, U extract

```
25 def extract():
26     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
27     print("connection successful")
28     cursor = conn.cursor()
29     cursor.execute(''select * from employees''')
30     print("data fetched")
31     data = cursor.fetchone()
32     print(data[2])
33
34     conn.commit()
35     conn.close()
36
37 extract()
38
```

TERMINAL

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
sam
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
45
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
data fetched
12
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```

OUTLINE

TIMELINE

The screenshot shows a Microsoft Visual Studio Code (VS Code) interface with the following details:

- Explorer View:** Shows a file tree under the folder "PYTHON-TUTORIAL". The "env" folder contains "bin", "lib", ".gitignore", and "pyvenv.cfg". Other files include "output.txt", "README.md", "sample.txt", and several "Task-N.py" files (N=1 to 10). The file "Task-11.py" is currently open.
- Editor View:** Displays the content of "Task-11.py". The code uses the `psycopg2` library to connect to a PostgreSQL database named "learn_python" with user "nisha" and password "postgres". It prompts the user for Name, Id, and Age, inserts the data into the "employees" table, and prints "Data saved".

```
37 def dataInput():
38     conn = psycopg2.connect(dbname="learn_python", user="nisha", password="postgres")
39     print("connection successful")
40
41     name = input("Enter Name :")
42     id = input("Enter Id :")
43     age = input("Enter Age :")
44
45     cursor = conn.cursor()
46     query = '''insert into employees(Name,ID,Age) values(%s,%s,%s)'''
47     cursor.execute(query, (name,id,age))
48     print("Data saved")
49     conn.commit()
50     conn.close()
51
52 dataInput()
```
- Terminal View:** Shows the output of running the script. The terminal window title is "TERMINAL". The command entered was `python Task-11.py`. The output shows the connection message, the prompt for Name ("Enter Name :john"), the prompt for Id ("Enter Id :23"), the prompt for Age ("Enter Age :15"), and the confirmation message ("Data saved").

```
(env) nisha@Nishas-MacBook-Pro python-tutorial % python Task-11.py
connection successful
Enter Name :john
Enter Id :23
Enter Age :15
Data saved
(env) nisha@Nishas-MacBook-Pro python-tutorial %
```
- Bottom Status Bar:** Shows the status bar with icons for battery, signal, and other system information.

python-tutorial

Task-11.py 1, U

Task-11.py > dataInput

```
37 def dataInput():
38     learn_python=# \d
39             List of relations
40             Schema |    Name    |   Type   | Owner
41             -----+-----+-----+-----
42             public | employees | table  | nisha
43             public | student   | table  | nisha
44             (2 rows)
45
46     learn_python=# select * from employess;
47     ERROR:  relation "employess" does not exist
48     LINE 1: select * from employess;
49
50     learn_python=# select * from employees;
51             name | id | age
52             -----+---+---
53             sam  | 45 | 12
54             john | 23 | 15
55             (2 rows)
56
57     (env) nisha@nisha-MacBook-Pro:~/python-tutorial$
```

TERMINAL

OUTLINE

TIMELINE

SHELL COMMANDS

Visual Studio Code

Ln 39, Col 35 Spaces: 4 UTF-8 LF Python 3.9.6 64-bit Prettier