

# Lesson 01 Demo 06

## Comparing Numbers Using Python Operators

**Objective:** To understand how Python's comparison operators work through number comparisons for better decision making in programming

**Tools required:** Visual Studio Code (VS Code)

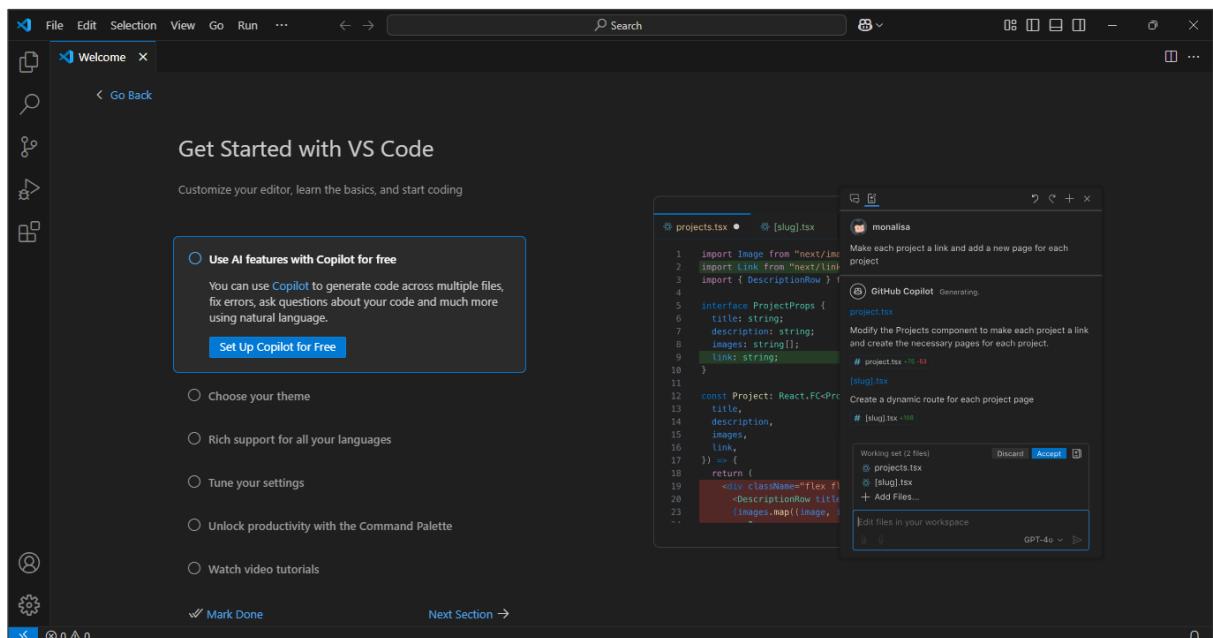
**Prerequisites:** None

**Steps to be followed:**

1. Install the Python extension in VS Code
2. Create a Python file in VS Code
3. Write and run the code

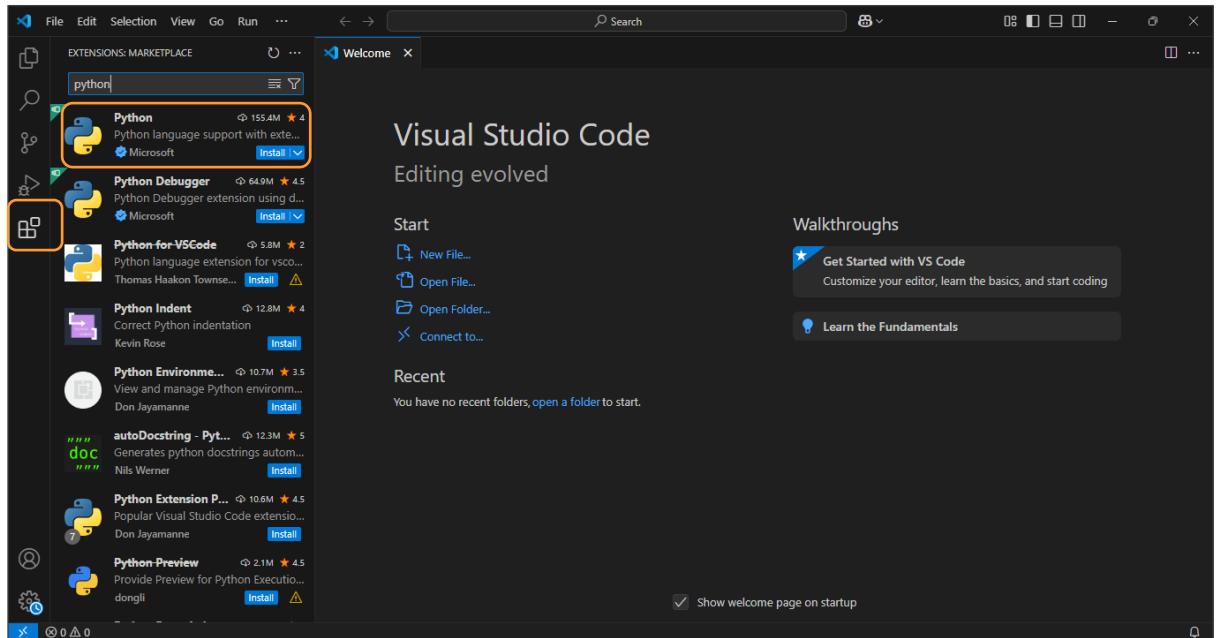
### Step 1: Install the Python extension in VS Code

#### 1.1 Launch the VS Code application on your system



**Note:** If you don't have VS Code installed, download it from <https://code.visualstudio.com/>

1.2 Click on the **Extensions** icon (or press Ctrl + Shift + X on your keyboard), type Python in the search bar, and select the **Python** extension by Microsoft

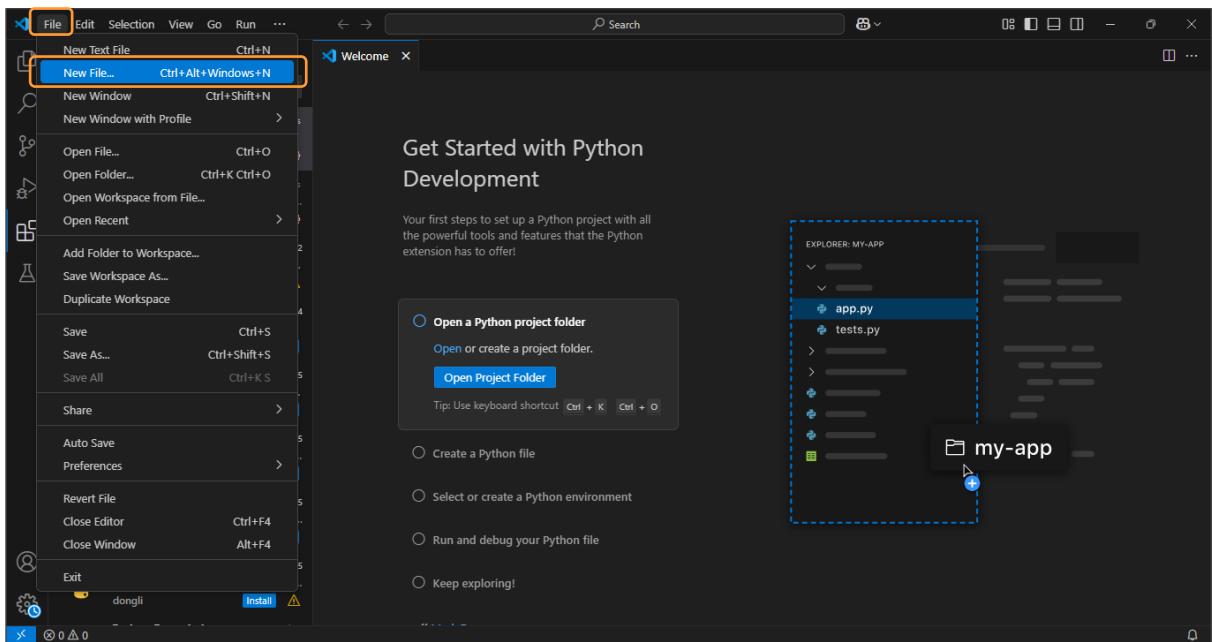


1.3 Click on **Install** to enable Python support inside VS Code

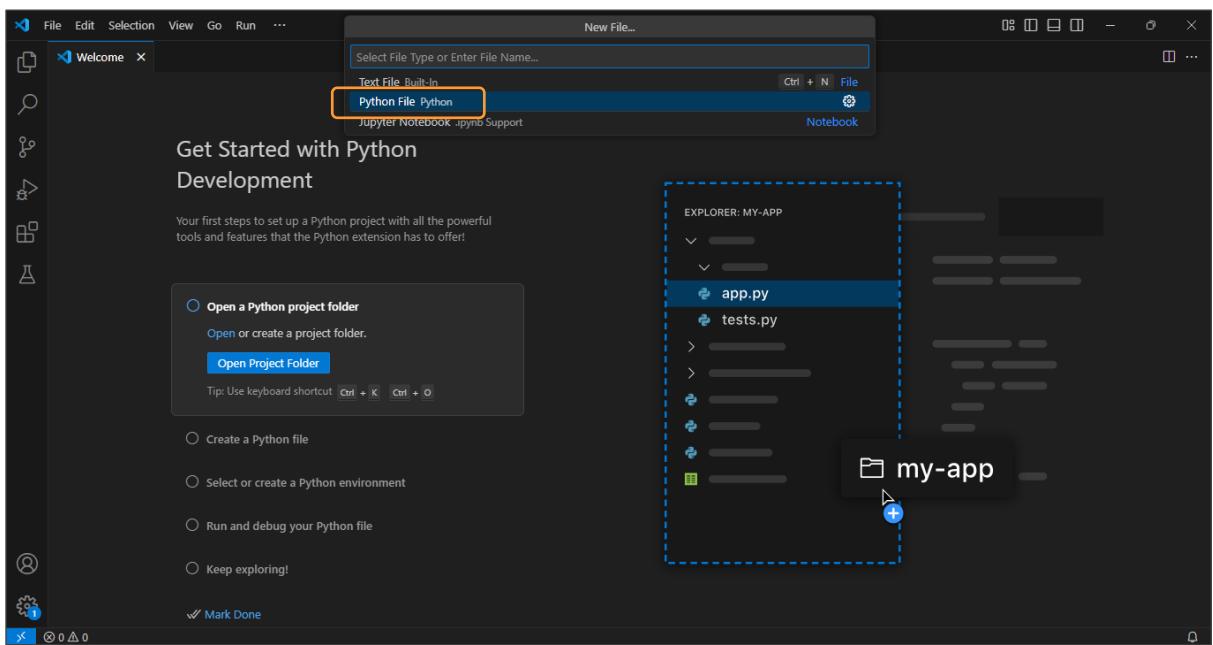


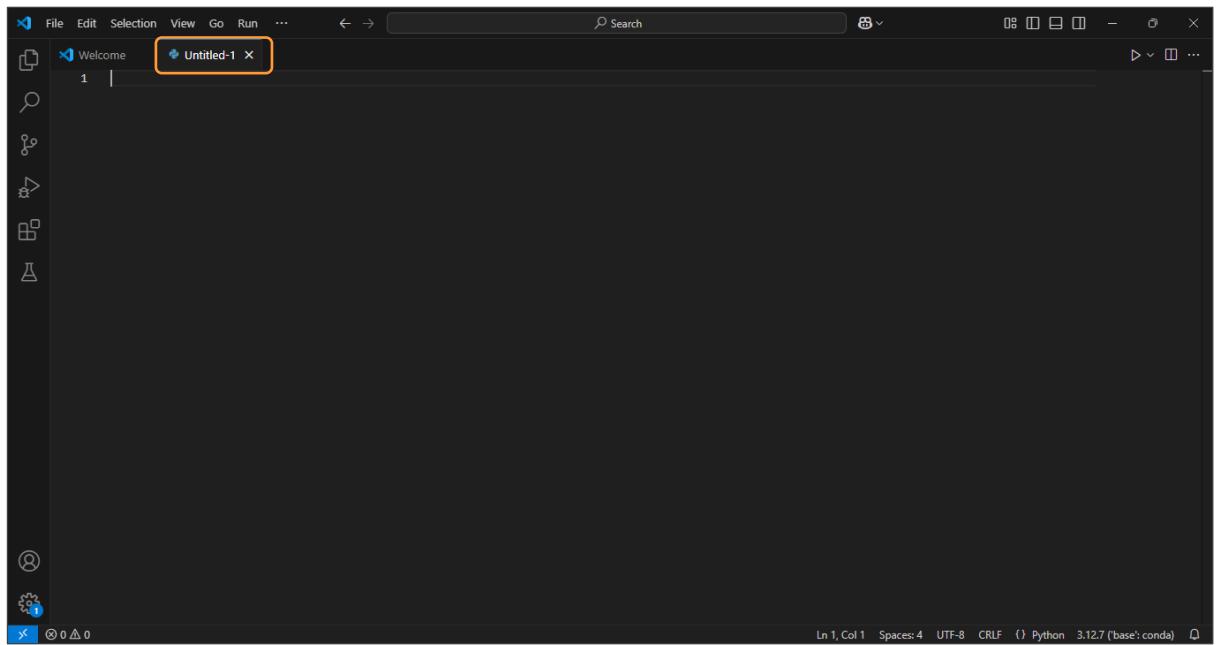
## Step 2: Create a Python file in VS Code

### 2.1 Click on **File** and then on **New File...**



### 2.2 Select the **Python File** option on top, and a new Python file named Untitled-1 will open





### Step 3: Write and run the code

3.1 Write the following Python script in the Untitled-1.py file:

```
# Taking two numbers as input from the user
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

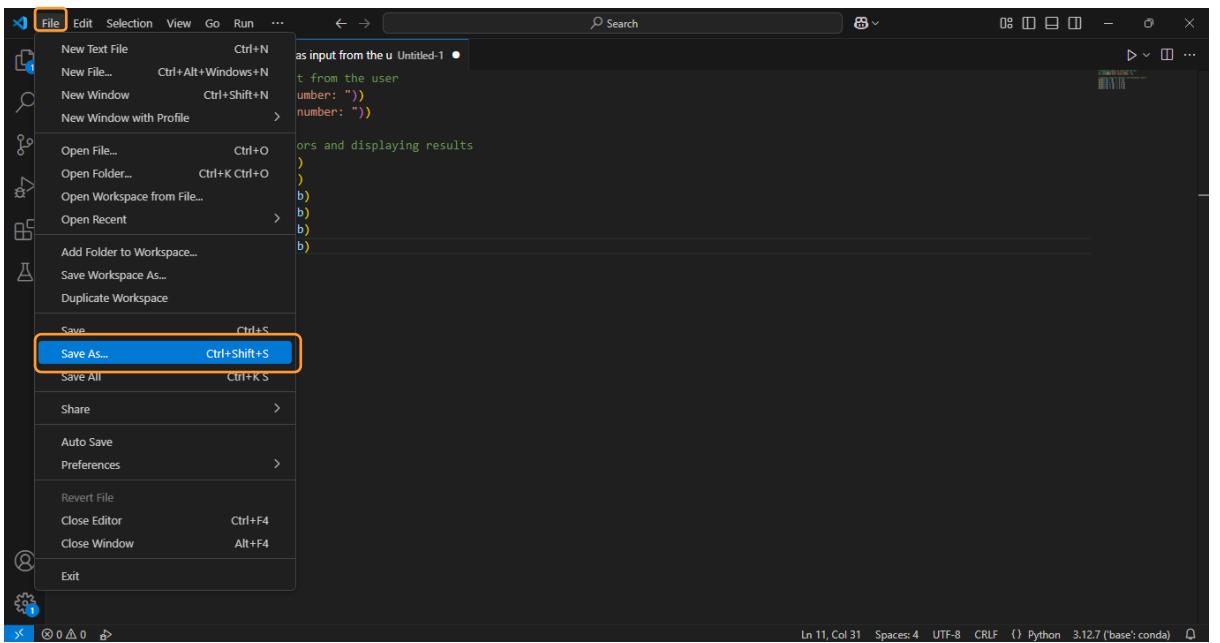
# Applying comparison operators and displaying results
print(f"{a} > {b} :", a > b)
print(f"{a} < {b} :", a < b)
print(f"{a} >= {b} :", a >= b)
print(f"{a} <= {b} :", a <= b)
print(f"{a} == {b} :", a == b)
print(f"{a} != {b} :", a != b)
```

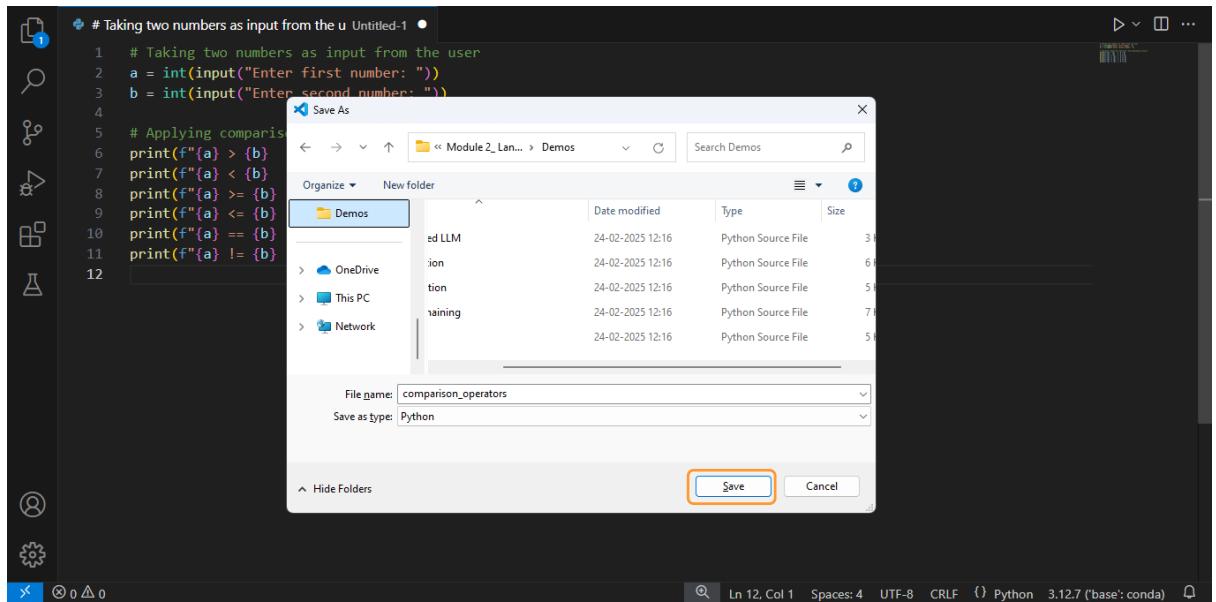
A screenshot of a code editor window titled "Welcome". The code in the editor is:

```
1 # Taking two numbers as input from the user
2 a = int(input("Enter first number: "))
3 b = int(input("Enter second number: "))
4
5 # Applying comparison operators and displaying results
6 print(f"{a} > {b} ::", a > b)
7 print(f"{a} < {b} ::", a < b)
8 print(f"{a} >= {b} ::", a >= b)
9 print(f"{a} <= {b} ::", a <= b)
10 print(f"{a} == {b} ::", a == b)
11 print(f"{a} != {b} ::", a != b)
```

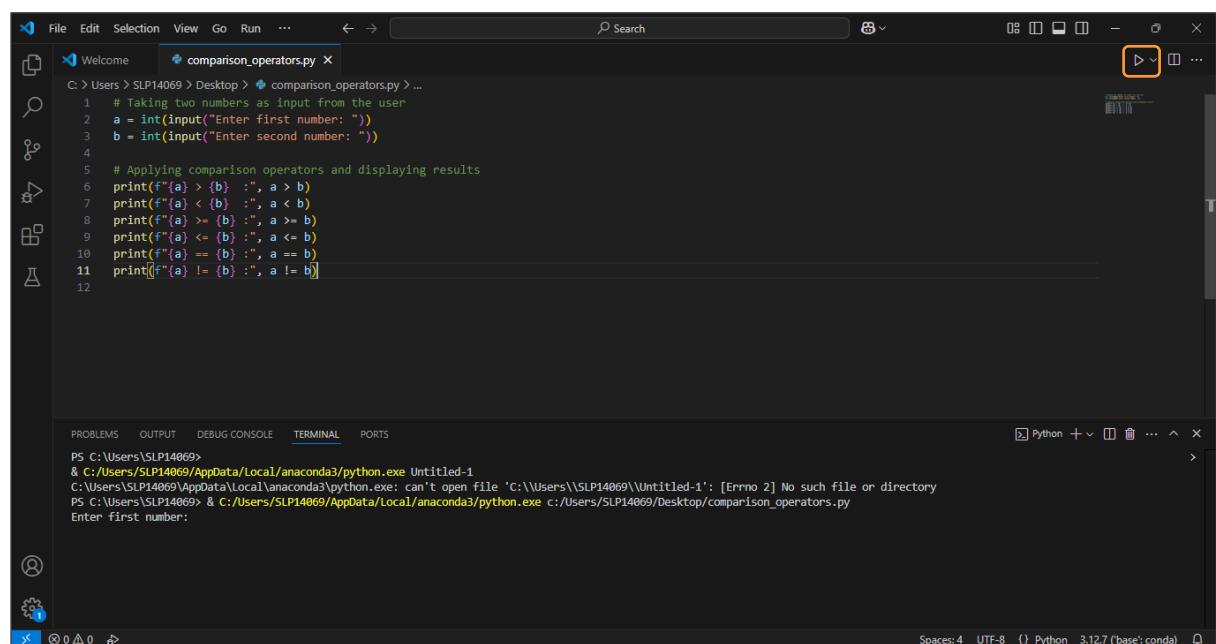
The status bar at the bottom right shows "Ln 12, Col 1 Spaces: 4 UTF-8 CRLF {} Python 3.12.7 ('base': conda)".

3.2 Click **File** and then **Save As**. Name the file as comparison\_operators and click on **Save**.





3.3 After saving the file, click the Play (▶) button at the top-right corner to run the script



**Note:** Upon running the script, the integrated terminal in VS Code will open and display the script's output. If there are any syntax or runtime errors, they will also appear in the terminal, helping you quickly identify and debug issues in your code.

### 3.4 When prompted in the terminal, enter two numbers and press enter to see the results

The screenshot shows a code editor interface with a dark theme. A file named 'comparison\_operators.py' is open, containing the following Python code:

```
C:\> Users > SLP14069 > Desktop > comparison_operators.py > ...
1 # Taking two numbers as input from the user
2 a = int(input("Enter first number: "))
3 b = int(input("Enter second number: "))
4
5 # Applying comparison operators and displaying results
6 print(f'{a} > {b} ::", a > b)
7 print(f'{a} < {b} ::", a < b)
8 print(f'{a} >= {b} ::", a >= b)
9 print(f'{a} <= {b} ::", a <= b)
10 print(f'{a} == {b} ::", a == b)
11 print(f'{a} != {b} ::", a != b)
12
```

Below the code editor is a terminal window titled 'Python'. It shows the command-line interface with the following interaction:

```
& C:/Users/SLP14069/AppData/Local/anaconda3/python.exe Untitled-1
C:/Users/SLP14069/AppData/Local/anaconda3/python.exe: can't open file 'C:\\Users\\SLP14069\\Untitled-1': [Errno 2] No such file or directory
PS C:/Users/SLP14069> & C:/Users/SLP14069/AppData/Local/anaconda3/python.exe C:/Users/SLP14069/Desktop/comparison_operators.py
Enter first number: 6
Enter second number: 2
6 > 2 : True
6 < 2 : False
6 >= 2 : True
6 <= 2 : False
6 == 2 : False
6 != 2 : True
PS C:/Users/SLP14069>
```

The terminal also displays the system status at the bottom: 'Spaces:4' and 'UTF-8'.

By following these steps, you have successfully explored how Python's comparison operators work in real time, highlighting its ability to efficiently handle logical comparisons for effective decision-making in programming.