

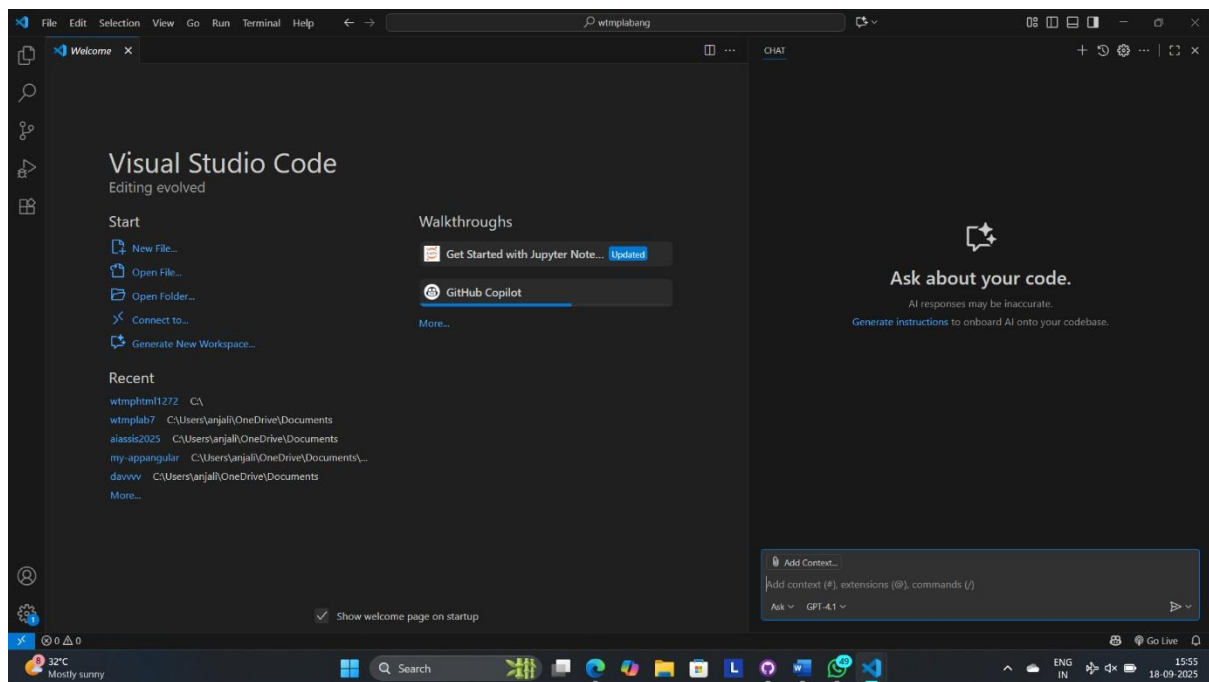
Assignment-1.4

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Task-1:

Install and configure GitHub Copilot in VS Code.



Task-2:

Prompt: Give a function in python that returns the maximum of three numbers that is entered by user.

Code:

```
def max_of_three():  
    a = float(input("Enter first number: "))  
    b = float(input("Enter second number: "))  
    c = float(input("Enter third number: "))  
    return max(a, b, c)  
result = max_of_three()  
print("The maximum number is:", result)
```

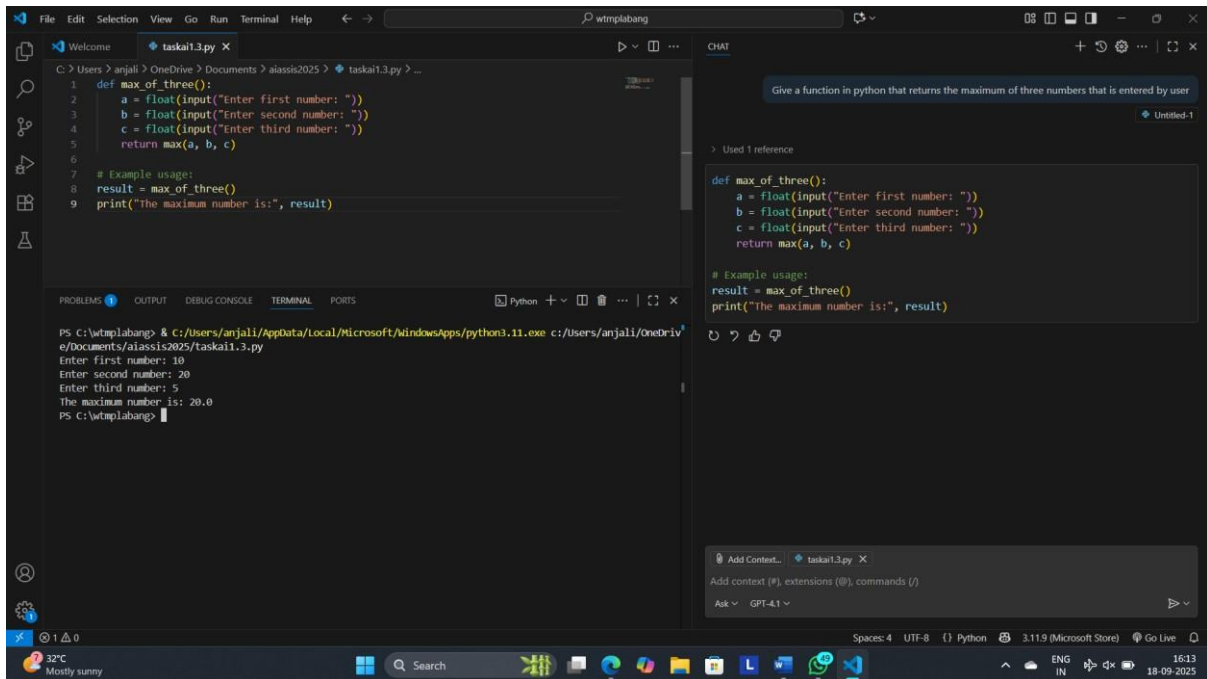
Output:

Enter first number: 10

Enter second number: 20

Enter third number: 5

The maximum number is: 20.0



The screenshot shows a VS Code editor with a file named `task1.3.py`. The code defines a function `max_of_three()` that takes three inputs and returns the maximum. Below the function, there is an example usage. The terminal at the bottom shows the command `python task1.3.py` being executed, with the following output:

```
PS C:\wtmp\labang> python task1.3.py
Enter first number: 10
Enter second number: 20
Enter third number: 5
The maximum number is: 20.0
PS C:\wtmp\labang>
```

Task-3: Prompt:

create a recursive Python function that calculates the factorial of a number entered by user.

Code: def

factorial(n): if n

== 0 or n == 1:

return 1

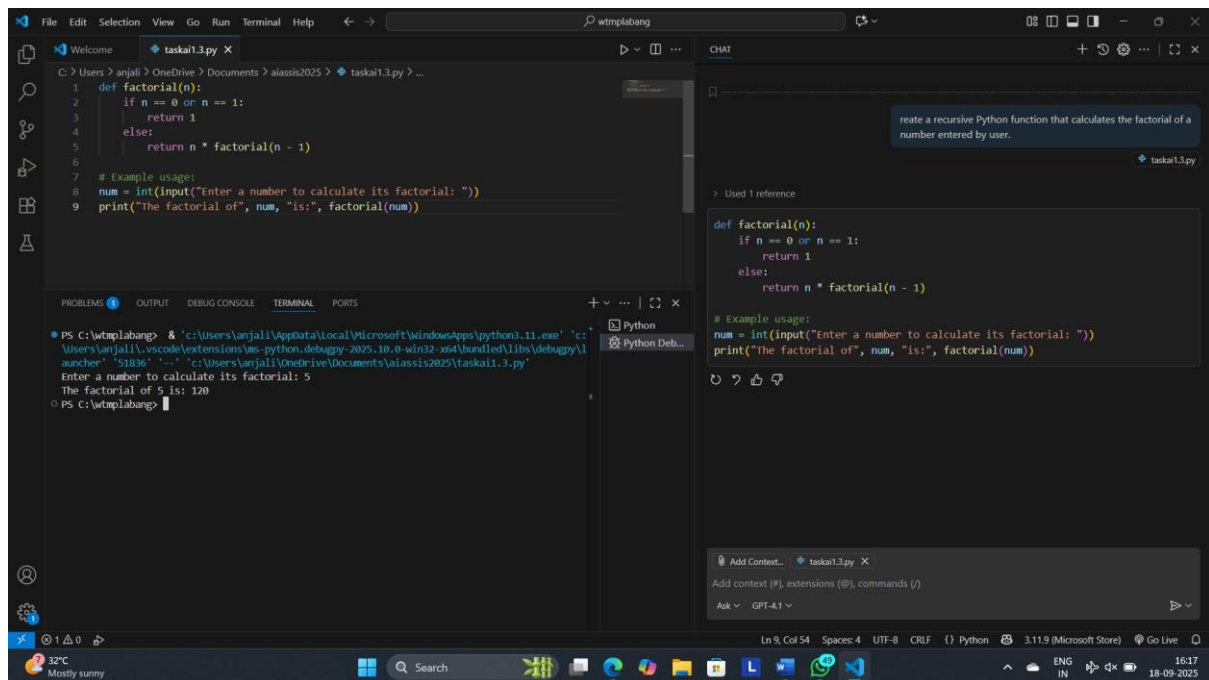
else:

return n * factorial(n - 1) num = int(input("Enter a number to calculate its factorial: ")) print("The factorial of", num, "is:", factorial(num))

Output:

Enter a number to calculate its factorial: 5

The factorial of 5 is: 120



```
File Edit Selection View Go Run Terminal Help
task1.3.py
C:\Users\anjali\OneDrive\Documents\aiassisi2025> task1.3.py ...
1 def factorial(n):
2     if n == 0 or n == 1:
3         return 1
4     else:
5         return n * factorial(n - 1)
6
7 # Example usage:
8 num = int(input("Enter a number to calculate its factorial: "))
9 print("The factorial of", num, "is:", factorial(num))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\wtmp\labang> & 'c:\Users\anjali\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\anjali\OneDrive\Documents\aiassisi2025\task1.3.py'
Enter a number to calculate its factorial: 5
The factorial of 5 is: 120
PS C:\wtmp\labang>
```

Task-4:

Prompt:

Create a class named Student with attributes name, roll_no, and marks. Add a method to display student details.

Code:

```
class Student:
    def __init__(self, name, roll_no, marks):
```

```
        self.name = name
```

```
        self.roll_no = roll_no
```

```
        self.marks = marks
```

```
    def display_details(self):
```

```
        print(f"Name: {self.name}")
```

```
        print(f"Roll No: {self.roll_no}")
```

```
        print(f"Marks: {self.marks}")
```

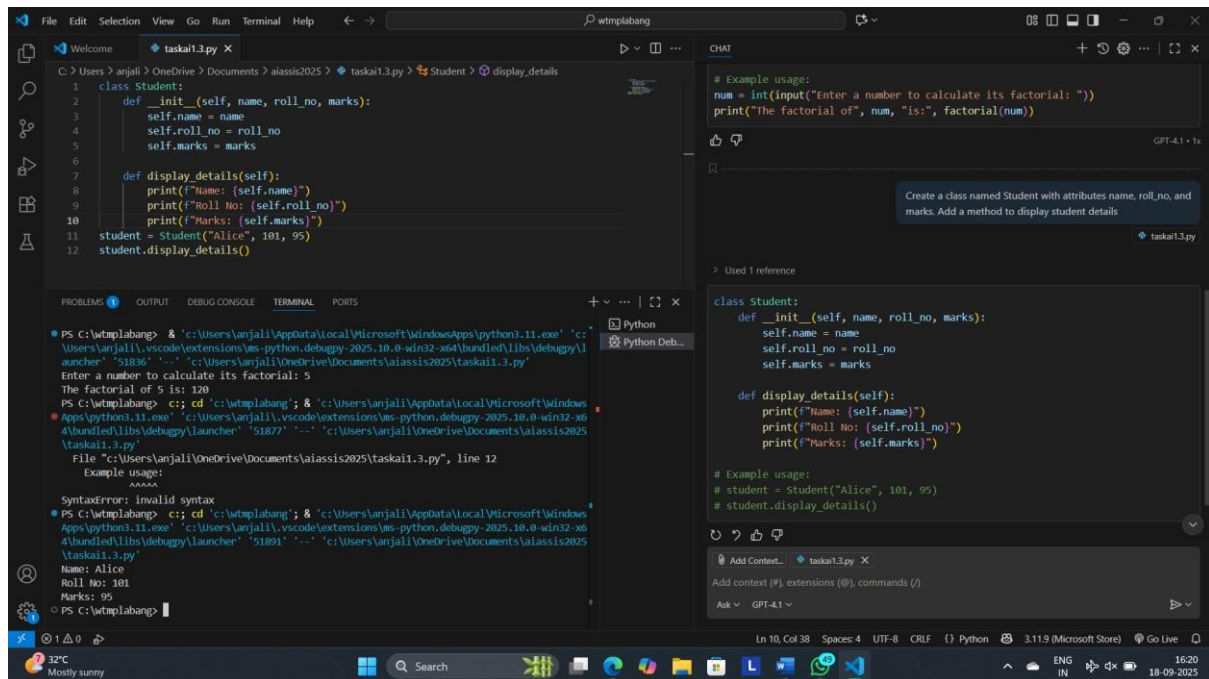
```
student = Student("Alice", 101, 95)
```

```
student.display_details()
```

Output:
Name: Alice

Roll No: 101

Marks: 95



Task-5:

Prompt:

Generate a Python function that takes a string as input and returns the frequency of each word. Code:

```
def word_frequency(text):
```

```
    words =
```

```
    text.split()    freq =
```

```
    {}    for word in
```

```
    words:
```

```
        word = word.lower() # Optional: make it case-
```

```
insensitive    freq[word] = freq.get(word, 0) + 1    return
```

```
freq
```

```
# Example input:
```

```
# text = "This is a test. This test is simple."
```

```
# print(word_frequency(text))
```

Output:

```
{'this': 2, 'is': 2, 'a': 1, 'test.': 1, 'test': 1, 'simple.': 1}
```

