Assignment-1.4

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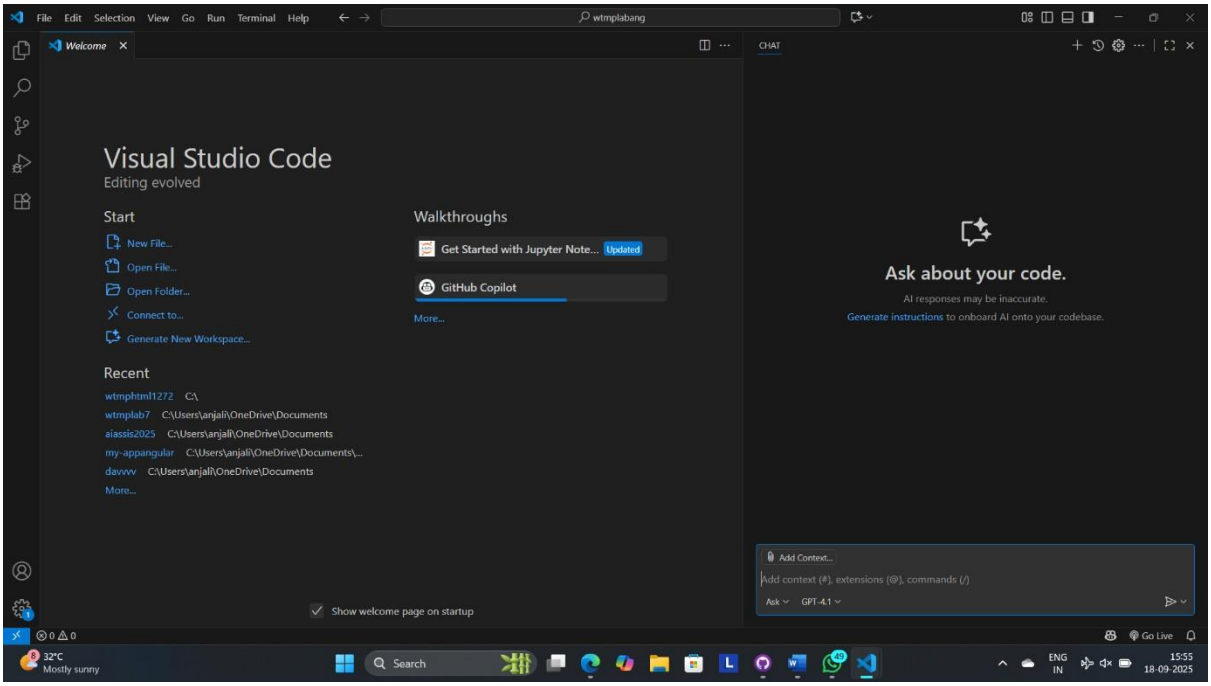
Task-1:

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:

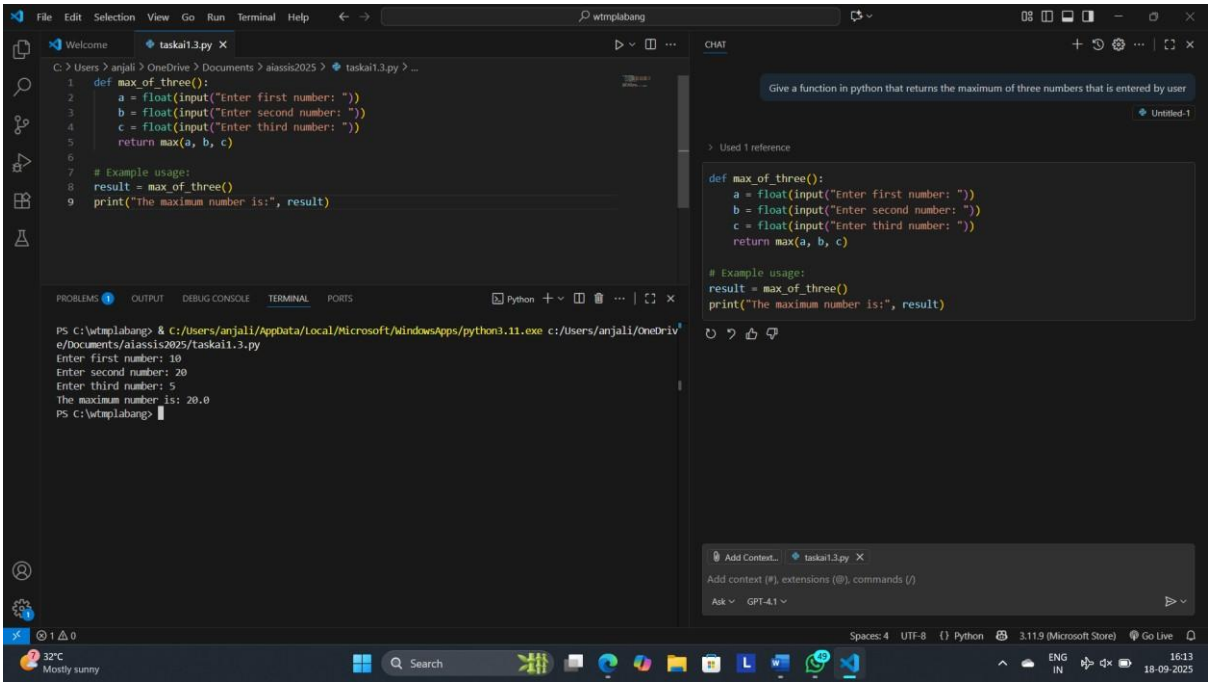
```
def max_of_three():
    a = float(input("Enter first number: "))
b = float(input("Enter second number: "))
c = float(input("Enter third number: "))
return max(a, b, c) result =
max_of_three() print("The maximum
number is:", result) Output:
```

Enter first number: 10

Enter second number: 20

Enter third number: 5

The maximum number is: 20.0



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

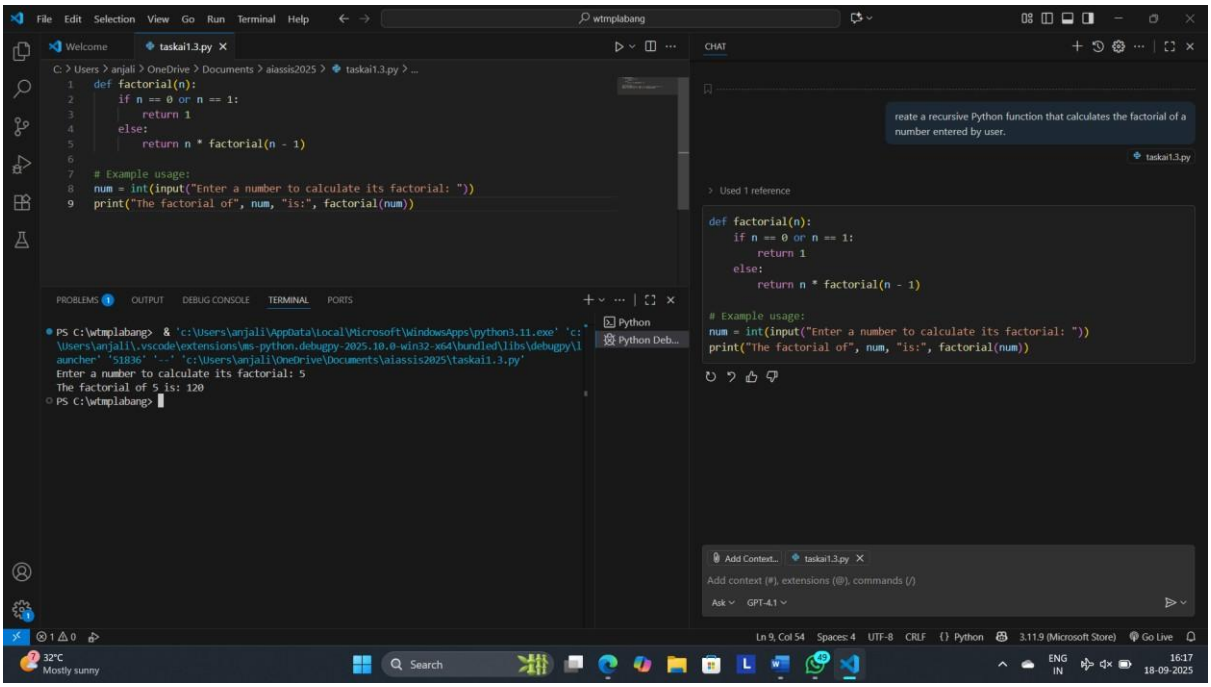
number to calculate its factorial: ")) print("The factorial

of", num, "is:", factorial(num))

Output:

Enter a number to calculate its factorial: 5

The factorial of 5 is: 120



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 =

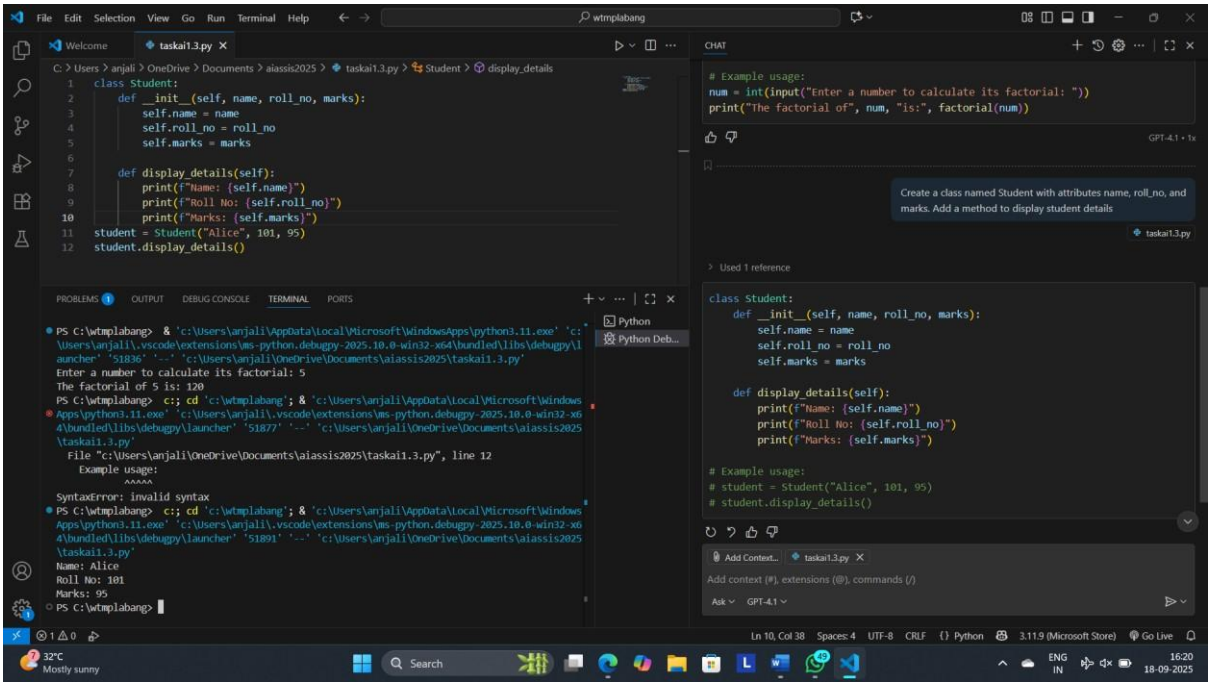
Student("Alice", 101, 95)

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}