

SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
ProgramName: B. Tech		Assignment Type: Lab	AcademicYear: 2025-2026
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NS_2 (Mounika)			
CourseCode	24CS002PC215	CourseTitle	AI Assisted Coding
Year/Sem	II/I	Regulation	R24
Date and Day of Assignment	Week1 - Thursday	Time(s)	
Duration	2 Hours	Applicable to Batches	24CSBTB01 To 24CSBTB39
Assignment Number: 1.4 (Present assignment number) / 24 (Total number of assignments)			
Q.No.	Question	Expected Time to complete	
1	Lab 1: Environment Setup – GitHub Copilot and VS Code Integration  <b>Lab Objectives:</b> <ul style="list-style-type: none"> <li>To install and configure GitHub Copilot in Visual Studio Code.</li> <li>To explore AI-assisted code generation using GitHub Copilot.</li> </ul>	Week1 - Thursday	

- To analyze the accuracy and effectiveness of Copilot's code suggestions.
- To understand prompt-based programming using comments and code context

### Lab Outcomes (LOs):

After completing this lab, students will be able to:

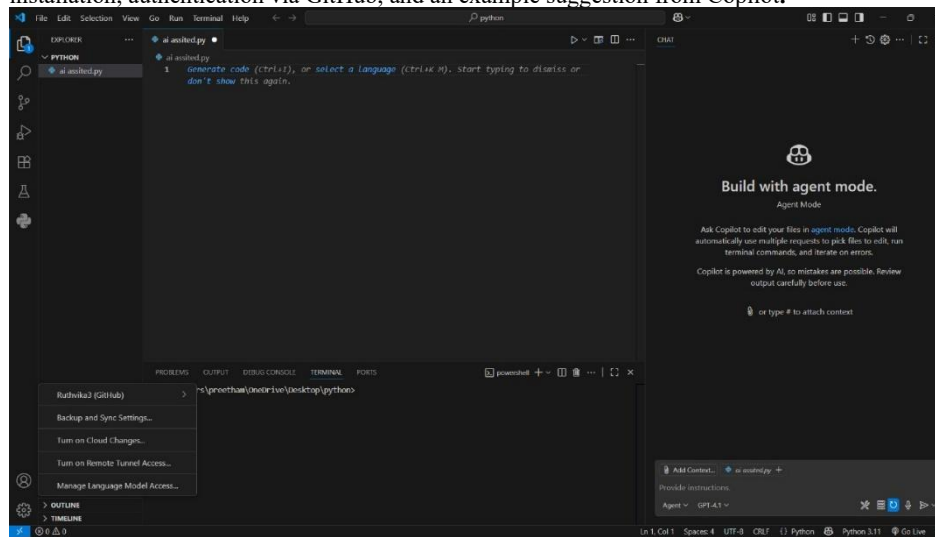
- Set up GitHub Copilot in VS Code successfully.
- Use inline comments and context to generate code with Copilot.
- Evaluate AI-generated code for correctness and readability.
- Compare code suggestions based on different prompts and programming styles.


### Task Description #1

- Install and configure GitHub Copilot in VS Code. Take screenshots of each step.

### Expected Output #1

- Successfully install and activate GitHub Copilot in VS Code. Include screenshots showing installation, authentication via GitHub, and an example suggestion from Copilot.





GitHub Copilot Chat

GitHub [github.com](#) | 36,571,891 | ★★★★★ (157)

AI chat features powered by Copilot

Disable

Uninstall

Auto Update

DETAILS

FEATURES

CHANGELOG

EXTENSION PACK

GitHub Copilot - Your AI peer programmer

GitHub Copilot is an AI peer programming tool that helps you write code faster and smarter.

GitHub Copilot adapts to your unique needs allowing you to select the best model for your project, customize chat responses with custom instructions, and utilize agent mode for AI-powered, seamlessly integrated peer programming sessions.

Sign up for [GitHub Copilot Free!](#)

Installation

Identifiergithub.copilot-chat

Version0.30.0

Last2025-08-08,

Updated15:06:19

Size27.49MB

Cache10.95MB

Marketplace

Published2023-04-27,

12:43:54

PROBLEMS


OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

Python Debug Console



GitHub Copilot pre-release

GitHub [github.com](#) | 46,000,047 | ★★★★★ (982)

Your AI pair programmer

Disable

Uninstall

Switch to Release Version

Auto Update

DETAILS

FEATURES

EXTENSION PACK

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Sign up for [GitHub Copilot Free!](#)

Installation

Identifiergithub.copilot

Version1.353.1723

Last2025-08-08,

Updated11:28:10

Size63.57MB

Marketplace

Published2021-06-29,

19:56:17

Last2025-08-08,

Released07:17:37

PROBLEMS

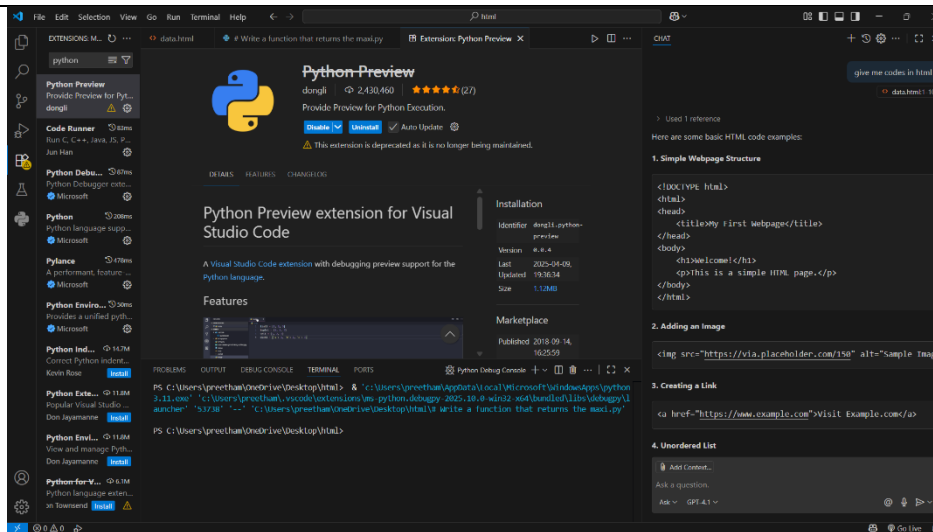
OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

Python Debug Console

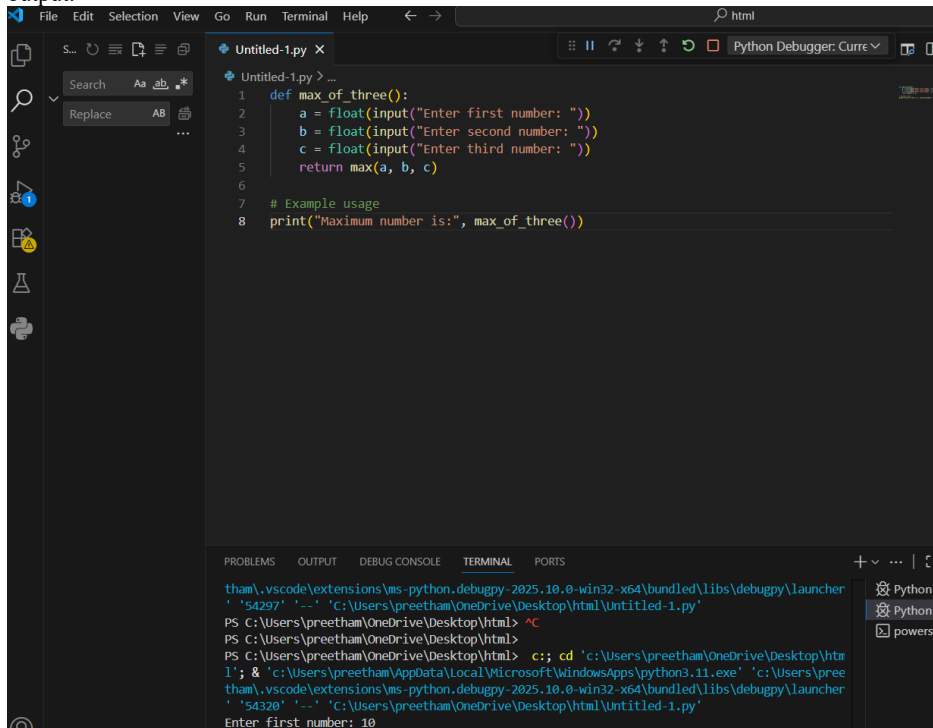


## Task Description #2

- A function in Python that returns the maximum of three numbers using GitHub Copilot. Use an appropriate comment as a prompt.

## Expected Output #2

- Python function that takes three inputs and returns the largest value. Include the code and output.



## Task Description #3

- Use GitHub Copilot to create a recursive Python function that calculates the factorial of a number.

## Expected Output #3

- Python function for factorial using recursion with input and output examples.

```

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

```

```

Enter first number: 10
Enter second number: 25
Enter third number: 50
Maximum number is: 50.0
PS C:\Users\preetham\OneDrive\Desktop\html> ^C
PS C:\Users\preetham\OneDrive\Desktop\html>
PS C:\Users\preetham\OneDrive\Desktop\html> c:; cd 'c:\Users\preetham\OneDrive\Desktop\html'; & 'c:\Users\preetham\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\preetham\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundle\libs\debugpy\launcher' '54443' '-.' 'c:\Users\preetham\OneDrive\Desktop\html\Untitled-1.py'
Enter a number to calculate its factorial: 9
Factorial is: 362880

```

#### Task Description #4

- Prompt GitHub Copilot Add a method to display student details.

#### Expected Output #4

- Python class definition with an initializer and a display method. Include object creation and output.

```

1 class Student:
2     def __init__(self, name, roll_no, marks):
3         self.name = name
4         self.roll_no = roll_no
5         self.marks = marks
6
7     def display(self):
8         print("Student Details:")
9         print("Name:", self.name)
10        print("Roll no:", self.roll_no)
11        print("Marks:", self.marks)
12
13 # Taking input from the user
14 name = input("Enter student name: ")
15 roll_no = input("Enter roll number: ")
16 marks = float(input("Enter marks: "))
17
18 # Creating a Student object and displaying details
19 student1 = Student(name, roll_no, marks)
20 student1.display()

```

```

Enter student name: ram
Enter roll number: 2222
Enter marks: 100
Student Details:
Name: ram
Roll No: 2222
Marks: 100.0

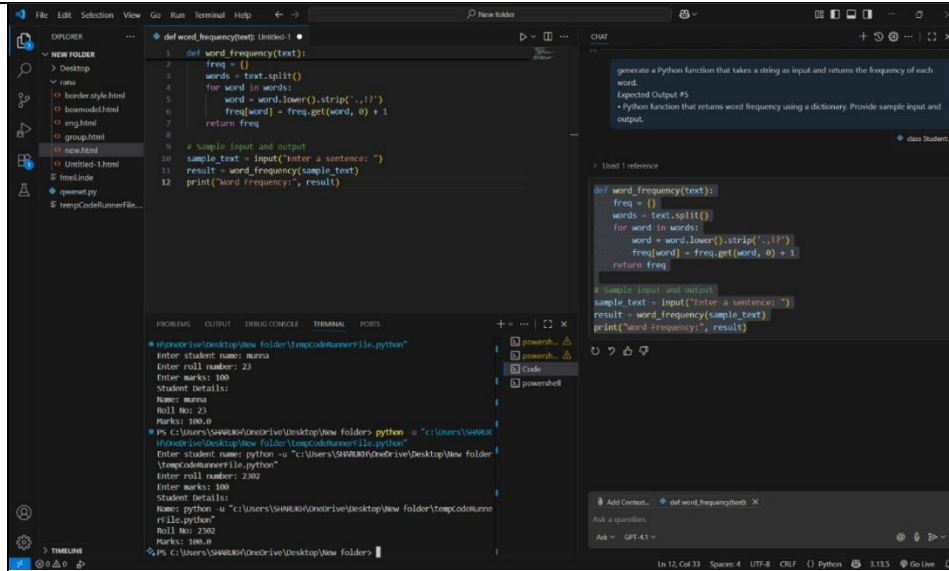
```

#### Task Description #5

- Ask GitHub Copilot to generate a Python function that takes a string as input and returns the frequency of each word.

#### Expected Output #5

- Python function that returns word frequency using a dictionary. Provide sample input and output.



**Note:** Report should be submitted a word document for all tasks in a single document with prompts, comments & code explanation, and output and if required, screenshots

#### Evaluation Criteria:

Criteria	Max Marks
Install and configure GitHub Copilot in VS Code (Task #1)	0.5
Python function that takes three inputs and returns the largest value (Task #2)	0.5
Python function for factorial using recursion (Task #3)	0.5
Python class definition with an initializer and a display method (Task #4)	0.5
Function that returns word frequency using a dictionary (Task #5)	0.5
<b>Total</b>	<b>2.5 Marks</b>