

Enrollment no : 2403A53023

Name : T.Shirisha

SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING																		
ProgramName:B. Tech		Assignment Type: Lab	AcademicYear:2025-2026																	
Course Coordinator Name		Venkataramana Veeramsetty																		
Instructor(s)Name		<table><tr><td>Dr. V. Venkataramana (Co-ordinator)</td></tr><tr><td>Dr. T. Sampath Kumar</td></tr><tr><td>Dr. Pramoda Patro</td></tr><tr><td>Dr. Brij Kishor Tiwari</td></tr><tr><td>Dr.J.Ravichander</td></tr><tr><td>Dr. Mohammand Ali Shaik</td></tr><tr><td>Dr. Anirodh Kumar</td></tr><tr><td>Mr. S.Naresh Kumar</td></tr><tr><td>Dr. RAJESH VELPULA</td></tr><tr><td>Mr. Kundhan Kumar</td></tr><tr><td>Ms. Ch.Rajitha</td></tr><tr><td>Mr. M Prakash</td></tr><tr><td>Mr. B.Raju</td></tr><tr><td>Intern 1 (Dharma teja)</td></tr><tr><td>Intern 2 (Sai Prasad)</td></tr><tr><td>Intern 3 (Sowmya)</td></tr><tr><td>NS_2 (Mounika)</td></tr></table>		Dr. V. Venkataramana (Co-ordinator)	Dr. T. Sampath Kumar	Dr. Pramoda Patro	Dr. Brij Kishor Tiwari	Dr.J.Ravichander	Dr. Mohammand Ali Shaik	Dr. Anirodh Kumar	Mr. S.Naresh Kumar	Dr. RAJESH VELPULA	Mr. Kundhan Kumar	Ms. Ch.Rajitha	Mr. M Prakash	Mr. B.Raju	Intern 1 (Dharma teja)	Intern 2 (Sai Prasad)	Intern 3 (Sowmya)	NS_2 (Mounika)
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CourseCode	24CS002PC215	CourseTitle	AI Assisted Coding																	
Year/Sem	II/I	Regulation	R24																	
Date and Day of Assignment	Week1 - Thursday	Time(s)																		
Duration	2 Hours	Applicableto Batches	24CSBTB01 To 24CSBTB39																	
AssignmentNumber:1.4(Present assignment number)/24(Total number of assignments)																				
Q.No.	Question	ExpectedTime to complete																		
1	Lab 1: Environment Setup – GitHub Copilot and VS Code Integration Lab Objectives: <ul style="list-style-type: none">To install and configure GitHub Copilot in Visual Studio Code.To explore AI-assisted code generation using GitHub Copilot.	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:

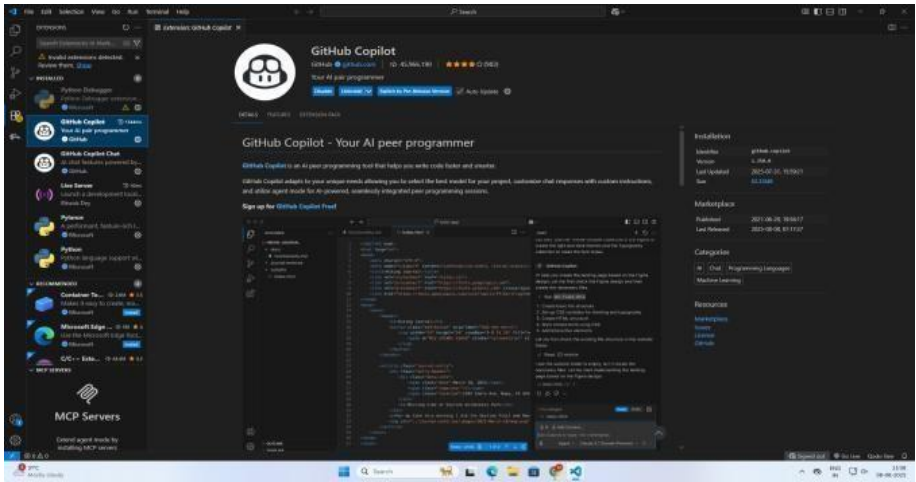
- Set up GitHub Copilot in VS Code successfully.
- Use inline comments and context to generate code with Copilot.
- Evaluate AI-generated code for correctness and readability.
- Compare code suggestions based on different prompts and programming styles.

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.



Task Description #2

- A function in Python that returns the maximum of three numbers using GitHub Copilot. Use an appropriate comment as a prompt.
- **Prompt :** Write a program in python that returns the maximum of three.

Expected Output #2

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

```

max.py > ...
1 def largest_of_three(a, b, c):
2     return max(a, b, c)
3 a = int(input("Enter first number: "))
4 b = int(input("Enter second number: "))
5 c = int(input("Enter third number: "))
6 print("The largest number is:", largest_of_three(a, b, c))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai> & C:\Users\T-SHIRISHA\AppData\Local\Microsoft\Windows
Apps\python3.11.exe c:/Users/T-SHIRISHA/Documents/HTML/Ai/max.py
Enter first number: 20
Enter second number: 59
Enter third number: 56
The largest number is: 59
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai>

```

Task Description #3

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

• **Prompt :** write a program in python to create a python function for factorial using recursion.

Expected Output #3

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

```

fac.py > ...
1 def factorial(n):
2     if n < 0:
3         raise ValueError("Factorial is not defined for negative numbers.")
4     if n == 0 or n == 1:
5         return 1
6     return n * factorial(n - 1)
7
8 number = int(input("Enter a number: "))
9 print(f"Factorial of {number} is {factorial(number)}")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai> & C:\Users\T-SHIRISHA\AppData\Local\Microsoft\Windows
Apps\python3.11.exe c:/Users/T-SHIRISHA/Documents/HTML/Ai/fac.py
Enter a number: 5
Factorial of 5 is 120
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai>

```

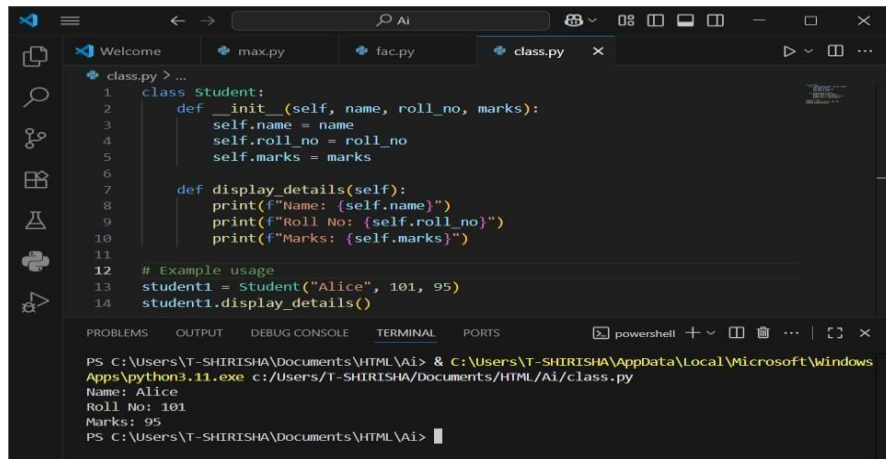
Task Description #4

- Prompt GitHub Copilot to create a class named Student with attributes name, roll_no, and marks. Add a method to display student details.

• **Prompt :** write a program in python to create class named Student with attributes name, roll_no, and marks. 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.



```
class.py > ...
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_details(self):
8         print(f"Name: {self.name}")
9         print(f"Roll No: {self.roll_no}")
10        print(f"Marks: {self.marks}")
11
12 # Example usage
13 student1 = Student("Alice", 101, 95)
14 student1.display_details()
```

```
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai> & C:\Users\T-SHIRISHA\AppData\Local\Microsoft\WindowsApps\python3.11.exe c:/Users/T-SHIRISHA/Documents/HTML/Ai/class.py
Name: Alice
Roll No: 101
Marks: 95
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai>
```

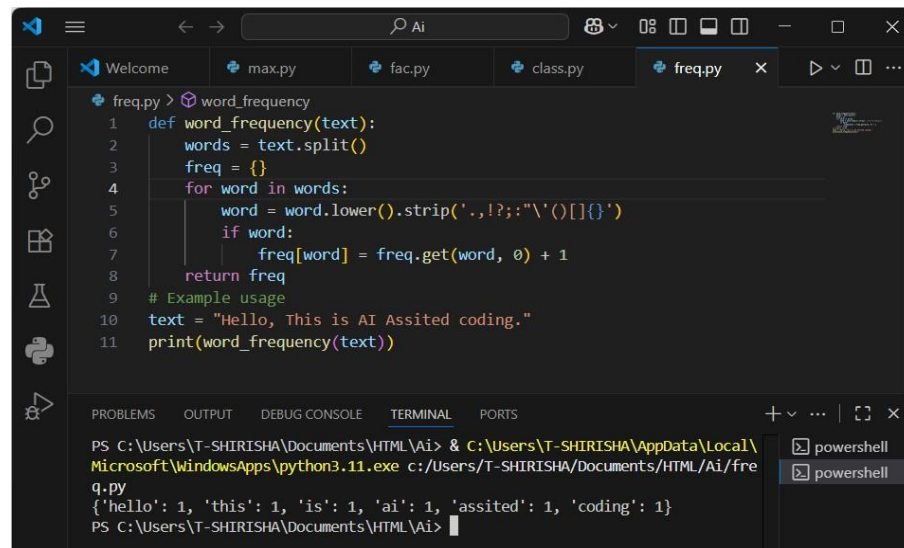
Task Description #5

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

• **Prompt :** write a program in python 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



```
freq.py > word_frequency
1 def word_frequency(text):
2     words = text.split()
3     freq = {}
4     for word in words:
5         word = word.lower().strip('.,!?:"\'()[]{}')
6         if word:
7             freq[word] = freq.get(word, 0) + 1
8     return freq
9
10 # Example usage
11 text = "Hello, This is AI Assited coding."
12 print(word_frequency(text))
```

```
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai> & C:\Users\T-SHIRISHA\AppData\Local\Microsoft\WindowsApps\python3.11.exe c:/Users/T-SHIRISHA/Documents/HTML/Ai/freq.py
{'hello': 1, 'this': 1, 'is': 1, 'ai': 1, 'assited': 1, 'coding': 1}
PS C:\Users\T-SHIRISHA\Documents\HTML\Ai>
```

	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		
	Total	2.5 Marks		