SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
ProgramName:B. Tech		**Assignment Type: Lab**	**AcademicYear:**2025-2026
CourseCoordinatorName		Venkataramana Veeramsetty	
Instructor(s)Name		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)	
CourseCode	24CS002PC215	**CourseTitle**	AI Assisted Coding
Year/Sem	II/I	**Regulation**	R24
Date and Day of Assignment	Week1 - Tuesday	**Time(s)**	
Duration	2 Hours	**Applicableto Batches**	24CSBTB01 To 24CSBTB39
AssignmentNumber:1.2(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:** ● To install and configure GitHub Copilot in Visual Studio Code. ● To explore AI-assisted code generation using GitHub Copilot.	Week1 - wednesday

- 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

- Write a comment: # Function to check if a string is a valid palindrome (ignoring spaces and case) and allow Copilot to complete it.
- **Prompt:** write a python code to check a string is a valid palindrom

Expected Output#1

assignment1.2.py > ...

```python
#write a python code to check a string is a valid palindrome
def is_palindrome(s):
    # Remove spaces and convert to lowercase
    s = s.replace(" ", "").lower()
    # Check if the string is equal to its reverse
    return s == s[::-1]
# Example usage
test_str = "A man a plan a canal Panama"
print(is_palindrome(test_str))
```

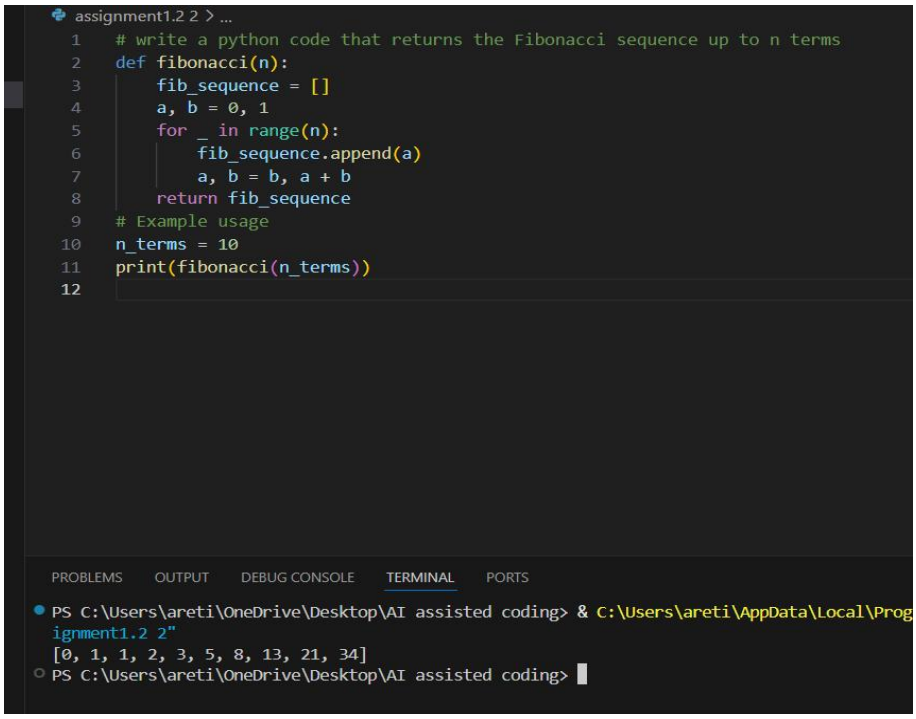
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding> & C:\Users\areti\AppData\Local
ignment1.2.py"
True
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding>
```

Task Description#2

- Generate a Python function that returns the Fibonacci sequence up to n terms. Prompt with only a function header and docstring
- **Prompt:**write a python code that returns the fibonacci sequence up to n terms

Expected Output#2



Task Description#3

- Write a comment like # Function to reverse a string and use Copilot to generate the function.
- **Prompt:**

Expected Output#3

```
assignment1.2 3.py > ...
1  # write a python code to reverse a string
2  def reverse_string(s):
3      return s[::-1]
4  # Example usage
5  test_str = "Hello, World!"
6  print(reverse_string(test_str))
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding> & C:\Users\areti\AppData\Local\Programs\Pyt
ignment1.2 3.py"
!dlroW ,olleH
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding>
```

Task Description#4

- Generate a program that simulates a basic calculator (add, subtract, multiply, divide). Write the comment: # Simple calculator with 4 operations and let AI complete it.

Prompt:write a python code that simulates a basic calculator (add, subtract, multiply, divide).

Expected Output#4

```
assignment1.2 4.py > ...
1  # write a python code that simulates a basic calculator (add, subtract, multiply, divide)
2  def calculator(a, b, operation):
3      if operation == 'add':
4          return a + b
5      elif operation == 'subtract':
6          return a - b
7      elif operation == 'multiply':
8          return a * b
9      elif operation == 'divide':
10         if b != 0:
11             return a / b
12         else:
13             return "Error: Division by zero is not allowed."
14 # Example usage
15 a = 10
16 b = 5
17 operation = 'add'
18 print(calculator(a, b, operation))  # Output: 15
```

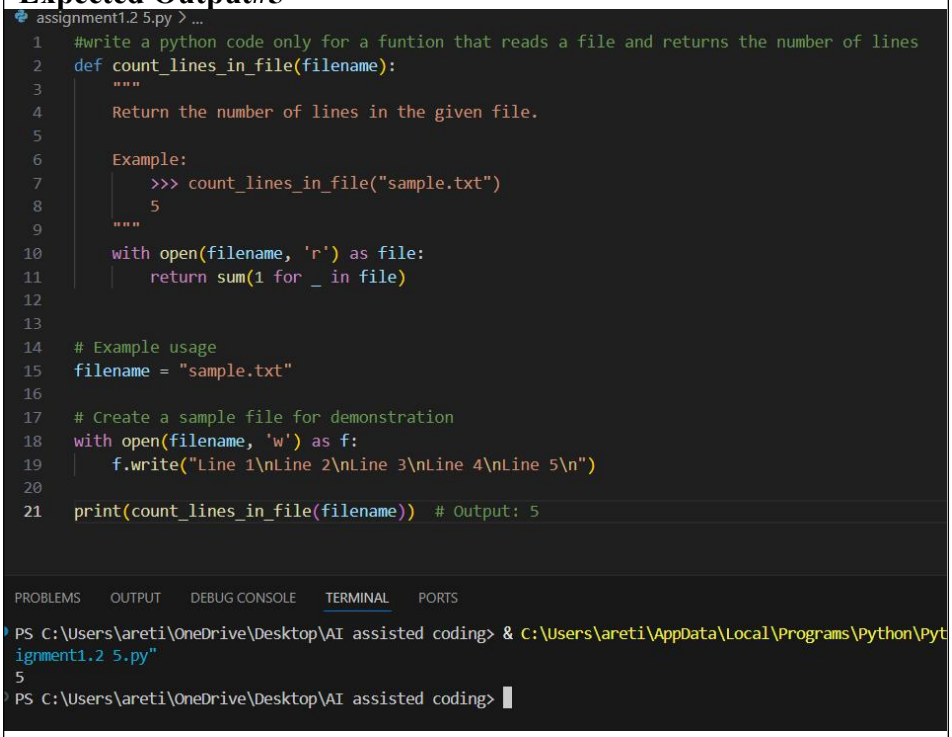
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding> & C:\Users\areti\AppData\Local\Programs\Python\Python
ignment1.2 4.py"
15
PS C:\Users\areti\OneDrive\Desktop\AI assisted coding>
```

Task Description#5

- Use a comment to instruct AI to write a function that reads a file and returns the number of lines..

Prompt:write a python code only for a funtion that reads a file and returns the number of lines

Expected Output#5



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
Task #1	0.5
Task #2	0.5
Task #3	0.5
Task #4	0.5
Task #5	0.5
Total	**2.5 Marks**