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)			

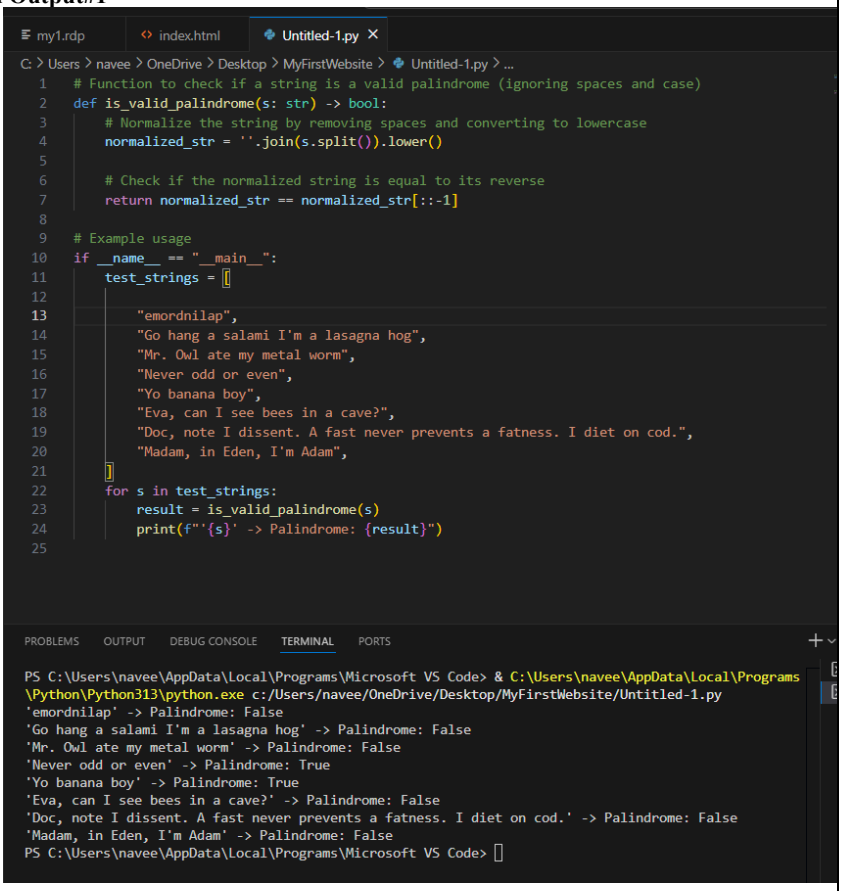
Q.No.	Question	*ExpectedTime to complete*
1	Lab 1: Environment Setup – GitHub Copilot and VS Code Integration **Lab Objectives:** ● To install and configure GitHub Copilot in Visual Studio Code. ● To explore AI-assisted code generation using GitHub Copilot. ● To analyze the accuracy and effectiveness 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:	Week1 - wednesday

- 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 for a function to check if a string is a valid palindrome

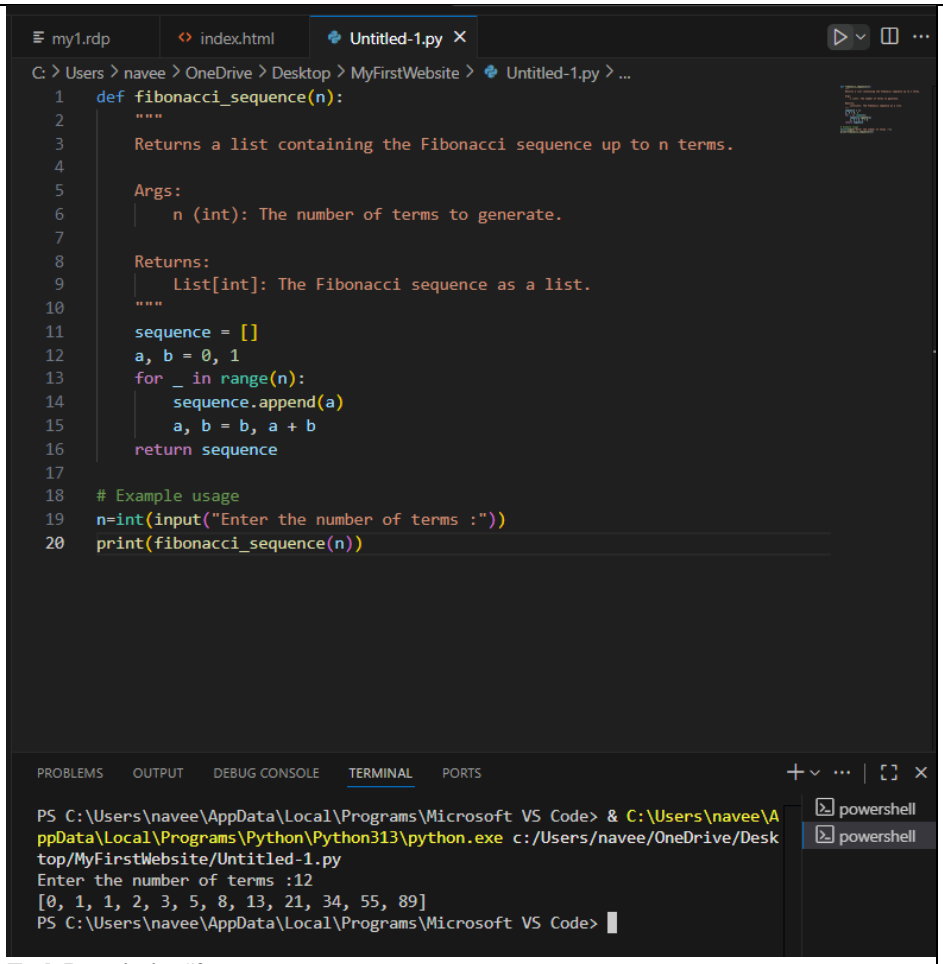
Expected Output#1



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 for a function 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 :** write a python code for Function to reverse a string

Expected Output#3

my1.rdp | index.html | Untitled-1.py

C: > Users > navee > OneDrive > Desktop > MyFirstWebsite > Untitled-1.py > ...

```python
def reverse_string(s):
    """
    Returns the reversed version of the input string.

    Args:
        s (str): The string to reverse.

    Returns:
        str: The reversed string.
    """
    return s[::-1]

# Example usage
print(reverse_string("hello"))
print(reverse_string("Python123"))
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code> & C:\Users\navee\AppData\Local\Programs\Python\Python313\python.exe c:/Users/navee/OneDrive/Desktop/MyFirstWebsite/Untitled-1.py
olleh
321nohtyP
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code>
```

-

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 :** python code only for a program that simulates a basic calculator (add, subtract, multiply, divide)

Expected Output#4

```
# Simple calculator with 4 operation
def calculator(a, b, operation):
    """
    Performs basic arithmetic operations on two numbers.

    Args:
        a (float): The first number.
        b (float): The second number.
        operation (str): The operation to perform ('add', 'subtract', 'multiply', 'divide').

    Returns:
        float: The result of the operation.
    """
    if operation == 'add':
        return a + b
    elif operation == 'subtract':
        return a - b
    elif operation == 'multiply':
        return a * b
    elif operation == 'divide':
        if b != 0:
            return a / b
        else:
            raise ValueError("Cannot divide by zero.")
    else:
        raise ValueError("Invalid operation. Choose from 'add', 'subtract', 'multiply', or 'divide'.")

# Example usage
print(calculator(10, 5, 'add'))
print(calculator(10, 5, 'subtract'))
print(calculator(10, 5, 'multiply'))
print(calculator(10, 5, 'divide'))
```

```
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code> & C:\Users\navee\AppData\Local\Programs\Python\Python313\python.exe c:/Users/navee/OneDrive/Desktop/MyFirstWebsite/Untitled-1.py
15
5
50
2.0
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code>
```

-

Task Description#5

- Use a comment to instruct AI to write a function that reads a file and returns the number of lines..
- **Prompt :** python code only for a function that reads a file and returns the number of lines..
-

Expected Output#5

```
def count_lines_in_file(filename):
    """
    Return the number of lines in the given file.

    Example:
        >>> count_lines_in_file("sample.txt")
        5
    """
    with open(filename, 'r') as file:
        return sum(1 for _ in file)


# Example usage
filename = "sample.txt"

# Create a sample file for demonstration
with open(filename, 'w') as f:
    f.write("Line 1\nLine 2\nLine 3\nLine 4\nLine 5\n")

print(count_lines_in_file(filename))  # Output: 5
```

```
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code> & C:\Users\navee\AppData\Local\Programs\Python\Python313\python.exe c:/Users/navee/OneDrive/Desktop/MyFirstWebsite/Untitled-1.py
5
PS C:\Users\navee\AppData\Local\Programs\Microsoft VS Code>
```

-

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**		