

ASSIGNMENT-1

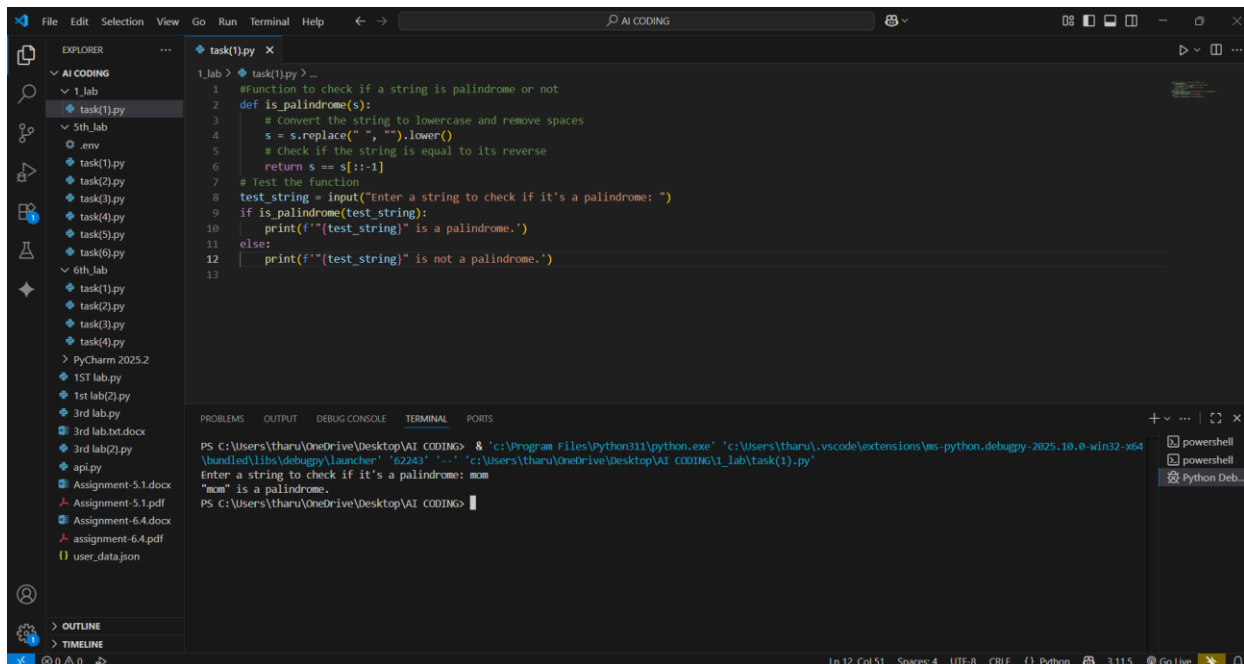
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BATCH: AIB03

Task 1:

Write a comment: # Function to check if a string is a valid palindrome (ignoring spaces and case) and allow Copilot to complete it.



```
1 #Function to check if a string is palindrome or not
2 def is_palindrome(s):
3     # Convert the string to lowercase and remove spaces
4     s = s.replace(" ", "").lower()
5     # Check if the string is equal to its reverse
6     return s == s[::-1]
7 # Test the function
8 test_string = input("Enter a string to check if it's a palindrome: ")
9 if is_palindrome(test_string):
10     print(f"{test_string} is a palindrome.")
11 else:
12     print(f"{test_string} is not a palindrome.")
13
```

```
PS C:\Users\tharu\OneDrive\Desktop\AI CODING> & 'c:\Program Files\Python311\python.exe' 'c:\Users\tharu\vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\
bundled\libs\debugpy\launcher' '62242' '-.' 'c:\Users\tharu\OneDrive\Desktop\AI CODING\1_lab\task(1).py'
Enter a string to check if it's a palindrome: mom
"mom" is a palindrome.
PS C:\Users\tharu\OneDrive\Desktop\AI CODING>
```

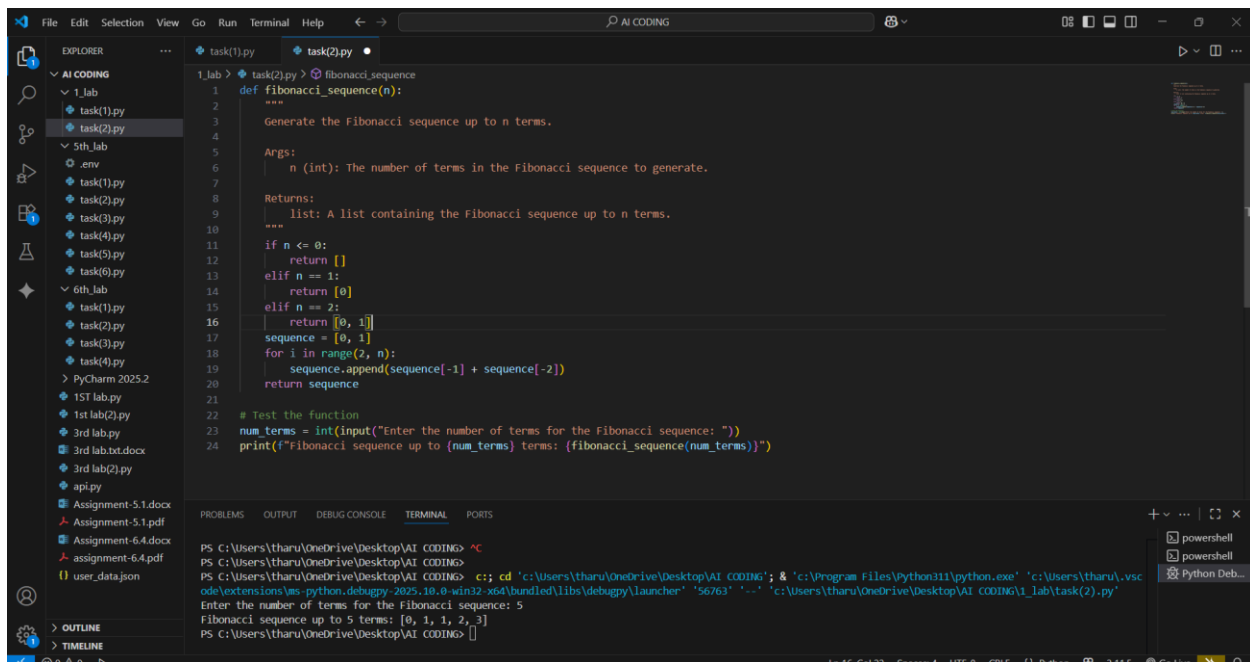
Task 2:

- Generate a Python function that returns the Fibonacci sequence up to n terms. Prompt

with only a function header and docstring

Expected Output#2

- AI completes the function logic using loop or recursion with accurate output

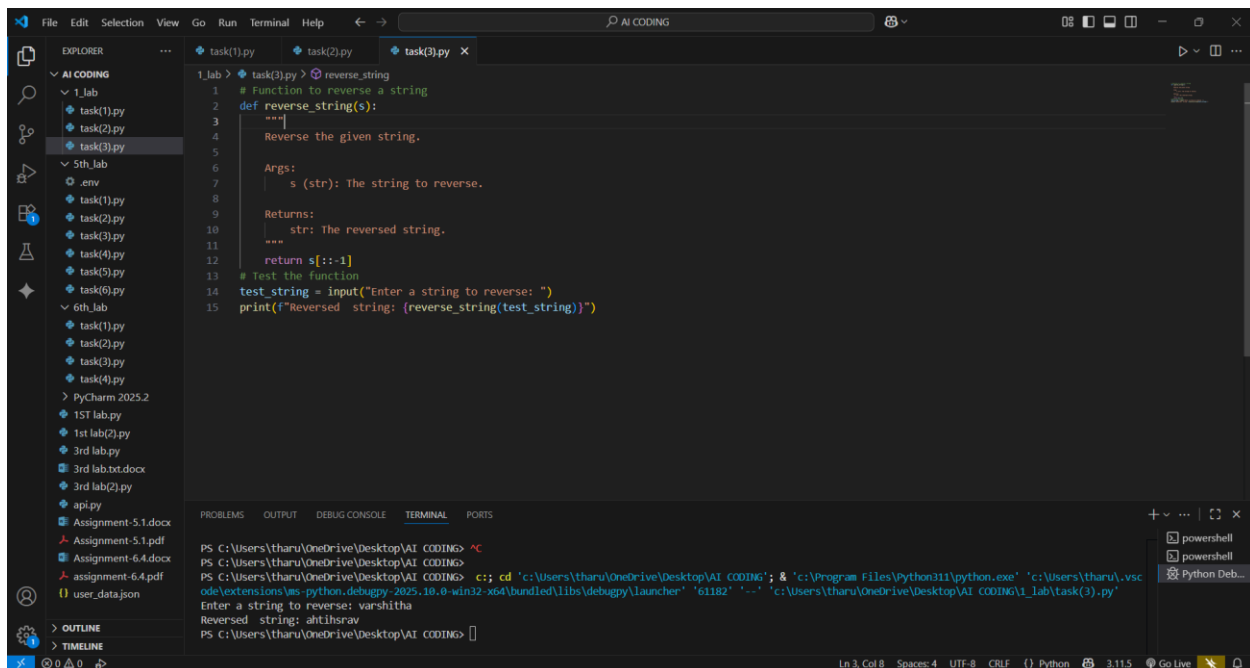


Task 3:

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

Expected Output#3

- Auto-completed reverse function



Task 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.

Expected Output#4

- Fully working calculator with input/output and operator selection logic

The screenshot shows the VS Code editor with the file explorer on the left. The file explorer shows a project named 'AI CODING' with several files and folders. The file 'task(4).py' is selected. The code in 'task(4).py' is a simple calculator with 4 operations: add, subtract, multiply, and divide. It uses a loop to repeatedly prompt the user for an operation and numbers until they choose to exit. The code is as follows:

```
1 # Simple calculator with 4 operations
2 def add(a, b):
3     return a + b
4 def subtract(a, b):
5     return a - b
6 def multiply(a, b):
7     return a * b
8 def divide(a, b):
9     if b != 0:
10        return a / b
11    else:
12        return "Error: Division by zero is not allowed."
13 if __name__ == "__main__":
14    print("Select operation:")
15    print("1. Add")
16    print("2. Subtract")
17    print("3. Multiply")
18    print("4. Divide")
19    choice = input("Enter choice (1/2/3/4): ")
20    if choice in ['1', '2', '3', '4']:
21        num1 = float(input("Enter first number: "))
22        num2 = float(input("Enter second number: "))
23        if choice == '1':
24            print(f"The result is: {add(num1, num2)}")
25        elif choice == '2':
26            print(f"The result is: {subtract(num1, num2)}")
27        elif choice == '3':
28            print(f"The result is: {multiply(num1, num2)}")
29        elif choice == '4':
30            print(f"The result is: {divide(num1, num2)}")
31    else:
32        print("Invalid input. Please select a valid operation.")
```

The screenshot shows the VS Code editor with the terminal window open. The terminal displays the output of the calculator program. The user has entered '1' for the operation, '10' for the first number, and '56' for the second number. The program has calculated the result as 66.0. The terminal output is as follows:

```
Select operation:
1. Add
2. Subtract
3. Multiply
4. Divide
Enter choice (1/2/3/4): 1
Enter first number: 10
Enter second number: 56
3. Multiply
4. Divide
Enter choice (1/2/3/4): 1
Enter first number: 10
Enter second number: 56
The result is: 66.0
PS C:\Users\tharu\OneDrive\Desktop\AI CODING>
```

Task 5:

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

Expected Output#5

- Functional implementation using open() or with open() and readlines()

