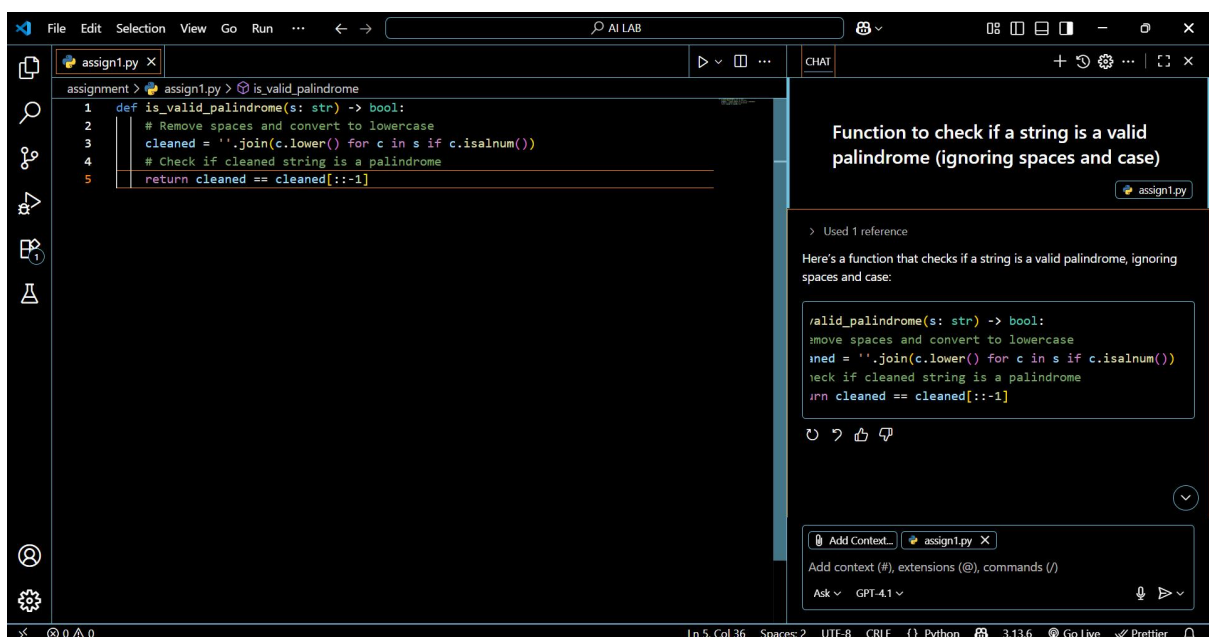# AI ASSISTED CODING LAB

ASSIGNMENT 1.2

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ENROLLMENT NO :2503A51L20

BATCH NO: 19

TASK DESCRIPTION 1: Function to check if a string is a valid palindrome (ignoring spaces and case) and allow Copilot to complete it.

PROMPT 1: # Function to check if a string is a valid palindrome (ignoring spaces and case)
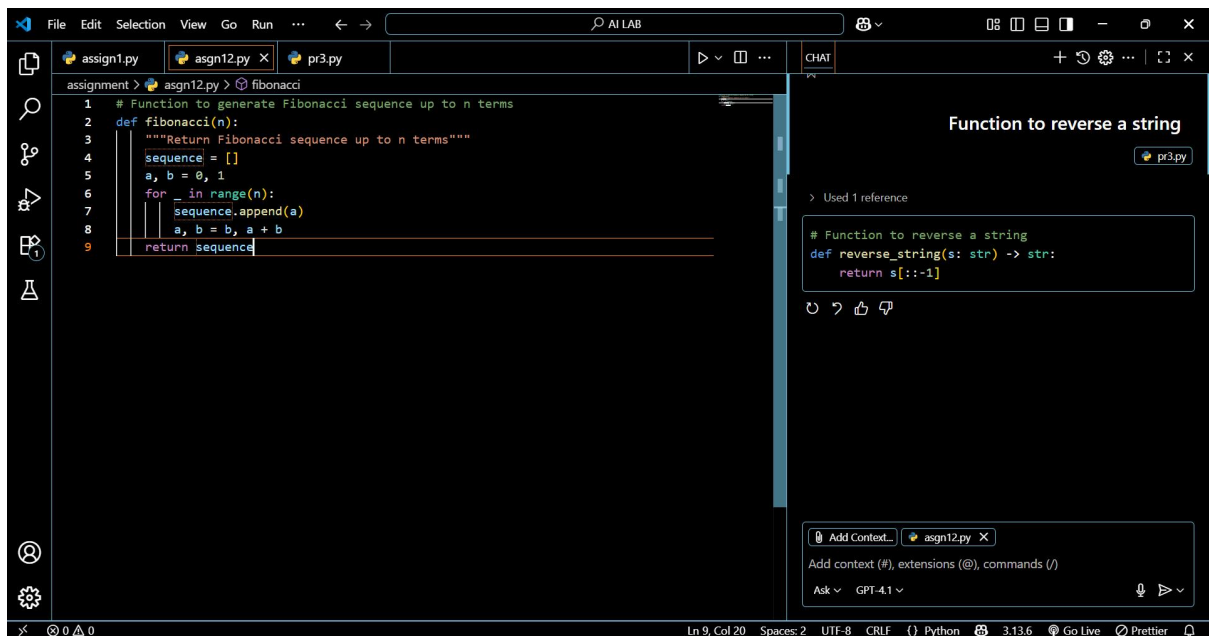
TASK DESCRIPTION 2: Generate a Python function that returns the Fibonacci sequence up to n terms. Prompt with only a function header and docstring

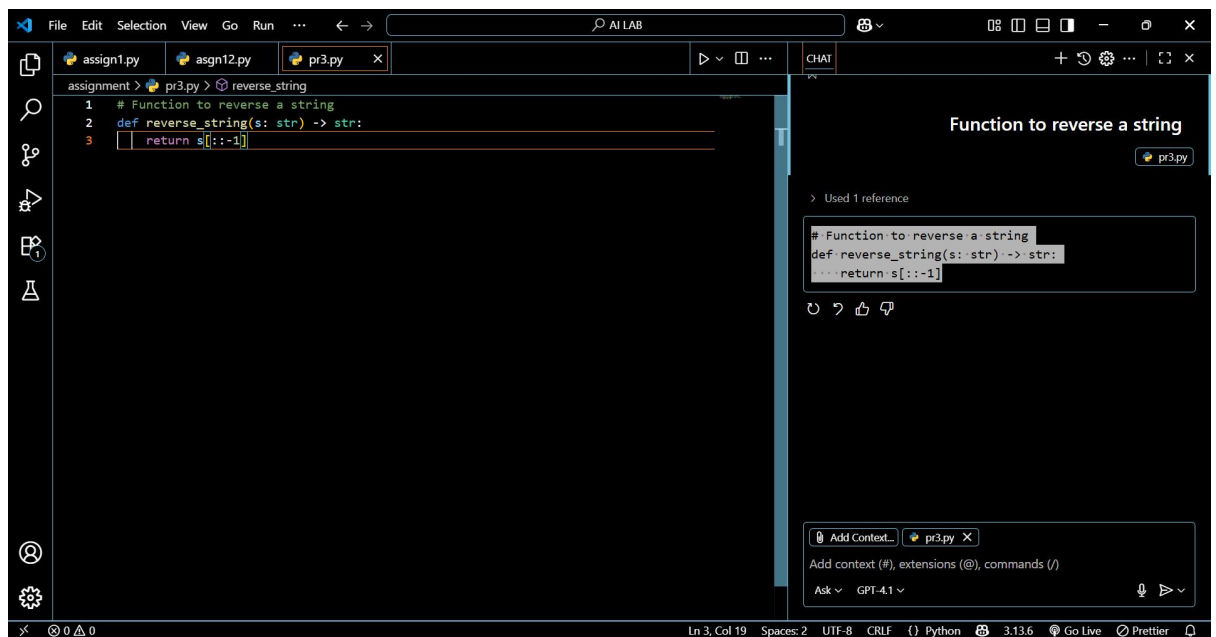## PROMPT 1: # Function to generate Fibonacci sequence up to n terms

def fibonacci(n):

"""Return Fibonacci sequence up to n terms"""

TASK DESPRICTION 3: Function to reverse a string and use Copilot to generate the function.
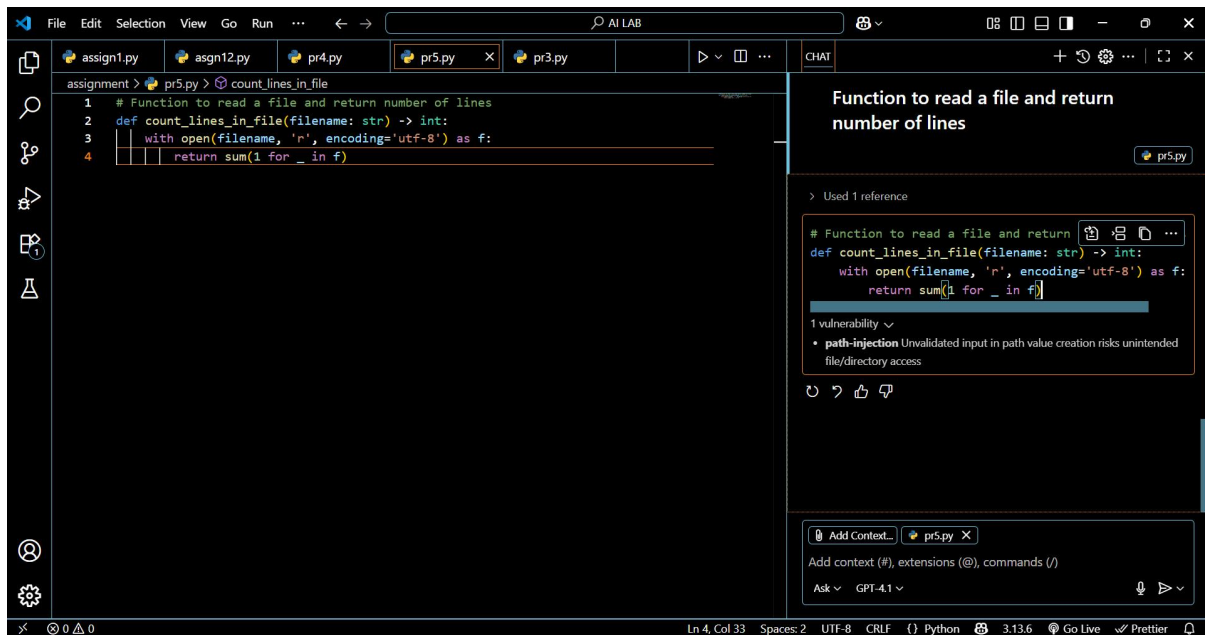
PROMPT 1: # Function to reverse a string

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 1: # Simple calculator with 4 operations

TASK DESCRIPTION 5: Use a comment to instruct AI to write a function that reads a file and returns the number of lines

PROMPT 1: # Function to read a file and return number of lines

OBSERVATION: This lab demonstrated how GitHub Copilot can auto-generate functional Python code from prompts. By comparing the outputs with expected results, we validated the correctness and efficiency of AI-assisted coding..

Key Observations

- The assignment showcases how AI can accelerate the coding process by accurately filling in function logic from concise prompts and comments.

- Each task starts with a clear function header or descriptive comment, allowing the AI to infer and generate the code structure and implementation for the required functionality.

- The approach encourages understanding of prompt engineering—precisely crafting comments and headers to guide AI models towards correct and optimized solutions.

- The generated code is well-structured and solves the respective problems: handling string manipulation, numerical computations, basic arithmetic, and file I/O.

- Overall, the assignment highlights the synergy between human intent and AI assistance in coding, increasing productivity for both simple and moderately complex programming task