## Task 1

* Prompt / Comment:

# Function to check if a string is a valid palindrome (ignoring spaces and case)

* Copilot Generated Code:

def is\_palindrome(s):  
 s = s.replace(" ", "").lower()  
 return s == s[::-1]  
  
# Test  
print(is\_palindrome("A man a plan a canal Panama"))

* Explanation:

The function removes spaces and converts the string to lowercase before checking if it reads the same forwards and backwards using slicing.

* Sample Output:

True

**Screenshot:**

**A screenshot of a computer program

AI-generated content may be incorrect.**

## Task 2

* Prompt / Comment:

def fibonacci(n):  
 """Return the Fibonacci sequence up to n terms"""

* Copilot Generated Code:

def fibonacci(n):  
 sequence = []  
 a, b = 0, 1  
 for \_ in range(n):  
 sequence.append(a)  
 a, b = b, a + b  
 return sequence  
  
# Test  
print(fibonacci(10))

* Explanation:

The function starts with 0 and 1, then appends the sum of the last two numbers until n terms are generated.

* Sample Output:

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]

Screenshot:

A computer screen shot of a program

AI-generated content may be incorrect.

## Task 3

* Prompt / Comment:

# Function to reverse a string

* Copilot Generated Code:

def reverse\_string(s):  
 return s[::-1]  
  
# Test  
print(reverse\_string("Python"))

* Explanation:

Uses Python slicing with a step of -1 to reverse the string.

* Sample Output:
* nohtyP
* Screenshot:
* **A screen shot of a computer

  AI-generated content may be incorrect.**

## Task 4

* Prompt / Comment:

# Simple calculator with 4 operations

* Copilot Generated Code:

def calculator():  
 num1 = float(input("Enter first number: "))  
 num2 = float(input("Enter second number: "))  
 op = input("Enter operation (+, -, \*, /): ")  
  
 if op == '+':  
 print("Result:", num1 + num2)  
 elif op == '-':  
 print("Result:", num1 - num2)  
 elif op == '\*':  
 print("Result:", num1 \* num2)  
 elif op == '/':  
 if num2 != 0:  
 print("Result:", num1 / num2)  
 else:  
 print("Error: Division by zero")  
 else:  
 print("Invalid operation")  
  
# Run  
calculator()

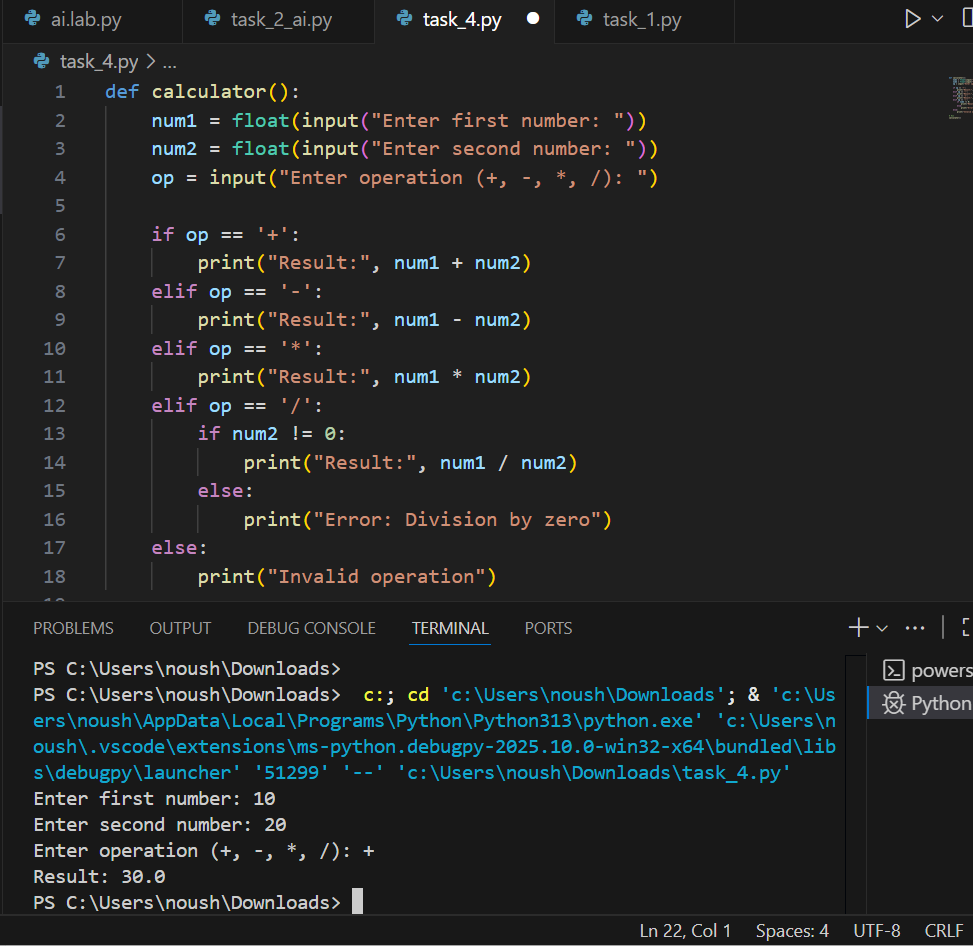
* Explanation:

Takes two numbers and an operation as input, performs the calculation, and handles division by zero.

* Sample Output:

Example:  
Enter first number: 5  
Enter second number: 3  
Enter operation (+, -, \*, /): \*  
Result: 15.0

Screenshot:



## Task 5

* Prompt / Comment:

# Function to read a file and return the number of lines

* Copilot Generated Code:
* def count\_lines\_in\_file(filename):
* with open(filename, 'r') as file:
* lines = file.readlines()
* return len(lines)
* print(count\_lines\_in\_file('example.txt'))
* Explanation:

Opens the file in read mode, reads all lines into a list, and returns the number of lines.

* Sample Output:
* 5

Screenshot:

A screen shot of a computer screen

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

A computer screen with blue text

AI-generated content may be incorrect.