

ASSIGNMENT 1

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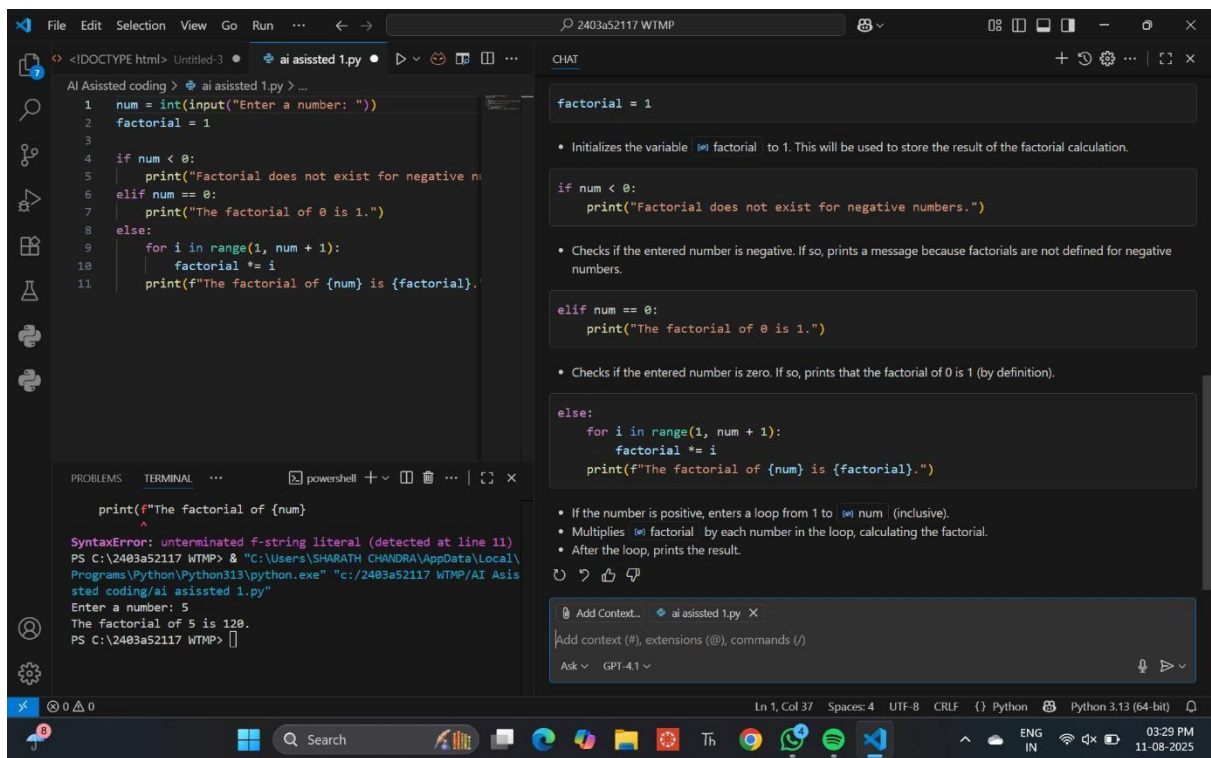
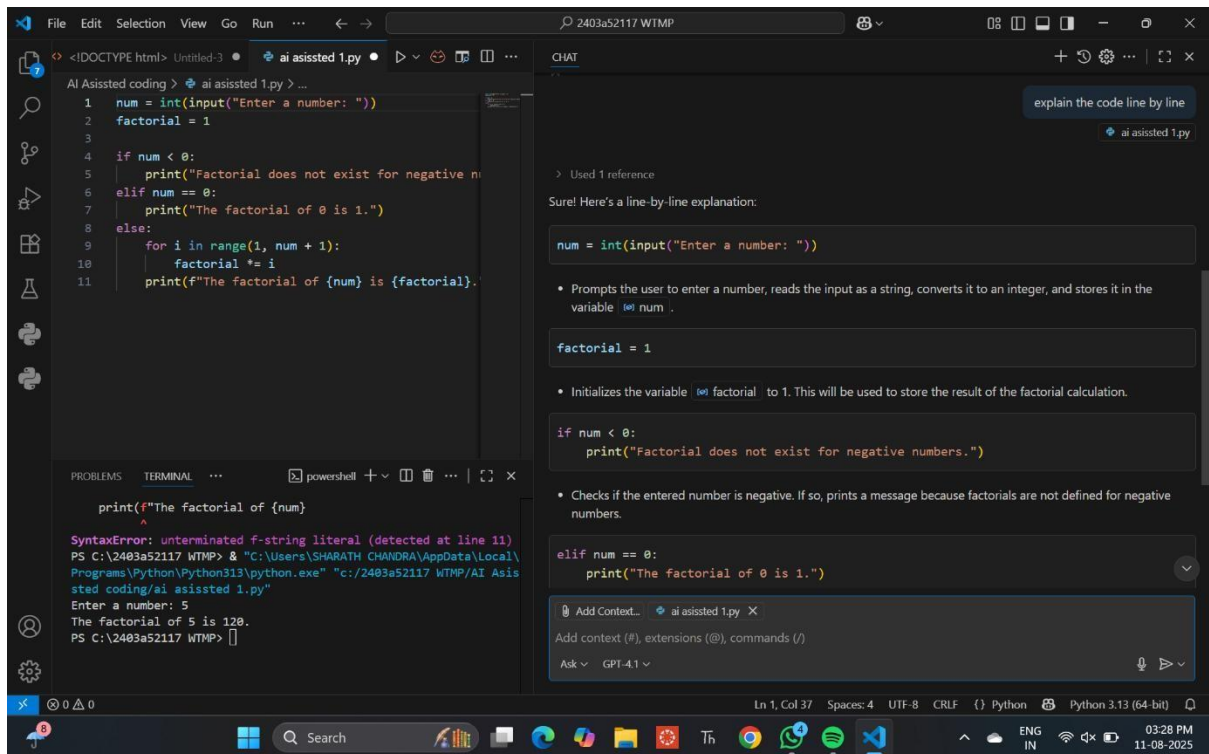
TASK 1:

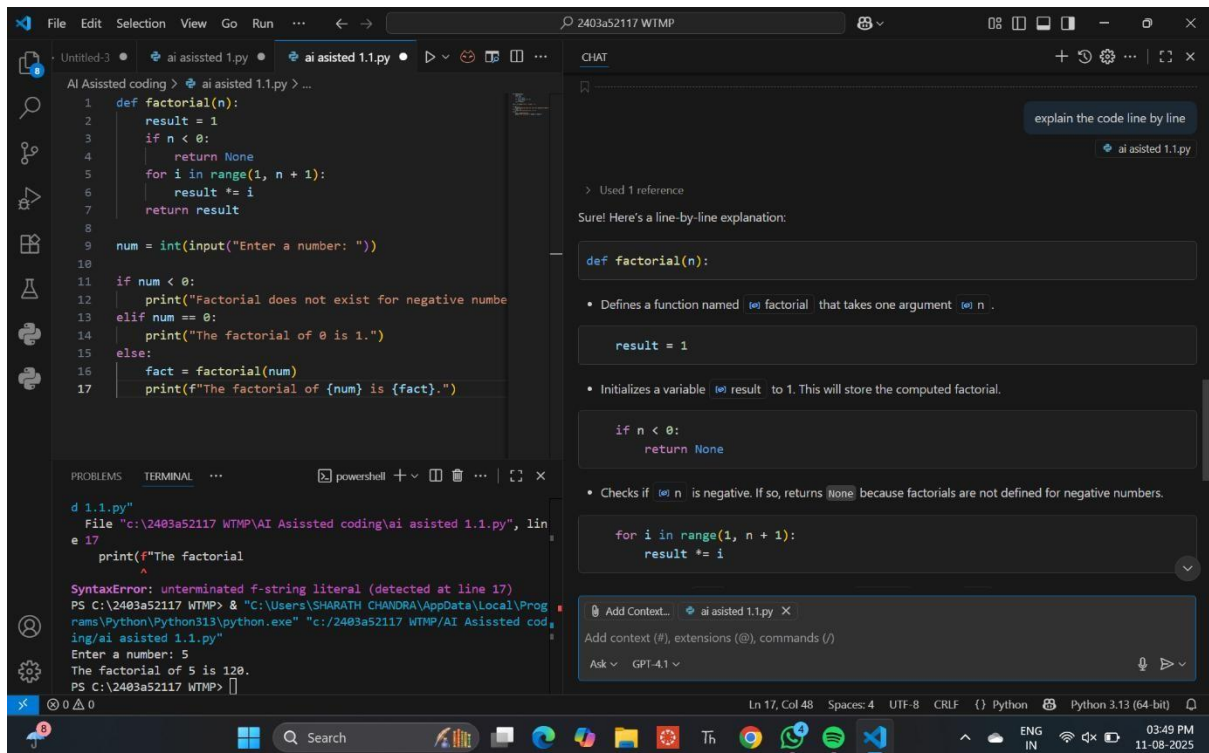
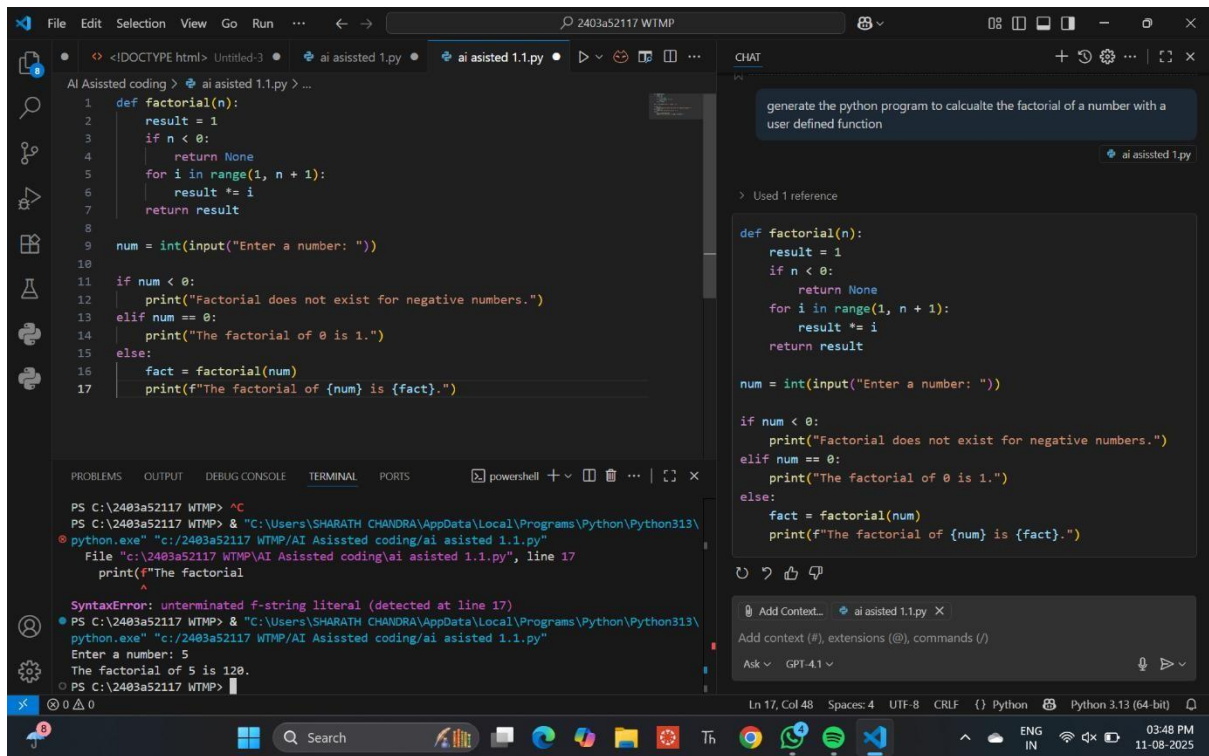
The screenshot displays a code editor with a Python file named 'ai assisted 1.py'. The code calculates the factorial of a number entered by the user. It includes comments and a docstring. A chat window on the right shows a prompt: 'give me a python program that calculates the factorial of a number without defining any functions'. The terminal window at the bottom shows the program being executed in a PowerShell environment. The output shows the factorial of 5 is 120. The terminal also shows a syntax error for an unterminated f-string literal at line 11.

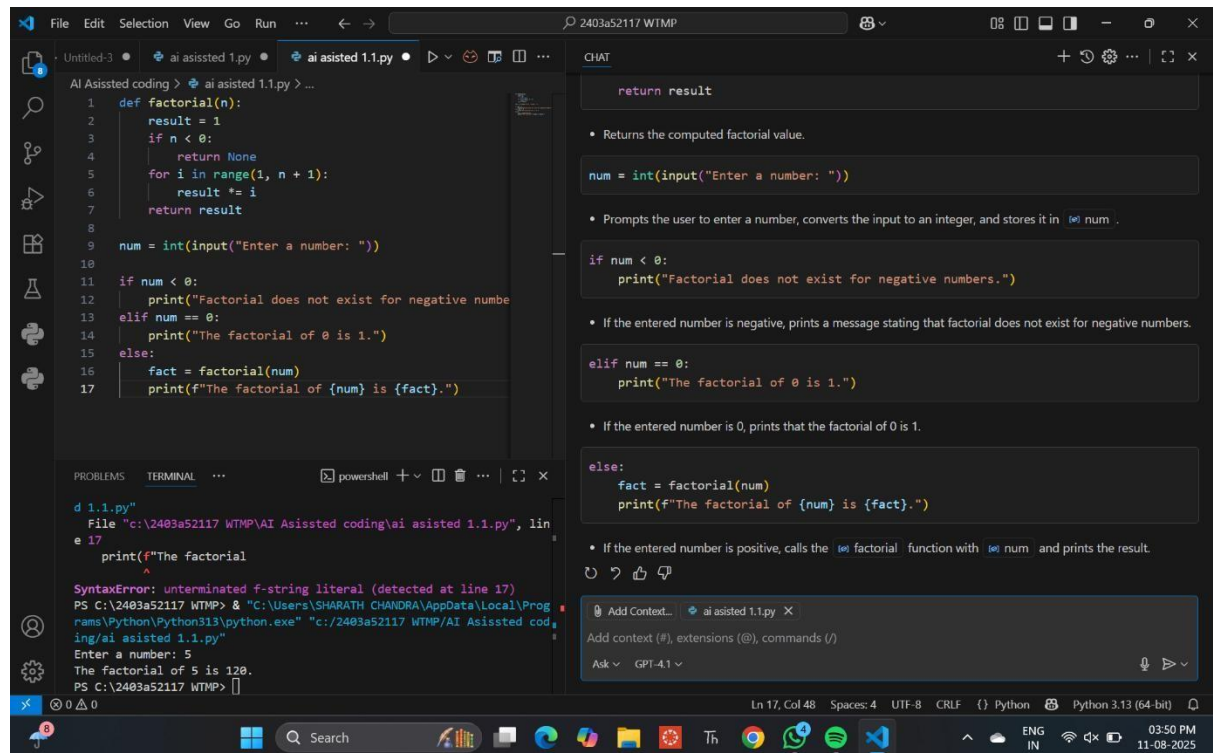
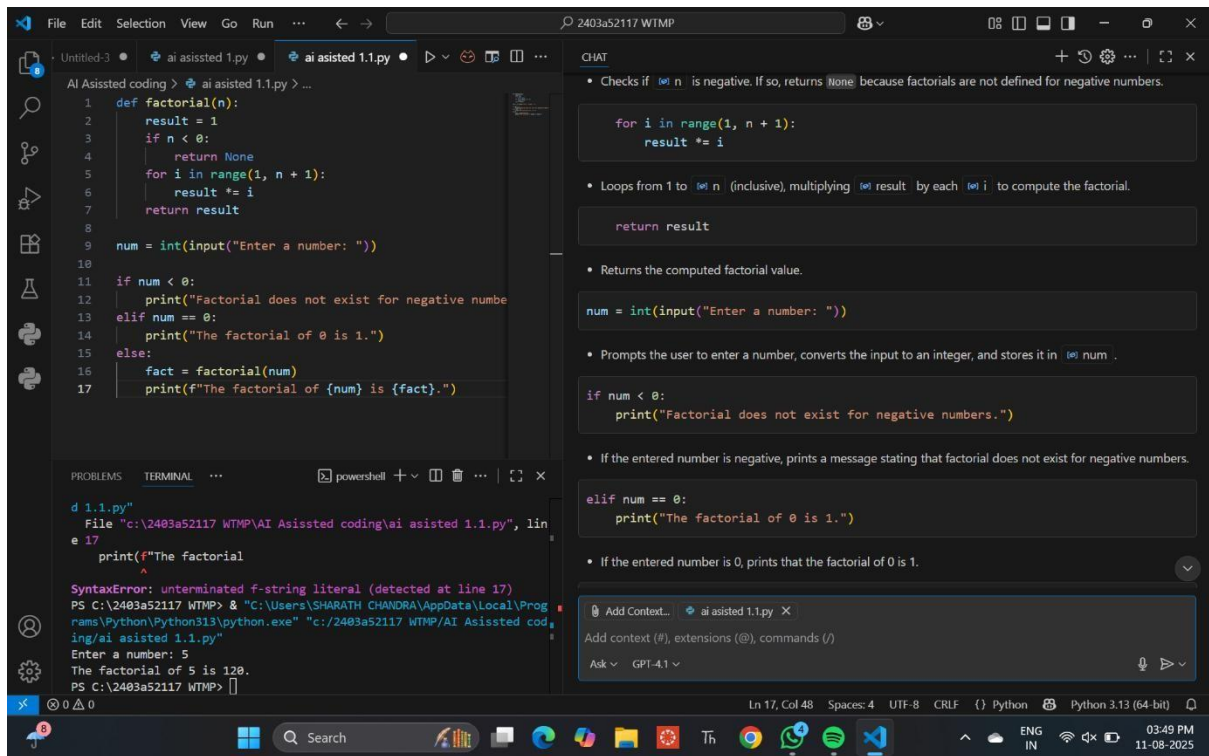
```
# Assignment 2.css  ASSIGNMENT 2.1.html  <DOCTYPE html> Untitled 3  ai assisted 1.py  CHAT  +  -  x
AI Assisted coding > ai assisted 1.py > ...
1 num = int(input("Enter a number: "))
2 factorial = 1
3
4 if num < 0:
5     print("Factorial does not exist for negative numbers.")
6 elif num == 0:
7     print("The factorial of 0 is 1.")
8 else:
9     for i in range(1, num + 1):
10         factorial *= i
11     print(f"The factorial of {num} is {factorial}.")

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\2403a52117 WTMP> & "C:\Users\SHARATH CHANDRA\AppData\Local\Programs\Python\Python313\python.exe" "c:/2403a52117 WTMP/AI Assisted coding/ai assisted 1.py"
File "c:/2403a52117 WTMP/AI Assisted coding/ai assisted 1.py", line 11
    print(f"The factorial of {num}
          ^
SyntaxError: unterminated f-string literal (detected at line 11)
PS C:\2403a52117 WTMP> & "C:\Users\SHARATH CHANDRA\AppData\Local\Programs\Python\Python313\python.exe" "c:/2403a52117 WTMP/AI Assisted coding/ai assisted 1.py"
Enter a number: 5
The factorial of 5 is 120.
PS C:\2403a52117 WTMP>
```

TASK 3:







TASK 5:

File Edit Selection View Go Run ... 2403a52117 WTMP

ai assisted 1.py • ai assisted 1.1.py • ai assisted 1.2.py

AI Assisted coding > ai assisted 1.2.py > ...

```
1 def l_iterative(n):
2     1
3     range(1, n + 1):
4     lt *= i
5     result
6
7 def l_recursive(n):
8     :
9     rn None
10    0 or n == 1:
11    rn 1
12    * factorial_recursive(n - 1)
13
14    put("Enter a number: ")
15
16    actorial does not exist for negative numbers.")
17
18    Iterative: The factorial of {num} is {factorial_iterative(num)}."
19    Recursive: The factorial of {num} is {factorial_recursive(num)}."
```

PROBLEMS OUTPUT TERMINAL ... powershell + - X

File "c:\2403a52117 WTMP\AI Assisted coding\ai assisted 1.2.py", line 20
print(f"Recursive: The factorial of {num}")
^

SyntaxError: unterminated f-string literal (detected at line 20)
PS C:\2403a52117 WTMP> & "C:\Users\SHARATH CHANDRA\AppData\Local\Programs\Python\Python313\python.exe" "c:/2403a52117 WTMP/AI Assisted coding/ai assisted 1.2.py"
Enter a number: 5
Iterative: The factorial of 5 is 120.
Recursive: The factorial of 5 is 120.
PS C:\2403a52117 WTMP> |

CHAT

GENERATE THE PYTHON PROGRAM OF ITERATIVE AND RECURSIVE VERSION OF FACTORIAL FUNCTION

ai assisted 1.1.py

> Used 1 reference

```
def factorial_iterative(n):
    result = 1
    for i in range(1, n + 1):
        result *= i
    return result

def factorial_recursive(n):
    if n < 0:
        return None
    if n == 0 or n == 1:
        return 1
    return n * factorial_recursive(n - 1)

num = int(input("Enter a number: "))

if num < 0:
    print("Factorial does not exist for negative numbers.")
else:
    print(f"Iterative: The factorial of {num} is {factorial_iterative(num)}")
    print(f"Recursive: The factorial of {num} is {factorial_recursive(num)}")
```

Add Context... ai assisted 1.2.py X

Add context (#), extensions (@), commands (/)

Ask GPT-4.1

Ln 20, Col 79 Spaces: 4 UTF-8 CRLF {} Python Python 3.13 (64-bit)

04:10 PM 11-08-2025