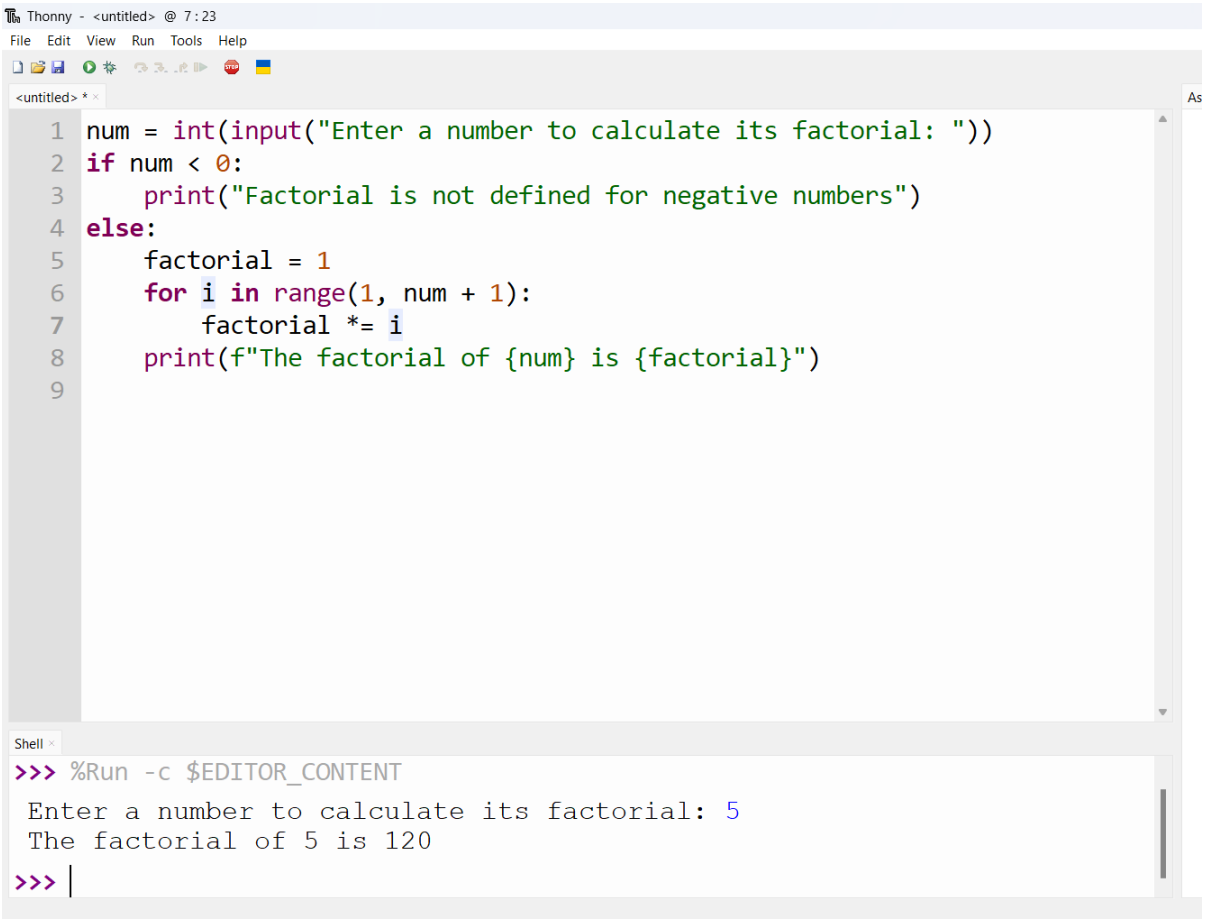
ASSIGNMENT-1

NAME:G.VARSHITHA

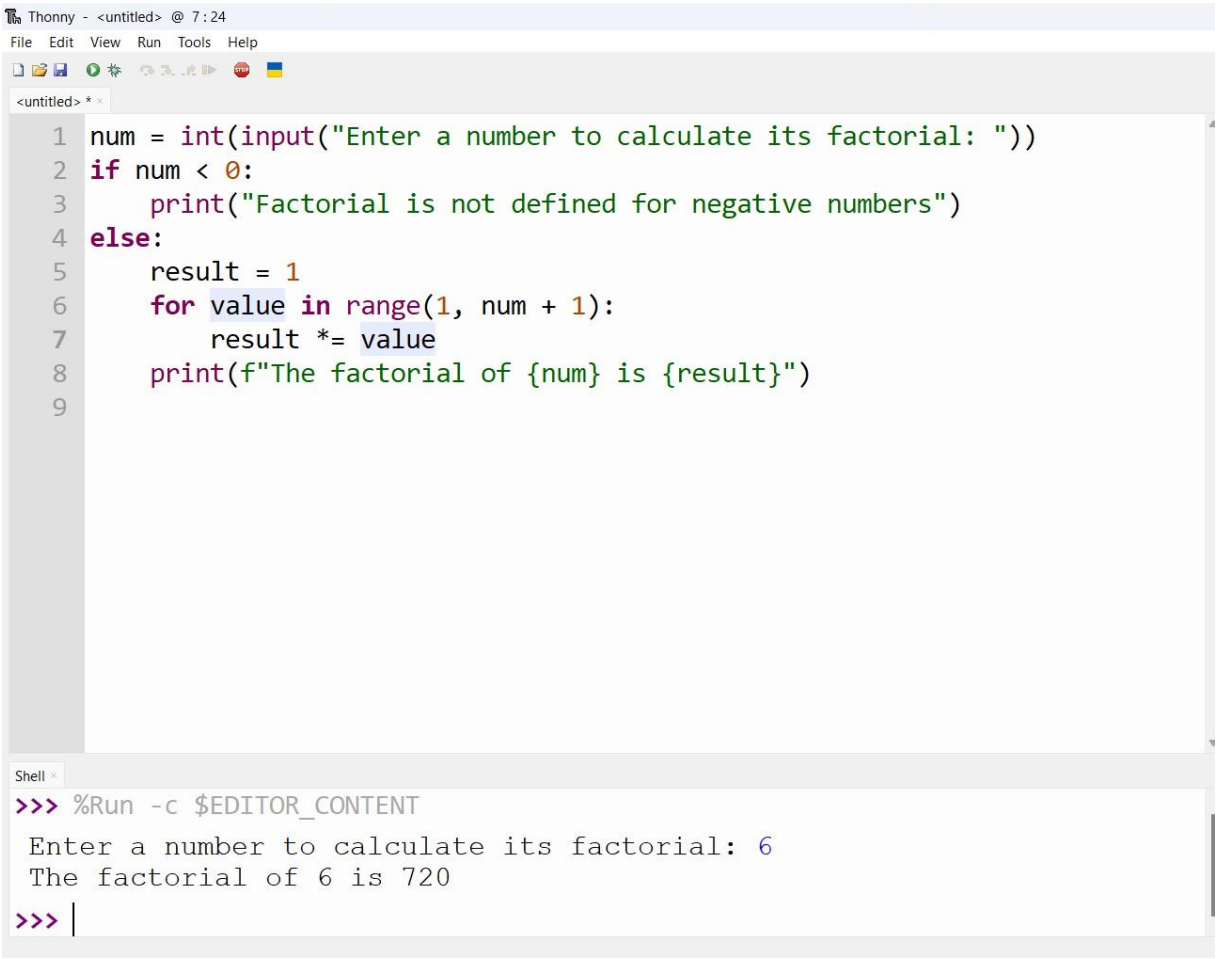
BATCH-16

HTNO:-2303A51053

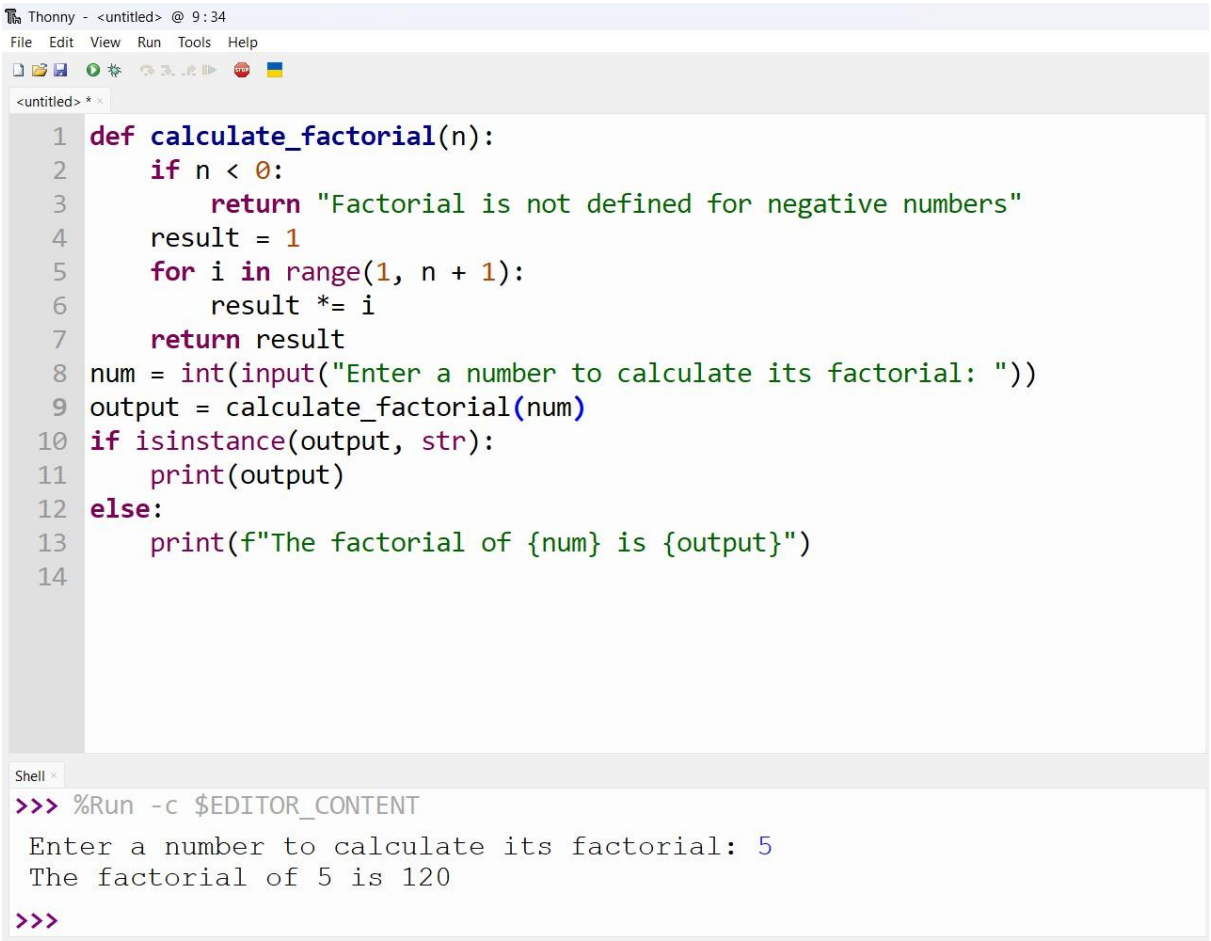
Task1:AI-GeneratedLogicWithoutModularisation*(FactorialwithoutFunctions)*



Task2:AICodeOptimization&Cleanup(ImprovingEfficiencyandReadability)

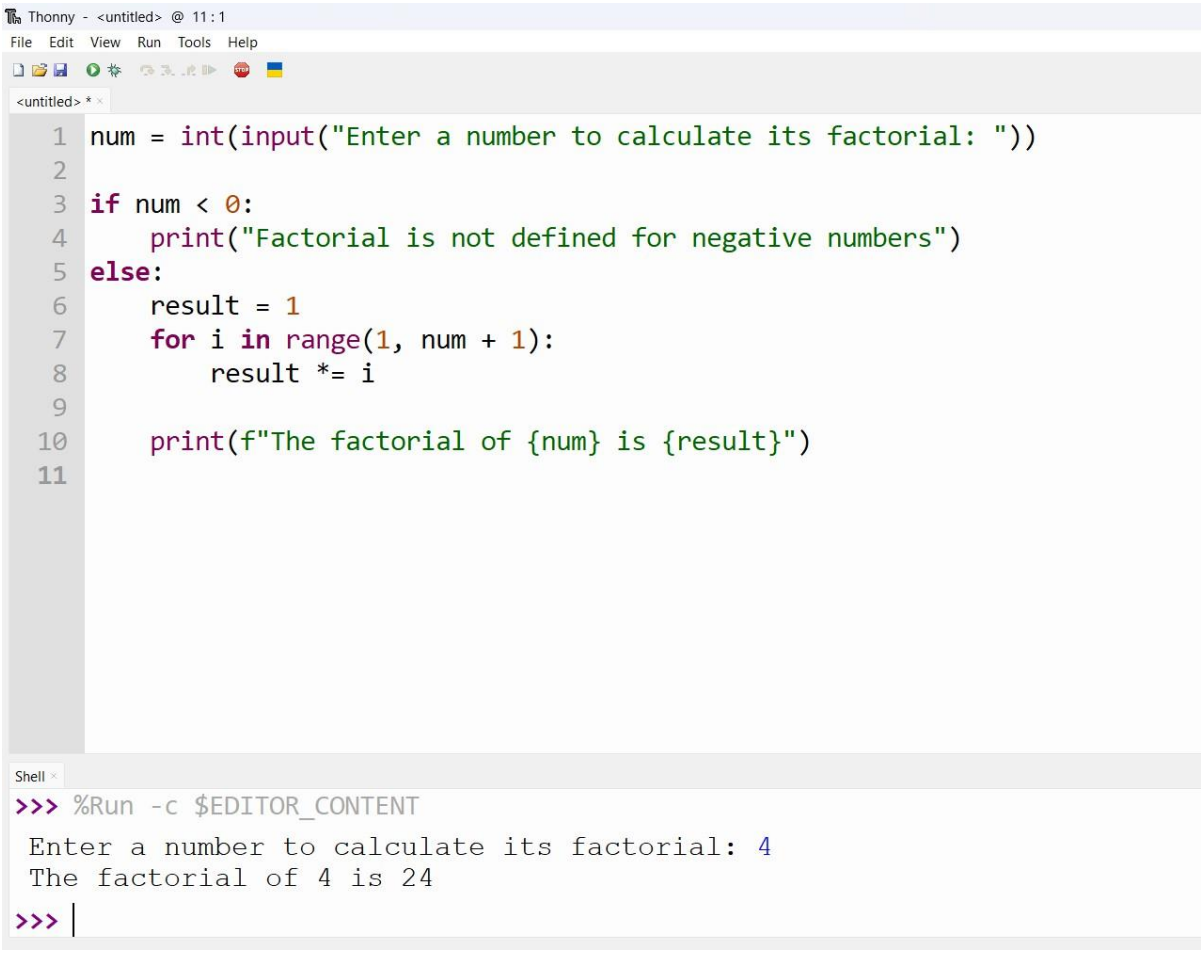


Task3:ModularDesignUsingAIAssistance(FactorialwithFunctions)

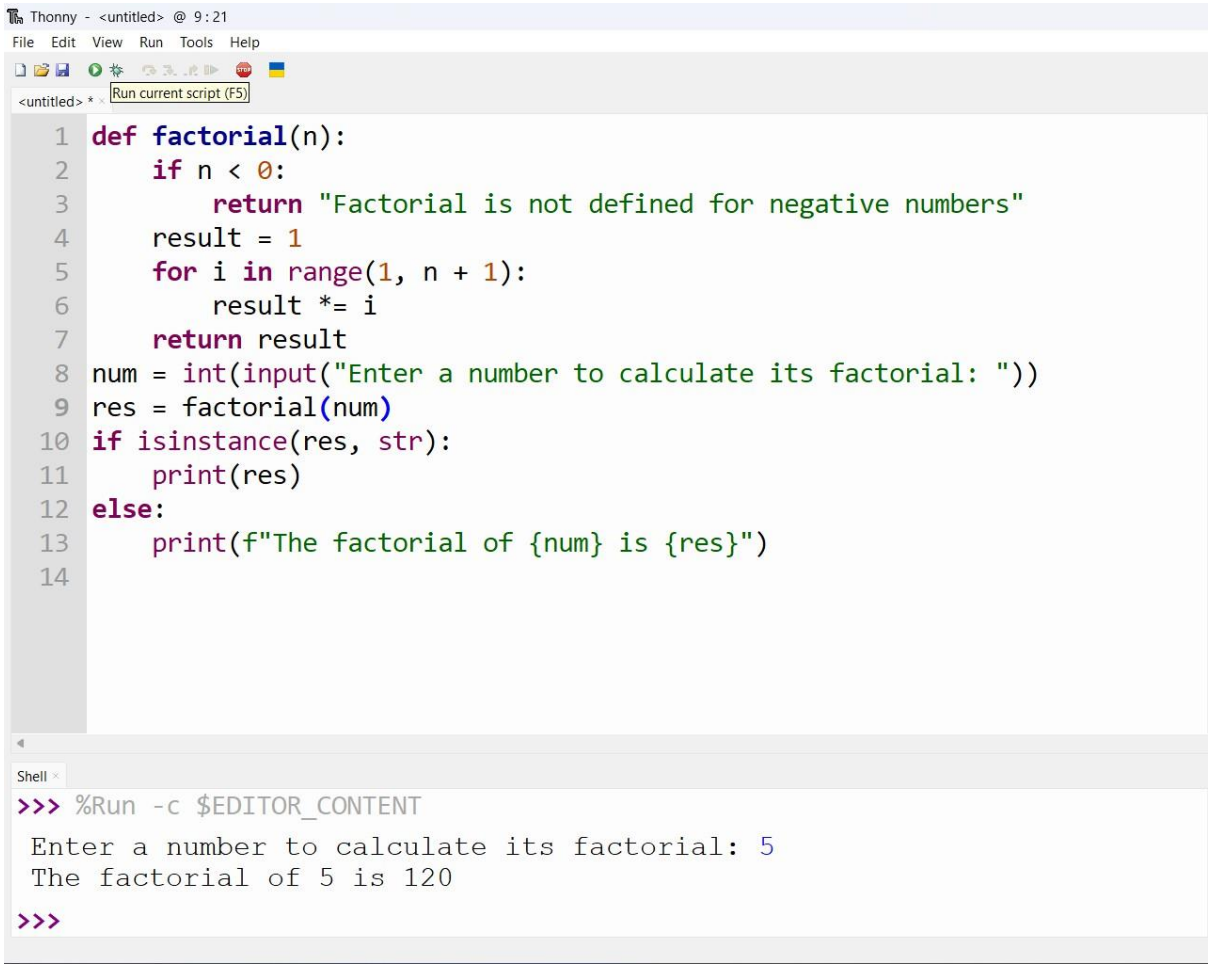


Task4:ComparativeAnalysis–ProceduralvsModularAICode Procedural

(Without Function):-

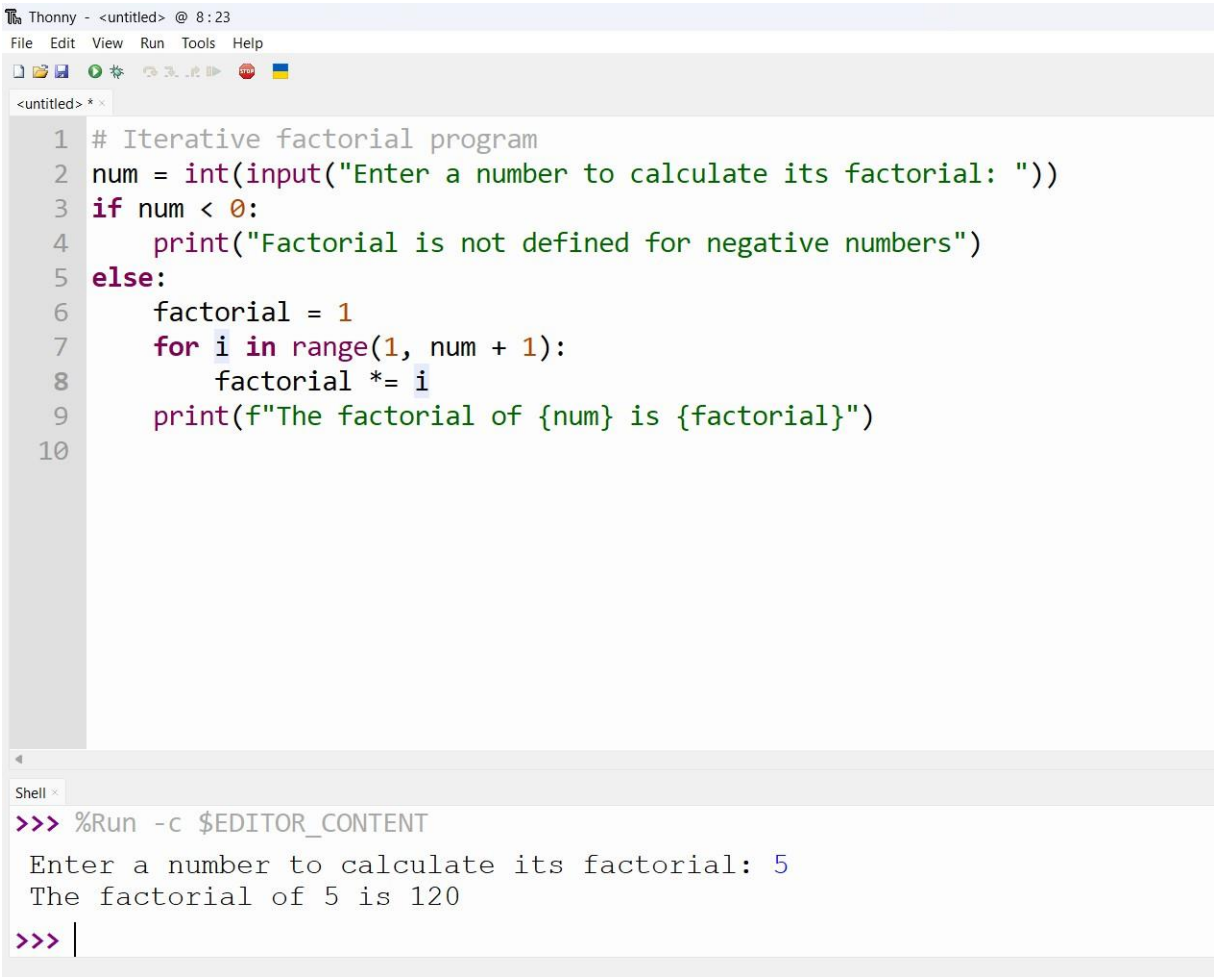


Modular(WithFunction)

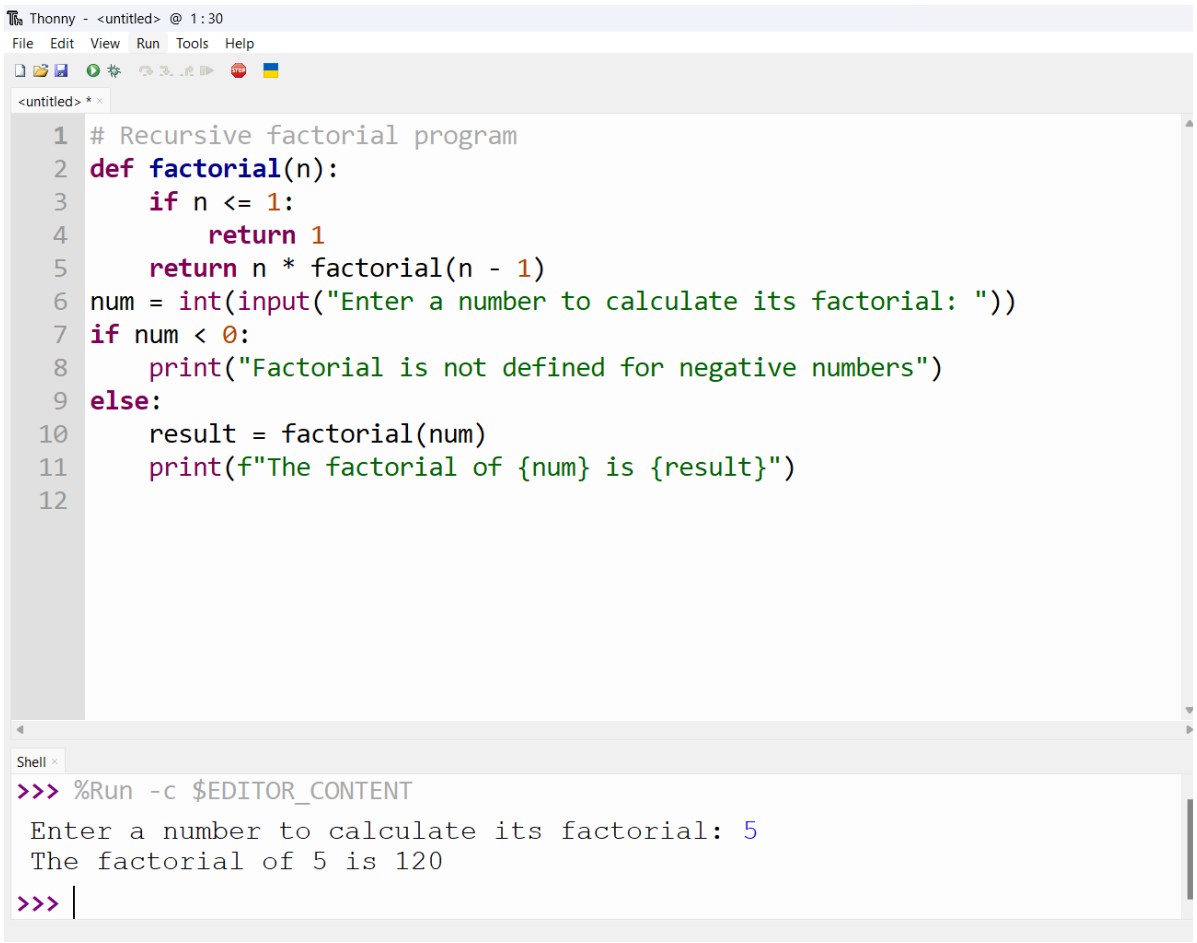


Task5:AI-GeneratedIterativevsRecursiveThinking Iterative

Approach



RecursiveApproach


Thonny - <untitled> @ 1 : 30
File Edit View Run Tools Help
<untitled> *
1 # Recursive factorial program
2 def factorial(n):
3 if n <= 1:
4 return 1
5 return n * factorial(n - 1)
6 num = int(input("Enter a number to calculate its factorial: "))
7 if num < 0:
8 print("Factorial is not defined for negative numbers")
9 else:
10 result = factorial(num)
11 print(f"The factorial of {num} is {result}")
12
Shell
>>> %Run -c $EDITOR_CONTENT
Enter a number to calculate its factorial: 5
The factorial of 5 is 120
>>>