# ASSIGNMENT -3.1

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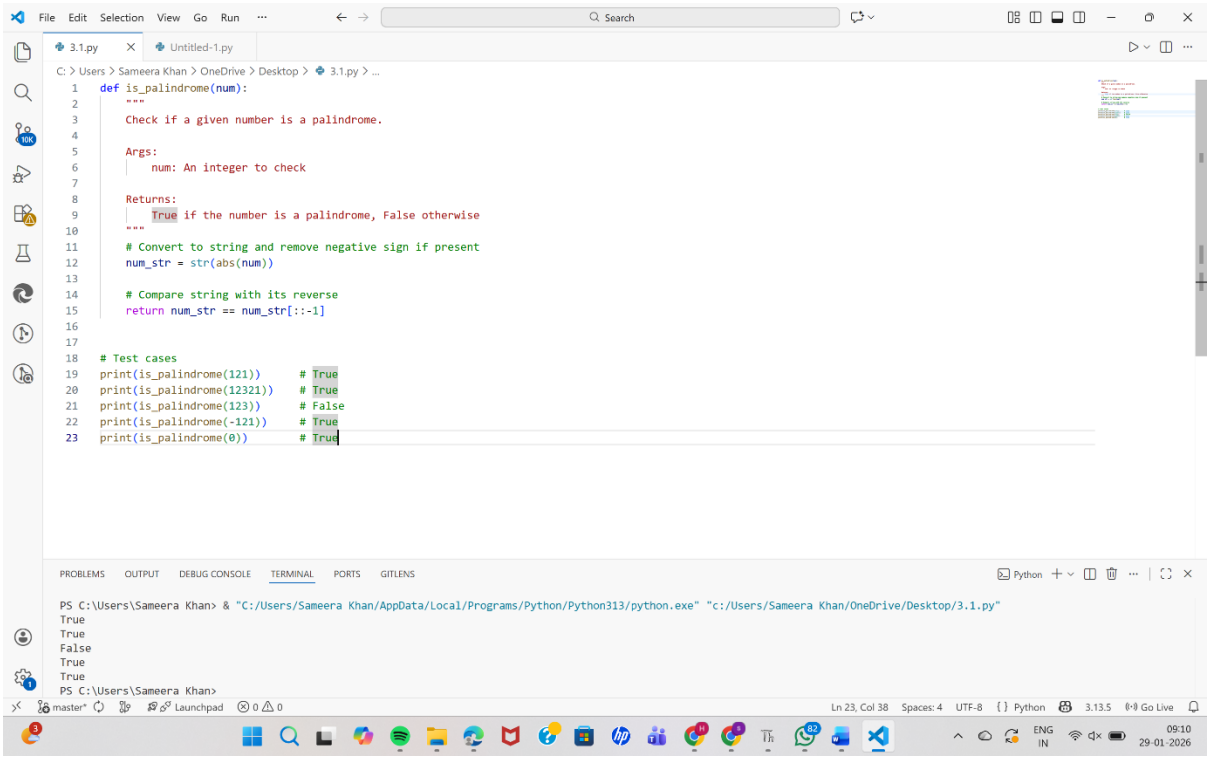
BATCH-29

## TASK-1: ZERO-SHOT PROMPTING (PALINDROME NUMBER PROGRAM)

**PROMPT:** Write a Python function that checks whether a given number is a palindrome.

The function should return True if it is a palindrome and False otherwise.




## OBSERVATION:

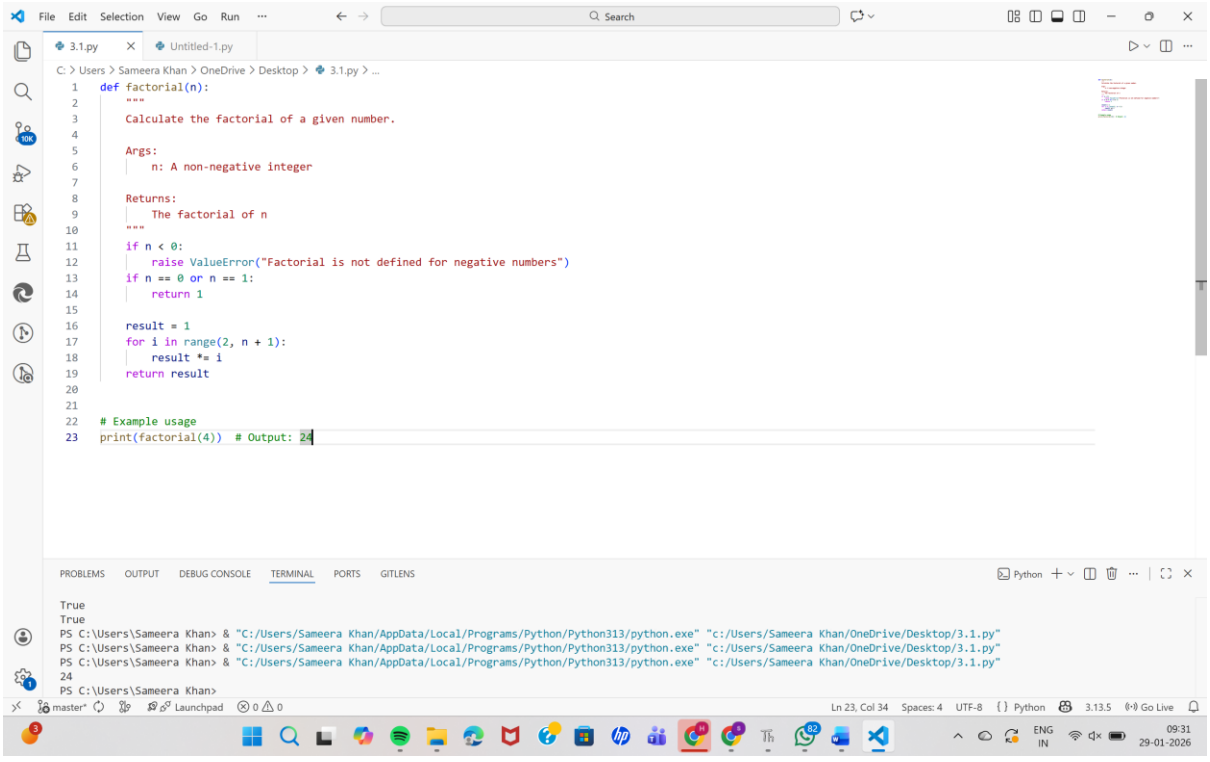
-The model is given only the explanation of the question

-Any example or detailed explanation is not given

-Answer is accurate but not specific with negative and non integers values

## TASK-2: ONE-SHOT PROMPTING (FACTORIAL CALCULATION)

**PROMPT:** write a python function that compute the factorial of given number. The function should return the result.




## OBSERVATION:

Clear understanding of the output

Better choice of logic-stack overflow, recursion complexity

Correct handling of base case

Improve code simplicity

## TASK-3: FEW-SHOT PROMPTING (ARMSTRONG NUMBER

CHECK)

Prompt: Example 1:

Input: 153

Output: Armstrong Number

Example 2:

Input: 370

Output: Armstrong Number

Example 3:

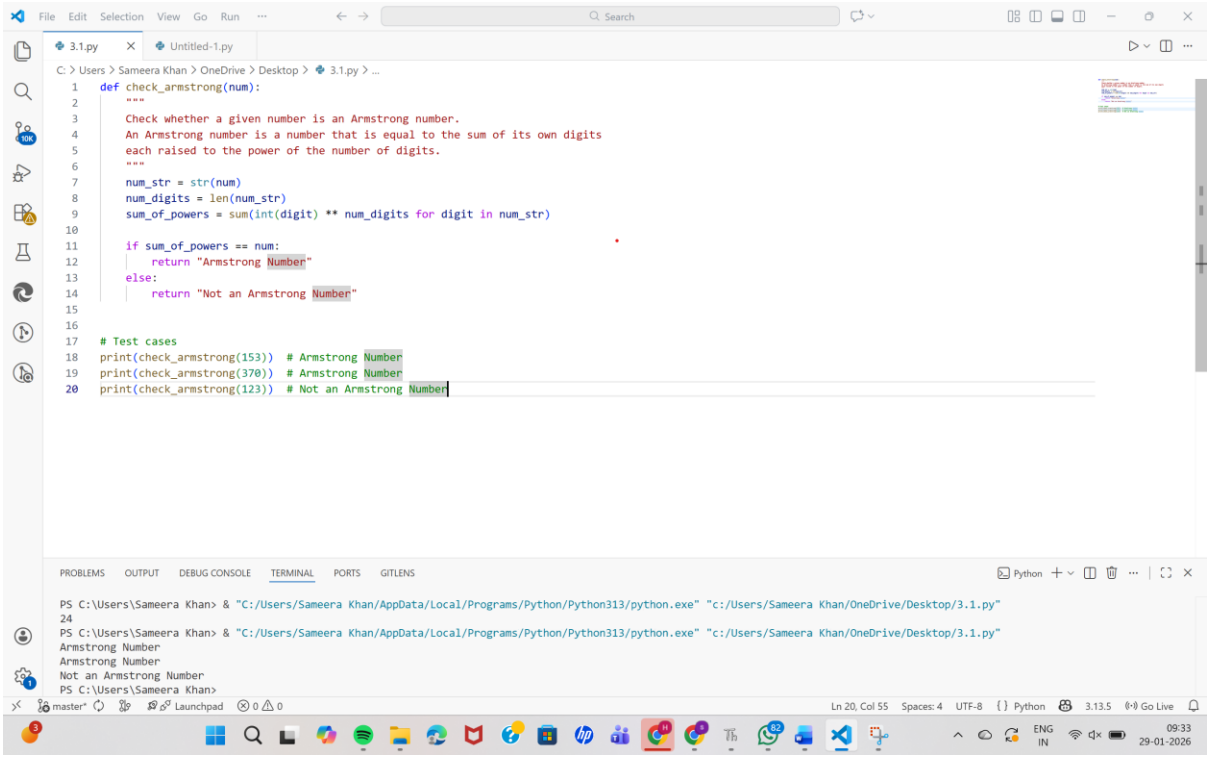
Input: 123

Output: Not an Armstrong Number

Now write a Python function that checks whether a given number is an Armstrong number.

The function should return an appropriate result.

CODE:




**OBSERVATION:**

Clear output formatting. structured way

Correct logic selection

Easy understanding of code

Exact Appropriate answer

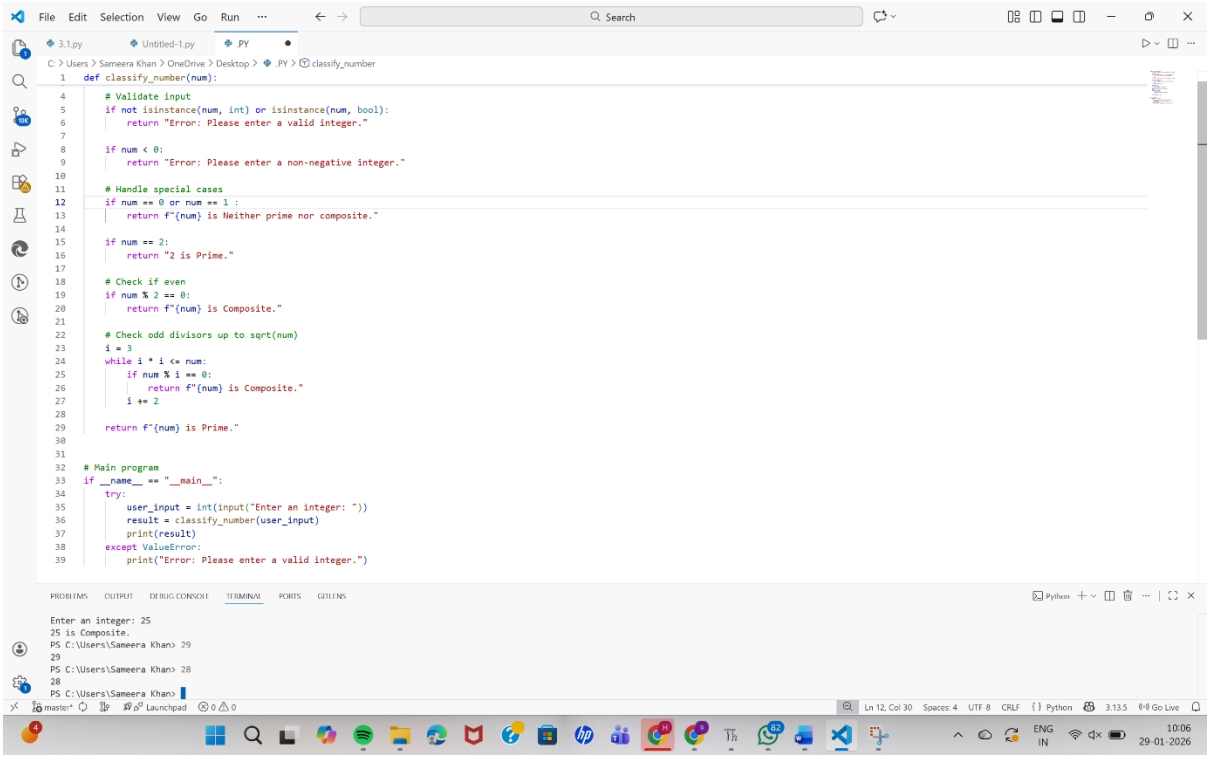
Optimized and customized solution

**TASK-4:** CONTEXT-MANAGED PROMPTING (OPTIMIZED NUMBER CLASSIFICATION)

**PROMPT:**

You are writing a Python program for number classification.

CODE:




## OBSERVATION:

The role is defined

Constrains are clearly stated

Efficiency and validation of the code

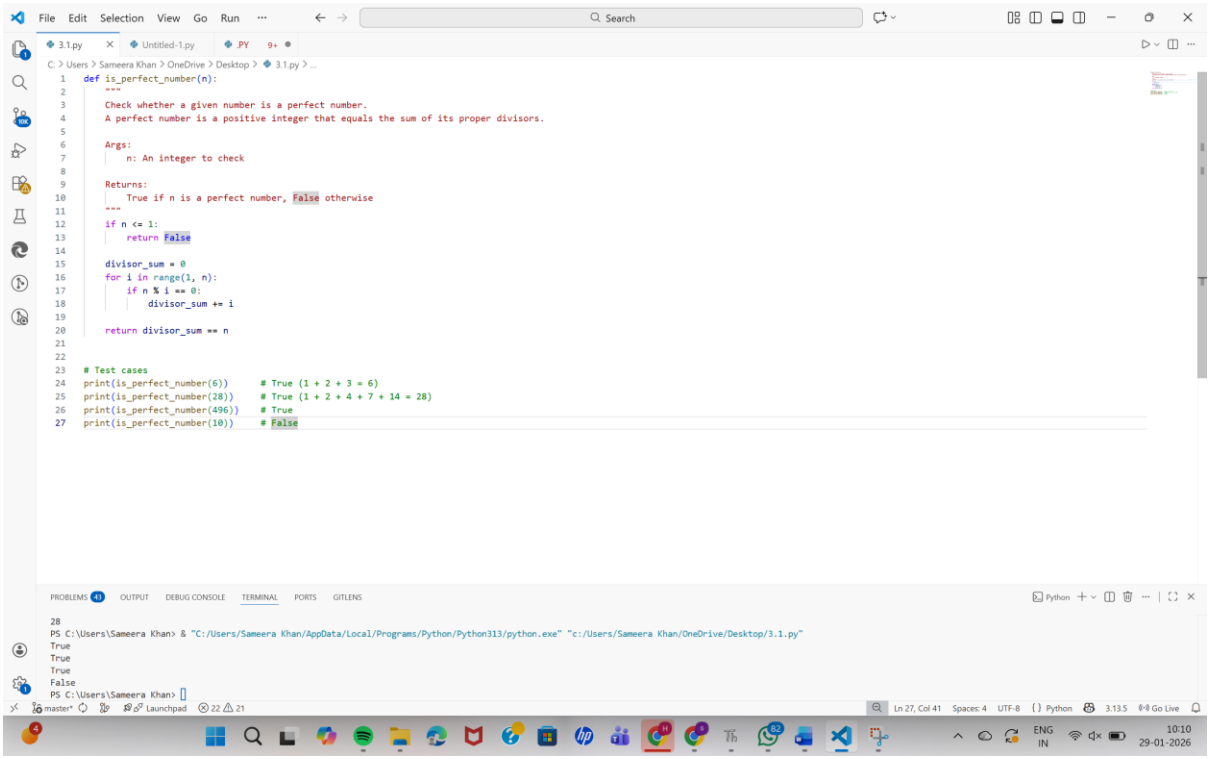
But the inputs should be specified  more clearly mentioned

## TASK-5: ZERO-SHOT PROMPTING (PERFECT NUMBER CHECK) VALIDATION)

**PROMPT:** Write a Python function that checks whether a given number is a perfect number.

The function should return an appropriate result.

## CODE:




## OBSERVATION:

No input validation – if negative or float any..

Inefficient for large input

Did not specify input constraints

No edge case handing seen

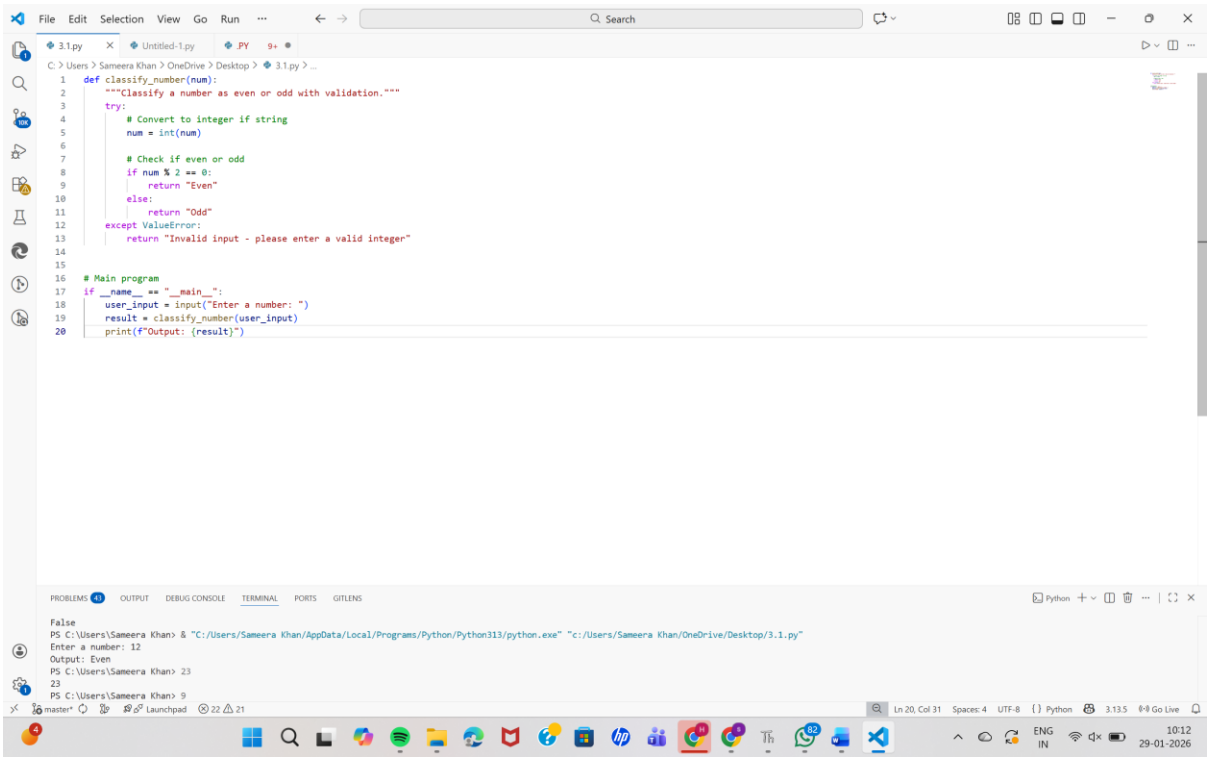
## TASK-6: FEW-SHOT PROMPTING (EVEN OR ODD CLASSIFICATION WITH VALIDATION)

## PROMPT:

Now write a Python program that determines whether a given number is Even or Odd.

The program should include proper input validation and return clear messages.

## CODE:




## OBSERVATION:

Negative integer are handled correctly

Program safely rejected non integer inputs

Improve input handling

Clear and consistent output