ASSIGNMENT-4.2

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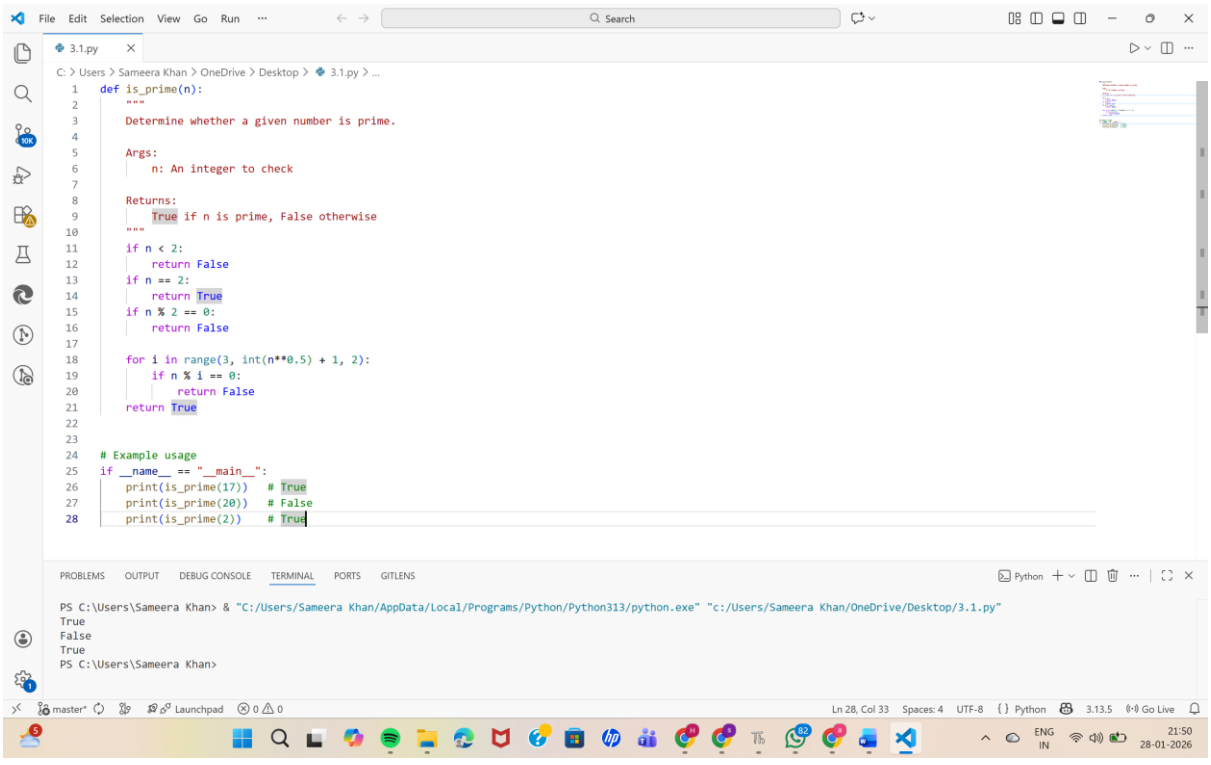
BATCH NO:29

TASK-1: ZERO-SHOT PROMPTING

PROMPT: Write a Python function to determine whether a given number is prime.

CODE:

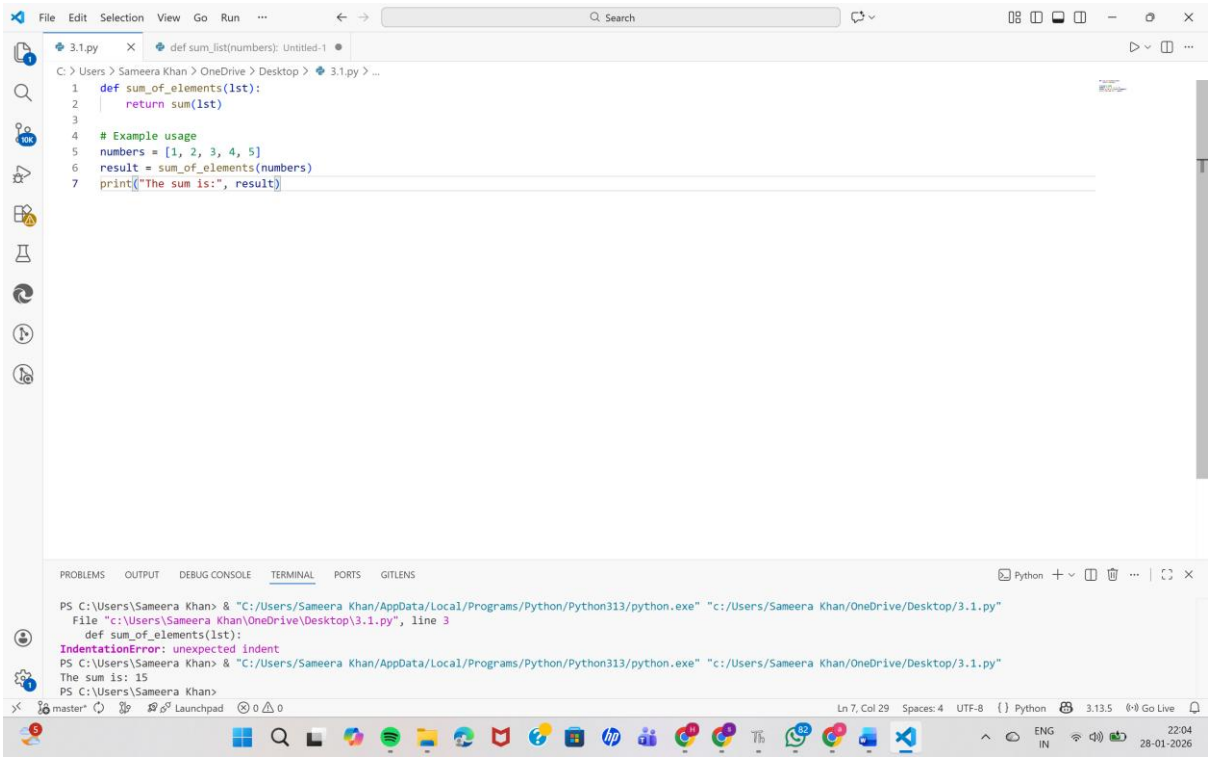


OBSERVATION:

The AI model successfully interprets the definition of a prime number solely from the prompt, without relying on examples or extra instructions. It applies correct mathematical logic to distinguish prime numbers from non-prime numbers. Additionally, the model produces Python code that is both syntactically correct and logically accurate, demonstrating effective zero-shot reasoning.

TASK-2

PROMPT: Write a Python function that calculates the sum of elements in a list.



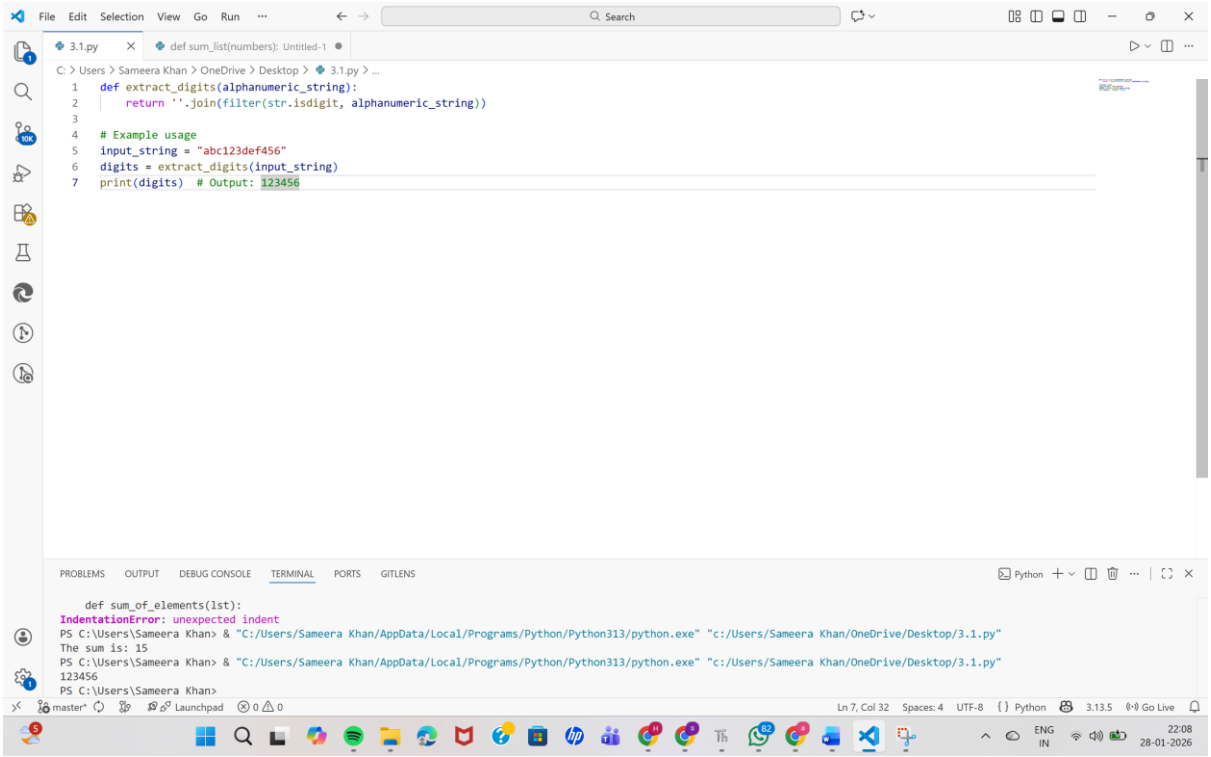
OBSERVATION:

By observing one example, the AI understands how inputs relate to outputs and correctly applies the same pattern to other lists of numbers.

TASK-3

PROMPT: Write a Python function that extracts only digits from an alphanumeric string.

CODE:



OBSERVATION:

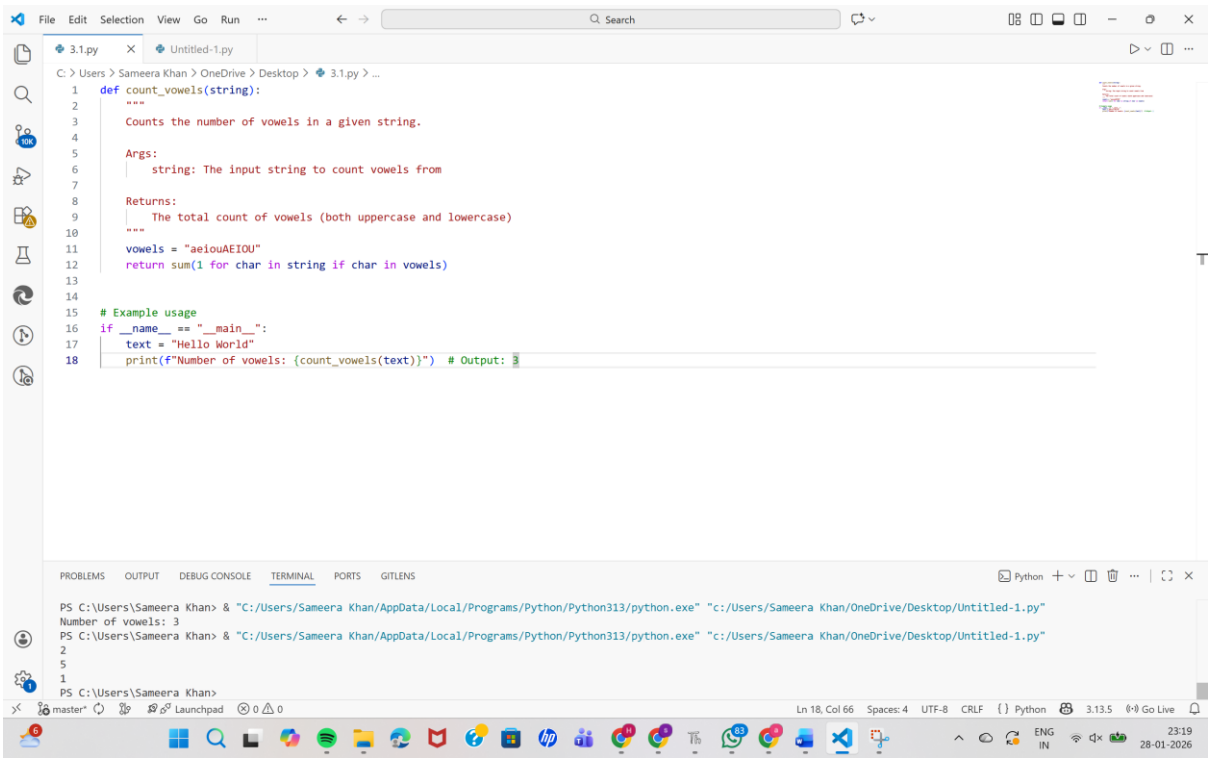
Providing multiple examples helps the AI model precisely identify the required pattern. The model correctly filters out alphabetic characters and focuses

solely on digits. This approach results in more reliable and unambiguous outputs than zero-shot and one-shot prompting.

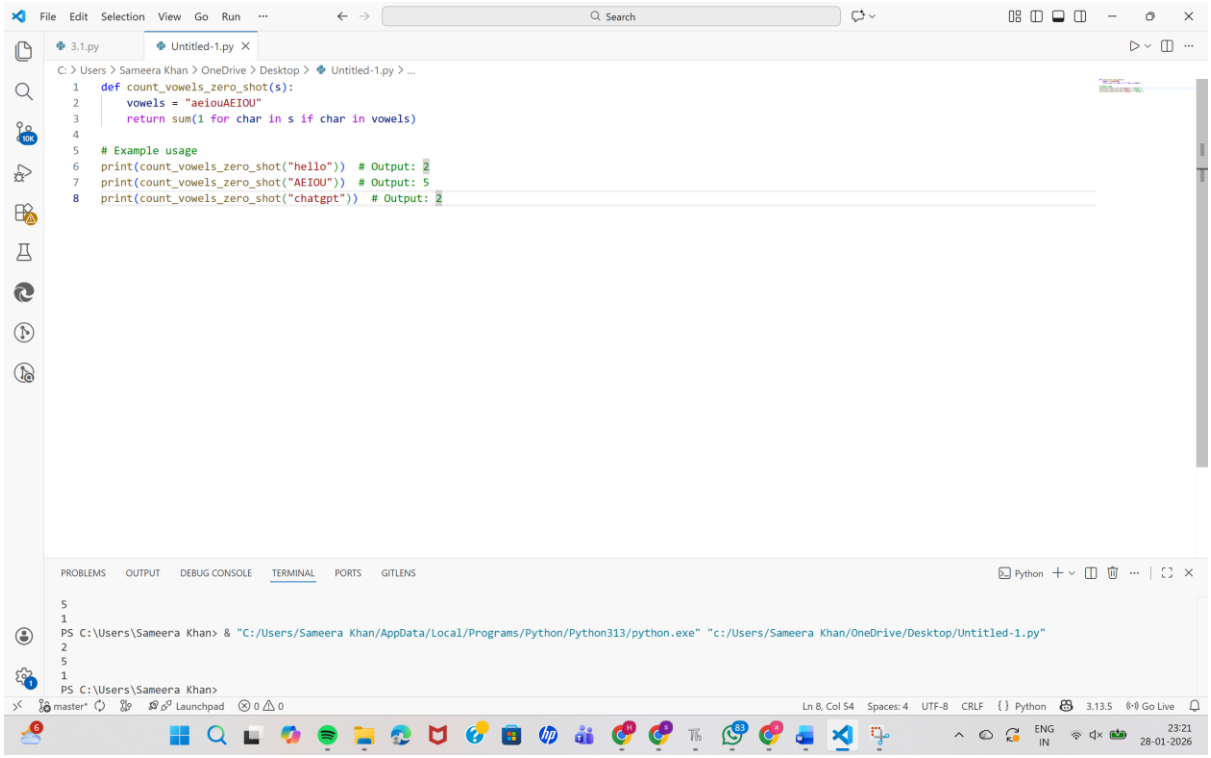
TASK-4

PROMPT: ZERO-SHOT: Write a Python function that counts the number of vowels in a string.

FEW-SHOT: Write a Python function that counts the number of vowels in a string. Examples: Input: "hello" Output: 2 Input: "AEIOU" Output: 5 Input: "chatgpt" Output: 2



ZERO SHOT:



OBSERVATION:

FEW-SHOT OBSERVATION

The provided examples clearly define what characters should be counted as vowels
The model confidently includes both uppercase and

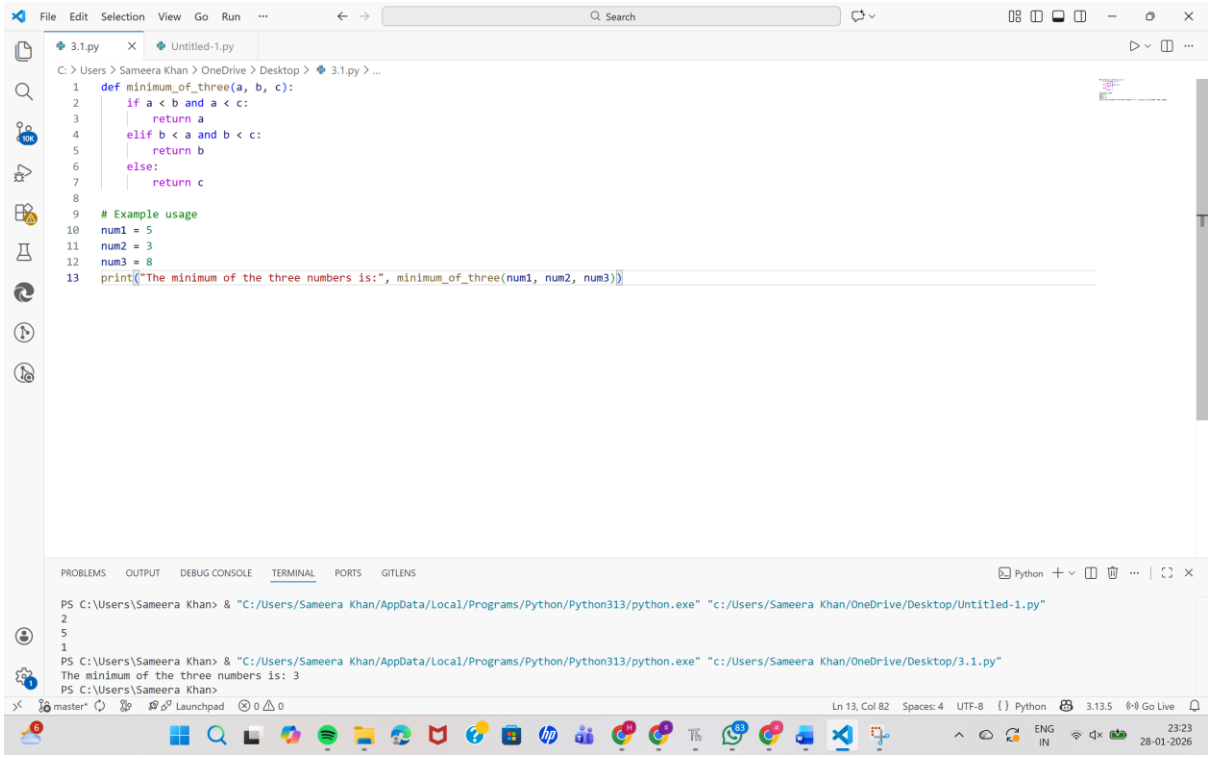
lowercase vowels due to examples ZERO SHOT:

zero shot prompting the AI guesses the intent based on general knowledge which may vary for ambiguous tasks

TASK-5

PROMPT:

Write a Python function that determines the minimum of three numbers without using the built-in min() function.



OBSERVATION:

The examples help the AI understand how to compare values to find the minimum. The model correctly accounts for equal values and implements the logic using conditional statements rather than built-in functions.