ASSIGNMENT-3.1

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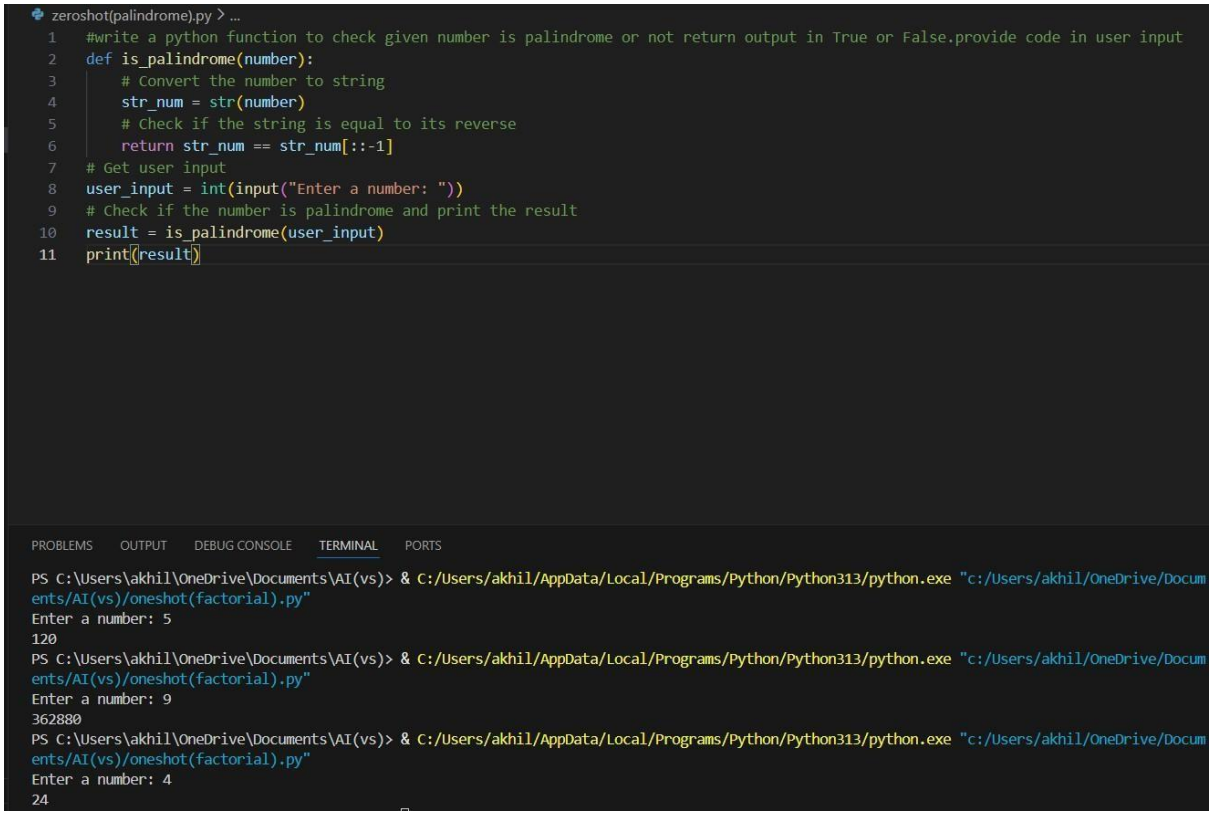
BATCH-14

Task 1: Zero-Shot Prompting (Palindrome Number Program)

Prompt: write a python function to check given number is palindrome or not return output int Tr ue or False. Provide code in user input.

Code with output:



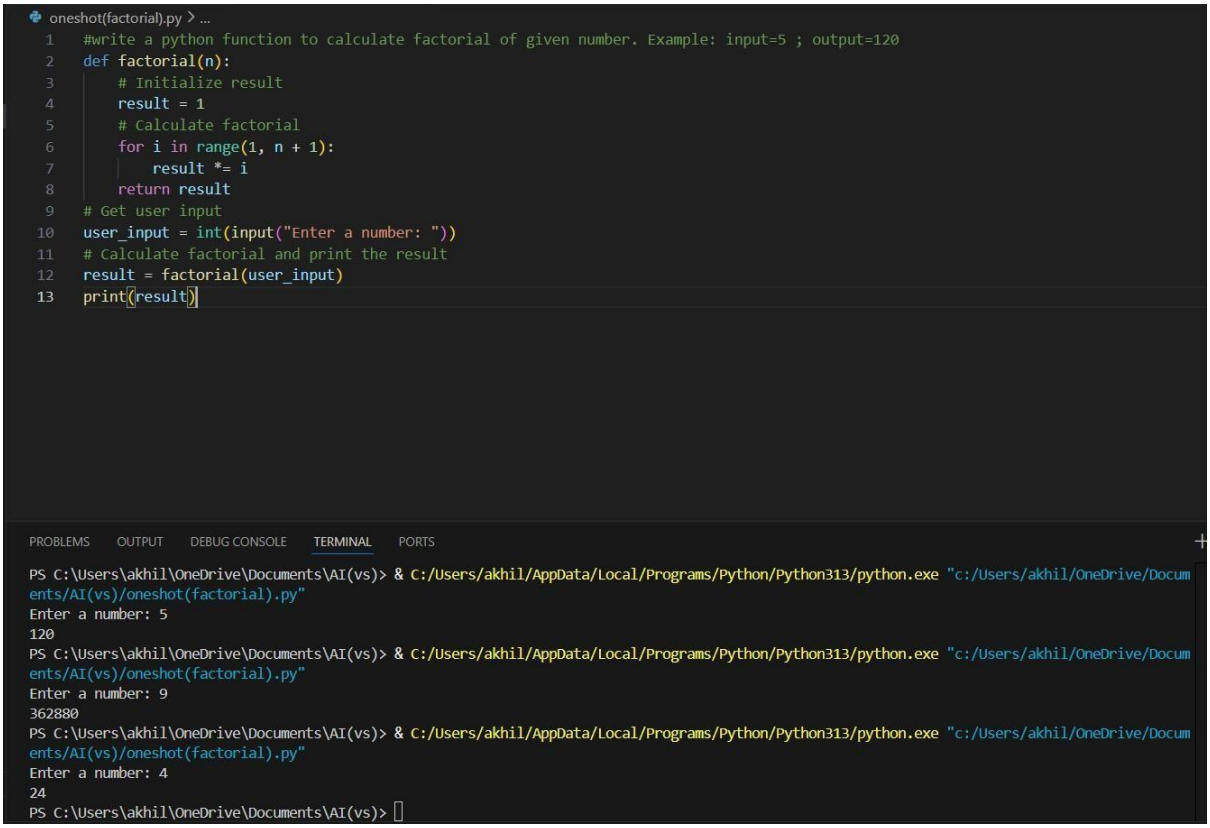
Justification:

- Correct for positive numbers
- Negative numbers not handled clearly
- No input validation for non-integers

Task 2: One-Shot Prompting (Factorial Calculation)

Prompt: write a python function to calculate factorial of given number. Example: input=5 ; output=120

Code with output:

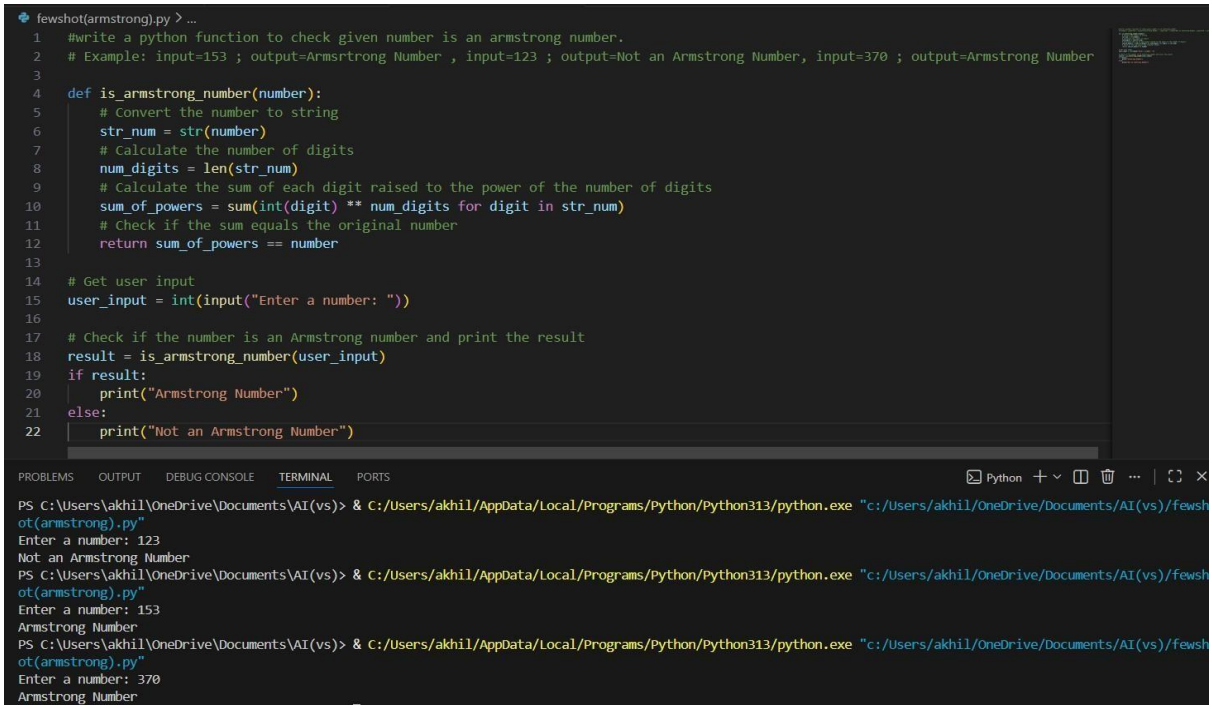


Justification:

- One-shot gives clearer logic
- More readable and reliable

Task 3: Few-Shot Prompting (Armstrong Number Check)

Code with output:

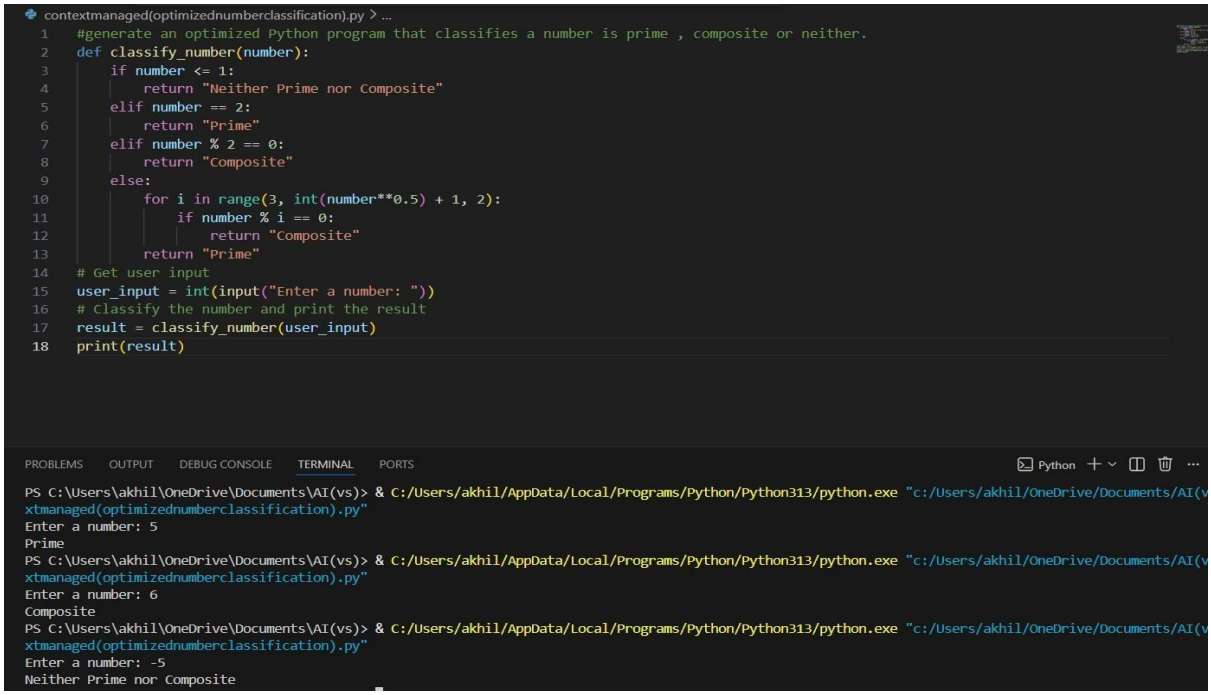


Justification:

- Few-shot improves accuracy
- Code structure matches examples
- Still lacks input validation for negatives

Task 4: Context-Managed Prompting (Optimized Number Classification)

Prompt: generate an optimized python program that classifies a number is prime, composite or neither Code with output:



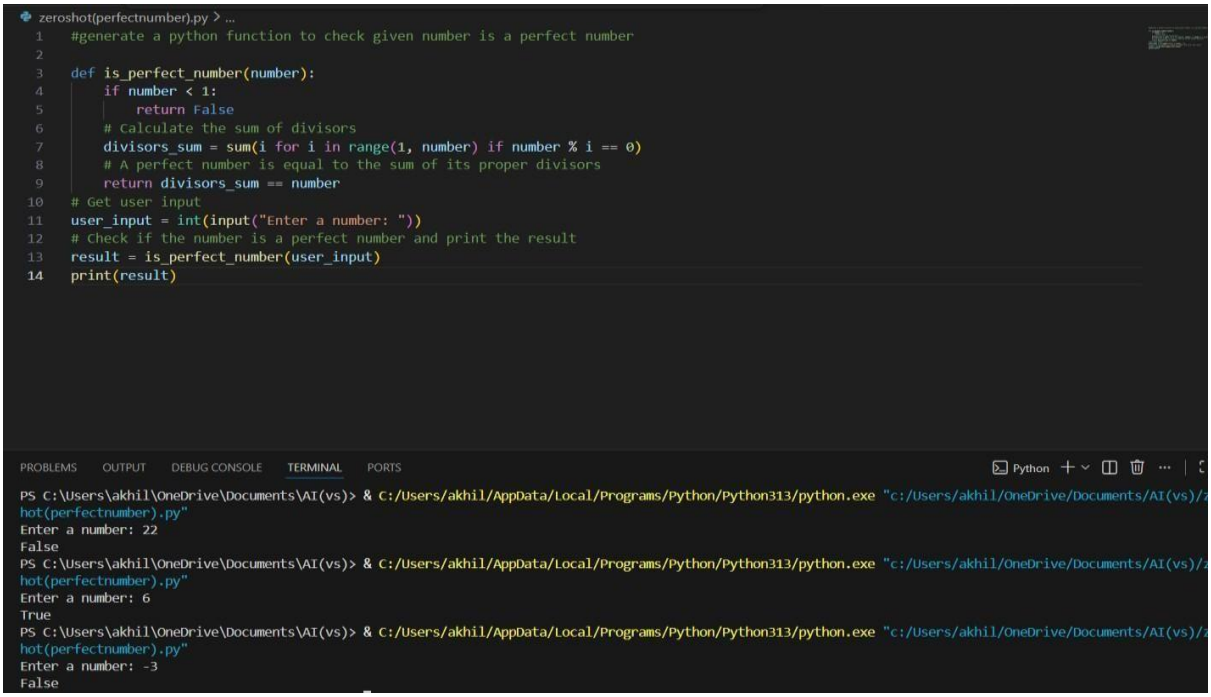
Justification:

- Best performance among all prompts
- Clear validation and optimized logic
- Context improves efficiency and correctness

Task 5: Zero-Shot Prompting (Perfect Number Check)

Prompt:generate a python function to check given number is a perfect number.

Code with output:



Task 6: Few-Shot Prompting (Even or Odd Classification with Validation)

Code with output: