Assignment_6.1

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Batch:18

Task Description #1 (AI-Based Code Completion for Loops)

Task: Use an AI code completion tool to generate a loop-based program.

Prompt:

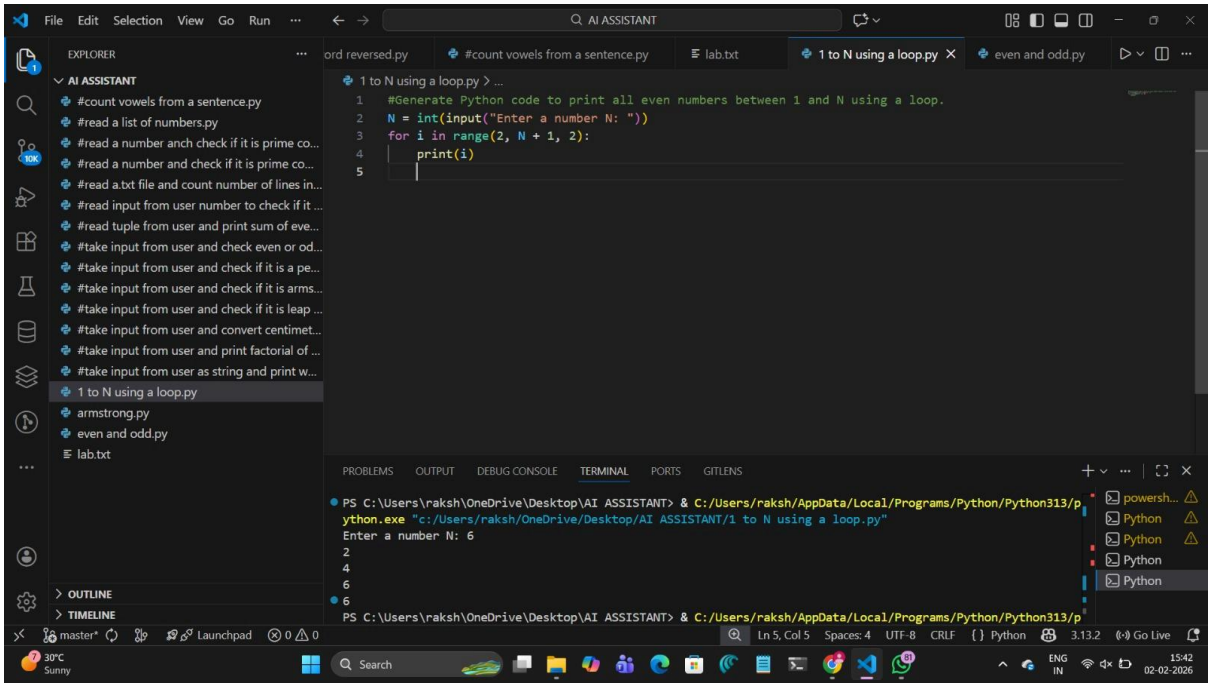
“Generate Python code to print all even numbers between 1 and N using a loop.”

Expected Output:

- **AI-generated loop logic.**
- **Identification of loop type used (for or while).**
- **Validation with sample inputs.**

Prompt:

#Generate Python code to print all even numbers between 1 and N using a loop



Analysis:

Correct selection of a for loop with step size optimization

Logic is clear and efficient

Task Description #2 (AI-Based Code Completion for Loop with Conditionals)

Task: Use an AI code completion tool to combine loops and conditionals.

Prompt:

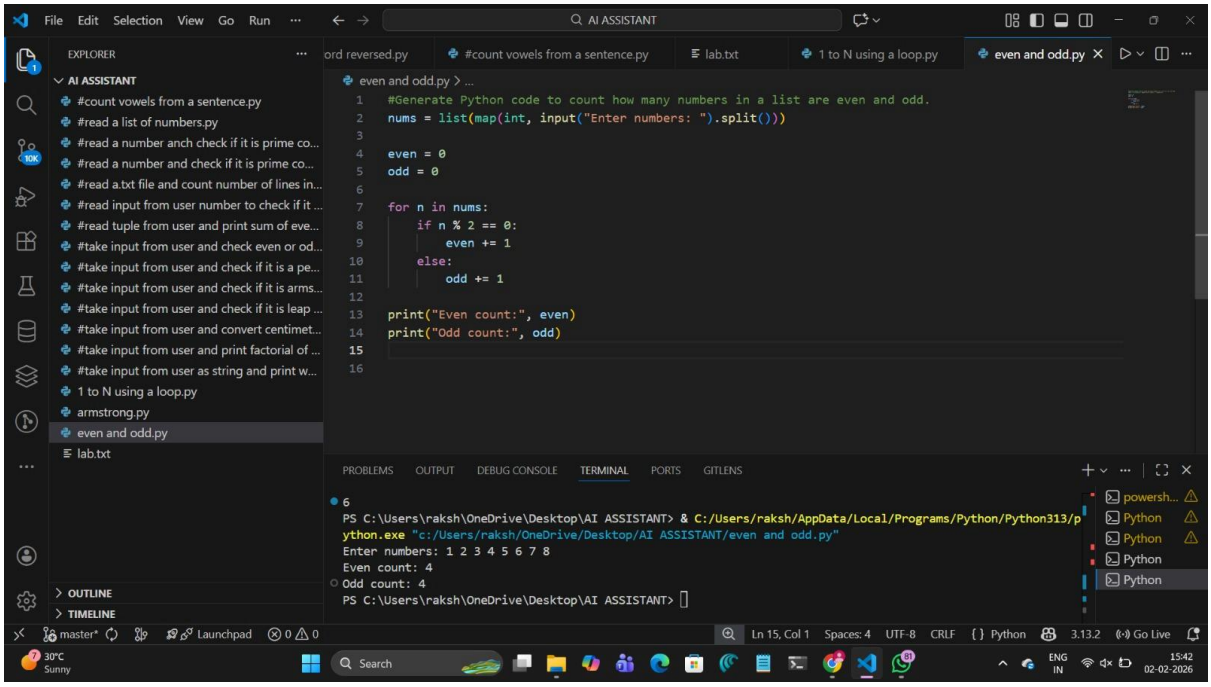
“Generate Python code to count how many numbers in a list are even and odd.”

Expected Output:

- **AI-generated code using loop and if condition.**
- **Correct count validation.**
- **Explanation of logic flow.**

Prompt:

#Generate Python code to count how many numbers in a list are even and odd.



Analysis:

Accurate counting logic

Easy to extend for other classifications

Task Description #3 (AI-Based Code Completion for Class Attributes Validation)

Task: Use an AI tool to complete a Python class that validates user input.

Prompt:

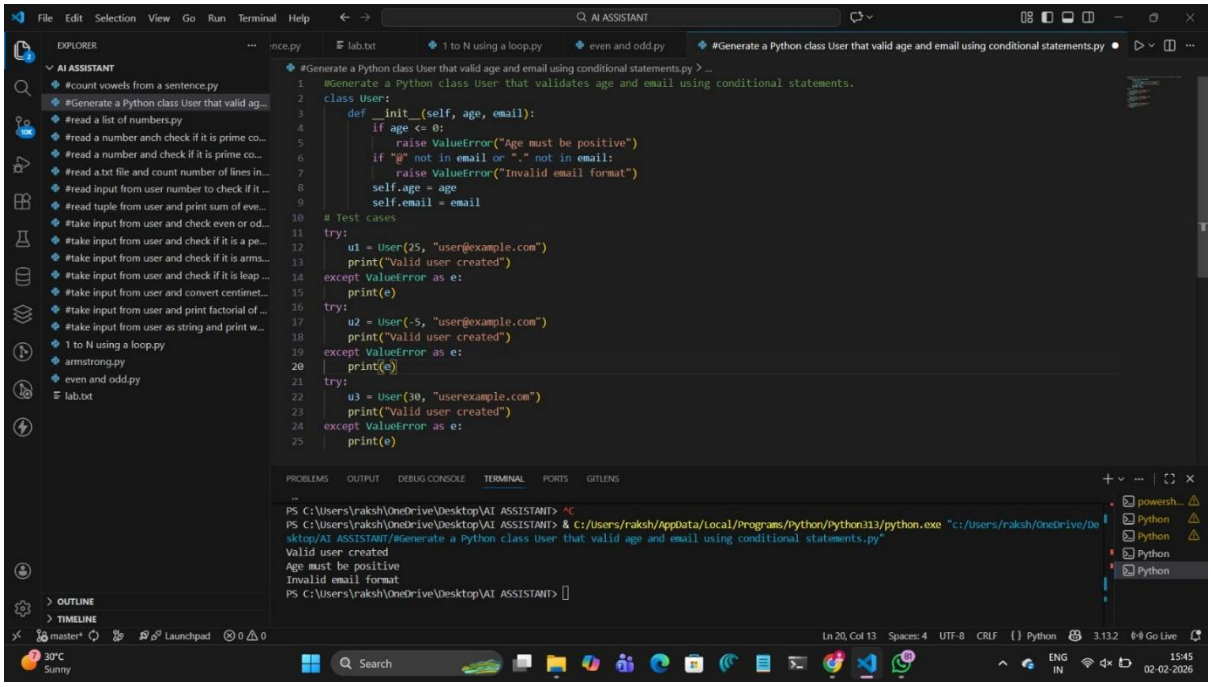
“Generate a Python class User that validates age and email using conditional statements.”

Expected Output:

- **AI-generated class with validation logic.**
- **Verification of condition handling.**
- **Test cases for valid and invalid inputs.**

Prompt:

#Generate a Python class User that validates age and email using conditional statements.



Analysis:

Correct use of constructor for validation

Clear error handling via exceptions

Task Description #4 (AI-Based Code Completion for Classes)

Task: Use an AI code completion tool to generate a Python class for managing student details.

Prompt:

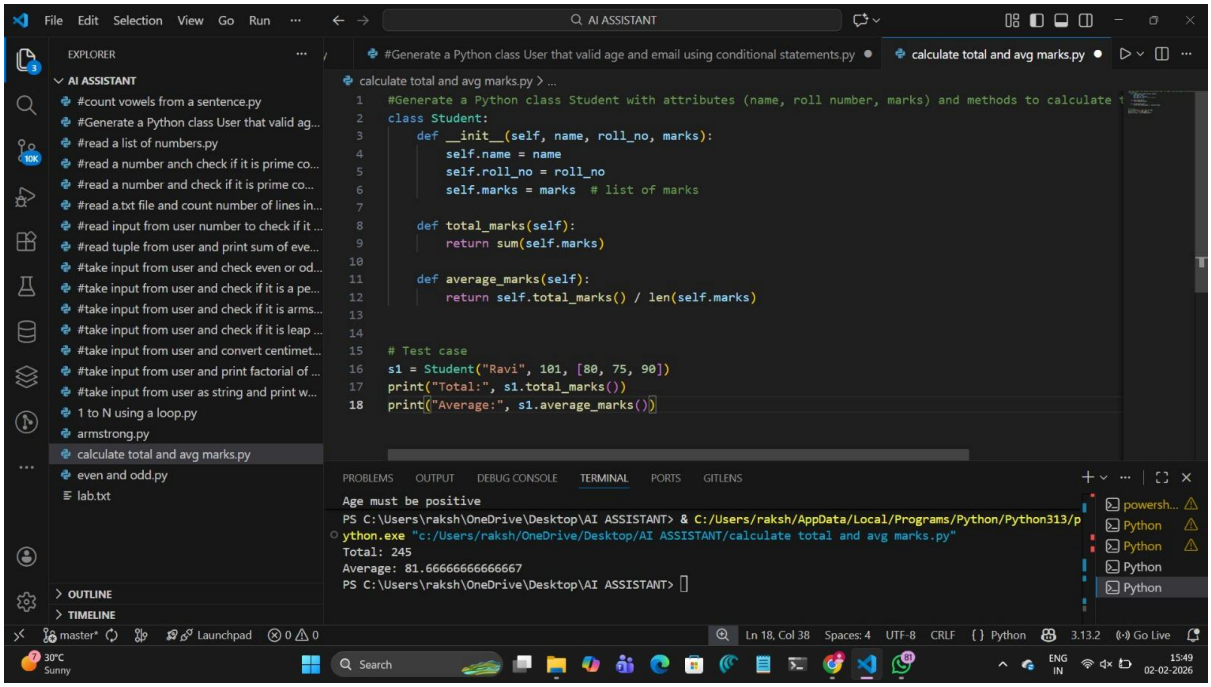
"Generate a Python class Student with attributes (name, roll number, marks) and methods to calculate total and average marks."

Expected Output:

- **AI-generated class code.**
- **Verification of correctness and completeness of class structure.**
- **Minor manual improvements (if needed) with justification.**

Prompt:

#Generate a Python class Student with attributes (name, roll number, marks) and methods to calculate total and average marks.



Analysis:

Logical separation of data and behavior

Reusability improved by method reuse

Code is readable and maintainable

Task Description 5 (AI-Assisted Code Completion Review)

Task: Use an AI tool to generate a complete Python program using

classes, loops, and conditionals together.

Prompt:

“Generate a Python program for a simple bank account system using

class, loops, and conditional statements.”

Expected Output:

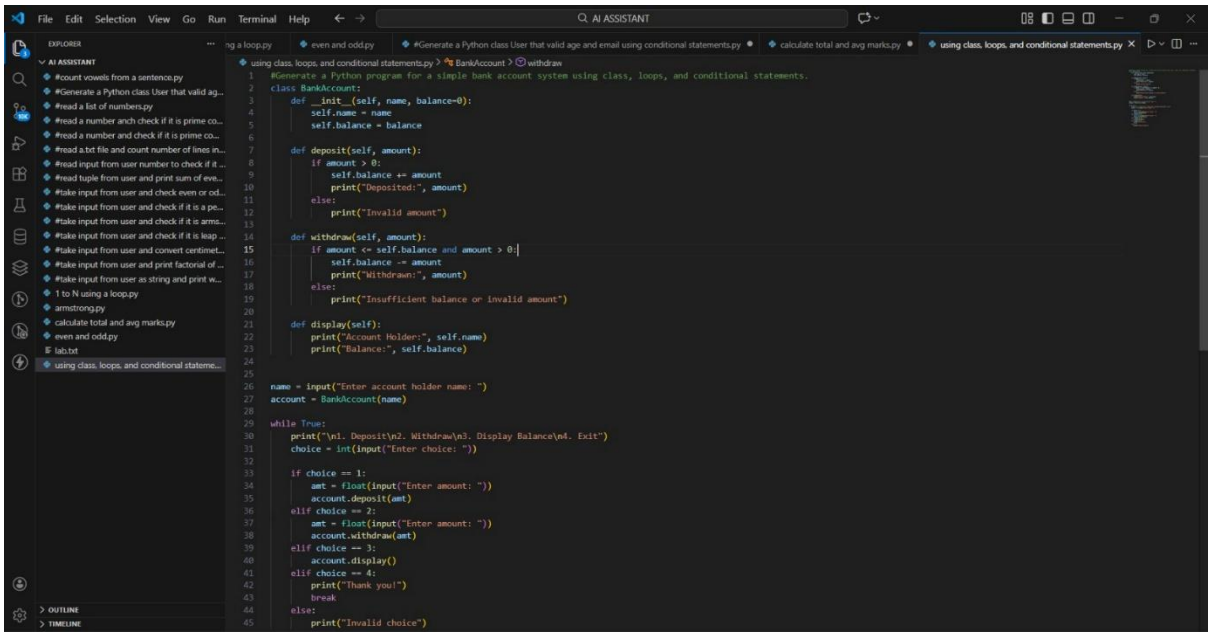
• Complete AI-generated program.

• Identification of strengths and limitations of AI suggestions.

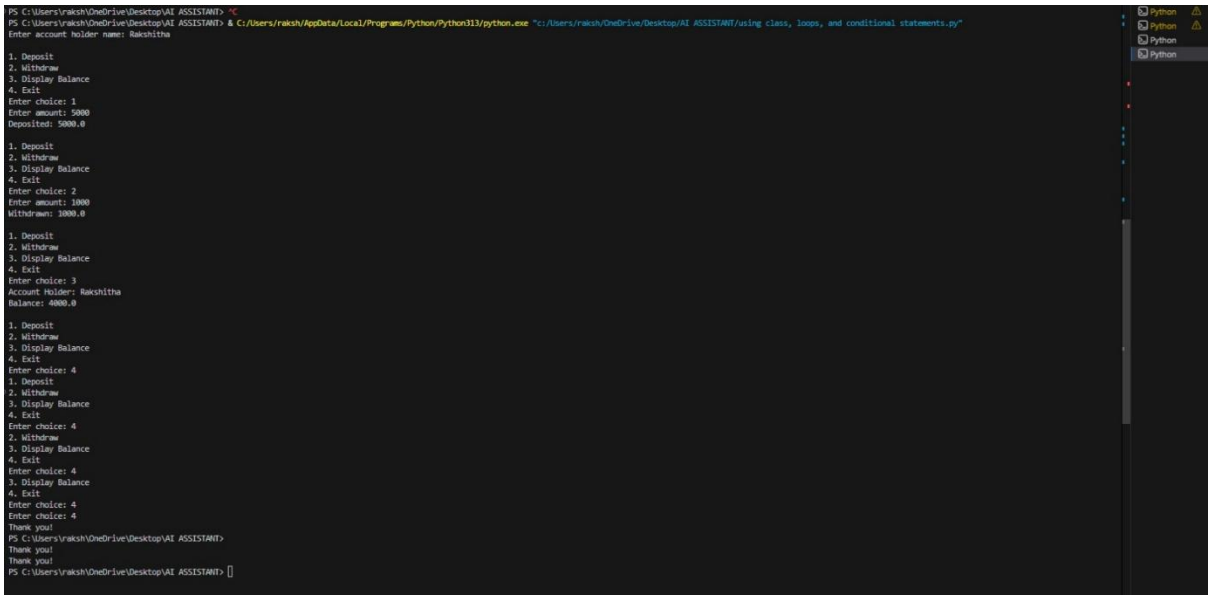
• Reflection on how AI assisted coding productivity.

Prompt:

#Generate a Python program for a simple bank account system using class, loops, and conditional statements.



Output:



Analysis:

Real-world inspired example

Demonstrates program flow clearly