ASSIGNMENT- 8.3

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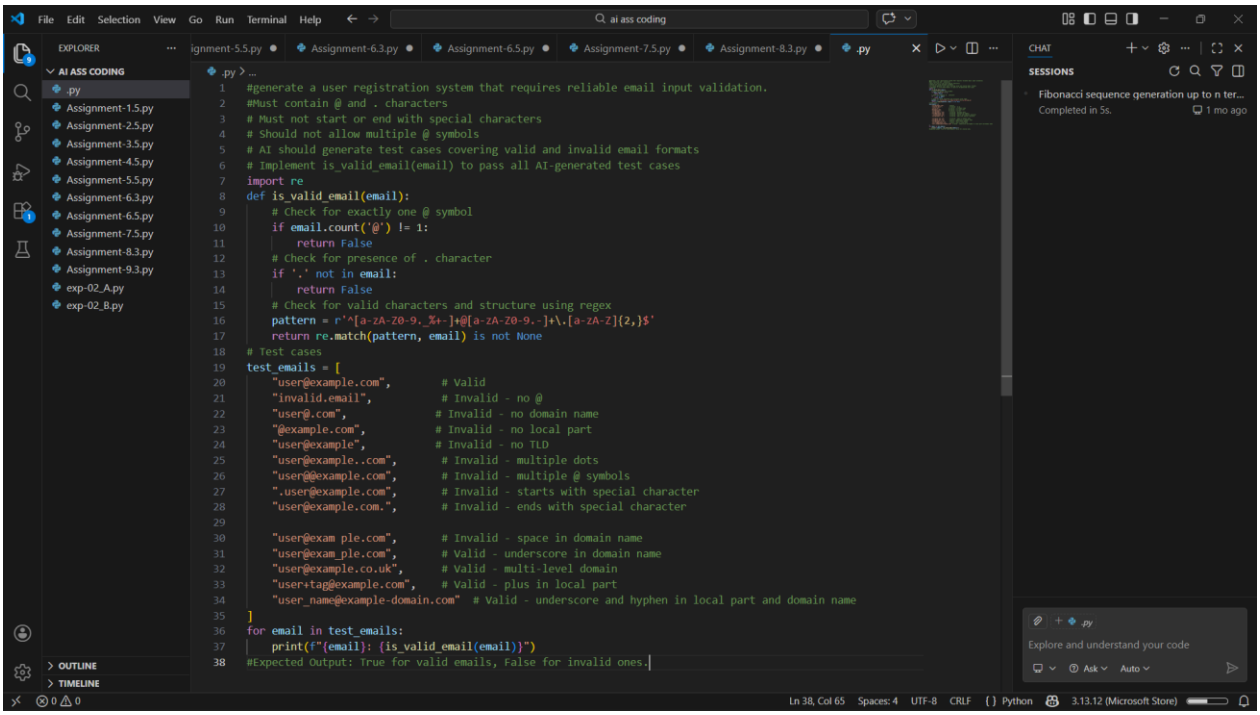
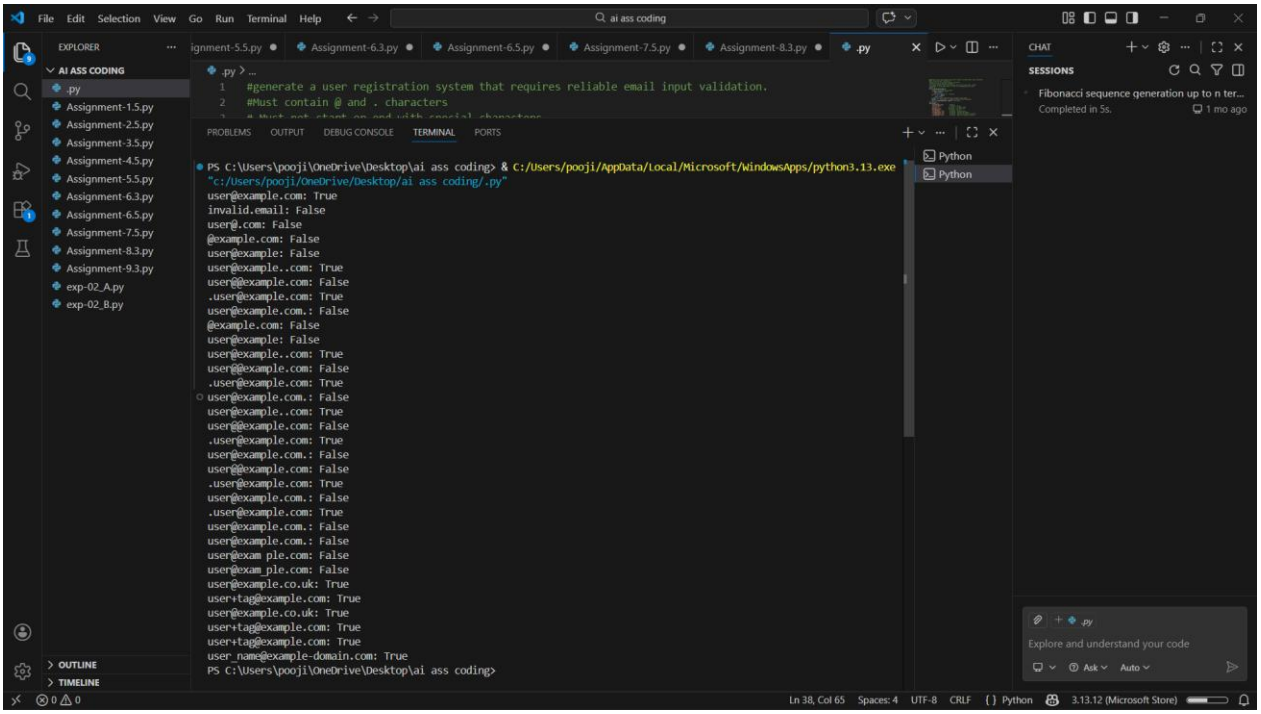
Batch: 20

Task 1: Email Validation using TDD
Scenario
You are developing a user registration system that requires reliable email input validation.
Requirements
• Must contain @ and . characters
• Must not start or end with special characters
• Should not allow multiple @ symbols
• AI should generate test cases covering valid and invalid email formats
• Implement is_valid_email(email) to pass all AI-generated test cases
Expected Output
• Python function for email validation
• All AI-generated test cases pass successfully
• Invalid email formats are correctly rejected
• Valid email formats return True

CODE:

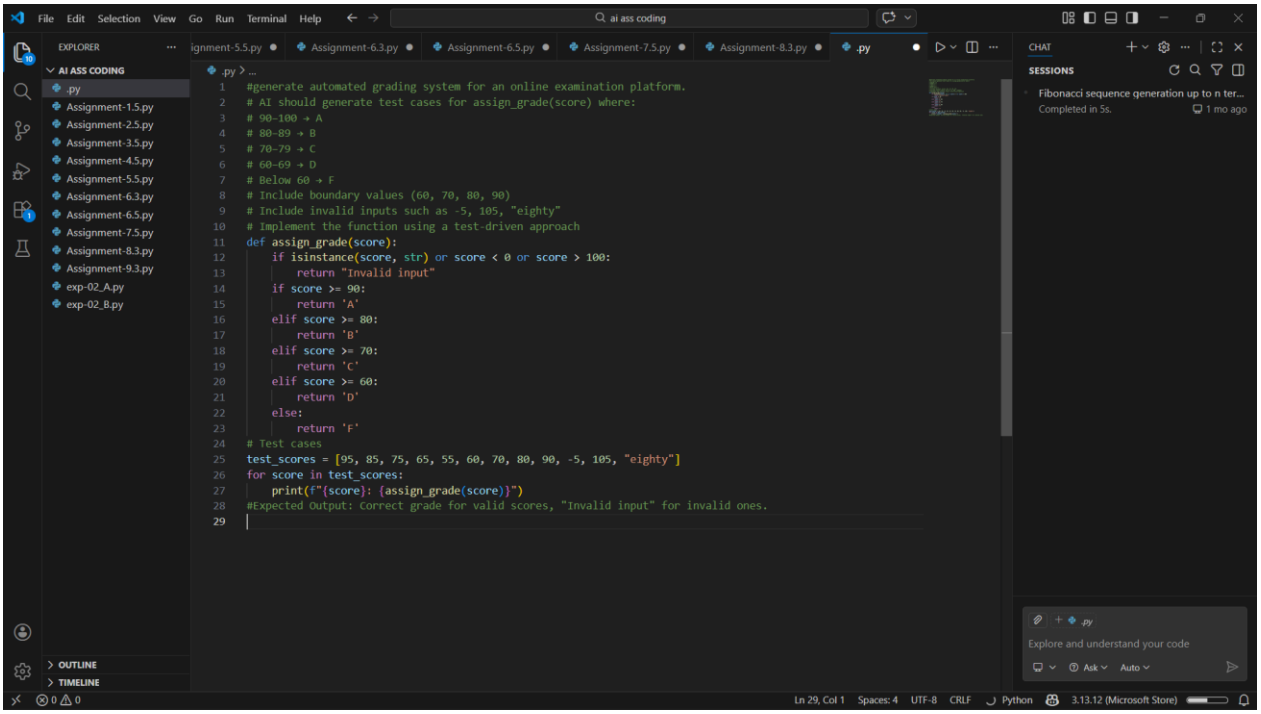


OUTPUT:

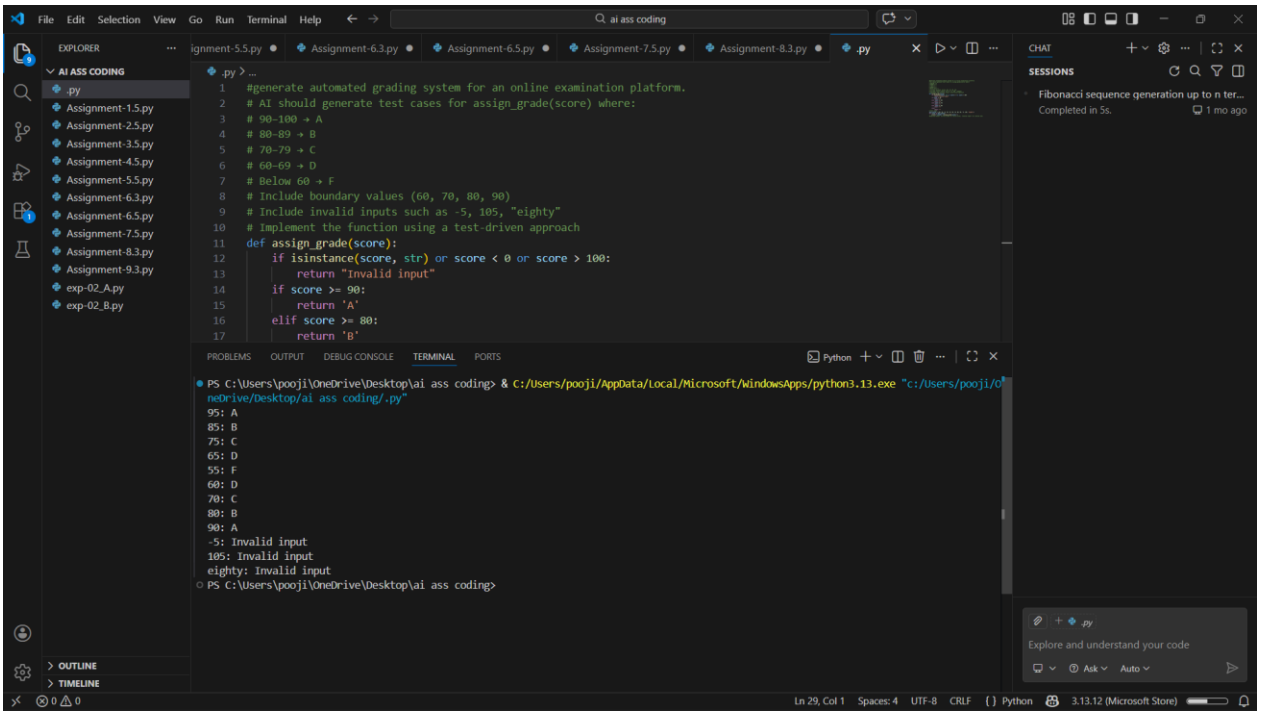


Task 2: Grade Assignment using Loops
Scenario
You are building an automated grading system for an online examination platform.
Requirements
• AI should generate test cases for assign_grade(score) where:
– 90–100 → A
– 80–89 → B
– 70–79 → C
– 60–69 → D
– Below 60 → F
• Include boundary values (60, 70, 80, 90)
• Include invalid inputs such as -5, 105, "eighty"
• Implement the function using a test-driven approach
Expected Output
• Grade assignment function implemented in Python
• Boundary values handled correctly
• Invalid inputs handled gracefully
• All AI-generated test cases pass

CODE:



OUTPUT:



Task 3: Sentence Palindrome Checker

Scenario

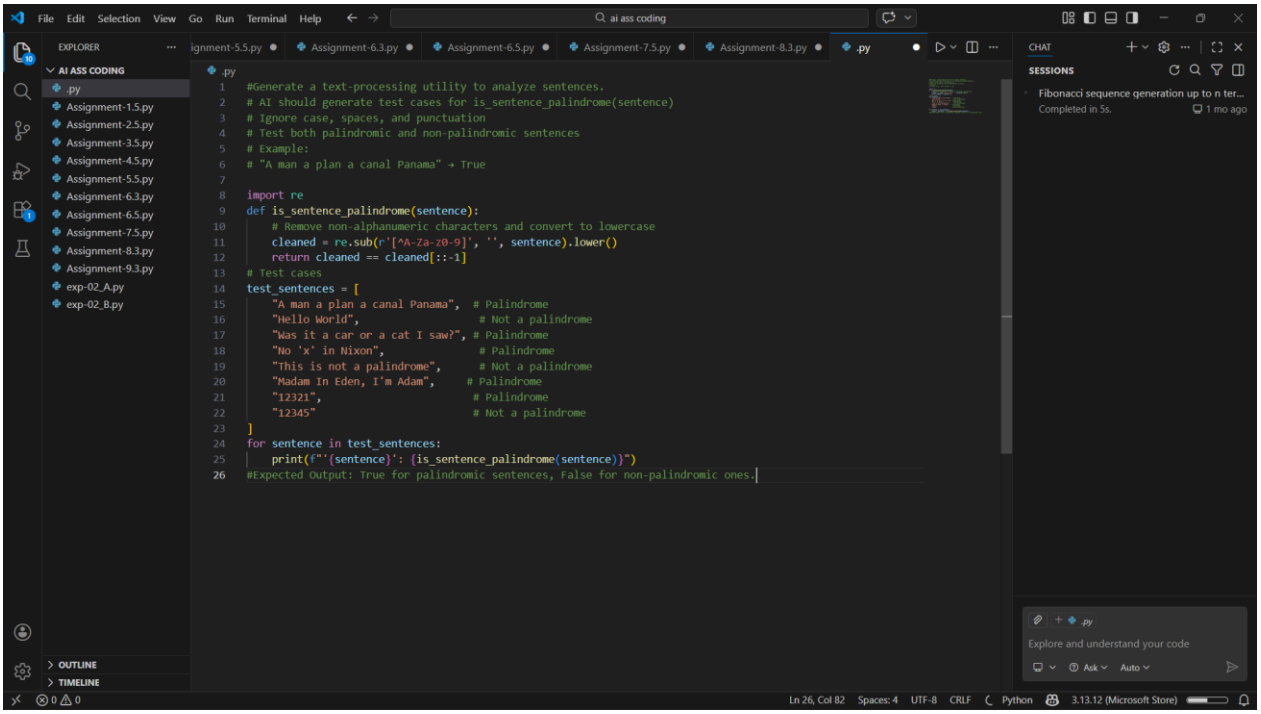
You are developing a text-processing utility to analyze sentences.

Requirements

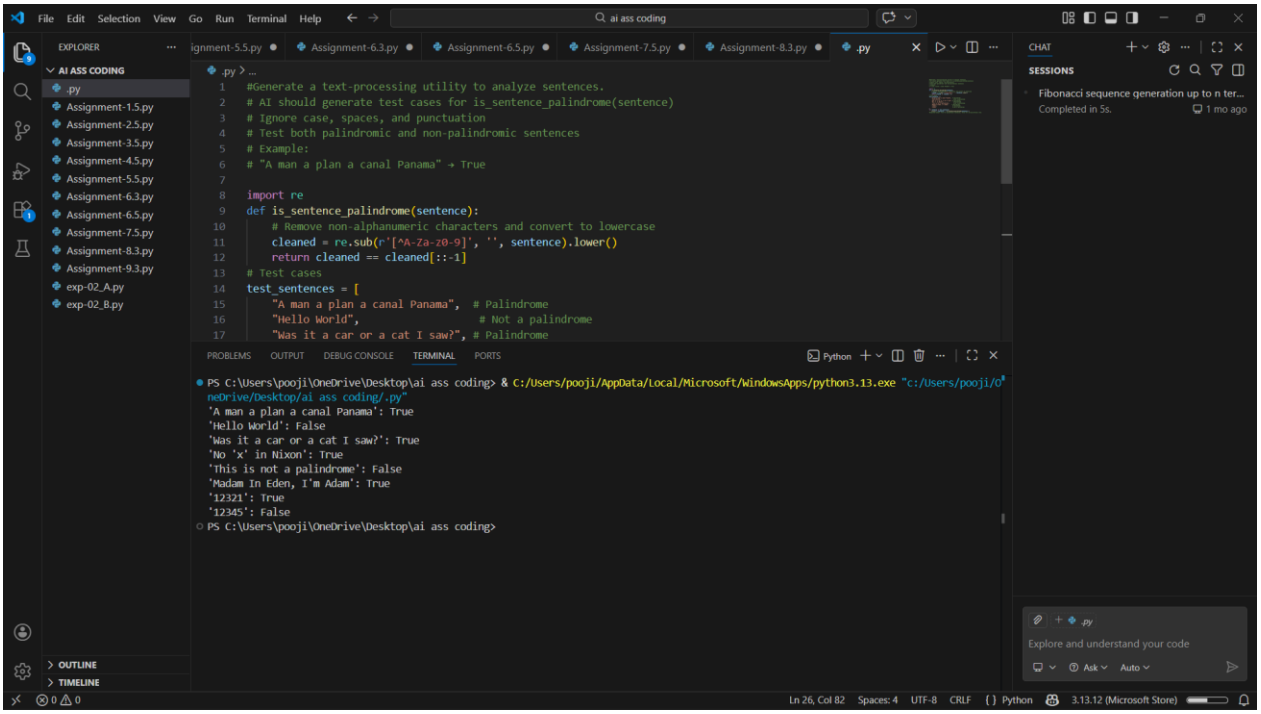
• AI should generate test cases for is_sentence_palindrome(sentence)

• Ignore case, spaces, and punctuation
• Test both palindromic and non-palindromic sentences
• Example:
– "A man a plan a canal Panama" → True
Expected Output
• Function correctly identifies sentence palindromes
• Case and punctuation are ignored
• Returns True or False accurately
• All AI-generated test cases pass

CODE:



OUTPUT:



Task 4: ShoppingCart Class

Scenario

You are designing a basic shopping cart module for an e-commerce application.

Requirements

• AI should generate test cases for the ShoppingCart class

• Class must include the following methods:

– add_item(name, price)

– remove_item(name)

– total_cost()

• Validate correct addition, removal, and cost calculation

• Handle empty cart scenarios

Expected Output

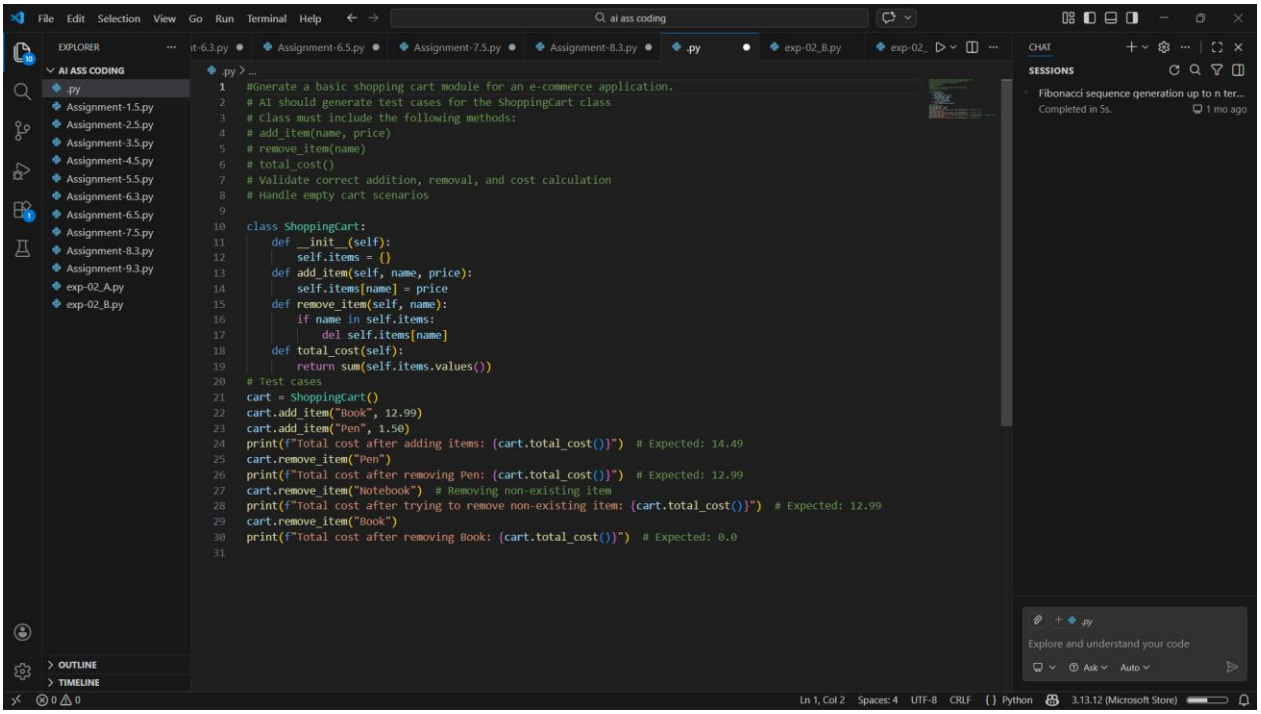
• Fully implemented ShoppingCart class

• All methods pass AI-generated test cases

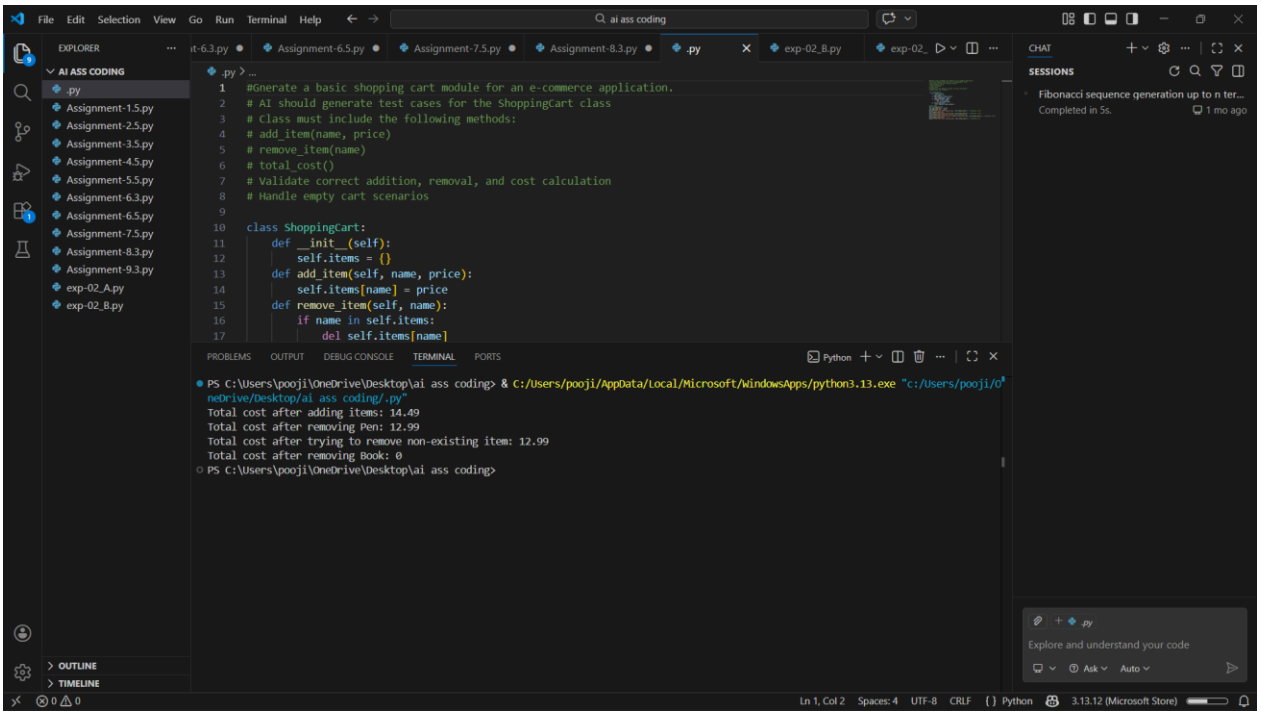
• Total cost is calculated accurately

• Items are added and removed correctly

CODE:



OUTPUT:



Task 5: Date Format Conversion

Scenario

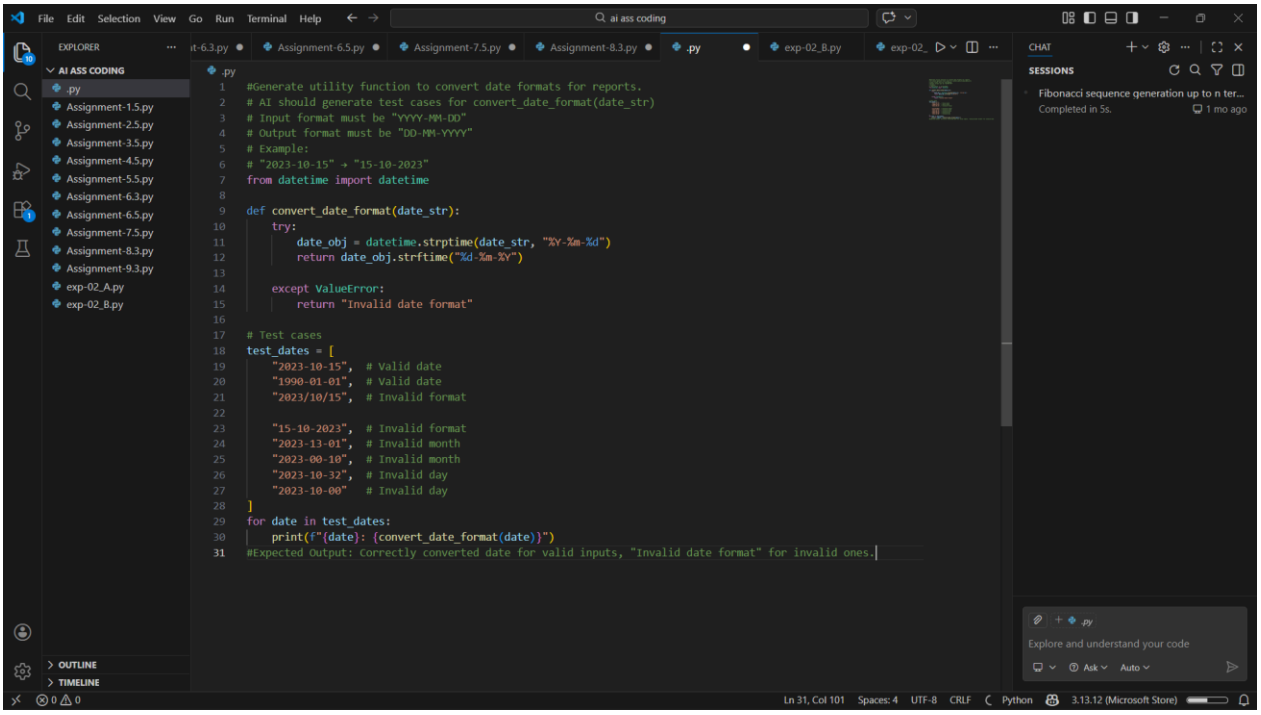
You are creating a utility function to convert date formats for reports.

Requirements

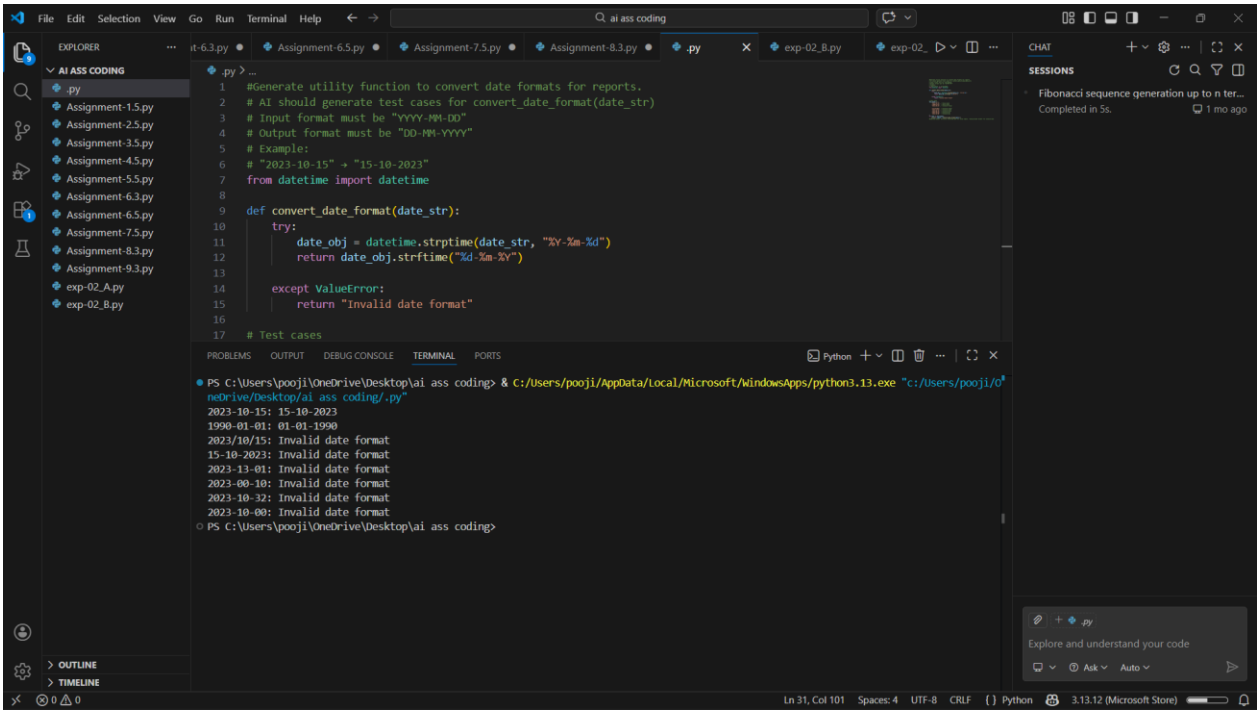
• AI should generate test cases for convert_date_format(date_str)

• Input format must be "YYYY-MM-DD" • Output format must be "DD-MM-YYYY"
• Example:
– "2023-10-15" → "15-10-2023"
Expected Output
• Date conversion function implemented in Python
• Correct format conversion for all valid inputs
• All AI-generated test cases pass successfully

CODE:



OUTPUT:


File Edit Selection View Go Run Terminal Help
ai ass coding
EXPLORER
AI ASS CODING
.py
Assignment-1.5.py
Assignment-2.5.py
Assignment-3.5.py
Assignment-4.5.py
Assignment-5.5.py
Assignment-6.3.py
Assignment-6.5.py
Assignment-7.5.py
Assignment-8.3.py
Assignment-9.3.py
exp-02_A.py
exp-02_B.py
Assignment-6.5.py
Assignment-7.5.py
Assignment-8.3.py
.py
exp-02_B.py
#Generate utility function to convert date formats for reports.
# AI should generate test cases for convert_date_format(date_str)
# Input format must be "YYYY-MM-DD"
# Output format must be "DD-MM-YYYY"
# Example:
# "2023-10-15" → "15-10-2023"
from datetime import datetime
def convert_date_format(date_str):
try:
date_obj = datetime.strptime(date_str, "%Y-%m-%d")
return date_obj.strftime("%d-%m-%Y")
except ValueError:
return "Invalid date format"
Test cases
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python
PS C:\Users\pooji\OneDrive\Desktop\ai ass coding> & C:/Users/pooji/AppData/Local/Microsoft/WindowsApps/python3.13.exe "c:/Users/pooji/OneDrive/Desktop/ai ass coding/.py"
2023-10-15: 15-10-2023
1990-01-01: 01-01-1990
2023/10/15: Invalid date format
15-10-2023: Invalid date format
2023-13-01: Invalid date format
2023-00-10: Invalid date format
2023-10-32: Invalid date format
2023-10-00: Invalid date format
PS C:\Users\pooji\OneDrive\Desktop\ai ass coding>
CHAT
SESSIONS
Fibonacci sequence generation up to n ter...
Completed in 5s.
1 mo ago
.py
Explore and understand your code
Ask
Auto
OUTLINE
TIMELINE
Ln 31, Col 101
Spaces: 4
UTF-8
CRLF
Python
3.13.12 (Microsoft Store)