AI ASSIGNMENT-6.5

Name : D.Varshitha

Hall No. : 2303A52268

Batch : 36

Task Description #1 (AI-Based Code Completion for Conditional

Eligibility Check)

Task: Use an AI tool to generate eligibility logic.

Prompt:

“Generate Python code to check voting eligibility based on age and

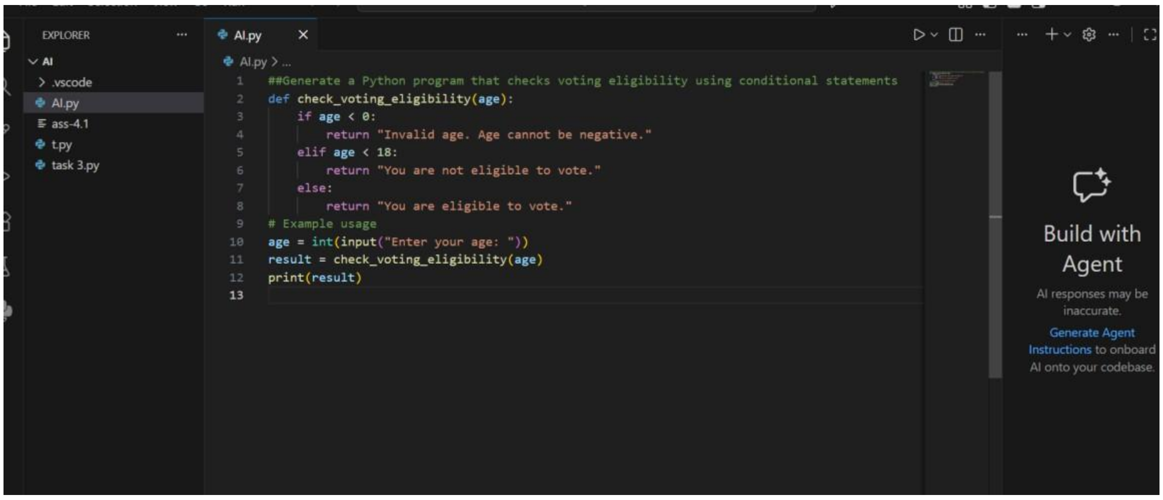
citizenship.”

Expected Output:

• AI-generated conditional logic.

• Correct eligibility decisions.

• Explanation of conditions.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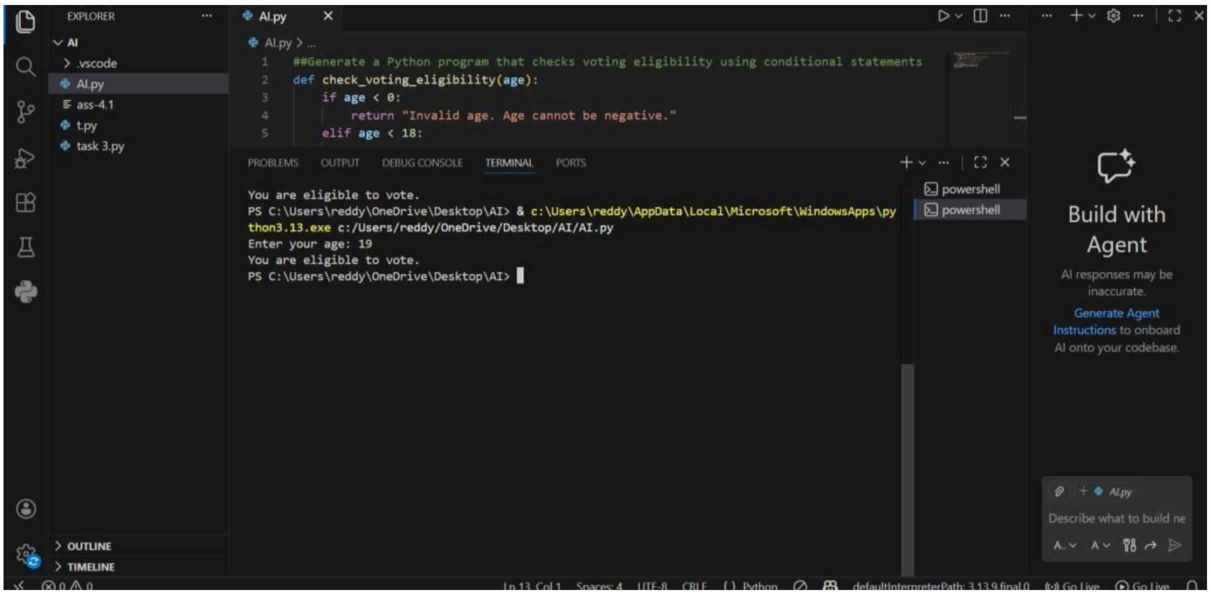
AI.py
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.

```python
##Generate a Python program that checks voting eligibility using conditional statements
def check_voting_eligibility(age):
    if age < 0:
        return "Invalid age. Age cannot be negative."
    elif age < 18:
        return "You are not eligible to vote."
    else:
        return "You are eligible to vote."
# Example usage
age = int(input("Enter your age: "))
result = check_voting_eligibility(age)
print(result)
```

Output:



```
##Generate a Python program that checks voting eligibility using conditional statements
def check_voting_eligibility(age):
    if age < 0:
        return "Invalid age. Age cannot be negative."
    elif age < 18:
```

```
You are eligible to vote.
PS C:\Users\reddy\OneDrive\Desktop\AI> & c:\Users\reddy\AppData\Local\Microsoft\WindowsApps\py
thon3.13.exe c:/Users/reddy/OneDrive/Desktop/AI/AI.py
Enter your age: 19
You are eligible to vote.
PS C:\Users\reddy\OneDrive\Desktop\AI>
```

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

String Processing)

Task: Use an AI tool to process strings using loops.

Prompt:

“Generate Python code to count vowels and consonants in a string

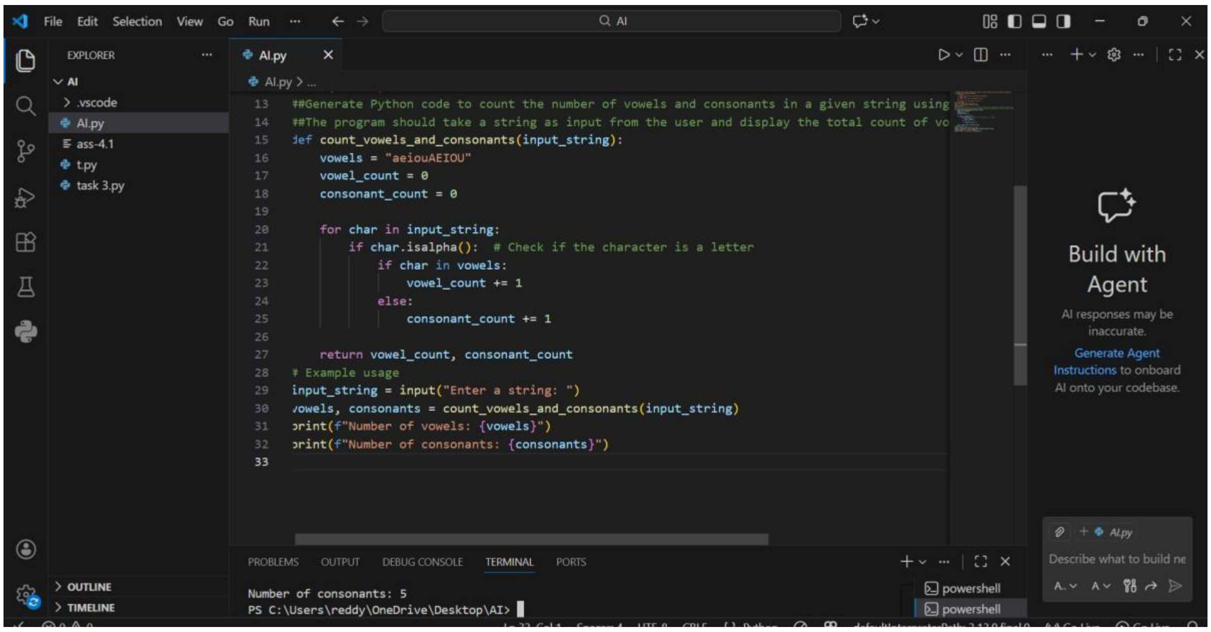
using a loop.”

Expected Output:

• AI-generated string processing logic.

• Correct counts.

• Output verification.



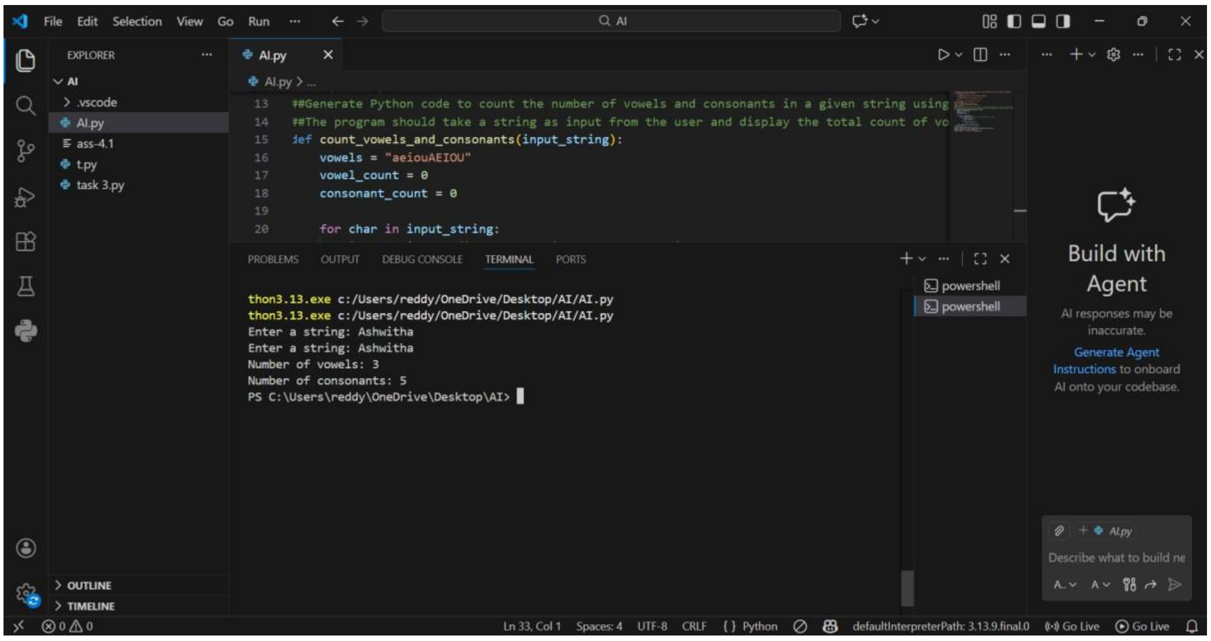
```
##Generate Python code to count the number of vowels and consonants in a given string using
##The program should take a string as input from the user and display the total count of vo
def count_vowels_and_consonants(input_string):
    vowels = "aeiouAEIOU"
    vowel_count = 0
    consonant_count = 0

    for char in input_string:
        if char.isalpha():  # Check if the character is a letter
            if char in vowels:
                vowel_count += 1
            else:
                consonant_count += 1

    return vowel_count, consonant_count
# Example usage
input_string = input("Enter a string: ")
vowels, consonants = count_vowels_and_consonants(input_string)
print(f"Number of vowels: {vowels}")
print(f"Number of consonants: {consonants}")
```

```
Number of consonants: 5
PS C:\Users\reddy\OneDrive\Desktop\AI>
```

Output:



```python
##Generate Python code to count the number of vowels and consonants in a given string using
##The program should take a string as input from the user and display the total count of vo
def count_vowels_and_consonants(input_string):
    vowels = "aeiouAEIOU"
    vowel_count = 0
    consonant_count = 0

    for char in input_string:
```

```
thon3.13.exe c:/Users/reddy/OneDrive/Desktop/AI/AI.py
thon3.13.exe c:/Users/reddy/OneDrive/Desktop/AI/AI.py
Enter a string: Ashwitha
Enter a string: Ashwitha
Number of vowels: 3
Number of consonants: 5
PS C:\Users\reddy\OneDrive\Desktop\AI>
```

Task Description #3 (AI-Assisted Code Completion Reflection

Task)

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

loops, and conditionals.

Prompt:

“Generate a Python program for a library management system

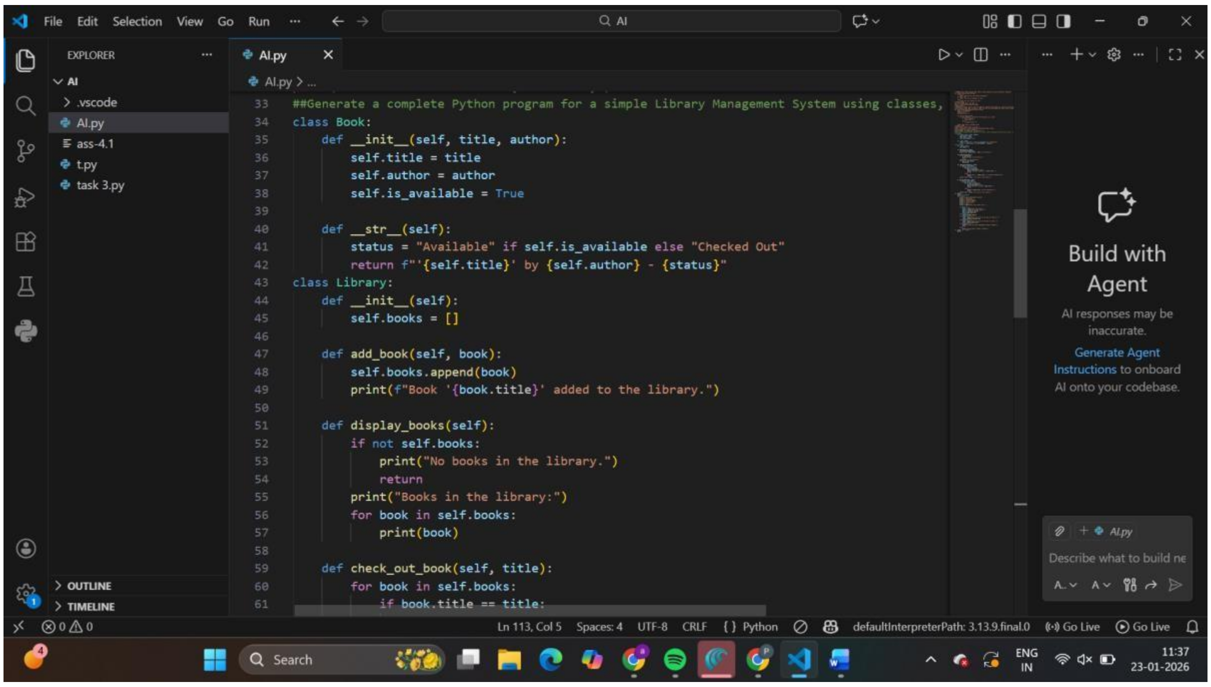
using classes, loops, and conditional statements.”

Expected Output:

• Complete AI-generated program.

• Review of AI suggestions quality.

• Short reflection on AI-assisted coding experience.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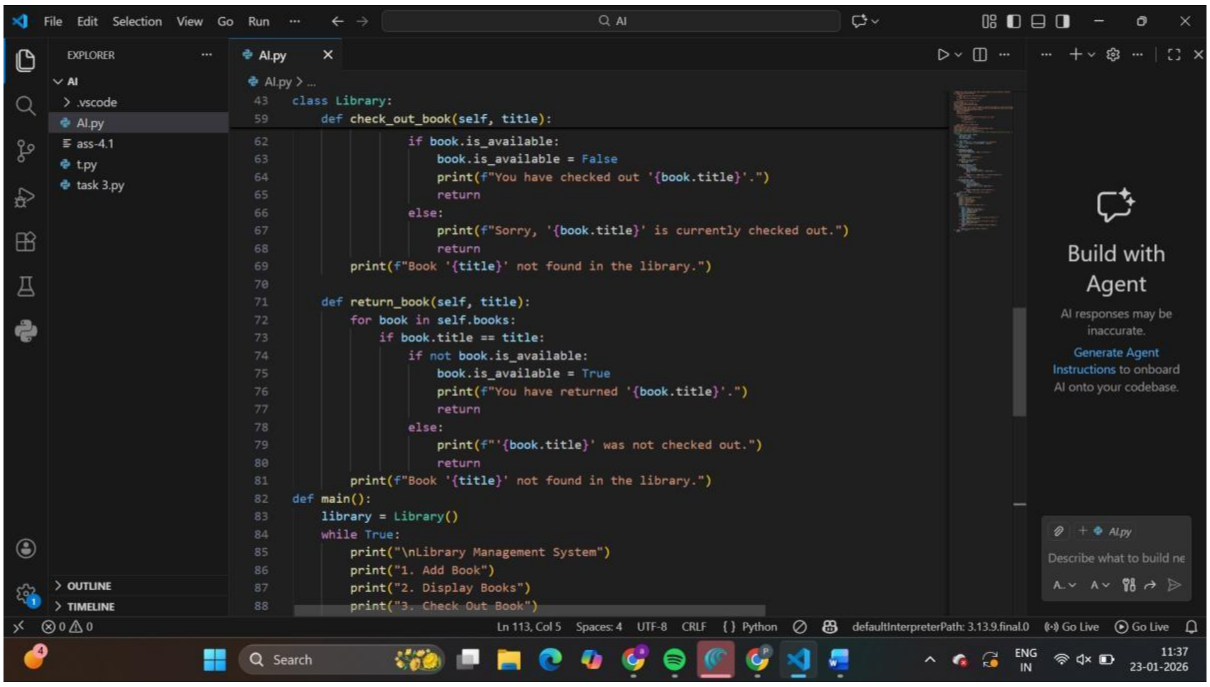
```python
##Generate a complete Python program for a simple Library Management System using classes,
class Book:
    def __init__(self, title, author):
        self.title = title
        self.author = author
        self.is_available = True

    def __str__(self):
        status = "Available" if self.is_available else "Checked Out"
        return f"'{self.title}' by {self.author} - {status}"
class Library:
    def __init__(self):
        self.books = []

    def add_book(self, book):
        self.books.append(book)
        print(f"Book '{book.title}' added to the library.")

    def display_books(self):
        if not self.books:
            print("No books in the library.")
            return
        print("Books in the library:")
        for book in self.books:
            print(book)

    def check_out_book(self, title):
        for book in self.books:
            if book.title == title:
```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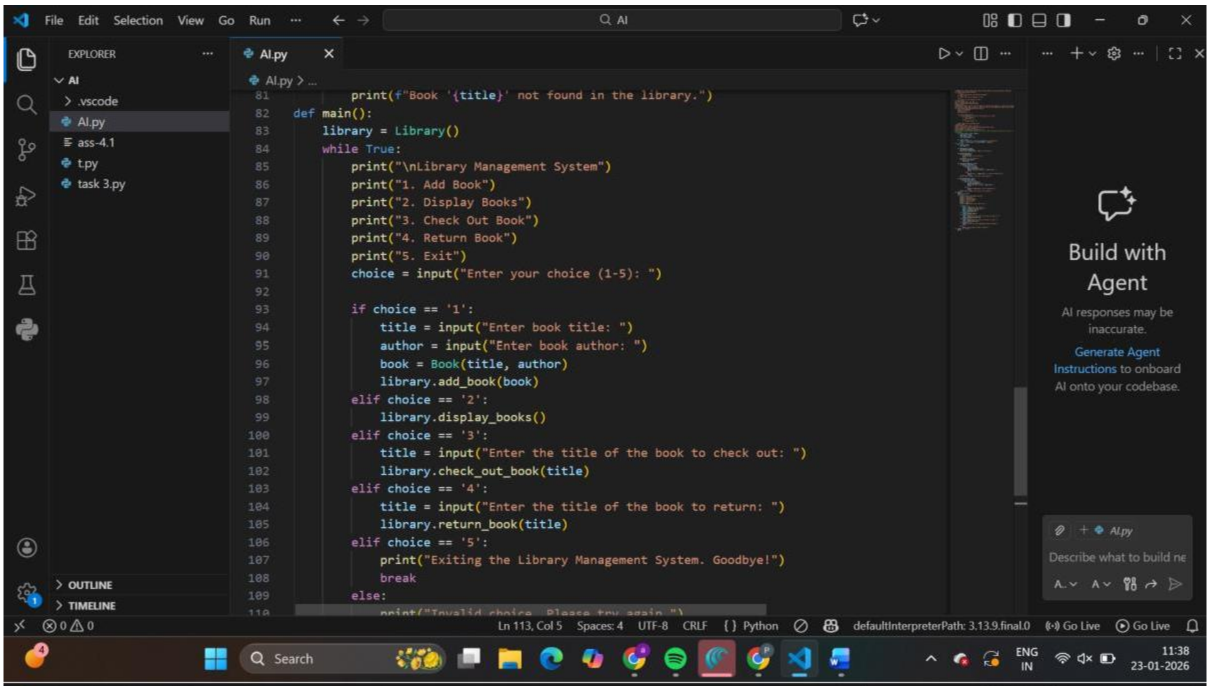
```python
class Library:
    def check_out_book(self, title):
                if book.is_available:
                    book.is_available = False
                    print(f"You have checked out '{book.title}'.")
                    return
                else:
                    print(f"Sorry, '{book.title}' is currently checked out.")
                    return
        print(f"Book '{title}' not found in the library.")

    def return_book(self, title):
        for book in self.books:
            if book.title == title:
                if not book.is_available:
                    book.is_available = True
                    print(f"You have returned '{book.title}'.")
                    return
                else:
                    print(f"'{book.title}' was not checked out.")
                    return
        print(f"Book '{title}' not found in the library.")
def main():
    library = Library()
    while True:
        print("\nLibrary Management System")
        print("1. Add Book")
        print("2. Display Books")
        print("3. Check Out Book")
```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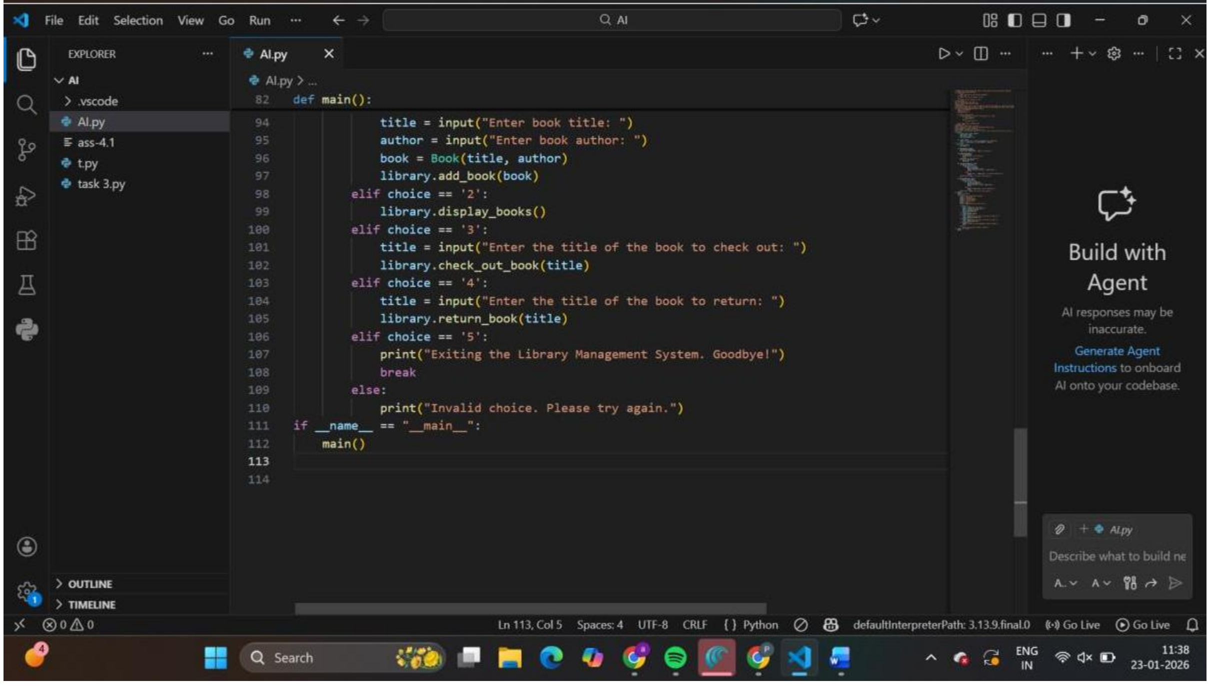
```python
        print(f"Book '{title}' not found in the library.")
def main():
    library = Library()
    while True:
        print("\nLibrary Management System")
        print("1. Add Book")
        print("2. Display Books")
        print("3. Check Out Book")
        print("4. Return Book")
        print("5. Exit")
        choice = input("Enter your choice (1-5): ")

        if choice == '1':
            title = input("Enter book title: ")
            author = input("Enter book author: ")
            book = Book(title, author)
            library.add_book(book)
        elif choice == '2':
            library.display_books()
        elif choice == '3':
            title = input("Enter the title of the book to check out: ")
            library.check_out_book(title)
        elif choice == '4':
            title = input("Enter the title of the book to return: ")
            library.return_book(title)
        elif choice == '5':
            print("Exiting the Library Management System. Goodbye!")
            break
        else:
            print("Invalid choice. Please try again.")
```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.vscode
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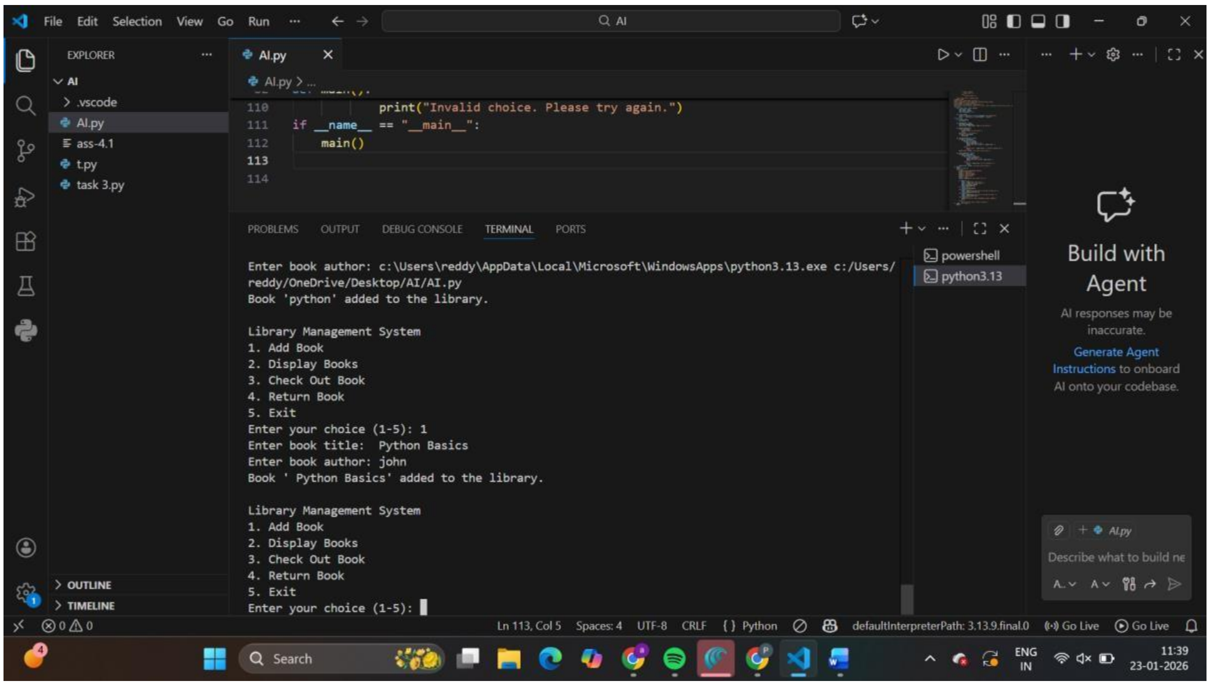
Describe what to build ne
Ln 113, Col 5 Spaces: 4 UTF-8 CRLF Python
defaultInterpreterPath: 3.13.9.final.0
Go Live
11:38
23-01-2026

```python
def main():
            title = input("Enter book title: ")
            author = input("Enter book author: ")
            book = Book(title, author)
            library.add_book(book)
        elif choice == '2':
            library.display_books()
        elif choice == '3':
            title = input("Enter the title of the book to check out: ")
            library.check_out_book(title)
        elif choice == '4':
            title = input("Enter the title of the book to return: ")
            library.return_book(title)
        elif choice == '5':
            print("Exiting the Library Management System. Goodbye!")
            break
        else:
            print("Invalid choice. Please try again.")
if __name__ == "__main__":
    main()
```

Output:



```
            print("Invalid choice. Please try again.")
if __name__ == "__main__":
    main()
```

```
Enter book author: c:\Users\reddy\AppData\Local\Microsoft\WindowsApps\python3.13.exe c:/Users/
reddy/OneDrive/Desktop/AI/AI.py
Book 'python' added to the library.

Library Management System
1. Add Book
2. Display Books
3. Check Out Book
4. Return Book
5. Exit
Enter your choice (1-5): 1
Enter book title:  Python Basics
Enter book author: john
Book ' Python Basics' added to the library.

Library Management System
1. Add Book
2. Display Books
3. Check Out Book
4. Return Book
5. Exit
Enter your choice (1-5): 
```

Task Description #4 (AI-Assisted Code Completion for Class-

Based Attendance System)

Task: Use an AI tool to generate an attendance management class.

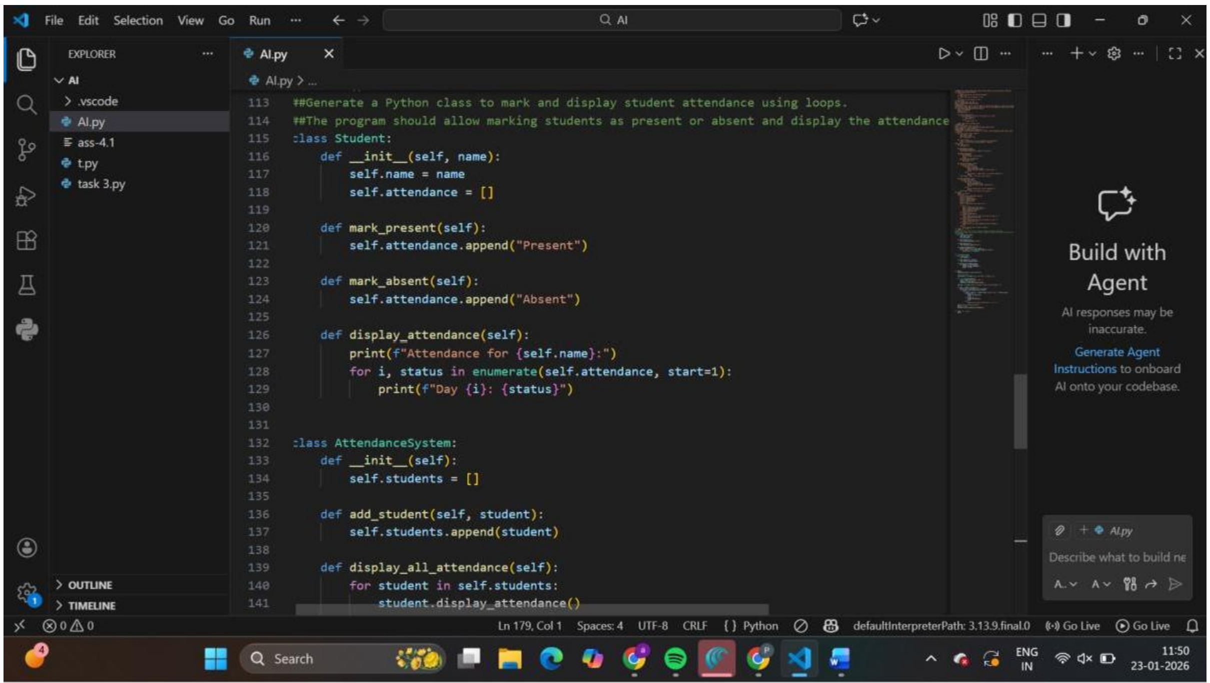
Prompt: “Generate a Python class to mark and display student

attendance using loops.”

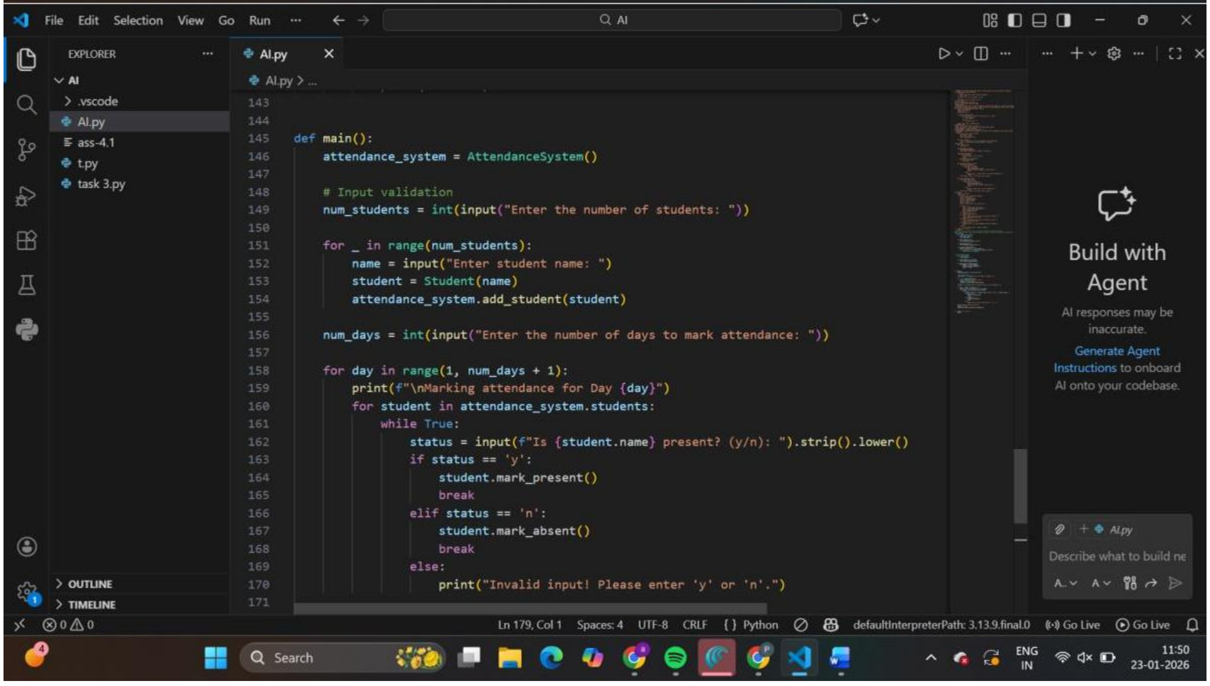
Expected Output:

• AI-generated attendance logic.

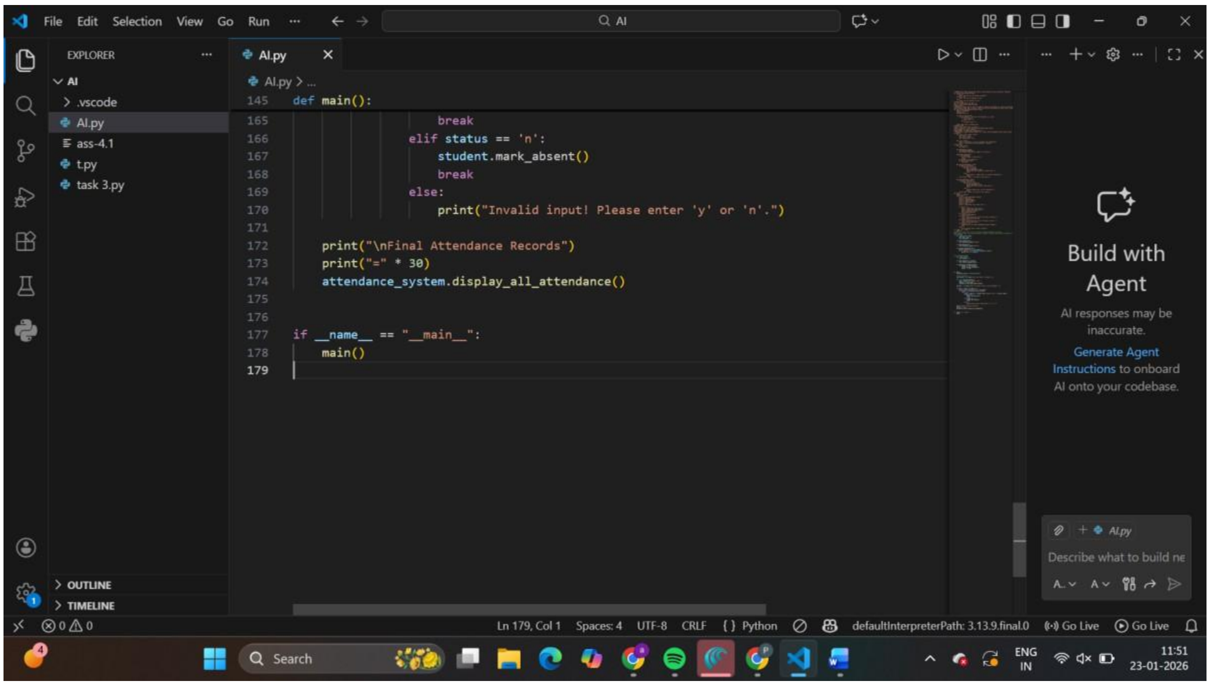
• Correct display of attendance.



```python
##Generate a Python class to mark and display student attendance using loops.
##The program should allow marking students as present or absent and display the attendance
class Student:
    def __init__(self, name):
        self.name = name
        self.attendance = []

    def mark_present(self):
        self.attendance.append("Present")

    def mark_absent(self):
        self.attendance.append("Absent")

    def display_attendance(self):
        print(f"Attendance for {self.name}:")
        for i, status in enumerate(self.attendance, start=1):
            print(f"Day {i}: {status}")


class AttendanceSystem:
    def __init__(self):
        self.students = []

    def add_student(self, student):
        self.students.append(student)

    def display_all_attendance(self):
        for student in self.students:
            student.display_attendance()
```

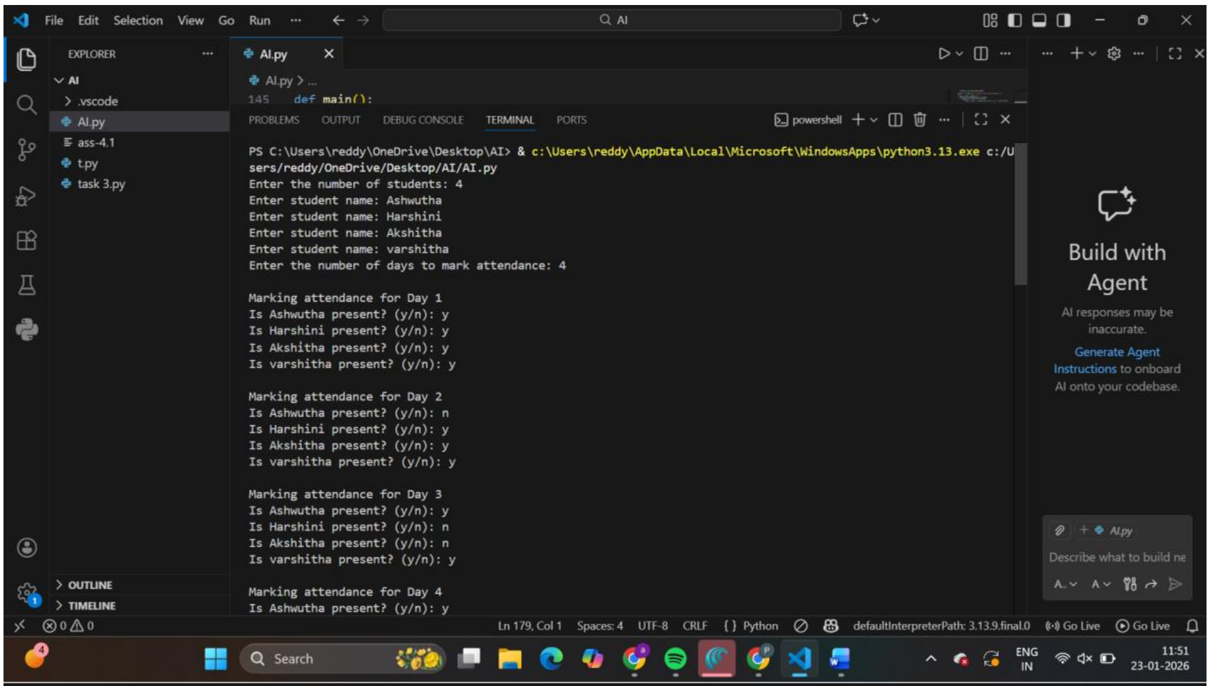


```python


def main():
    attendance_system = AttendanceSystem()

    # Input validation
    num_students = int(input("Enter the number of students: "))

    for _ in range(num_students):
        name = input("Enter student name: ")
        student = Student(name)
        attendance_system.add_student(student)

    num_days = int(input("Enter the number of days to mark attendance: "))

    for day in range(1, num_days + 1):
        print(f"\nMarking attendance for Day {day}")
        for student in attendance_system.students:
            while True:
                status = input(f"Is {student.name} present? (y/n): ").strip().lower()
                if status == 'y':
                    student.mark_present()
                    break
                elif status == 'n':
                    student.mark_absent()
                    break
                else:
                    print("Invalid input! Please enter 'y' or 'n'.")

```

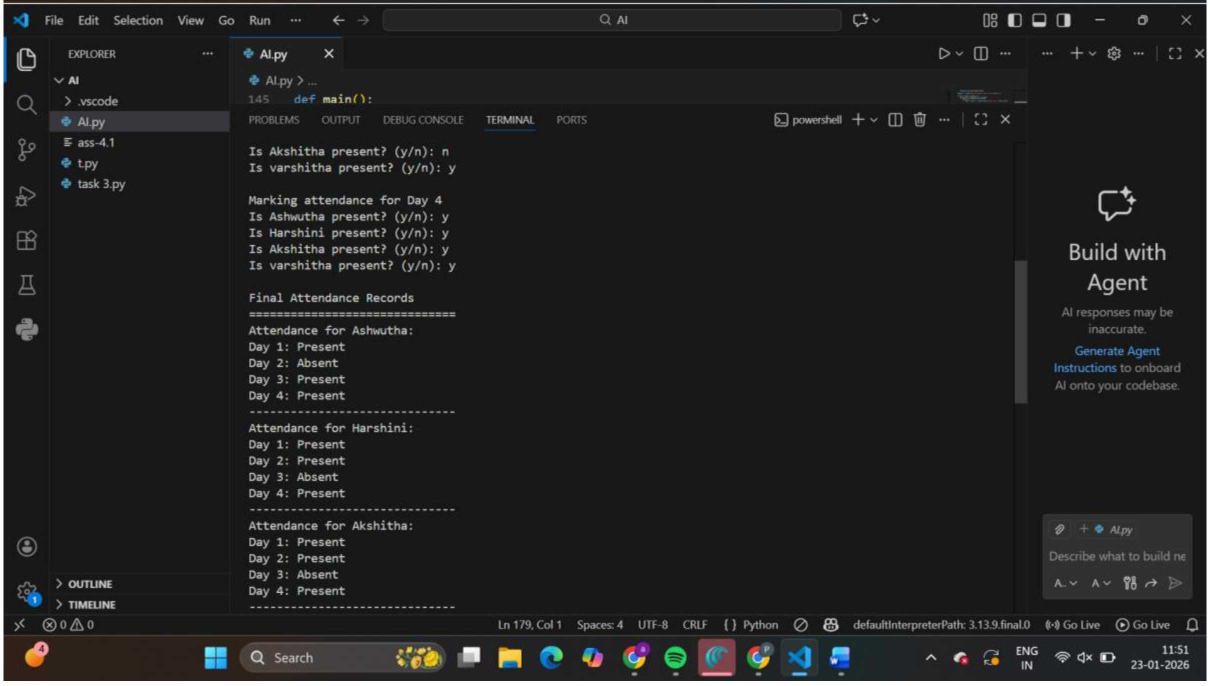


```python
def main():
                    break
                elif status == 'n':
                    student.mark_absent()
                    break
                else:
                    print("Invalid input! Please enter 'y' or 'n'.")

    print("\nFinal Attendance Records")
    print("=" * 30)
    attendance_system.display_all_attendance()


if __name__ == "__main__":
    main()

```

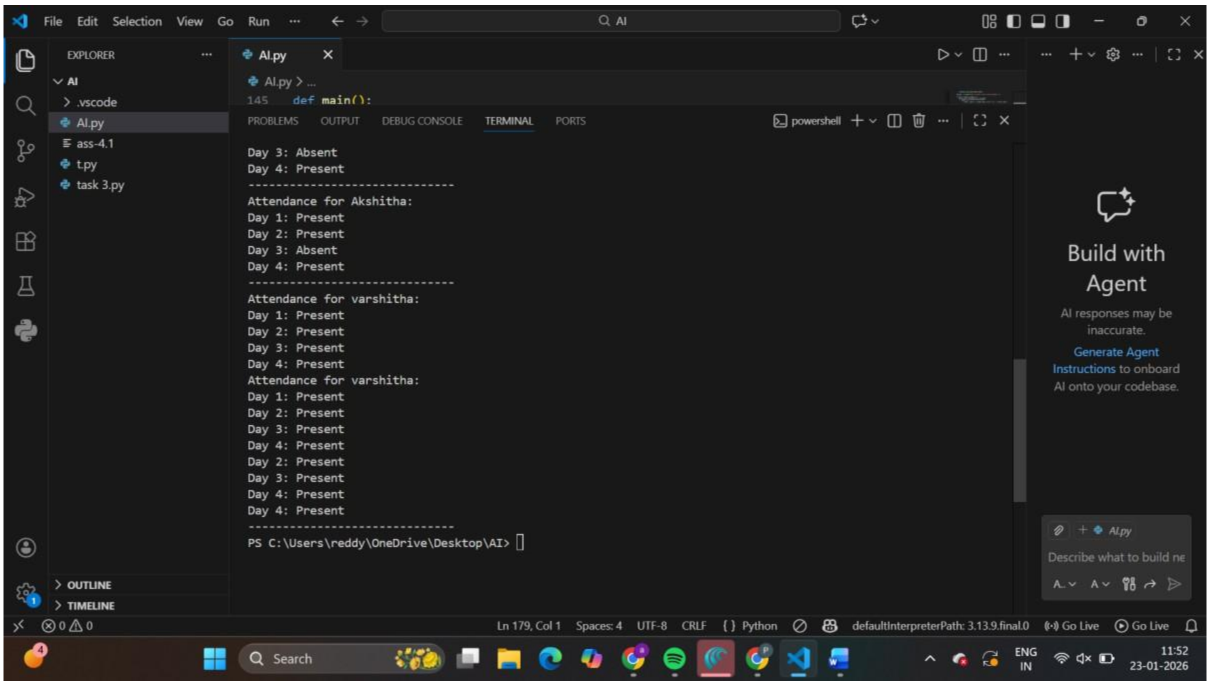
Output:



```
PS C:\Users\reddy\OneDrive\Desktop\AI> & c:\Users\reddy\AppData\Local\Microsoft\WindowsApps\python3.13.exe c:/U
sers/reddy/OneDrive/Desktop/AI/AI.py
Enter the number of students: 4
Enter student name: Ashwutha
Enter student name: Harshini
Enter student name: Akshitha
Enter student name: varshitha
Enter the number of days to mark attendance: 4

Marking attendance for Day 1
Is Ashwutha present? (y/n): y
Is Harshini present? (y/n): y
Is Akshitha present? (y/n): y
Is varshitha present? (y/n): y

Marking attendance for Day 2
Is Ashwutha present? (y/n): n
Is Harshini present? (y/n): y
Is Akshitha present? (y/n): y
Is varshitha present? (y/n): y

Marking attendance for Day 3
Is Ashwutha present? (y/n): y
Is Harshini present? (y/n): n
Is Akshitha present? (y/n): n
Is varshitha present? (y/n): y

Marking attendance for Day 4
Is Ashwutha present? (y/n): y
```



```
Is Akshitha present? (y/n): n
Is varshitha present? (y/n): y

Marking attendance for Day 4
Is Ashwutha present? (y/n): y
Is Harshini present? (y/n): y
Is Akshitha present? (y/n): y
Is varshitha present? (y/n): y

Final Attendance Records
==============================
Attendance for Ashwutha:
Day 1: Present
Day 2: Absent
Day 3: Present
Day 4: Present
------------------------------
Attendance for Harshini:
Day 1: Present
Day 2: Present
Day 3: Absent
Day 4: Present
------------------------------
Attendance for Akshitha:
Day 1: Present
Day 2: Present
Day 3: Absent
Day 4: Present
------------------------------
```



```
Day 3: Absent
Day 4: Present
------------------------------
Attendance for Akshitha:
Day 1: Present
Day 2: Present
Day 3: Absent
Day 4: Present
------------------------------
Attendance for varshitha:
Day 1: Present
Day 2: Present
Day 3: Present
Day 4: Present
Attendance for varshitha:
Day 1: Present
Day 2: Present
Day 3: Present
Day 4: Present
Day 2: Present
Day 3: Present
Day 4: Present
Day 4: Present
------------------------------
PS C:\Users\reddy\OneDrive\Desktop\AI>
```

Task Description #5 (AI-Based Code Completion for Conditional

Menu Navigation)

Task: Use an AI tool to complete a navigation menu.

Prompt: “Generate a Python program using loops and conditionals

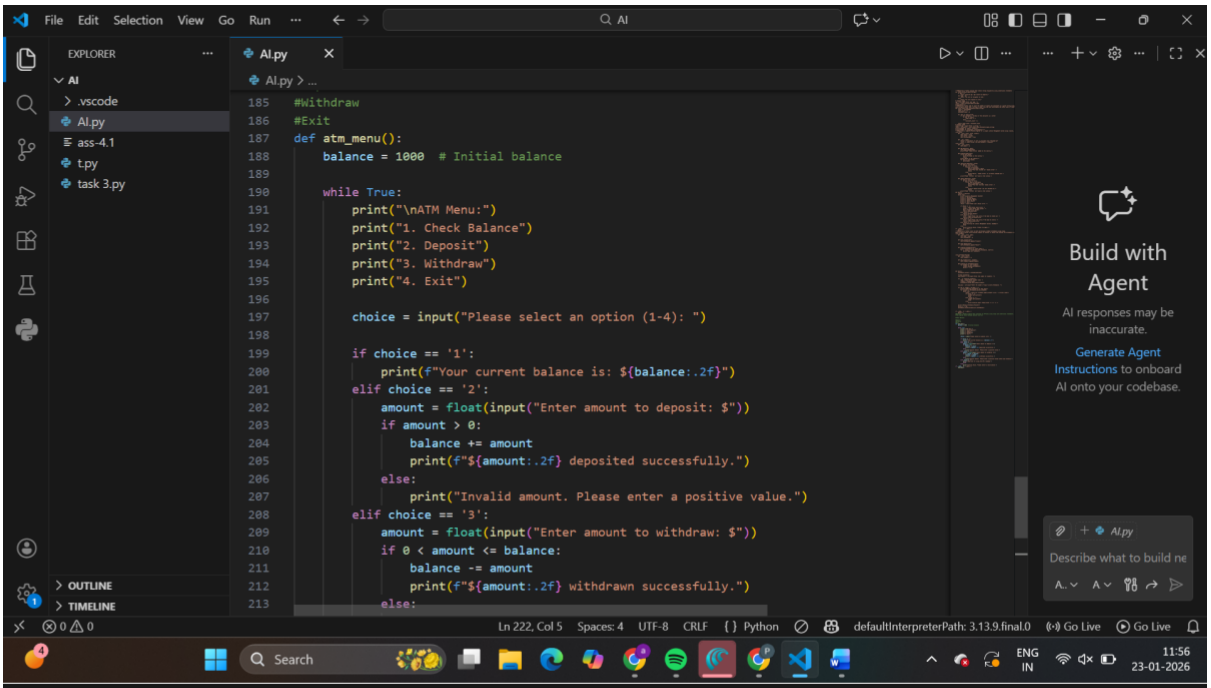
to simulate an ATM menu.”

Expected Output:

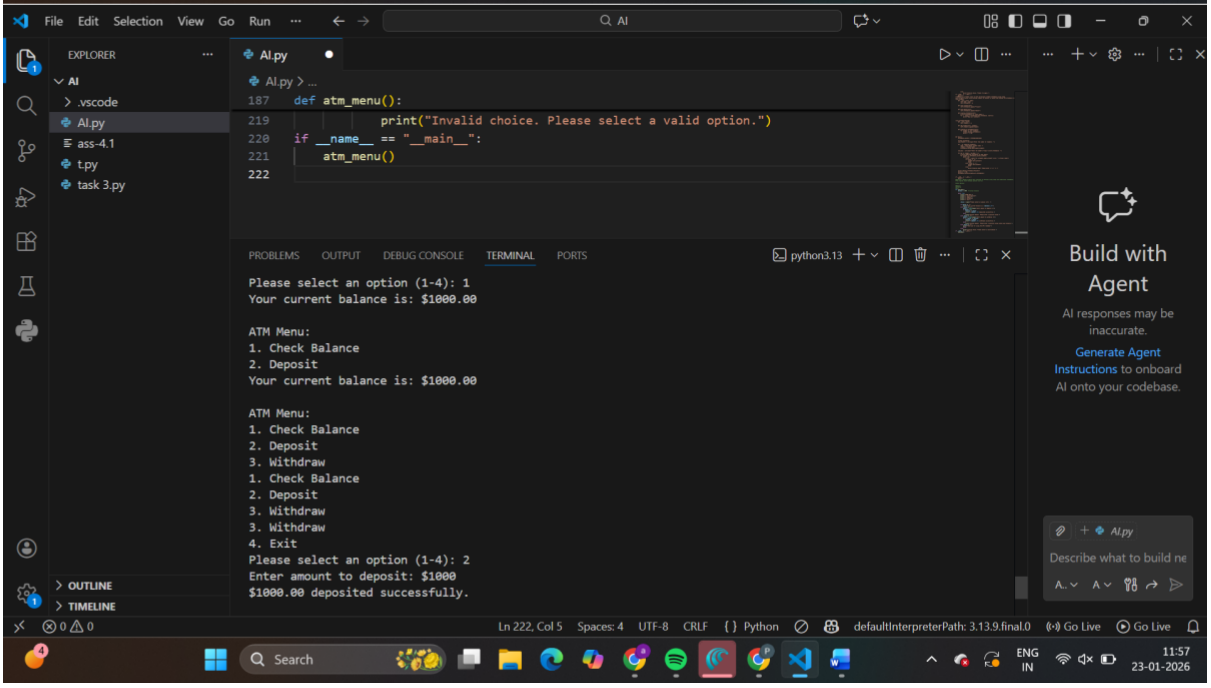
• AI-generated menu logic.

• Correct option handling.

• Output verification.

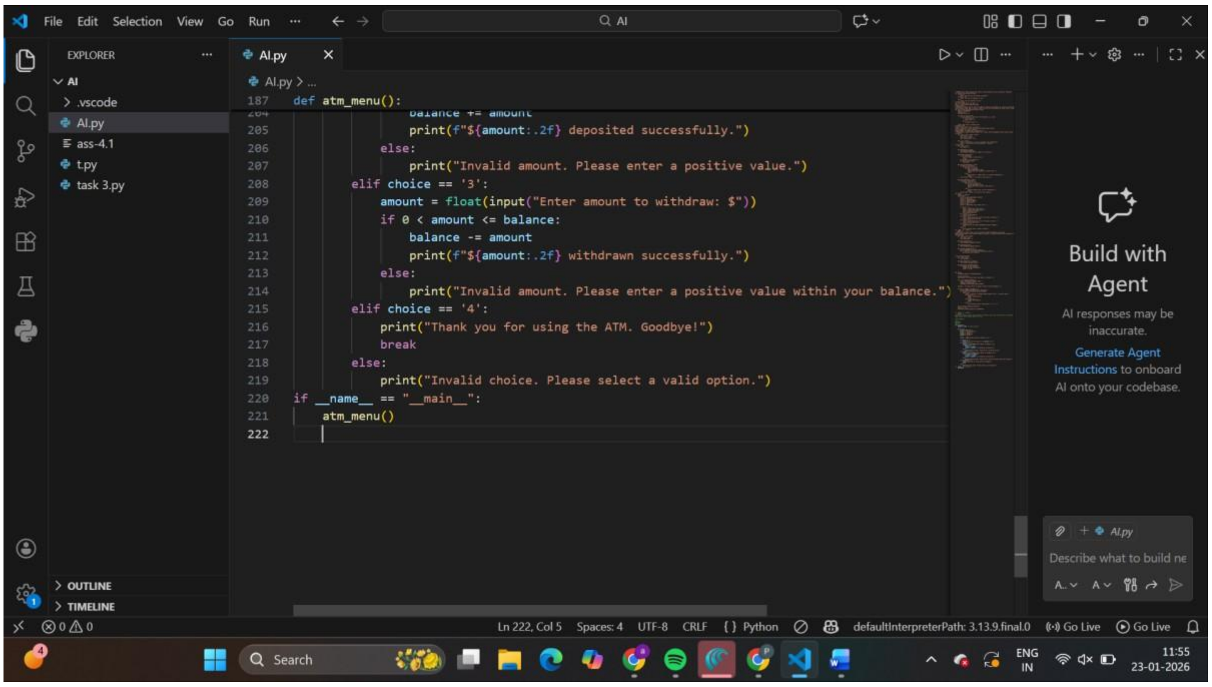


```python
#Withdraw
#Exit
def atm_menu():
    balance = 1000  # Initial balance

    while True:
        print("\nATM Menu:")
        print("1. Check Balance")
        print("2. Deposit")
        print("3. Withdraw")
        print("4. Exit")

        choice = input("Please select an option (1-4): ")

        if choice == '1':
            print(f"Your current balance is: ${balance:.2f}")
        elif choice == '2':
            amount = float(input("Enter amount to deposit: $"))
            if amount > 0:
                balance += amount
                print(f"${amount:.2f} deposited successfully.")
            else:
                print("Invalid amount. Please enter a positive value.")
        elif choice == '3':
            amount = float(input("Enter amount to withdraw: $"))
            if 0 < amount <= balance:
                balance -= amount
                print(f"${amount:.2f} withdrawn successfully.")
            else:
```



```python
def atm_menu():
            print("Invalid choice. Please select a valid option.")
if __name__ == "__main__":
    atm_menu()
```

```
Please select an option (1-4): 1
Your current balance is: $1000.00

ATM Menu:
1. Check Balance
2. Deposit
Your current balance is: $1000.00

ATM Menu:
1. Check Balance
2. Deposit
3. Withdraw
1. Check Balance
2. Deposit
3. Withdraw
3. Withdraw
4. Exit
Please select an option (1-4): 2
Enter amount to deposit: $1000
$1000.00 deposited successfully.
```



```python
def atm_menu():
                balance += amount
                print(f"${amount:.2f} deposited successfully.")
            else:
                print("Invalid amount. Please enter a positive value.")
        elif choice == '3':
            amount = float(input("Enter amount to withdraw: $"))
            if 0 < amount <= balance:
                balance -= amount
                print(f"${amount:.2f} withdrawn successfully.")
            else:
                print("Invalid amount. Please enter a positive value within your balance.")
        elif choice == '4':
            print("Thank you for using the ATM. Goodbye!")
            break
        else:
            print("Invalid choice. Please select a valid option.")
if __name__ == "__main__":
    atm_menu()
```

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