AI ASSISTED CODING LAB - 6.5

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G.Rishika

Batch – 35

TASK 1:

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.”

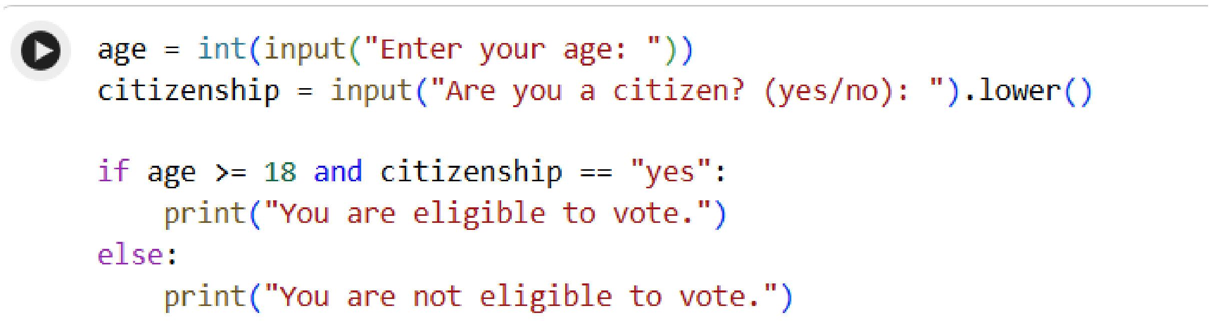
Expected Output:

• AI-generated conditional logic.

• Correct eligibility decisions.

• Explanation of conditions.

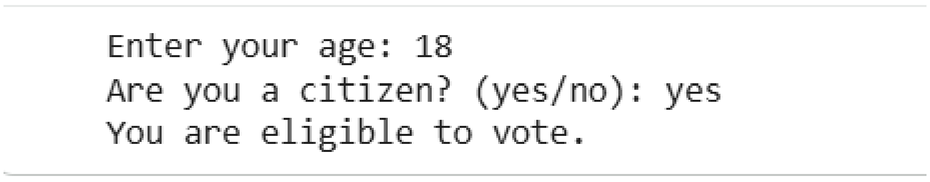
CODE:



```python
age = int(input("Enter your age: "))
citizenship = input("Are you a citizen? (yes/no): ").lower()

if age >= 18 and citizenship == "yes":
    print("You are eligible to vote.")
else:
    print("You are not eligible to vote.")
```

OUTPUT:



```
Enter your age: 18
Are you a citizen? (yes/no): yes
You are eligible to vote.
```

TASK - 2

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.”

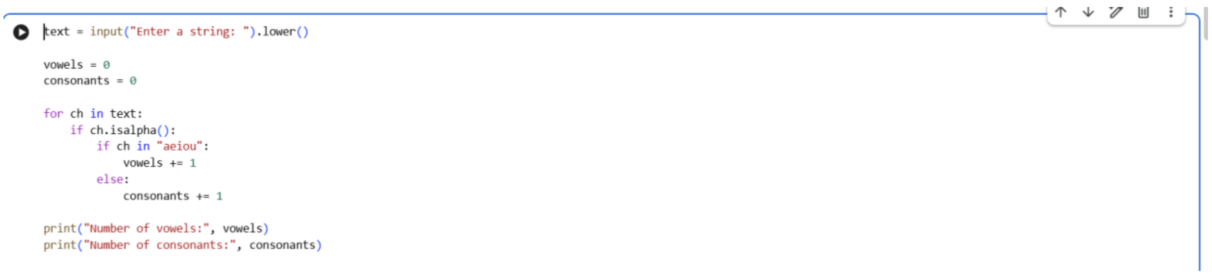
Expected Output:

• AI-generated string processing logic.

• Correct counts.

• Output verification.

CODE:



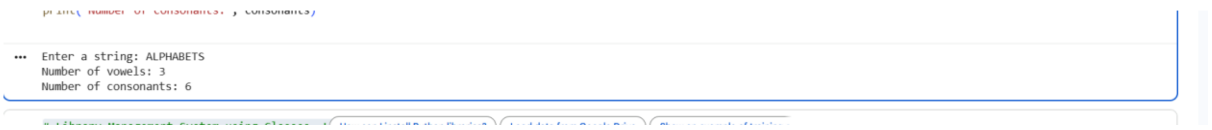
```
text = input("Enter a string: ").lower()

vowels = 0
consonants = 0

for ch in text:
    if ch.isalpha():
        if ch in "aeiou":
            vowels += 1
        else:
            consonants += 1

print("Number of vowels:", vowels)
print("Number of consonants:", consonants)
```

OUTPUT:



```
Enter a string: ALPHABETS
Number of vowels: 3
Number of consonants: 6
```

TASK – 3

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.”

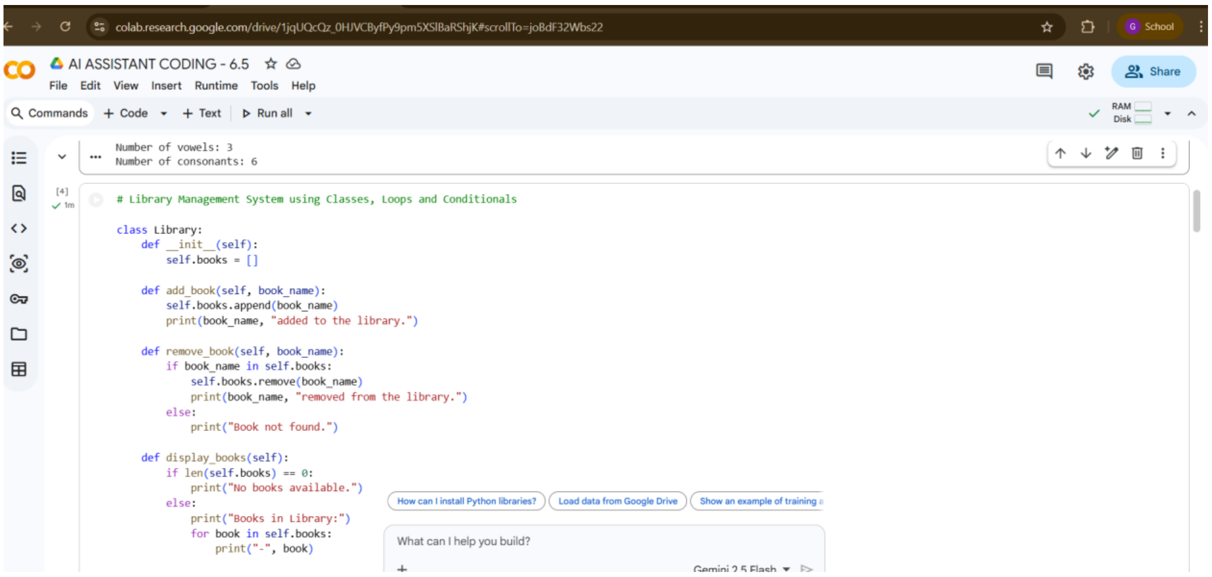
Expected Output:

• Complete AI-generated program.

• Review of AI suggestions quality.

• Short reflection on AI-assisted coding experience.

CODE:


colab.research.google.com/drive/1jqUQcQz_0HJVCByfPy9pm5XSlBaRShjK#scrollTo=joBdF32Wbs22
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```
Number of vowels: 3
Number of consonants: 6
```

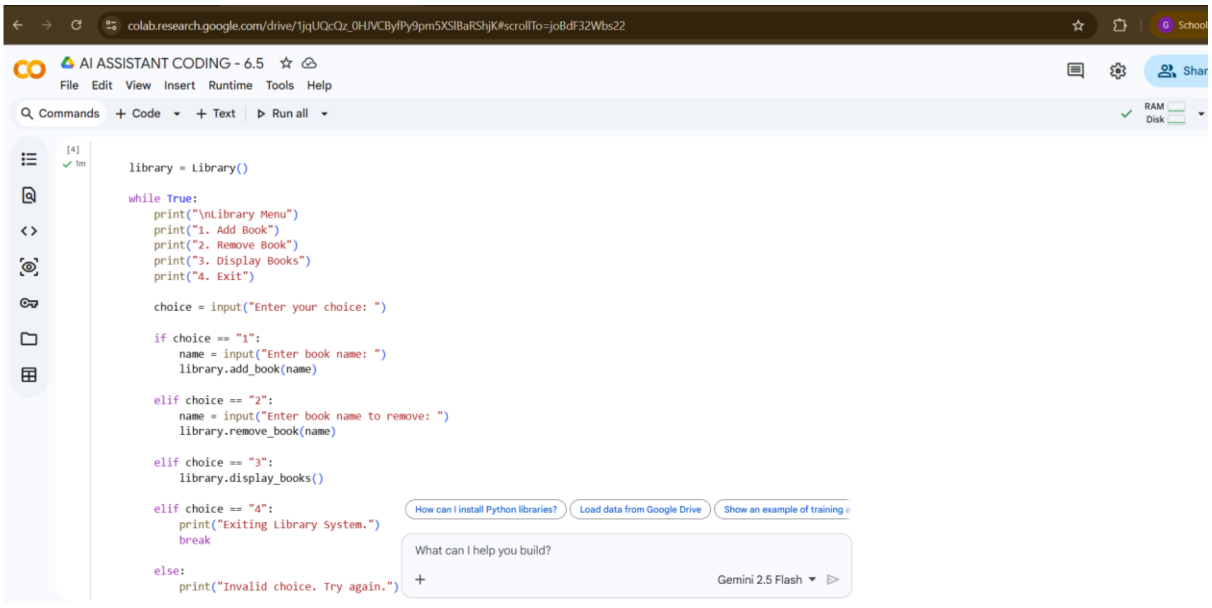
```python
# Library Management System using Classes, Loops and Conditionals

class Library:
    def __init__(self):
        self.books = []

    def add_book(self, book_name):
        self.books.append(book_name)
        print(book_name, "added to the library.")

    def remove_book(self, book_name):
        if book_name in self.books:
            self.books.remove(book_name)
            print(book_name, "removed from the library.")
        else:
            print("Book not found.")

    def display_books(self):
        if len(self.books) == 0:
            print("No books available.")
        else:
            print("Books in Library:")
            for book in self.books:
                print("-", book)
```


colab.research.google.com/drive/1jqUQcQz_0HJVCByfPy9pm5XSlBaRShjK#scrollTo=joBdF32Wbs22
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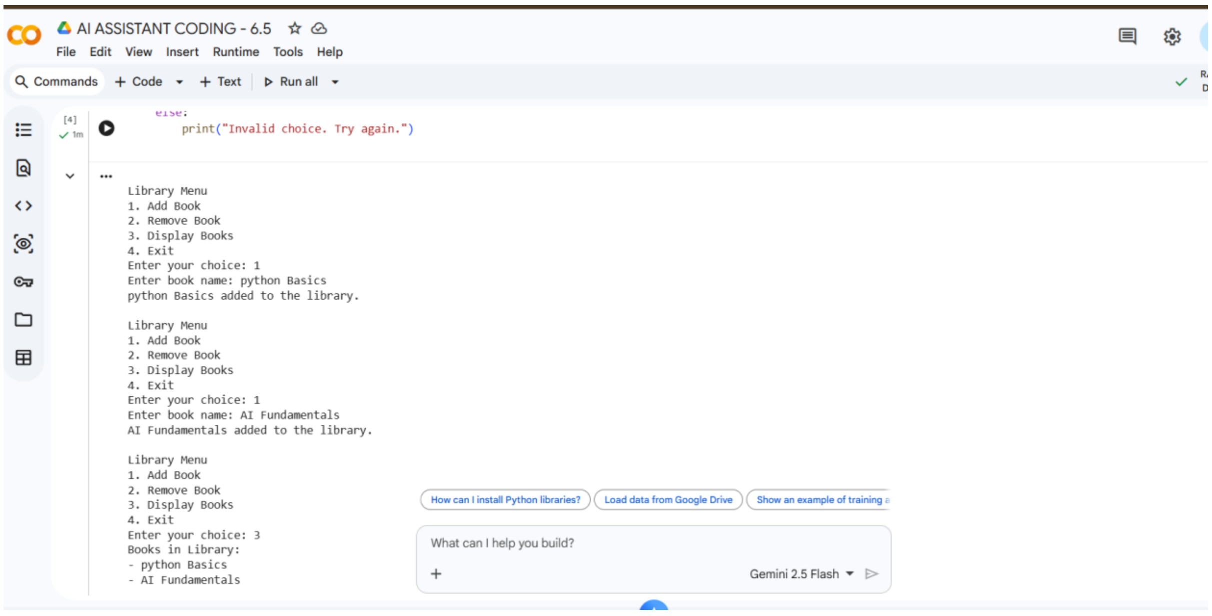
```python
library = Library()

while True:
    print("\nLibrary Menu")
    print("1. Add Book")
    print("2. Remove Book")
    print("3. Display Books")
    print("4. Exit")

    choice = input("Enter your choice: ")

    if choice == "1":
        name = input("Enter book name: ")
        library.add_book(name)

    elif choice == "2":
        name = input("Enter book name to remove: ")
        library.remove_book(name)

    elif choice == "3":
        library.display_books()

    elif choice == "4":
        print("Exiting Library System.")
        break

    else:
        print("Invalid choice. Try again.")
```

OUTPUT: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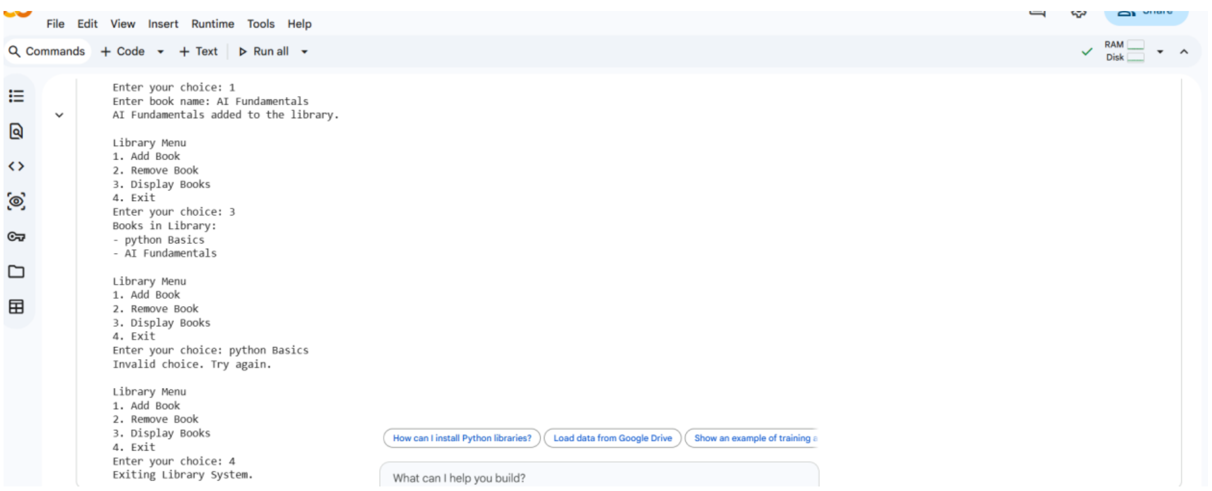
```
        else:
            print("Invalid choice. Try again.")
```

```
Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: 1
Enter book name: python Basics
python Basics added to the library.

Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: 1
Enter book name: AI Fundamentals
AI Fundamentals added to the library.

Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: 3
Books in Library:
- python Basics
- AI Fundamentals
```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```
Enter your choice: 1
Enter book name: AI Fundamentals
AI Fundamentals added to the library.

Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: 3
Books in Library:
- python Basics
- AI Fundamentals

Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: python Basics
Invalid choice. Try again.

Library Menu
1. Add Book
2. Remove Book
3. Display Books
4. Exit
Enter your choice: 4
Exiting Library System.
```

TASK – 4

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.”

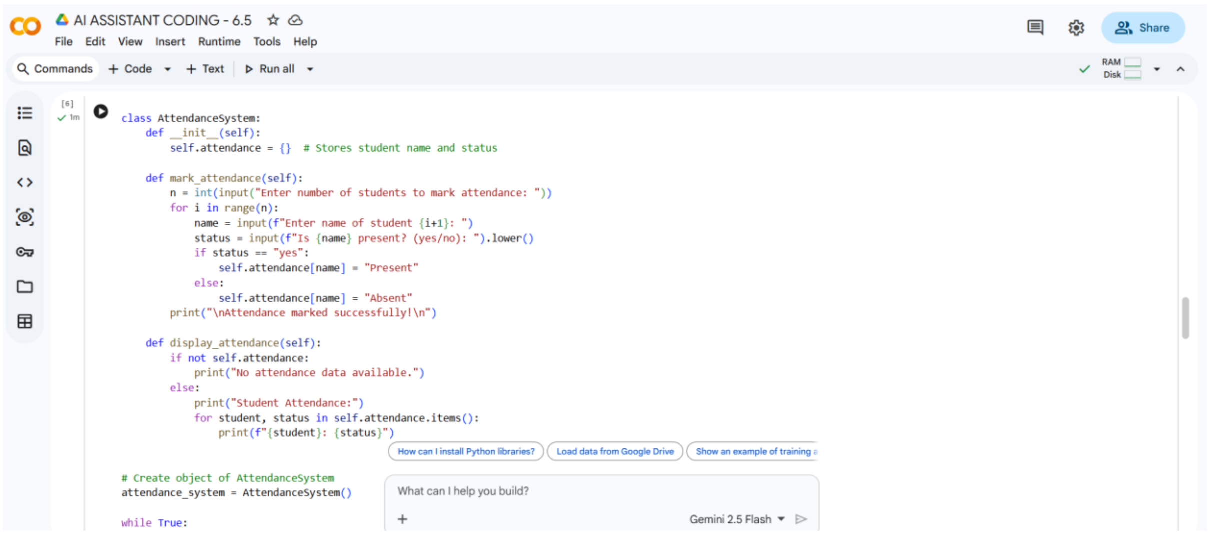
Expected Output:

• AI-generated attendance logic.

• Correct display of attendance.

• Test cases.

CODE: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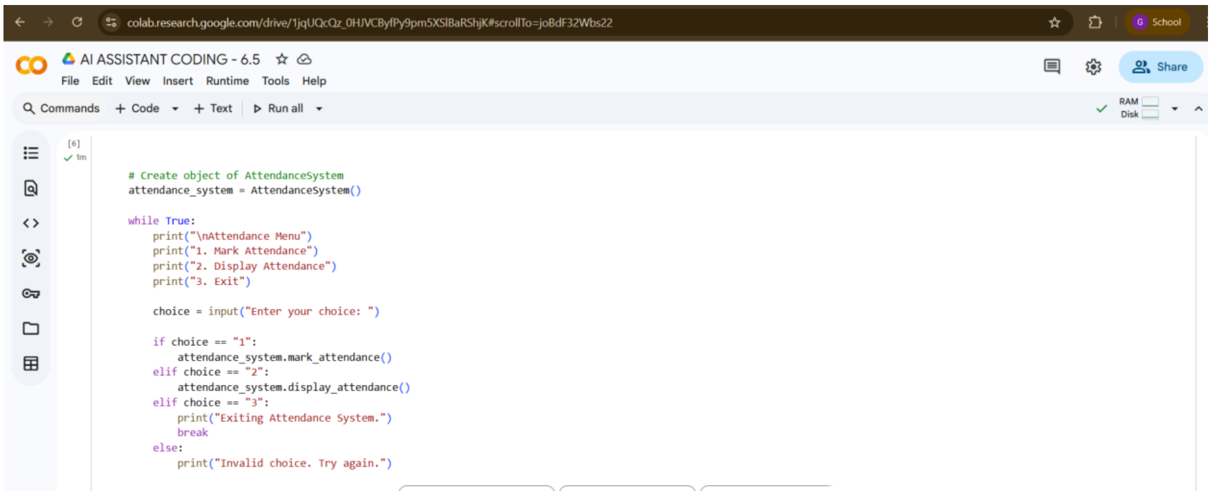
```python
class AttendanceSystem:
    def __init__(self):
        self.attendance = {}  # Stores student name and status

    def mark_attendance(self):
        n = int(input("Enter number of students to mark attendance: "))
        for i in range(n):
            name = input(f"Enter name of student {i+1}: ")
            status = input(f"Is {name} present? (yes/no): ").lower()
            if status == "yes":
                self.attendance[name] = "Present"
            else:
                self.attendance[name] = "Absent"
        print("\nAttendance marked successfully!\n")

    def display_attendance(self):
        if not self.attendance:
            print("No attendance data available.")
        else:
            print("Student Attendance:")
            for student, status in self.attendance.items():
                print(f"{student}: {status}")

# Create object of AttendanceSystem
attendance_system = AttendanceSystem()

while True:
```


colab.research.google.com/drive/1jqUQcQz_0HJVCByfPy9pm5XSlBaRShjK#scrollTo=joBdF32Wbs22
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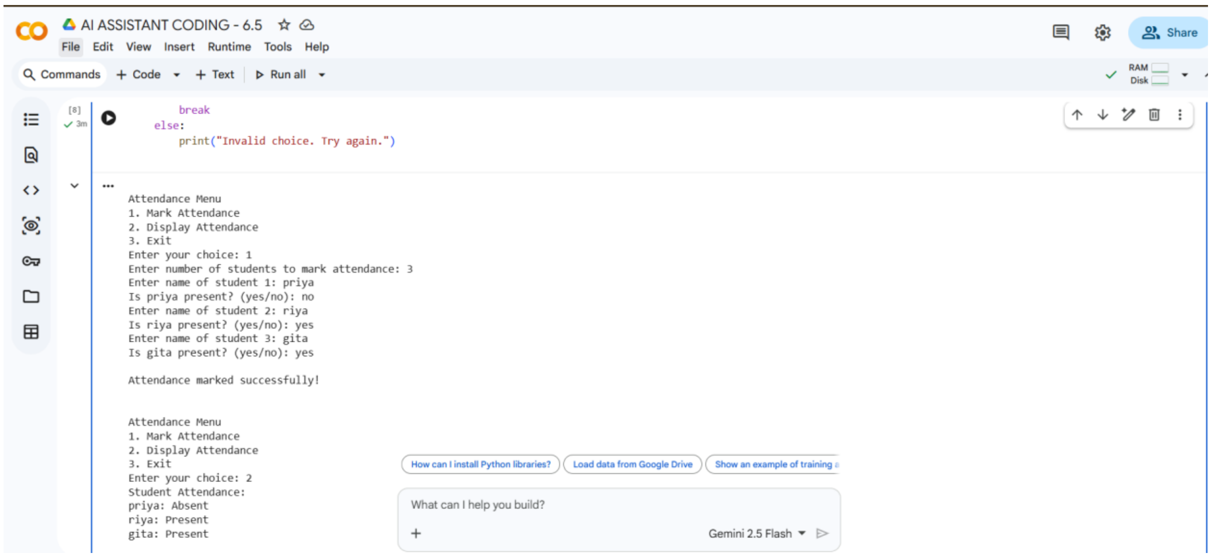
```
# Create object of AttendanceSystem
attendance_system = AttendanceSystem()

while True:
    print("\nAttendance Menu")
    print("1. Mark Attendance")
    print("2. Display Attendance")
    print("3. Exit")

    choice = input("Enter your choice: ")

    if choice == "1":
        attendance_system.mark_attendance()
    elif choice == "2":
        attendance_system.display_attendance()
    elif choice == "3":
        print("Exiting Attendance System.")
        break
    else:
        print("Invalid choice. Try again.")
```

OUTPUT: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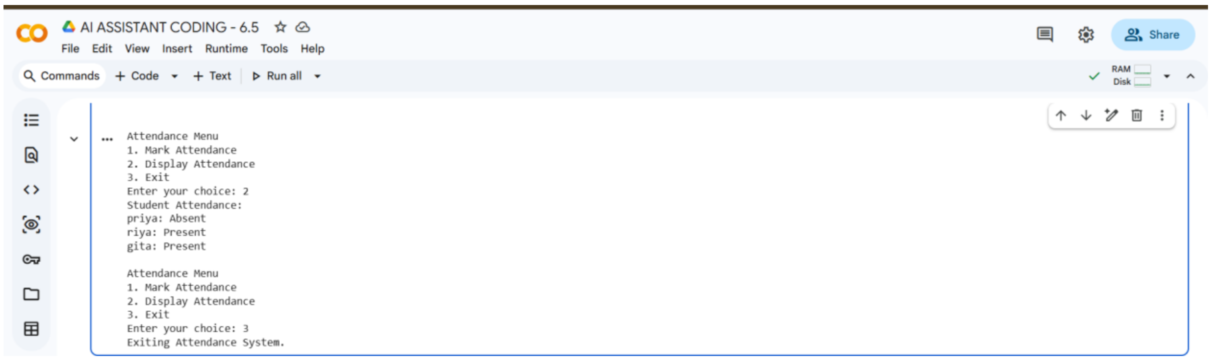
```
        break
    else:
        print("Invalid choice. Try again.")
```

```
Attendance Menu
1. Mark Attendance
2. Display Attendance
3. Exit
Enter your choice: 1
Enter number of students to mark attendance: 3
Enter name of student 1: priya
Is priya present? (yes/no): no
Enter name of student 2: riya
Is riya present? (yes/no): yes
Enter name of student 3: gita
Is gita present? (yes/no): yes

Attendance marked successfully!


Attendance Menu
1. Mark Attendance
2. Display Attendance
3. Exit
Enter your choice: 2
Student Attendance:
priya: Absent
riya: Present
gita: Present
```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```
Attendance Menu
1. Mark Attendance
2. Display Attendance
3. Exit
Enter your choice: 2
Student Attendance:
priya: Absent
riya: Present
gita: Present

Attendance Menu
1. Mark Attendance
2. Display Attendance
3. Exit
Enter your choice: 3
Exiting Attendance System.
```

TASK – 5

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.”

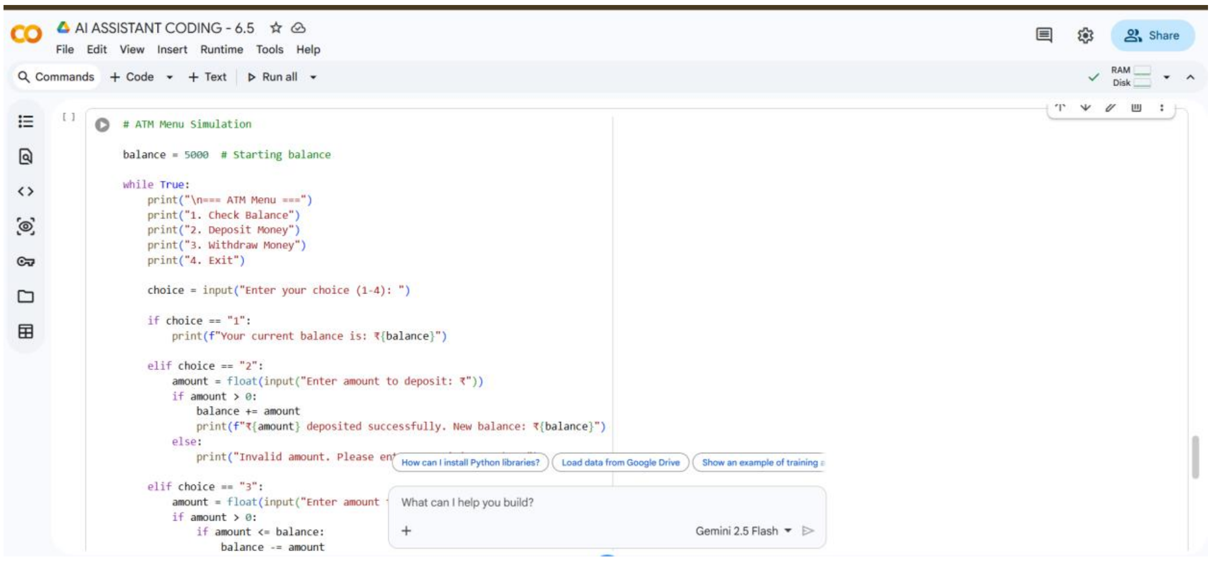
Expected Output:

• AI-generated menu logic.

• Correct option handling.

• Output verification.

CODE: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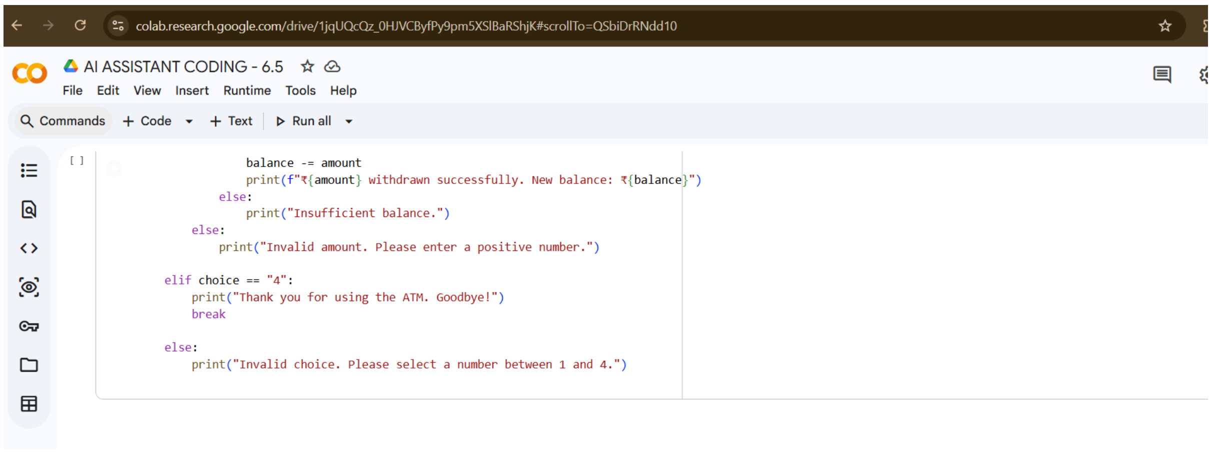
```
# ATM Menu Simulation

balance = 5000  # Starting balance

while True:
    print("\n=== ATM Menu ===")
    print("1. Check Balance")
    print("2. Deposit Money")
    print("3. Withdraw Money")
    print("4. Exit")

    choice = input("Enter your choice (1-4): ")

    if choice == "1":
        print(f"Your current balance is: ₹{balance}")

    elif choice == "2":
        amount = float(input("Enter amount to deposit: ₹"))
        if amount > 0:
            balance += amount
            print(f"₹{amount} deposited successfully. New balance: ₹{balance}")
        else:
            print("Invalid amount. Please en

    elif choice == "3":
        amount = float(input("Enter amount 
        if amount > 0:
            if amount <= balance:
                balance -= amount
```


colab.research.google.com/drive/1jqUQcQz_0HJVCByfPy9pm5XSlBaRShjK#scrollTo=QSbiDrRNdd10
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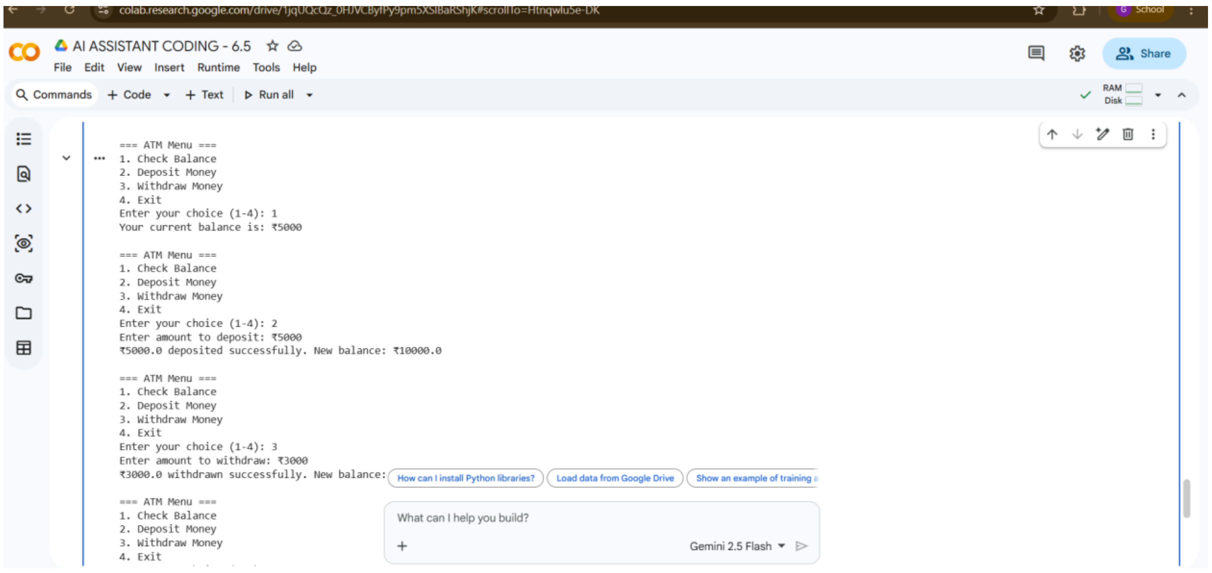
```
                balance -= amount
                print(f"₹{amount} withdrawn successfully. New balance: ₹{balance}")
            else:
                print("Insufficient balance.")
        else:
            print("Invalid amount. Please enter a positive number.")

    elif choice == "4":
        print("Thank you for using the ATM. Goodbye!")
        break

    else:
        print("Invalid choice. Please select a number between 1 and 4.")
```

OUTPUT:


colab.research.google.com/drive/1jqUQcQz_0HJVCByfPy9pm5XSlBaRShjK#scrollTo=Htnqwlu5e-DK
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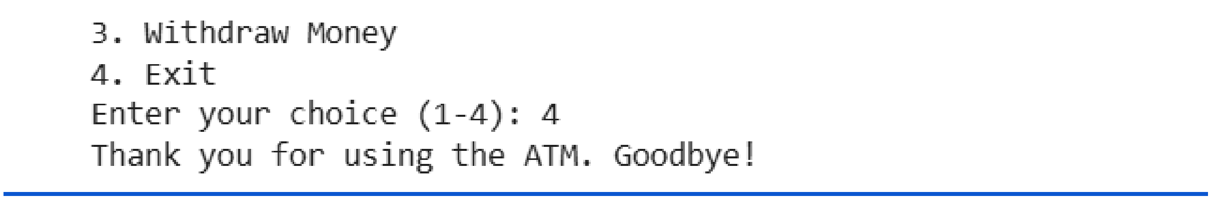
```
=== ATM Menu ===
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit
Enter your choice (1-4): 1
Your current balance is: ₹5000

=== ATM Menu ===
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit
Enter your choice (1-4): 2
Enter amount to deposit: ₹5000
₹5000.0 deposited successfully. New balance: ₹10000.0

=== ATM Menu ===
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit
Enter your choice (1-4): 3
Enter amount to withdraw: ₹3000
₹3000.0 withdrawn successfully. New balance:

=== ATM Menu ===
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit
```



```
3. Withdraw Money
4. Exit
Enter your choice (1-4): 4
Thank you for using the ATM. Goodbye!
```