SR UNIVERSITY

School of Computer Science and Artificial Intelligence

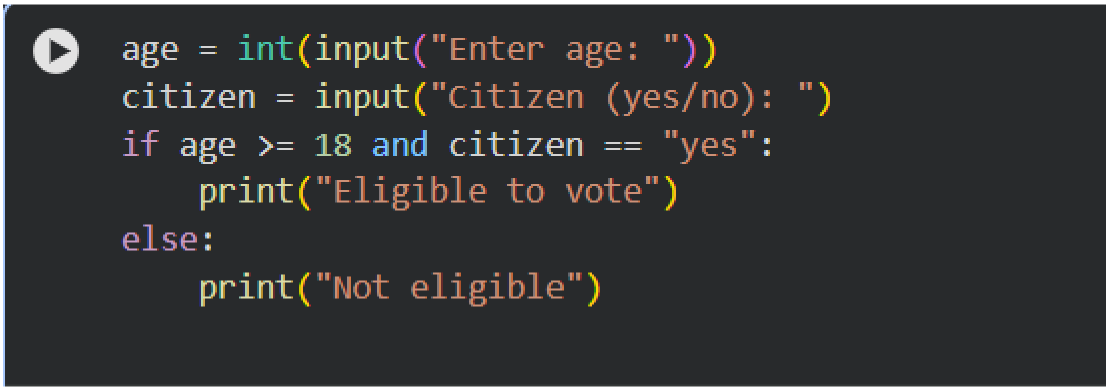
Lab Assignment # 6.5

Program	**: B. Tech (CSE)**
Specialization	**:**
Course Title	**: AI Assisted coding**
Course Code	**:**
Semester	**: II**
Academic Session	**: 2025-2026**
Name of Student	**:N. Sai Akash**
Enrollment No.	**: 2403A51L57**
Batch No.	**: 52**
Date	**:22-01-2026**

Task 1: Use an AI tool to generate eligibility logic.

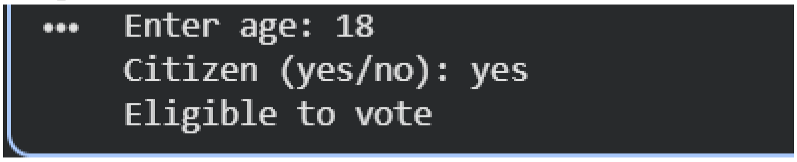
Prompt : Generate Python code to check voting eligibility based on age and citizenship.

Code :



```
age = int(input("Enter age: "))
citizen = input("Citizen (yes/no): ")
if age >= 18 and citizen == "yes":
    print("Eligible to vote")
else:
    print("Not eligible")
```

Output:



```
Enter age: 18
Citizen (yes/no): yes
Eligible to vote
```

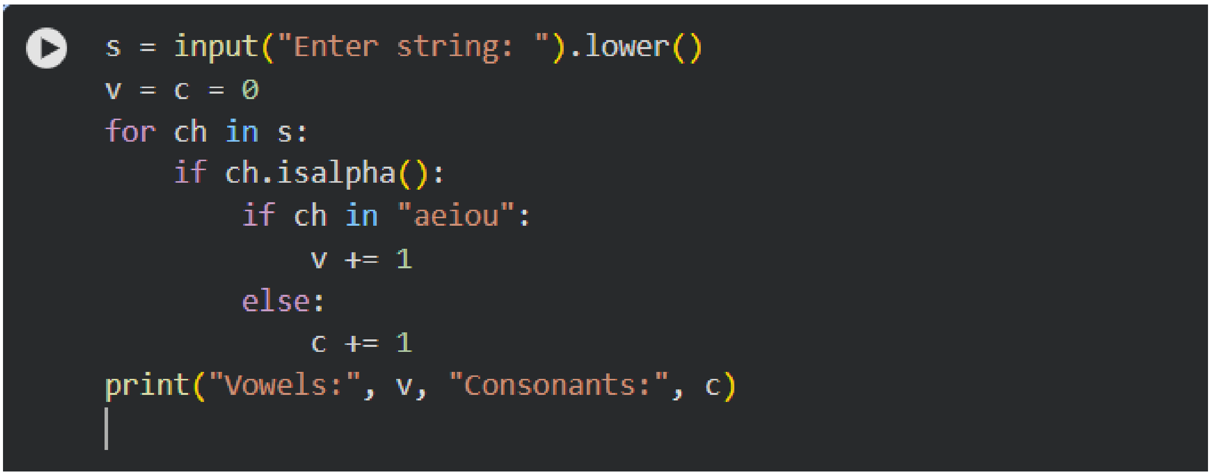
Explanation :

□ The program takes age as integer input from the user.
□ It takes citizenship status as string input (yes or no).
□ The if statement checks two conditions together.
□ First condition verifies whether age is 18 or above.
□ Second condition checks if the user is a citizen.

□ The and operator ensures both conditions must be true.
□ If both are true, voting eligibility is confirmed.
□ The program prints "Eligible to vote".
□ If any condition fails, control goes to else.
□ It prints "Not eligible" when criteria are not met.

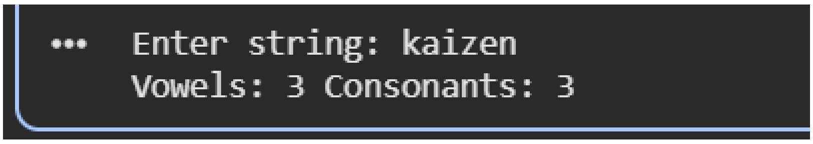
Task 2 : Count Vowels and Consonants (Loop + String)

Code :



```
s = input("Enter string: ").lower()
v = c = 0
for ch in s:
    if ch.isalpha():
        if ch in "aeiou":
            v += 1
        else:
            c += 1
print("Vowels:", v, "Consonants:", c)
```

Output :



```
Enter string: kaizen
Vowels: 3 Consonants: 3
```

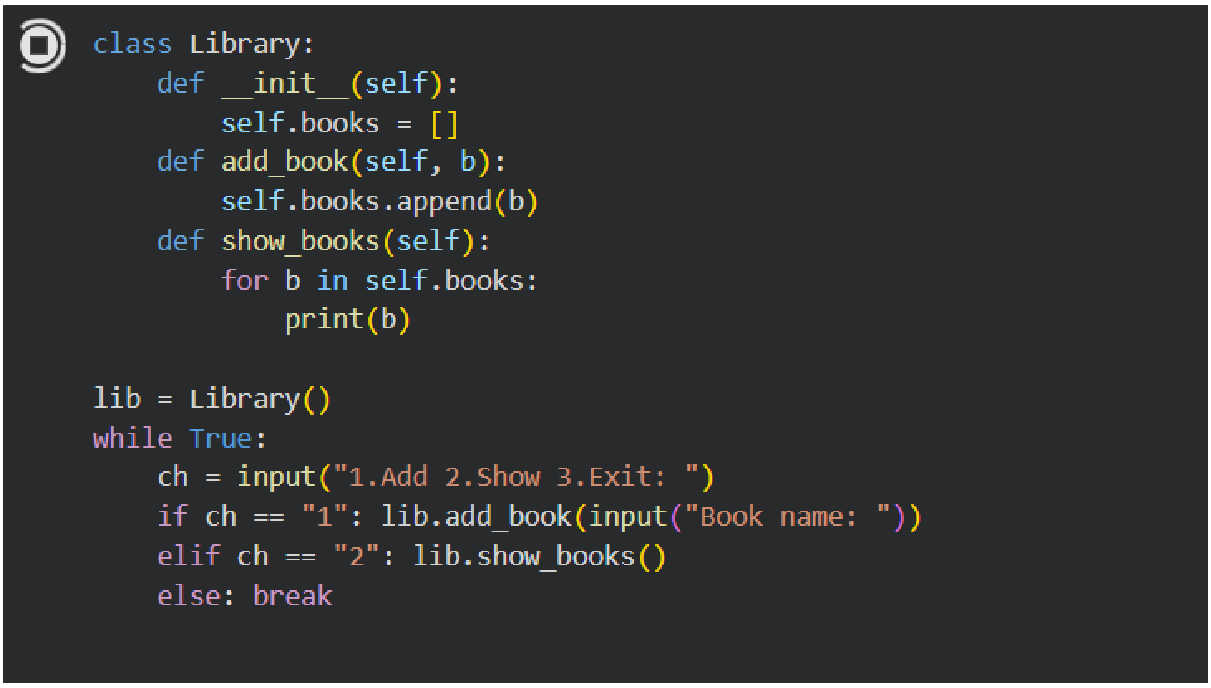
Explanation :

□ The program takes a string input from the user.
□ The string is converted to lowercase for easy comparison.
□ Two variables v and c are initialized to count vowels and consonants.
□ A for loop iterates through each character in the string.
□ isalpha() checks whether the character is a letter.
□ Non-alphabet characters like spaces and numbers are ignored.
□ The if condition checks if the character is a vowel.
□ Vowels are counted using variable v.
□ Remaining letters are counted as consonants using c.
□ The final count of vowels and consonants is displayed.

Task 3: Library Management System (Class + Loop + Condition)

Prompt: Generate a Python program for a library management system using classes, loops, and conditional statements.

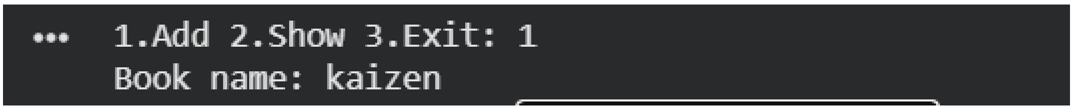
Code :



```
class Library:
    def __init__(self):
        self.books = []
    def add_book(self, b):
        self.books.append(b)
    def show_books(self):
        for b in self.books:
            print(b)

lib = Library()
while True:
    ch = input("1.Add 2.Show 3.Exit: ")
    if ch == "1": lib.add_book(input("Book name: "))
    elif ch == "2": lib.show_books()
    else: break
```

Output :



```
1.Add 2.Show 3.Exit: 1
Book name: kaizen
```

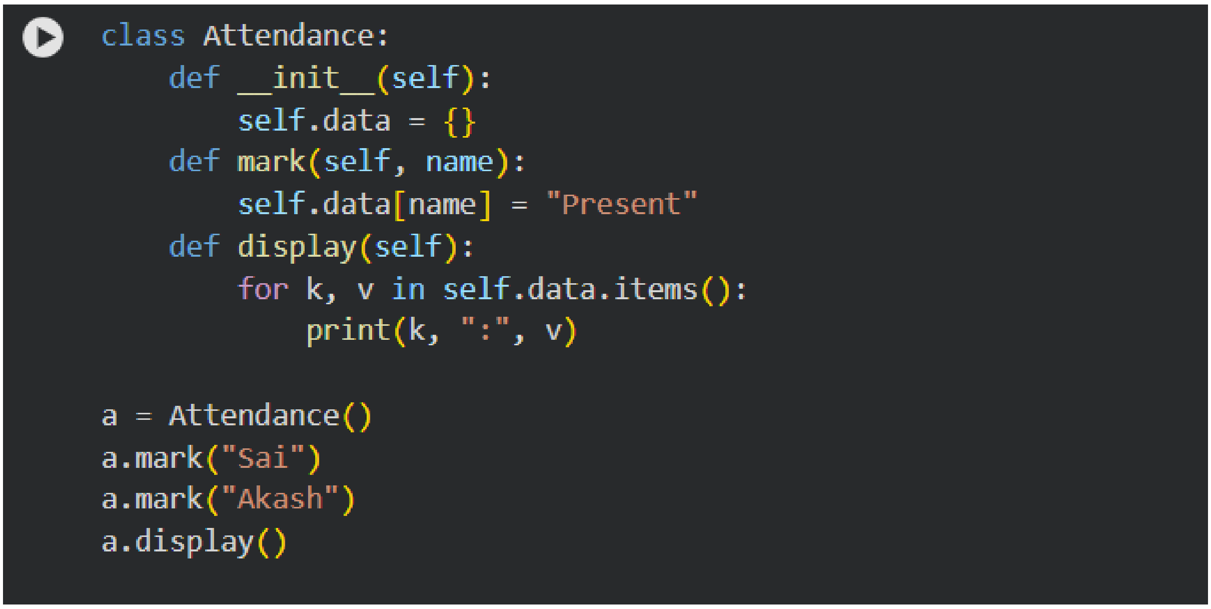
Explanation :

□ **The program defines a class named Library.**
□ **The constructor initializes an empty list to store books.**
□ **add_book() method adds a new book to the list.**
□ **show_books() method displays all stored books.**
□ **An object lib is created from the Library class.**
□ **A while True loop keeps the program running continuously.**
□ **The user is shown a menu with add, show, and exit options.**
□ **If choice is 1, a book name is added to the library.**
□ **If choice is 2, all books are displayed.**
□ **Any other choice exits the program.**

Task 4: Attendance Management System (Class + Loop)

Prompt: Generate a Python class to mark and display student attendance using loops.

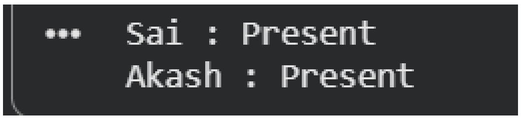
Code:



```
class Attendance:
    def __init__(self):
        self.data = {}
    def mark(self, name):
        self.data[name] = "Present"
    def display(self):
        for k, v in self.data.items():
            print(k, ":", v)

a = Attendance()
a.mark("Sai")
a.mark("Akash")
a.display()
```

Output :



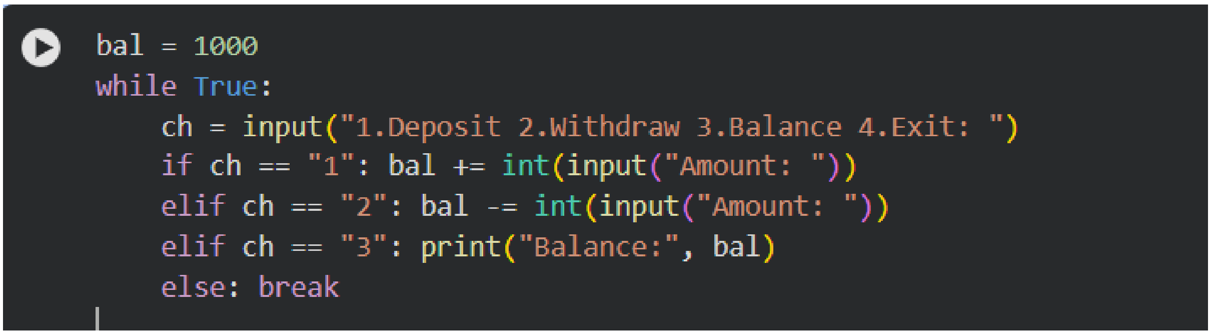
```
Sai : Present
Akash : Present
```

Explanation :

□ **The program defines a class named Attendance.**
□ **The constructor initializes an empty dictionary to store attendance data.**
□ **The dictionary stores student names as keys.**
□ **Attendance status is stored as values in the dictionary.**
□ **The mark() method marks a student as "Present".**
□ **The display() method prints all attendance records.**
□ **A for loop is used to access dictionary items.**
□ **An object a is created from the Attendance class.**
□ **Attendance is marked for students Sai and Ravi.**
□ **The final attendance list is displayed on the screen.**

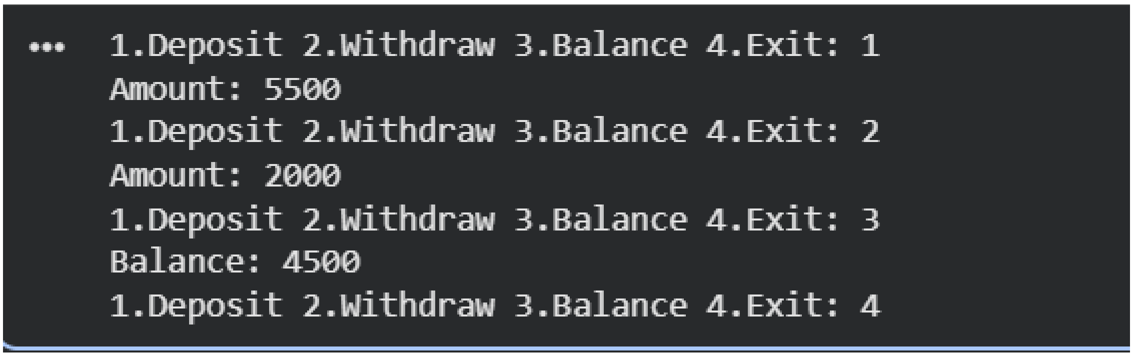
Task 5: ATM Menu Simulation (Loop + Conditionals)

Prompt: Generate a Python program using loops and conditionals to simulate an ATM menu.
Code:



```
bal = 1000
while True:
    ch = input("1.Deposit 2.Withdraw 3.Balance 4.Exit: ")
    if ch == "1": bal += int(input("Amount: "))
    elif ch == "2": bal -= int(input("Amount: "))
    elif ch == "3": print("Balance:", bal)
    else: break
```

Output :



```
1.Deposit 2.Withdraw 3.Balance 4.Exit: 1
Amount: 5500
1.Deposit 2.Withdraw 3.Balance 4.Exit: 2
Amount: 2000
1.Deposit 2.Withdraw 3.Balance 4.Exit: 3
Balance: 4500
1.Deposit 2.Withdraw 3.Balance 4.Exit: 4
```

Explanation :

□ **The program initializes the account balance with 1000.**
□ **A while True loop keeps the ATM menu running.**
□ **The user is shown options for deposit, withdraw, balance, and exit.**
□ **User input is stored in the variable ch.**
□ **If the choice is 1, the entered amount is added to the balance.**
□ **If the choice is 2, the entered amount is subtracted from the balance.**
□ **If the choice is 3, the current balance is displayed.**
□ **Conditional statements control the menu flow.**
□ **The loop repeats after each operation.**
□ **The program stops when the user selects exit.**