4.1.1 Set Operations

Algorithm

Step 1 :- Start

Step 2 :- **Input Set A**

- Prompt the user to enter space-separated integers for Set A.
- Convert the input values into a set and store it as Set_A.

Step 3 :- **Input Set B**

- Prompt the user to enter space-separated integers for Set B.
- Convert the input values into a set and store it as Set_B.

Step 4:- **Perform Union Operation**

- Compute Union_Set = Set_A ∪ Set_B.

Step 5 :- **Perform Intersection Operation**

- Compute Intersection_Set = Set_A ∩ Set_B.

Step 6 :- **Perform Difference Operation**

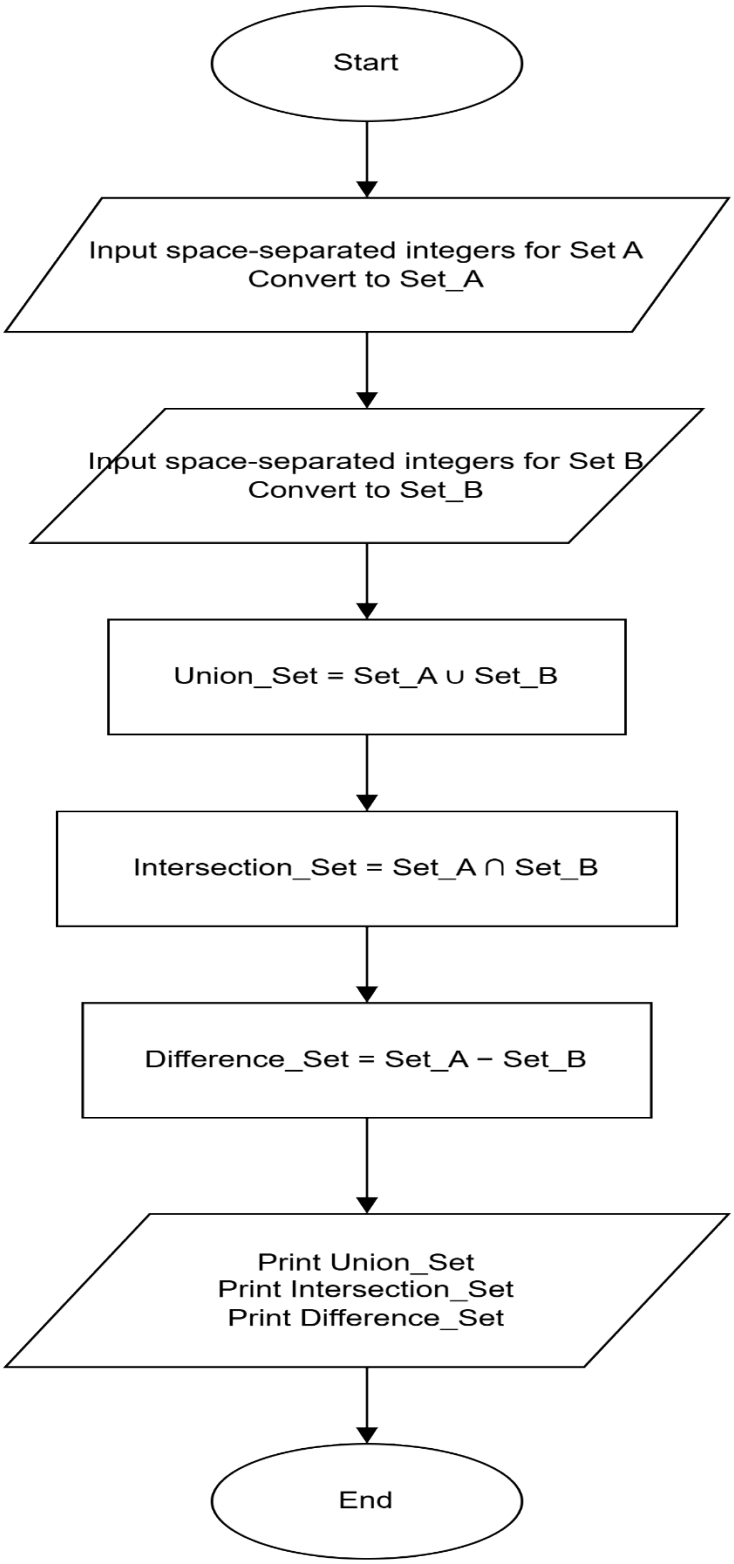
- Compute Difference_Set = Set_A − Set_B.

Step 7:-**Display Results**

- Print "Union:" followed by Union_Set.
- Print "Intersection:" followed by Intersection_Set.
- Print "Difference:" followed by Difference_Set.

Step8:- Stop

Flowchart



Python code

```
Set_A= set(map(int,input("Set A: ").split()))

Set_B= set(map(int,input("Set B: ").split()))
```

Union_Set=Set_A | Set_B

Intersection_Set=Set_A & Set_B

Difference_Set=Set_A - Set_B

print("Union:",Union_Set)

print("Intersection:",Intersection_Set)

print("Difference:",Difference_Set)

EXCECUTION