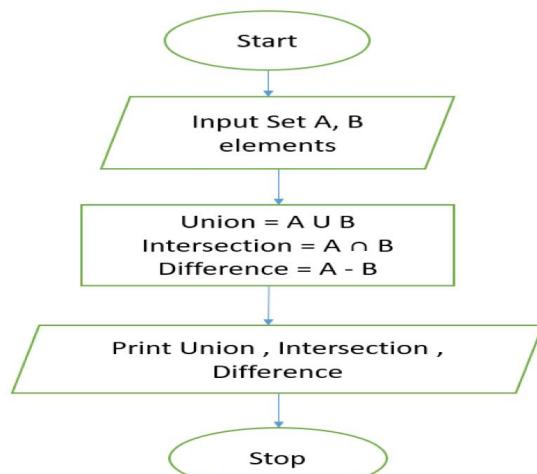


PROBLEM 4.1.1

Flowchart



Algorithm

Start

Read space-separated integers for **Set A**.

Read space-separated integers for **Set B**.

Convert the inputs into two sets: Set A and Set B.

Find the **Union** , Intersection and Difference of Set A and Set B.

Display the **Union**, Intersection and Difference.

Stop

The screenshot shows a Jupyter Notebook interface with the following details:

- Header:** CODETANTRA • Home, arjun.gahane.batch2025@sitnagpur.slu.edu.in • Support, Logout
- Section 1:** 4.1.1. Set Operations
- Text:** Write a Python program to perform union, intersection and difference operations on *Set A* and *Set B*.
- Input Format:**
 - First Line prompts "Set A: " followed by space-separated list of integers for *Set A*.
 - The second input prompts "Set B: " followed by space-separated list of integers for *Set B*.
- Output Format:**
 - The first line prints "Union: " followed by the union of *Set A* and *Set B*.
 - The second line prints "Intersection: " followed by the intersection of *Set A* and *Set B*.
 - The third line prints "Difference: " followed by the difference of *Set A* and *Set B*.
- Note:**
 - If there is no intersection between the two sets, the program prints an empty set, which appears as "set()" in the output.
 - Please refer to the visible test cases for better understanding.
- Code:** A Python script named `setoperat...` containing the following code:

```
1  input_a = input("Set A: ")
2  set_a = set(map(int, input_a.split()))
3  input_b = input("Set B: ")
4  set_b = set(map(int, input_b.split()))
5  union_result = set_a.union(set_b)
6  intersection_result = set_a.intersection(set_b)
7  difference_result = set_a.difference(set_b)
8  print(f"Union: {union_result}")
9  print(f"Intersection: {intersection_result}")
10 print(f"Difference: {difference_result}")
```
- Output:** The output pane shows the results of running the script with input "1 2 3 4" for Set A and "1 2 3 5" for Set B:

```
Set A: 1 2 3 4
Set B: 5
Union: {1, 2, 3, 4, 5}
Intersection: set()
Difference: {1, 2, 3, 4}
```

YOUR PROGRAM HAS ENDED