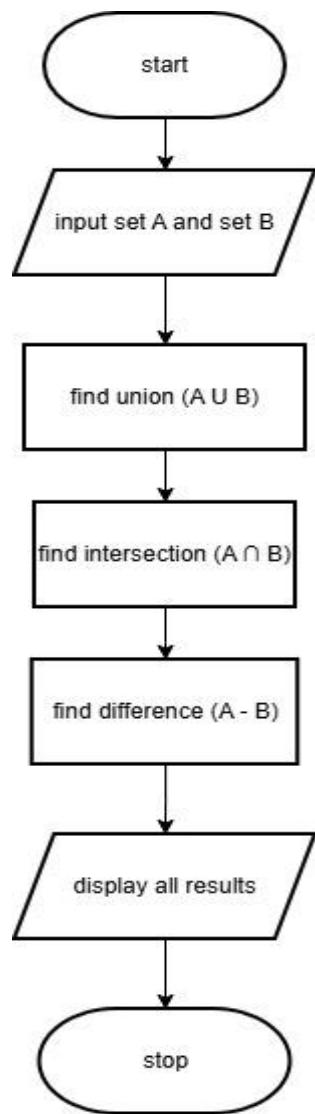


4.1.1 : Set Operations

Flow Chart :



Algorithm :

- Step 1: Start
- Step 2: Read elements of Set A
- Step 3: Read elements of Set B
- Step 4: Convert the inputs into sets
- Step 5: Find Union of Set A and Set B
- Step 6: Find Intersection of Set A and Set B
- Step 7: Find Difference (Set A – Set B)
- Step 8: Display Union
- Step 9: Display Intersection

Step 10: Display Difference

Step 11: Stop

The screenshot shows the CodeTantra IDE interface. On the left, there's a sidebar with 'CODETANTRA' and a 'Home' link. The main area has a title '4.1.1. Set Operations'. Below it, a text box says: 'Write a Python program to perform union, intersection and difference operations on Set A and Set B.' Under 'Input Format', it says: '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.' Under 'Output Format', it says: '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.' Under 'Note:', it says: '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.' A 'Sample Test Cases' button is at the bottom left.

On the right, the code editor window shows a file named 'setoperat...' with the following code:

```
1 # Type Content here...
2 seta=set(map(int,input("Set A: ").split()))
3 setb=set(map(int,input("Set B: ").split()))
4 u = seta | setb
5 i = seta & setb
6 d = seta - setb
7 print("Union:", u)
8 print("Intersection:", i)
9 print("Difference:", d)
```

The execution results show:

- Average time: 0.020 s (20.25 ms)
- Maximum time: 0.036 s (36.00 ms)
- Test case 1: 36 ms (Passed)
- Expected output:
 - Set A: {0, 2, 4, 5, 8}
 - Set B: {1, 2, 3, 4, 5}
 - Union: {0, 1, 2, 3, 4, 5, 8}
 - Intersection: {2, 4, 5}
 - Difference: {0, 8}
- Actual output:
 - Set A: {0, 2, 4, 5, 8}
 - Set B: {1, 2, 3, 4, 5}
 - Union: {0, 1, 2, 3, 4, 5, 8}
 - Intersection: {2, 4, 5}
 - Difference: {0, 8}

At the bottom, there are buttons for 'Terminal', 'Test cases' (which is highlighted), 'Prev', 'Reset', 'Submit', and 'Next'.