4.1.1 Set operations

A) Algorithm

Step 1. Start

Step 2. input Set A

Step 3. Convert the input values into a `Set_A`.

Step 4 input Set B

Step 5. Convert the input values into a `Set_B`.

Step 6. Find the Union of `Set_A` and `Set_B`.

Union = A | B

Step 7. Find the Intersection of `Set_A` and `Set_B`.

Intersection = A&B

Step 8. Find the Difference of `Set_A` and `Set_B`.

Difference = A-B

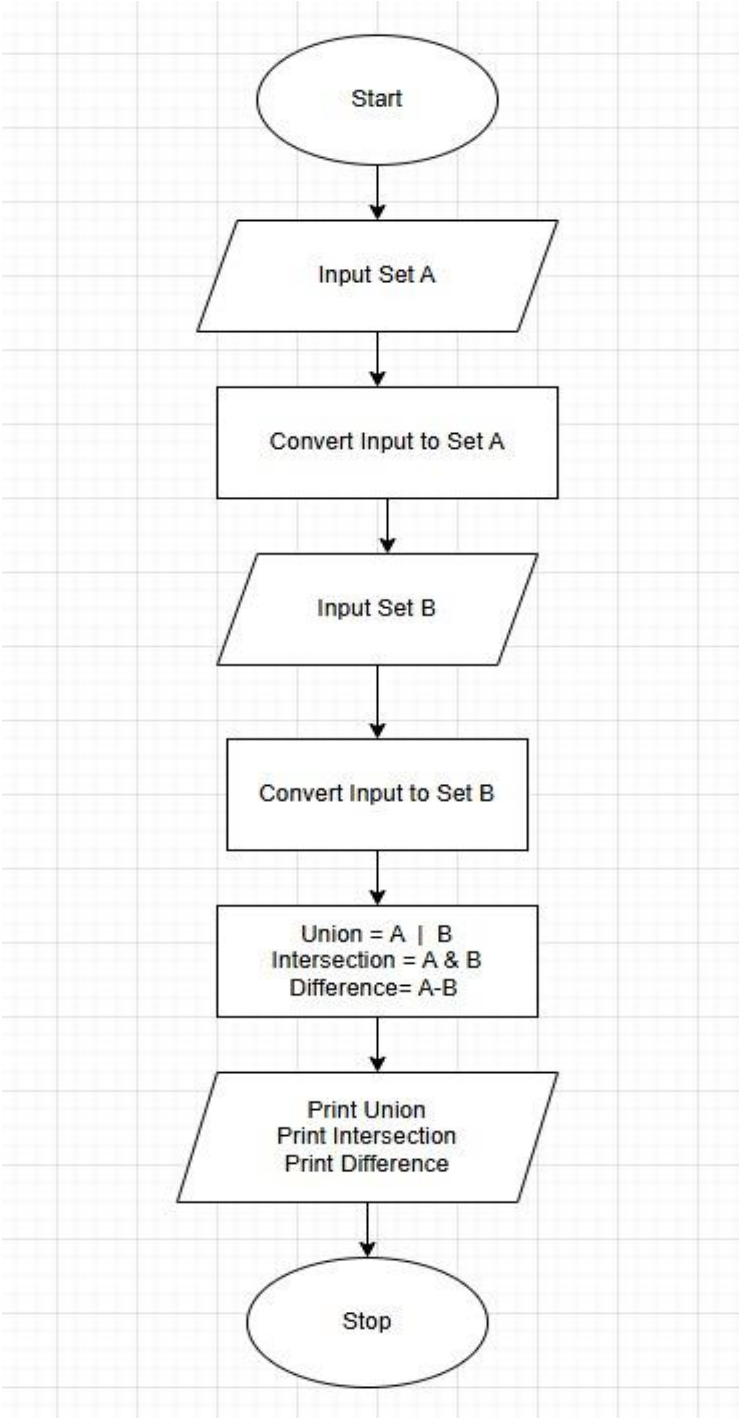
Step 9. Print Union, Intersection and Difference

Step 10. Stop

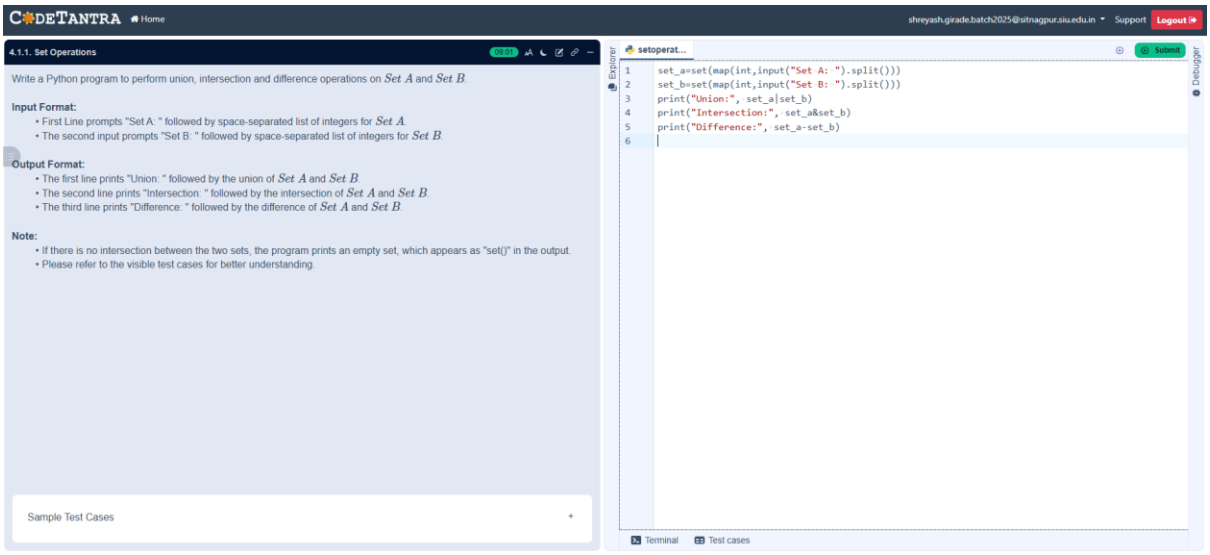
B) code

```
set_a=set(map(int,input("Set A: ").split()))
set_b=set(map(int,input("Set B: ").split()))
print("Union:", set_a|set_b)
print("Intersection:", set_a&set_b)
print("Difference:", set_a-set_b)
```

C) flowchart


Start
Input Set A
Convert Input to Set A
Input Set B
Convert Input to Set B
Union = A | B
Intersection = A & B
Difference= A-B
Print Union
Print Intersection
Print Difference
Stop

D) output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4.1.1. Set Operations
09:01
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.
Sample Test Cases
Explorer
setoperat...
Submit
Debugger
1 set_a=set(map(int,input("Set A: ").split()))
2 set_b=set(map(int,input("Set B: ").split()))
3 print("Union:", set_a|set_b)
4 print("Intersection:", set_a&set_b)
5 print("Difference:", set_a-set_b)
6
Terminal
Test cases