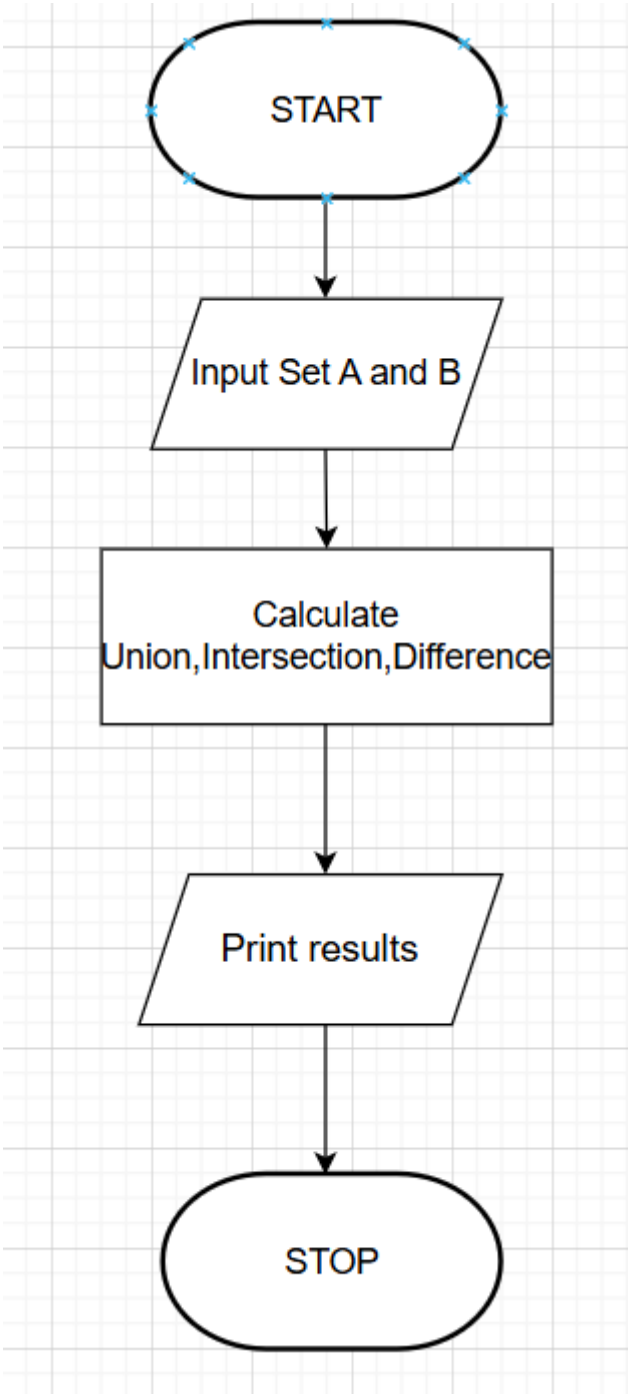
Experiment 4.1.1

Aim:- Write a Python program to perform union, intersection and difference operations on Set A and Set B.

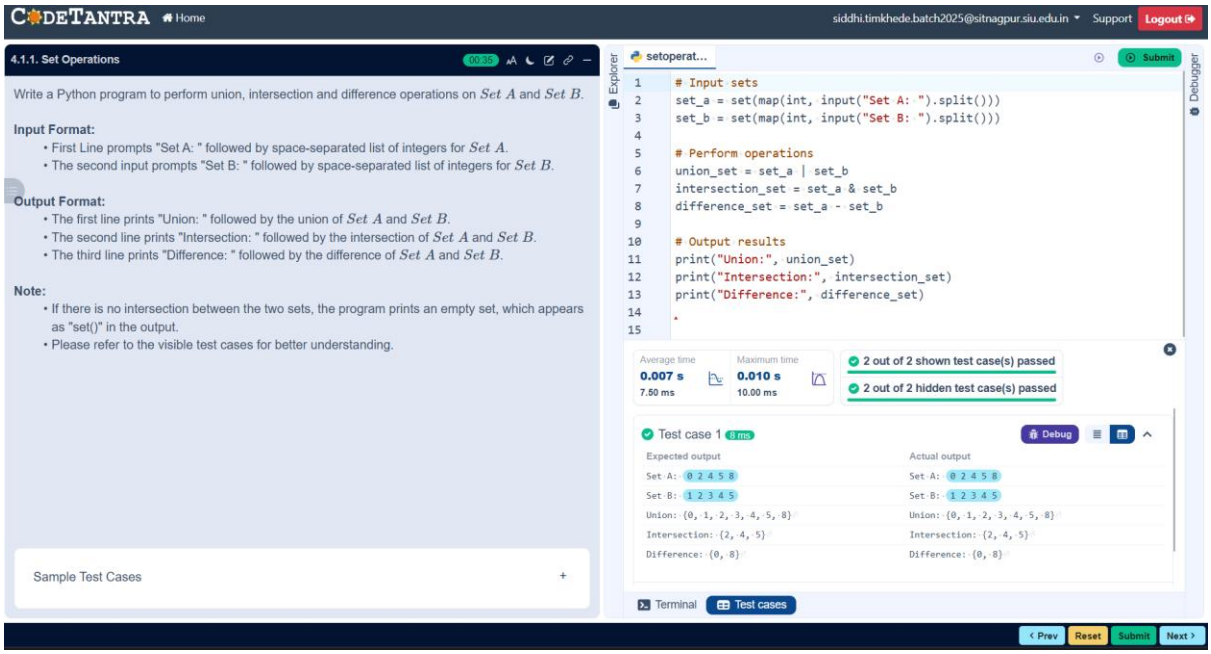
Algorithm:-

Step 1: Start
Step 2: Read set **A**
Step 3: Read set **B**
Step 4: Compute the **union** of sets
U = A ∪ B
Step 5: Compute the **intersection** of sets
I = A ∩ B
Step 6: Compute the **difference** of sets
D = A – B
Step 7: Display the results of union, intersection, and difference
Step 8: Stop

Flowchart:-


START
Input Set A and B
Calculate
Union,Intersection,Difference
Print results
STOP

Code:-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4.1.1. Set Operations
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
setoperat...
Submit
Explorer
Debugger
# Input sets
set_a = set(map(int, input("Set A: ").split()))
set_b = set(map(int, input("Set B: ").split()))
# Perform operations
union_set = set_a | set_b
intersection_set = set_a & set_b
difference_set = set_a - set_b
# Output results
print("Union:", union_set)
print("Intersection:", intersection_set)
print("Difference:", difference_set)
Average time
0.007 s
7.50 ms
Maximum time
0.010 s
10.00 ms
2 out of 2 shown test case(s) passed
2 out of 2 hidden test case(s) passed
Test case 1
Debug
Expected output
Actual output
Terminal
Test cases
‹ Prev
Reset
Submit
Next ›