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EX: 4.4.1 SET OPERATIONS

#ALGORITHM:

Step 1: Start

Step 2: Input Set A

Step 3: Convert the input values into Set A

Step 4: Input Set B

Step 5: Convert the input values into 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

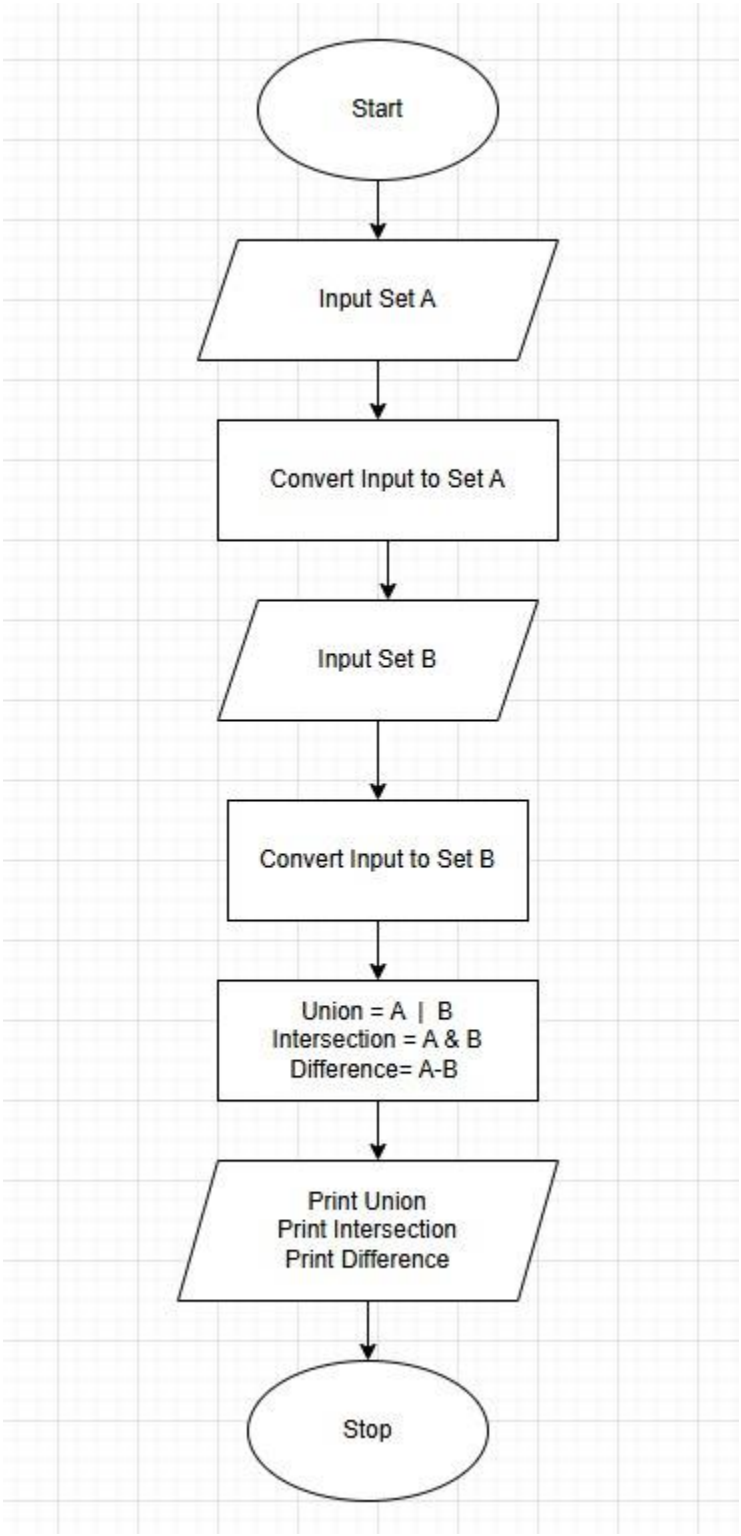
Difference = A − B

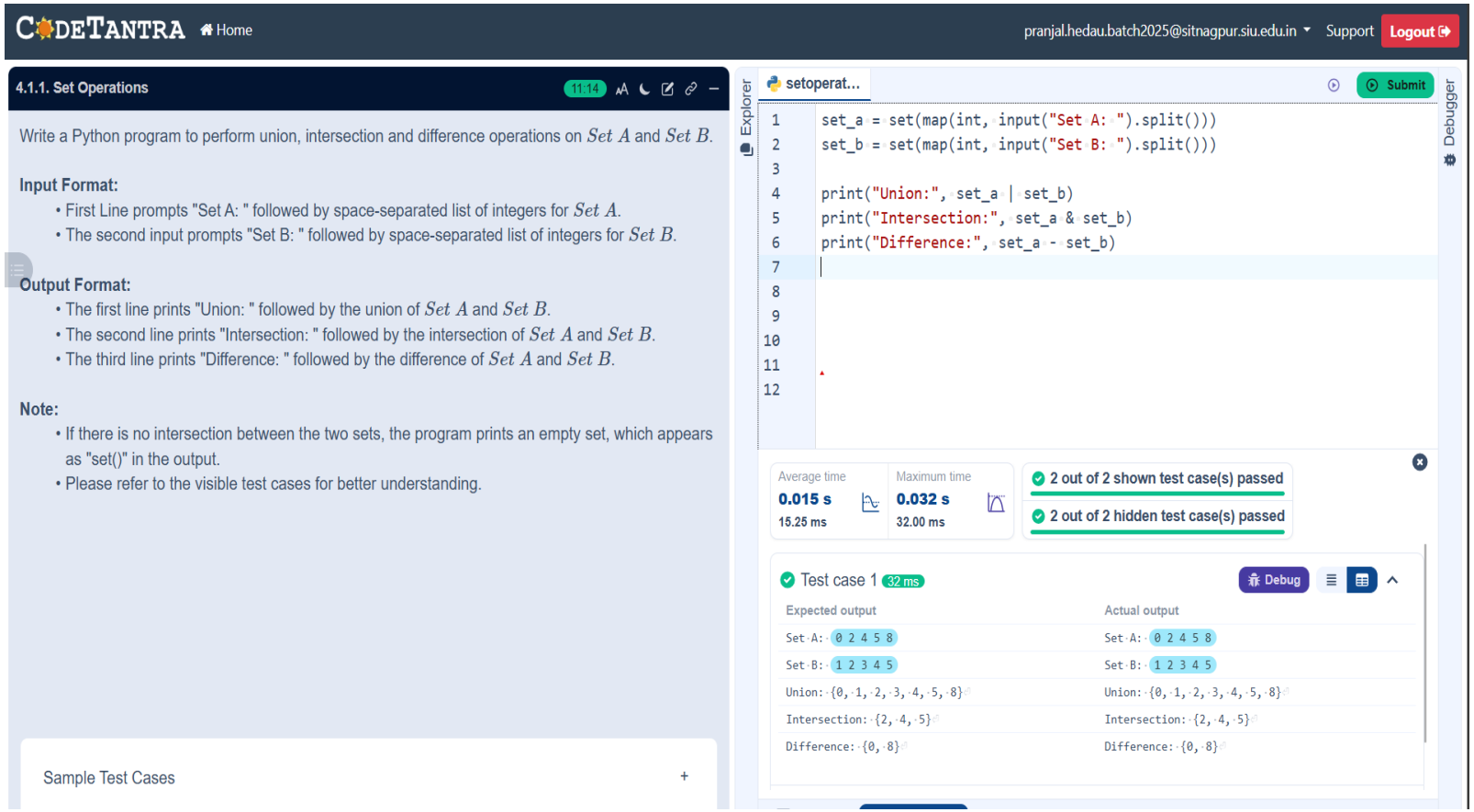
Step 9: Print the Union, Intersection, and Difference

Step 10: Stop

#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)
```


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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4.1.1. Set Operations
11:14
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
4 print("Union:", set_a | set_b)
5 print("Intersection:", set_a & set_b)
6 print("Difference:", set_a - set_b)
7
8
9
10
11
12
Average time
0.015 s
15.25 ms
Maximum time
0.032 s
32.00 ms
2 out of 2 shown test case(s) passed
2 out of 2 hidden test case(s) passed
Test case 1 32 ms
Debug
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}