

4.1

The screenshot displays the CODETANTRA online coding interface. On the left, a sidebar titled "4.1.1. Set Operations" provides instructions and test cases. The main editor shows a Python script that takes two sets of integers as input and outputs their union, intersection, and difference. The right sidebar shows the execution results, including a table of test cases and a terminal window.

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...

```
1 a = set(map(int, input("Set A: ").split()))
2 b = set(map(int, input("Set B: ").split()))
3
4 print("Union:", a | b)
5 print("Intersection:", a & b)
6 print("Difference:", a - b)
```

Average time: 0.010 s, Maximum time: 0.012 s, 2 out of 2 shown test case(s) passed, 2 out of 2 hidden test case(s) passed.

Test case 1	Expected output	Actual output
Set A: 0 2 4 5 8	Set A: 0 2 4 5 8	Set A: 0 2 4 5 8
Set B: 1 2 3 4 5	Set B: 1 2 3 4 5	Set B: 1 2 3 4 5
Union: {0, 1, 2, 3, 4, 5, 8}	Union: {0, 1, 2, 3, 4, 5, 8}	Union: {0, 1, 2, 3, 4, 5, 8}
Intersection: {2, 4, 5}	Intersection: {2, 4, 5}	Intersection: {2, 4, 5}
Difference: {0, 8}	Difference: {0, 8}	Difference: {0, 8}

Terminal, Test cases

Prev, Reset, Submit, Next

Algorithm

Step 1: Start

Step 2: Read set A and set B

Step 3: Find Union using $A \cup B$

Step 4: Find Intersection using $A \cap B$

Step 5: Find Difference using $A - B$

Step 6: Display the results

Step 7: Stop

Flowchart

