

4.1

The screenshot shows the CodeTantra IDE interface. The title bar says "CODETANTRA Home". The top right has a user email "antara.mangle.batch2025@sitnagpur.siu.edu.in", "Support", and a "Logout" button. Below the title bar, there's a navigation bar with "4.1.1. Set Operations" and other tabs like "Home", "Editor", "Terminal", "Test cases", "Submit", and "Next >".
The main area has a code editor with the following Python code:

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

Below the code editor, there's a performance metrics section:

Average time	0.010 s
Maximum time	0.012 s
9.75 ms	12.00 ms

And a results summary:

2 out of 2 shown test case(s) passed
2 out of 2 hidden test case(s) passed

Test case 1 (12 ms)
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 are buttons for "Terminal", "Test cases", "Submit", and "Next >".

Algorithm

Step 1: Start

Step 2: Read set A and set B

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

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

Step 5: Find Difference using $A - B$

Step 6: Display the results

Step 7: Stop

Flowchart

