

The screenshot shows the CodeTantra IDE interface. The top bar includes the logo, navigation links like 'Home', 'Support', and 'Logout'. The main area has a title '4.1.1. Set Operations' and a sub-section 'Input Format'. It lists two input prompts: 'Set A:' followed by space-separated integers and 'Set B:' followed by space-separated integers. Below this is the 'Output Format' section, which specifies three print statements: 'Union:', 'Intersection:', and 'Difference:'. The 'Note' section contains instructions about empty sets and refers to visible test cases. On the right, the code editor shows a script named 'setoperat...' with the following code:

```

1 set_a = set(map(int,input("Set A: ").split()))
2 set_b = set(map(int,input("Set B: ").split()))
3 union_set = set_a | set_b
4 intersection_set = set_a & set_b
5 difference_set = set_a - set_b
6 print("Union:",union_set)
7 print("Intersection:",intersection_set)
8 print("Difference:",difference_set)
9

```

The code editor includes a 'Submit' button and a 'Debugger' tab. Below the code editor is a performance summary table:

Average time	Maximum time
<b>0.018 s</b>	<b>0.023 s</b>
18.26 ms	23.00 ms

Test results indicate 2 out of 2 shown test case(s) passed and 2 out of 2 hidden test case(s) passed.

The results panel shows the expected and actual output for Test Case 1:

Expected output	Actual output
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
Union: {0, 1, 2, 3, 4, 5, 8}	Union: {0, 1, 2, 3, 4, 5, 8}
Intersection: {2, 4, 5}	Intersection: {2, 4, 5}
Difference: {0, 8}	Difference: {0, 8}

Below the results are 'Terminal' and 'Test cases' tabs.

### Algorithm: Set Operations (Union, Intersection, Difference)

1. Start
2. Prompt the user to enter elements of Set A as space-separated integers.
3. Read the input and convert it into a set set\_a.
4. Prompt the user to enter elements of Set B as space-separated integers.
5. Read the input and convert it into a set set\_b.
6. Find the union of set\_a and set\_b using the union operation.
7. Find the intersection of set\_a and set\_b using the intersection operation.
8. Find the difference of set\_a and set\_b (elements present in Set A but not in Set B).
9. Display the union result.
10. Display the intersection result.
11. Display the difference result.
12. Stop

