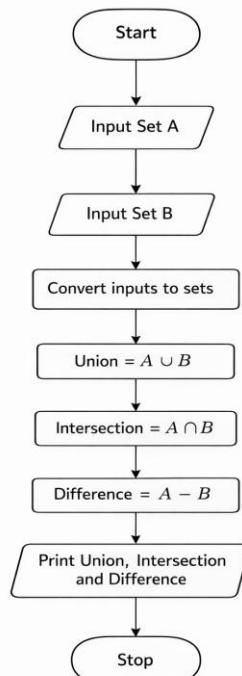


4.1.1. Set Operations

ALGORITHM:

1. Start
2. Read elements of Set A as space-separated integers.
3. Read elements of Set B as space-separated integers.
4. Convert the inputs into two sets set_a and set_b.
5. Find Union of Set A and Set B.
6. Find Intersection of Set A and Set B.
7. Find Difference of Set A and Set B.
8. Print Union, Intersection, and Difference.
9. Stop

FLOWCHART:



CODE:

```
# Read input
set_a_input = input("Set A: ").split()
set_b_input = input("Set B: ").split()

# Convert to sets of integers
set_a = set(map(int, set_a_input))
set_b = set(map(int, set_b_input))

# Perform set operations
union_set = set_a | set_b
intersection_set = set_a & set_b
difference_set = set_a - set_b

# Print results
print("Union:", union_set)
print("Intersection:", intersection_set)
print("Difference:", difference_set)
```

CODETANTRA:

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*.

Sample Test Cases +

```
setoperat...
1 # Read input
2 set_a_input = input("Set A: ").split()
3 set_b_input = input("Set B: ").split()
4
5 # Convert to sets of integers
6 set_a = set(map(int, set_a_input))
7 set_b = set(map(int, set_b_input))
8
9 # Perform set operations
10 union_set = set_a | set_b
11 intersection_set = set_a & set_b
12 difference_set = set_a - set_b
13
14 # Print results
15 print("Union:", union_set)
16 print("Intersection:", intersection_set)
17 print("Difference:", difference_set)
18
19
```

Terminal Test cases

< Prev Reset Submit Next >

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*.

Sample Test Cases +

```
setoperat...
1 # Read input
2 set_a_input = input("Set A: ").split()
3 set_b_input = input("Set B: ").split()
4
```

Average time Maximum time
0.011 s 0.015 s
10.75 ms 15.00 ms

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

Test case 1 (15 ms)

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}

Terminal Test cases

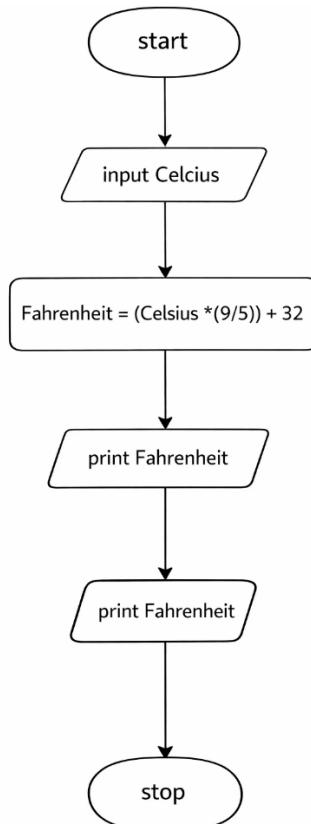
< Prev Reset Submit Next >

3.1.2. Celsius to Fahrenheit

ALGORITHM:

- 1 Start
- 2 Read the temperature in Celsius as a floating-point number.
- 3 Convert the temperature to Fahrenheit using the formula:
- 4 $Fahrenheit = (Celsius \times \frac{9}{5}) + 32$
- 5 Display the temperature in Fahrenheit formatted to 2 decimal places.
- 6 Stop

FLOWCHART:



CODE:

```

celsius = float(input())
fahrenheit = (celsius * 9/5) + 32
print(f"{fahrenheit:.2f}")

```

CODETANTRA:

The screenshot shows the CodeTantra interface for a challenge titled "3.1.2. Celsius to Fahrenheit".

Problem Statement: Write a Python program to convert temperature from Celsius to Fahrenheit.

Formula: $F = \left(C \times \frac{9}{5} \right) + 32$

Input Format: Single line contains a float value representing the temperature in Celsius.

Output Format: Print the temperature in Fahrenheit as a float value formatted to 2 decimal places.

Sample Test Cases:

Test Case	Expected Output	Actual Output
Test case 1	0.0	0.0
Test case 2	32.00	32.00
Test case 3	100.00	100.00

Code Editor:

```

1 celsius = float(input()) # Read temperature in Celsius
2 fahrenheit = (celsius * 9/5) + 32 # Convert to Fahrenheit
3 print(f"{fahrenheit:.2f}") # Print result formatted to 2
    decimal places

```

Performance Metrics: Average time: 0.010 s, Maximum time: 0.027 s, 9.63 ms, 27.00 ms.

Test Results: 4 out of 4 shown test case(s) passed, 4 out of 4 hidden test case(s) passed.

Buttons: Debug, Terminal, Test cases, < Prev, Reset, Submit, Next >