

Experiment - 3.1.2. Celsius to Fahrenheit

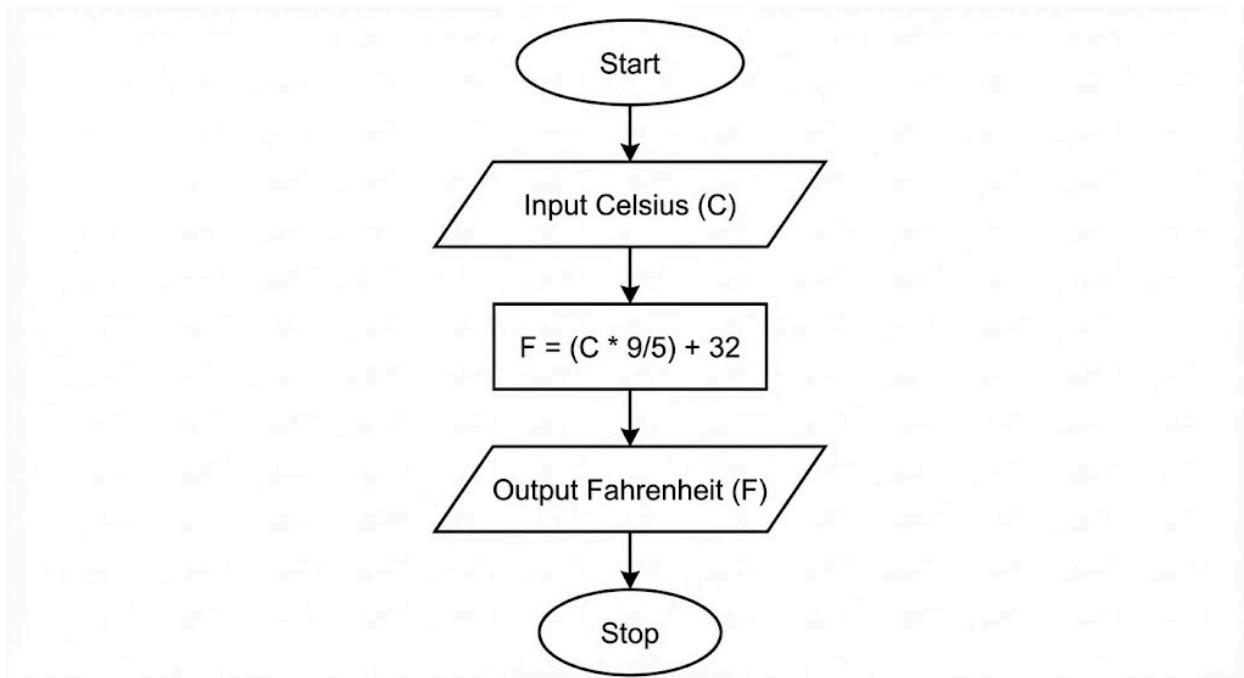
1. Aim

To design and implement a Python program that converts temperature from Celsius to Fahrenheit. The program accepts a floating-point value representing Celsius and applies the formula $Fahrenheit = (Celsius \times \frac{9}{5}) + 32$, displaying the result formatted to two decimal places.

2. Pseudocode

1. **START**
2. **READ** the input value as a float and store it in variable a (Celsius).
3. **CALCULATE** the Fahrenheit value using the formula: $b = a * (9/5) + 32$.
4. **STORE** the result in variable b.
5. **FORMAT** the value of b to 2 decimal places.
6. **PRINT** the formatted result.
7. **END**

3. Flowchart



4. Python Program

```

# Program to convert Celsius to Fahrenheit
# Input: Celsius value as a float
# Output: Fahrenheit value formatted to 2 decimal places

# Taking Celsius input from the user
a = float(input(""))

# Applying the conversion formula
b = a * (9/5) + 32

# Displaying the result formatted to 2 decimal places
print(f"{b:.2f}")

```

5. Experiment Screenshot

The screenshot shows the CodeTantra IDE interface. The top bar displays the user's name, email, support link, and logout button. The main workspace shows a Python script named 'temperat...' with the following code:

```

1 a = float(input(""))
2 b = a*(9/5) +32
3 print(f"{b:.2f}")
4

```

The code is submitted and has passed all test cases. The results summary indicates:

- Average time: 0.002 s (2.38 ms)
- Maximum time: 0.004 s (4.00 ms)
- 4 out of 4 shown test case(s) passed
- 4 out of 4 hidden test case(s) passed

Below the results, a specific test case is expanded:

- Test case 1**: 4 ms
- Expected output: 0.0
- Actual output: 0.0

At the bottom of the interface, there are buttons for Terminal, Test cases, Prev, Reset, Submit, and Next >.