Temperature Converter

- ## Class with methods to convert Celsius to Fahrenheit.

- ## Loop to allow repeated conversions.

- ## Conditional to validate inputs.

```
2.   # Function to convert Celsius to Fahrenheit
3.   def celsius_to_fahrenheit(celsius):
4.     fahrenheit = (celsius * 9/5) + 32
5.     return fahrenheit
6.
7.   # Example usage:
8.   celsius_temp = 80
9.   fahrenheit_temp = celsius_to_fahrenheit(celsius_temp)
10.  print(f"{celsius_temp}°C is equal to {fahrenheit_temp}°F")
```

Explanation (Simple)

- ### Celsius to Fahrenheit formula:
  ```
  F = (C × 9/5) + 32
  ```

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- ### You created a function that takes Celsius temperature → converts → returns Fahrenheit.
- ### Then you passed `80°C` to the function.
- ### Output will be:
  ```
  80°C is equal to 176.0°F
  ```

1. Aim

To write a Python program that converts a temperature given in Celsius into Fahrenheit using a user-defined function.

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2. Introduction

Temperature conversion is an important concept in science, daily life, and engineering applications. Different countries use different temperature scales, such as Celsius and Fahrenheit. This project demonstrates how a simple mathematical formula can be implemented in Python to convert Celsius to Fahrenheit.
It also explains the use of user-defined functions, variables, arithmetic operations, and formatted output. This project helps beginners understand the structure of a Python program and the benefits of writing clean, reusable code.

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3. Theory

Temperature scales:

- **Celsius (°C):** Used in most countries and scientific work.
- **Fahrenheit (°F):** Mainly used in the United States.

To convert Celsius to Fahrenheit, we use a fixed mathematical relationship that shows how both scales are connected.

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4. Formula

$$F=(C×\frac{9}{5})+32$$

Where:

- **C** = Temperature in Celsius
- **F** = Temperature in Fahrenheit

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5. Algorithm

1. Start the program.
2. Define a function `celsius_to_fahrenheit(celsius)`.
3. Inside the function, apply the formula:
   `fahrenheit = (celsius * 9/5) + 32`
4. Return the Fahrenheit value.
5. Store a Celsius temperature in a variable (e.g., 80).
6. Pass the value to the function.
7. Store the returned Fahrenheit value.
8. Display output using a formatted print statement.
9. End program.