**C program to convert temperature from degree celsius to fahrenheit & fahrenheit to celsius.**

Write a C program to input temperature in Celsius and convert to Fahrenheit and Fahrenheit to Celsius.

**Example**

**Input**

Enter temperature in Celsius = 100

**Output**

Enter temperature in Fahrenheit = 212

**Input**

Enter temperature in Fahrenheit = 212

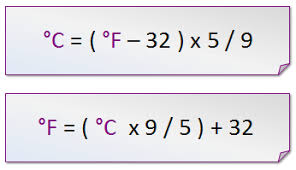
**Output**

Enter temperature in Celsius = 100

**Required knowledge**

[Arithmetic operators](https://codeforwin.org/2017/08/c-arithmetic-operators.html), [Variables and expressions](https://codeforwin.org/2017/08/variables-in-c-programming.html), [Data types](https://codeforwin.org/2017/08/data-types-in-c-programming.html), [Basic input/output](https://codeforwin.org/2017/08/basic-input-output-c.html), if-else.

## Temperature conversion formula



## Logic to convert temperature from Celsius to Fahrenheit

The logic of temperature conversion exists in converting mathematical formula to C expression. You just need to convert mathematical formula of temperature in C language. Rest is simple input/output.

Below is the step by step descriptive logic to convert temperature from degree Celsius to Fahrenheit.

1. Input temperature in Celsius from user. Store it in some variable say celsius.
2. Apply formula to convert the temperature to Fahrenheit i.e. fahrenheit = (celsius \* 9 / 5) + 32.
3. Print the value of fahrenheit.

## Logic to convert temperature from Fahrenheit to Celsius

The logic of temperature conversion exists in converting mathematical formula to C expression. You just need to convert mathematical formula of temperature in C language. Rest is simple input/output.

Below is the step by step descriptive logic to convert temperature from degree Fahrenheit to Celsius.

1. Input temperature in Fahrenheit from user. Store it in some variable say fahrenheit.
2. Apply formula to convert the temperature to Celsius i.e. celsius = ((fahrenheit-32)\*5)/9
3. Print the value of fahrenheit.

**Program**

/\*\*

\* C program to convert temperature from degree celsius to fahrenheit &

fahrenheit to celsius.

\*/

#include <stdio.h>

int main()

{

char typeOfTemperature, c, f;

float celsius, fahrenheit;

printf("\*\*\*If You enter the temperature in celsius >>> you should include its type as c \*\*\*\n\*\*\*If You enter the temperature in fahrenheit >>> you should incluede its type as f \*\*\*\n\n ");

printf("Enter the typeOfTemperature: ");

scanf("%s", &typeOfTemperature);

if(typeOfTemperature == 'c'){

/\* Input temperature in celsius \*/

printf("Enter temperature in Celsius: ");

scanf("%f", &celsius);

/\* celsius to fahrenheit conversion formula \*/

fahrenheit = (celsius \* 9 / 5) + 32;

printf("%.2f Celsius = %.2f Fahrenheit \n", celsius, fahrenheit);

}

else if(typeOfTemperature == 'f'){

/\* Input temperature in fahrenheit \*/

printf("Enter temperature in Fahrenheit: ");

scanf("%f", &fahrenheit);

/\* fahrenheit to celsius conversion formula \*/

celsius = ((fahrenheit-32)\*5)/9;

printf("%.2f Fahrenheit = %.2f Celsius \n", fahrenheit, celsius);

}

else{

printf("Warning >>> You entered invalid value!!! \n");

}

return 0;

}