**Task 2 :** Create a program that converts temperatures between Celsius, Fahrenheit, and Kelvin. The program should allow the user to input a temperature in one scale and output the converted temperature in another scale

**input**

#include <iostream>

using namespace std;

// Function to convert Celsius to Fahrenheit

float celsiusToFahrenheit(float celsius) {

return (celsius \* 9 / 5) + 32;

}

// Function to convert Celsius to Kelvin

float celsiusToKelvin(float celsius) {

return celsius + 273.15;

}

// Function to convert Fahrenheit to Celsius

float fahrenheitToCelsius(float fahrenheit) {

return (fahrenheit - 32) \* 5 / 9;

}

// Function to convert Fahrenheit to Kelvin

float fahrenheitToKelvin(float fahrenheit) {

return (fahrenheit - 32) \* 5 / 9 + 273.15;

}

// Function to convert Kelvin to Celsius

float kelvinToCelsius(float kelvin) {

return kelvin - 273.15;

}

// Function to convert Kelvin to Fahrenheit

float kelvinToFahrenheit(float kelvin) {

return (kelvin - 273.15) \* 9 / 5 + 32;

}

int main() {

char inputScale, outputScale;

float inputTemp, outputTemp;

cout << "Welcome to the Temperature Converter!\n";

cout << "Enter the input temperature scale (C for Celsius, F for Fahrenheit, K for Kelvin): ";

cin >> inputScale;

inputScale = toupper(inputScale);

cout << "Enter the temperature value: ";

cin >> inputTemp;

cout << "Enter the output temperature scale (C for Celsius, F for Fahrenheit, K for Kelvin): ";

cin >> outputScale;

outputScale = toupper(outputScale);

if (inputScale == 'C') {

if (outputScale == 'F') {

outputTemp = celsiusToFahrenheit(inputTemp);

} else if (outputScale == 'K') {

outputTemp = celsiusToKelvin(inputTemp);

} else {

outputTemp = inputTemp;

}

} else if (inputScale == 'F') {

if (outputScale == 'C') {

outputTemp = fahrenheitToCelsius(inputTemp);

} else if (outputScale == 'K') {

outputTemp = fahrenheitToKelvin(inputTemp);

} else {

outputTemp = inputTemp;

}

} else if (inputScale == 'K') {

if (outputScale == 'C') {

outputTemp = kelvinToCelsius(inputTemp);

} else if (outputScale == 'F') {

outputTemp = kelvinToFahrenheit(inputTemp);

} else {

outputTemp = inputTemp;

}

} else {

cout << "Invalid input scale!\n";

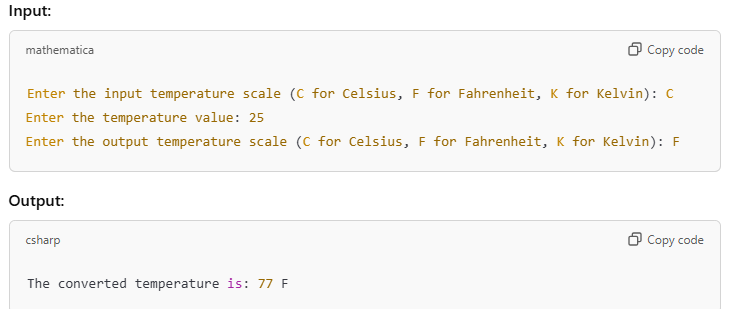
return 1;

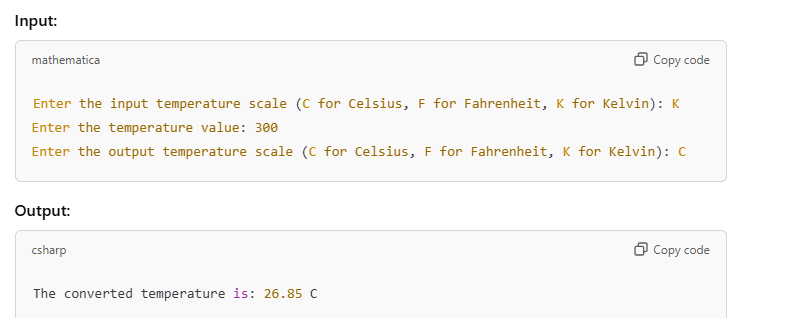
}

cout << "The converted temperature is: " << outputTemp << " " << outputScale << endl;

return 0;

}

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