# Celius and Fahrenheit conversions using “if”

Enter V for degrees Celciusor F for Fahrenheit

Get choice from user

If choice == “C”

source = “Celcius”

Y

N

if choice == “F”

source = “Fahrenheit”

Y

N

Get input from user

If choice == “C”

Fahrenheit = input \* 9/5 +32

If choice == “F”

Celcius = (input - 32) \* 5/9

“NOT SUPPORTED”

1. Display Instructions
2. Get user input
3. Customize input
4. Get input for degrees
5. If:
   1. Celsius entered; multiply by 9/5 then add 32
   2. Fahrenheit entered; subtract 32 and multiply by 5/9
6. Display results

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    Structured Programming

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    Demonstrates conversions using if

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#include <iostream>

#include <math.h>

using namespace std;

const double FREEZING\_in\_FAHRENHEIT = 32;

const char CELCIUS = 'C';

const char FARENHEIT = 'F';

int main()

{

    char choice;

    double input;

    double Celcius, Fahrenheit;

    string source;

    cout<<"This program converts degrees from either Fahrenheit or Celcius.\n";

    cout<<"    C) Enter degrees Celcius to convert to Fahrenheit\n";

    cout<<"    F) Enter degrees Fahrenheit to convert to Celcius\n";

    cout<<"Please choose your input:";

    cin>>choice;

    choice=toupper(choice);

    // Get appropriate text for query

    if (choice == CELCIUS) {

        source = "Celius";

    } else if (choice == FARENHEIT) {

        source = "Fahrenheit";

    } else {

        source = "";

    }

    cout<<"\nPlease enter the temperature in degrees "<<source<<" -> ";

    cin>>input;

    // Perform appropriate calculation

    if (choice == CELCIUS) {

        Fahrenheit = input \* 9/5 + FREEZING\_in\_FAHRENHEIT;

        cout<<floor(100\*Celcius)/100<<" degrees Celcius is equal to "<<floor(100\*Fahrenheit)/100<<" degrees Fahrenheit.\n";

    } else if (choice == FARENHEIT) {

        Celcius = (input - FREEZING\_in\_FAHRENHEIT) \* 5/9;

        cout<<floor(100\*Fahrenheit)/100<<" degrees Fahrenheit is equal to "<<floor(100\*Celcius)/100<<" degrees Celcius.\n";

    } else {

        cout<<source<<" NOT SUPPORTED\n";

    }

}