**Test Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Actual Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | Choice 1  Temp 20 | 20 | 68 | 68 | yes |
| 2 | Choice 2  Distance -8 | -8 | Error message | error | Yes |
| 3 | Choice 3  400 kilogram | 400 | 880 | 880 | yes |
| 4 | Choice 4 | enter | Ends program | End program | yes |

/\*

\* Class: CMSC140\_30522

\* Instructor: Charles Naegeli

\* Project<2>

\* Description: Write a program that shows the following menu options and lets the user to convert from Metric to Imperial system:

Converter Toolkit

--------------------

1. Temperature Converter

2. Distance Converter

3. Weight Converter

4. Quit

• If the user enters 1, the program should ask for the temperature in Celsius and convert it to Fahrenheit

• If the user enters 2, the program should ask for the distance in Kilometer and convert it to Mile

• If the user enters 3, the program should ask for the weight in Kilogram and convert it to Pound

• If the user enters 4, the program should end.

\* Due Date: 4/19

\* I pledge that I have completed the programming assignment independently.

I have not copied the code from a student or any source.

I have not given my code to any student.

Print your Name here: Chris Tark

\* Pseudocode or Algorithm for the program:

(be sure to indent items with control structure)

(need to match flow chart submitted in documentation)

1. The program should use at least one selection control structure (if – else statement)

2. Be sure to convert as specified. For example, convert temperature from Celsius to Fahrenheit, not the other way around.

3. Use the following for converting input:

• 1 kilometer = 0.6 mile,

• 1 kilogram = 2.2 pounds,

• The formula for converting Celsius degree to Fahrenheit is:

F = (9/5)\*C + 32 where F is the temperature in Fahrenheit and C is the temperature in Celsius

4. Convert temperature to a whole number such as 78, distance to two positions after decimal point (for example 84.56) and weight to one position after decimal point (For example 121.6).

(more as needed)

\*/

#include <iostream>

#include <string>

using namespace std;

int main() {

//variables

int pick;

string country;

double fahrenheit{}, celsius{}, mile, kiloMeter, pound, kiloGram;

//interface

cout << "Enter a country name: ";

getline(cin, country);

cout << endl;

cout << "Converter Toolkit" << endl;

cout << "--------------------" << endl;

cout << " 1. Temperature Converter" << endl;

cout << " 2. Distance Converter" << endl;

cout << " 3. Weight Converter" << endl;

cout << " 4. Quit" << endl << '\n';

cout << "Enter your choice (1-4): ";

cin >> pick;

cout << endl;

//invalid input

if (pick < 0 || pick > 4)

{

cout << "Input is invalid, enter a number 1-4" << endl;

}

//temperature

if (pick == 1)

{

cout << "Please enter temperature in Celsius (such as 24): ";

cin >> celsius;

//calculation for conversion to F

fahrenheit = celsius \* 9 / 5 + 32;

cout << "It is " << fahrenheit << " in fahrenheit." << endl;

cout << country << " sounds fun!" << endl << '\n';

}

if (pick == 2)

{

cout << "Please enter distance Kilometer (such as 18.54): ";

cin >> kiloMeter;

if (kiloMeter < 0)

{

//error

cout << " !!! Program does not convert negative distance !!! " << endl;

cout << country << " sounds fun!" << endl << '\n';

}

else

{

//conversion kilometer to mile

mile = kiloMeter \* .6;

cout << "It is " << mile << " in miles" << endl;

cout << country << "sounds fun!" << endl << '\n';

}

}

if (pick == 3)

{

cout << "Please enter weight in Kilogram: ";

cin >> kiloGram;

if (kiloGram < 0)

{

//error

cout << " !!! Program does not convert negative weight !!! " << endl;

cout << country << " sounds fun!" << endl << '\n';

}

else

{

//conversion kilogram to pound

pound = kiloGram \* 2.2;

cout << "It is " << pound << " in pounds." << endl;

cout << country << " sounds fun!" << endl << '\n';

}

}

if (pick == 4)

{

return 0;

}

cout << "Thank you for testing my program!!" << endl;

cout << "PROGRAMMER: Christopher Tark" << endl;

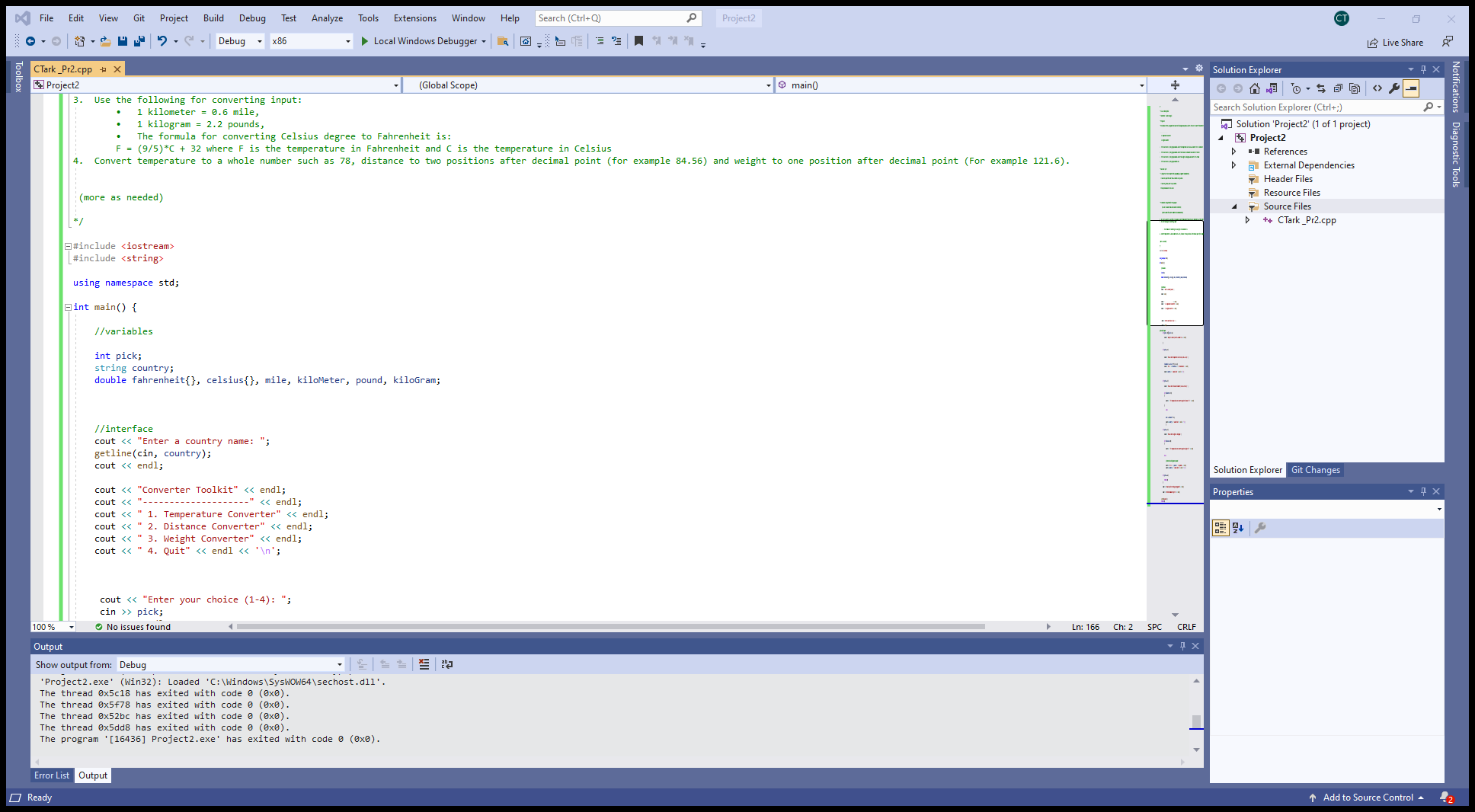
cout << "CMSC140 Common Project 2" << endl;

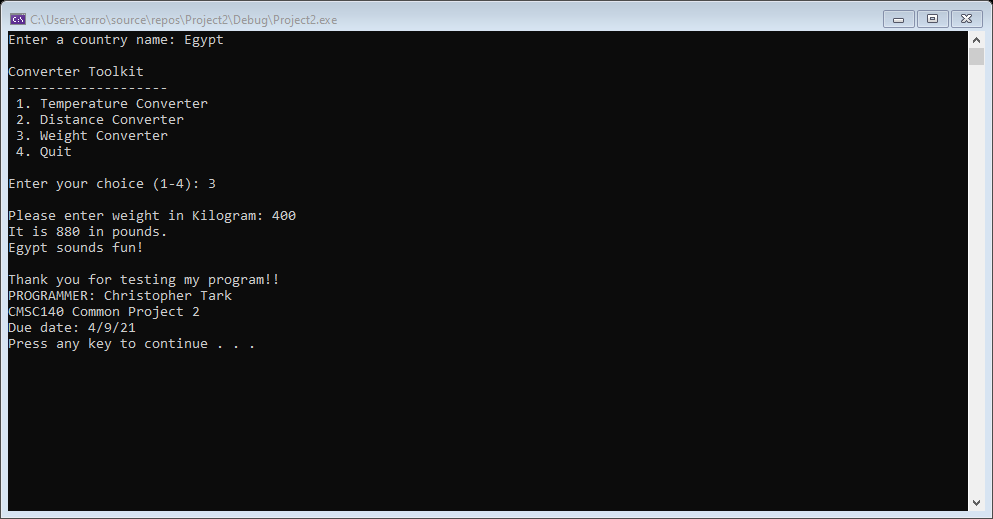
cout << "Due date: 4/9/21" << endl;

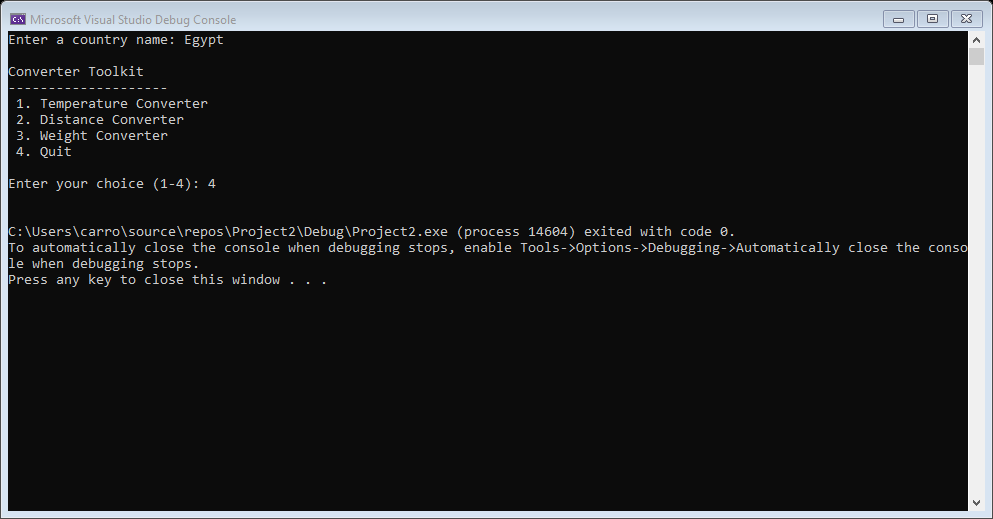
system("pause");

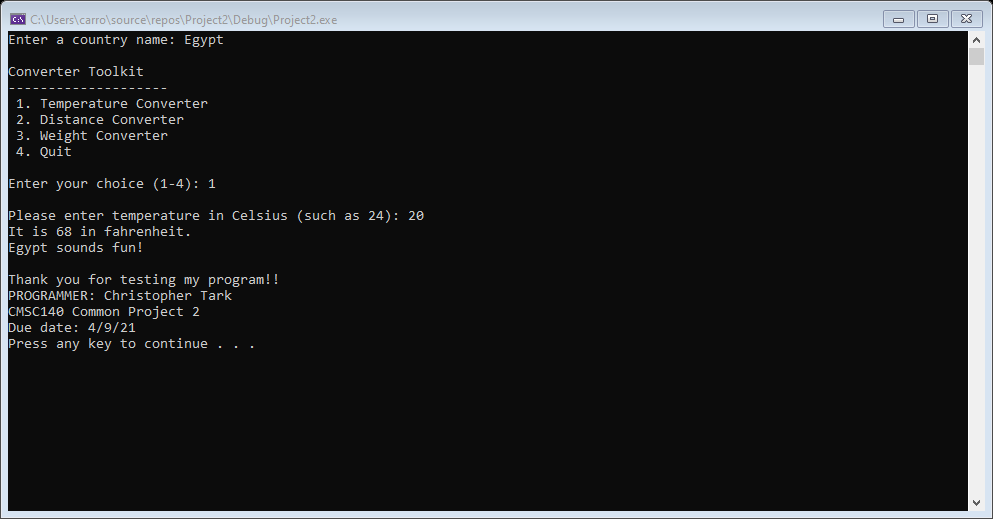
return 0;

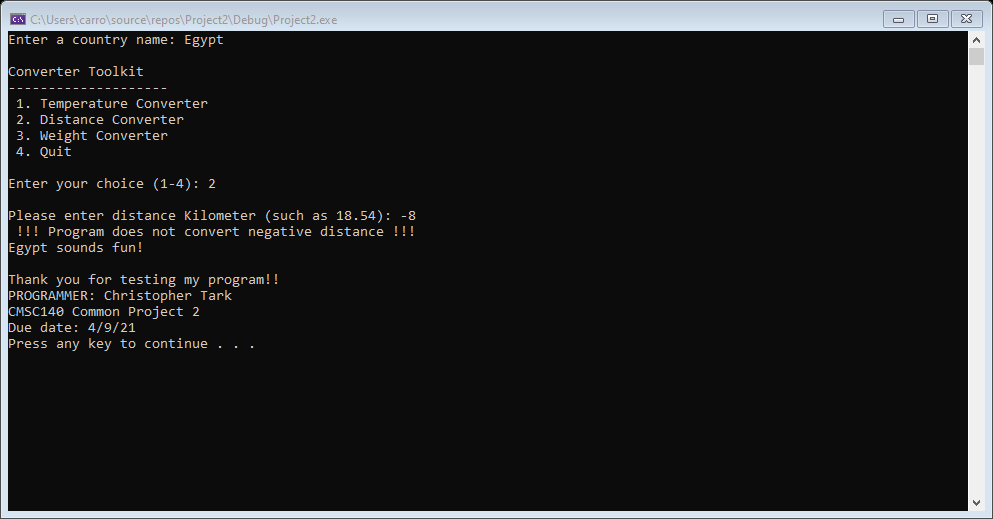
}











A picture containing text, whiteboard

Description automatically generated