CT103: Week 2 Lab Assignment (26/09/2023)

Note: This is your first assignment and will count towards your final grade.

*Make sure you submit your solution by following the "**Submission Instructions**" at the end of this document. An exception will be made this week so that you have **until midnight tonight to submit your solution on Canvas**.*

Please make sure you **write comments** explaining what your code does. Start your C program with a **comment stating your; Name, Student ID and Date**.

1. Create a new project.

2. Write the following program that will convert temperature from degrees Celsius to Fahrenheit.

```c
#include "stdio.h"
void main()
{
    int degC = 0;
    int degF = 0;

    printf("enter temperature in degrees Celsius: ");

    scanf_s("%d", &degC);

    degF = 32 +(degC*9)/5;

    printf("Degrees Fahrenheit = %d \n", degF);
}
```

3. If you are using MAC, use the following code with 'int main()' and 'return 0;':

```c
#include "stdio.h"
int main()
{
    int degC = 0;
    int degF = 0;

    printf("enter temperature in degrees Celsius: ");

    scanf("%d", &degC);

    degF = 32 +(degC*9)/5;

    printf("Degrees Fahrenheit = %d \n", degF);
    return 0;
}
```
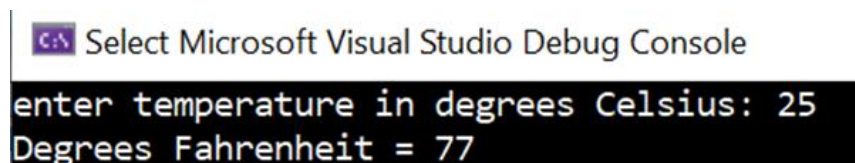
4. Compile and run the program so that you get an output similar to the following screen. Enter any value for Celsius other than 25.


```
Select Microsoft Visual Studio Debug Console
enter temperature in degrees Celsius: 25
Degrees Fahrenheit = 77
```

5. Now change the program so that it does the opposite conversion, i.e. from Fahrenheit to Celsius. Your program should obtain an output similar to the following. Enter any value other than 77 in your program.

```
enter temperature in degrees Fahrenheit: 77
Degrees Celsius = 25
```

6. Change the program so that it includes an **if statement** and a **printf** statement to say 'Too hot!' if the Celsius temperature is above 32.

```
Microsoft Visual Studio Debug Console
Too hot!
```

7. Change the program so that it includes another **if statement** and a **printf** statement to say 'Too cold!' if the Celsius temperature is below 0.

```
Microsoft Visual Studio Debug Console
Too cold!
```

Note: You only need to **submit** the **final version of your code** after step 7. **Don't submit several versions of your code for each step**. However, you should **include screenshots** showing the **console output** for your code for each of the **steps 4 - 7**.

Submission Instructions:

Please do the following to submit your solutions to the assignment.

- Copy and paste your code into a word document labelled 'Assignment2_YOURNAME_ID.doc', e.g. 'Assignment2_JoeBloggs_123456789.doc'.

- Make sure to **include screenshots of your code working** in the .doc file. Use: 'Windows' + 'Shift' + 'S' on your keyboard. On a Mac, you should use the keys: 'shift' + 'command' + '3' or 'shift' + 'command' + '4'.

- Add both: **your .c program** and **your .doc** files to a folder called 'Assignment2_YOURNAME_ID_Submission'.

- Zip the folder up and **submit the .zip file on Canvas** under CT103 Assessments. To zip the folder, right click and press 'Send To' then 'Compressed (zipped) folder'. On Mac, right click the folder and press 'Compress'.

- If for some reason, you cannot access Canvas, please send your .zip folder to the lab instructors by email. They will be available for the duration of the lab.