DT228/1 Programming Lab Test #3

Date: Tuesday, February 25th, 2014 (9.30am – 10.30am)

Requirements:

Write a program to do the following:

1. In your *main()*, enter a set of 5 temperatures (representing Celsius) into a floating-point array.
2. Write a function called *convert_temp()* that accepts 1 parameter (a floating-point array) and returns a floating-point number. This function is used to convert a set of floating-point Celsius temperatures (passed as a parameter) into their equivalent Fahrenheit temperatures using the formula:

   $$°F = ((°C \times 9) / 5) + 32$$

   The function also returns the average of the Celsius temperatures.

3. In the *main()*, pass the array containing your Celsius temperatures to the function *convert_temp()*.
4. In the *convert_temp()*, display each temperature in Celsius and the corresponding value in Fahrenheit.
5. Return the average Celsius temperature from *convert_temp()* to the *main()*. Display this in the *main()*.
6. Write a function called *in_Kelvin()* that accepts 1 parameter (a floating-point number) and has no return type. This function is used to convert a single floating-point Celsius temperature number (passed as a parameter) into its equivalent in Kelvin using the formula:

   $$°K = °C + 273$$

7. In the *main()*, pass the average Celsius temperature (point 5 above) to the function *in_Kelvin()* where it should be converted into its equivalent temperature in Kelvin.
8. In the *main()*, display the average temperature in Kelvin.

Submission details:

1. Name your program: labtest3.c
2. Submit your program using the labtest listed in the Programming module in Webcourses. This must be submitted on or before 10.30am today in this lab.
3. Extra marks will be awarded for well written code (comments, indentation, whitespace, good use of brackets, etc.,).

NB - This is an individual lab test and **NOT** a group one. Any student discovered copying or communicating in any way (electronic, verbal, or otherwise) will immediately fail the lab test and reported to management in the School of Computing. Do your own work!! Please :)