**CS 121 Homework Assignment Two**

1.0 Using the temps.txt data file which has temperatures in degrees Celsius create a new data file that consists of a table of temperatures in Celsius, Fahrenheit and Kelvin. The equation to convert Celsius to Fahrenheit is:

F = 9/5 \* Celsius + 32

To convert Celsius to Kelvin add 273 degrees.

The table should have headings for each temperature as shown below.

Celsius Fahrenheit Kelvin

32.0 0 305

100 212 405

2.0 Write a program that will prompt the user to enter a list of book titles, authors and prices and then create a file with the information provided. You can use online resources to get book information if you like. The information should be formatted as follows:

Title left justified in a 40 space field

Author last name and initial left justified in a 20 space field

Price right justified in a 7 space field

Fill the intermediate space between values with dots instead of spaces.

Example:

Flash Boys . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Lewis M. . . . . . . . . . . . . $24.95

Endless Forms Most Beautiful . . . . . . . . . . . . . .Carroll S. . . . . . . . . . . . . $17.95

Create a file with at least 10 entries. Turn in the C++ source code and a copy of the resulting file.

3.0 Write a program that will prompt the user to enter a sentence and then perform the following operations.

1. Print the number of characters in the sentence to the screen.
2. Count the number of words in the sentence.
3. Print the sentence to the screen in all uppercase.
4. Prompt the user to enter a position within the string and the number of characters wanted. Then print the substring specified by those values. NOTE: Make sure that the position and number of characters fall within the string before performing the operation.
5. Prompt the user to enter a single character and then print out the position within the sentence where every occurrence of that character appears.

4.0 Given the text file UAH\_sample.txt write a program that performs the following tasks:

1. Count the number of words in the file. Print the result to the screen.
2. Replace each occurrence of UAH with UAHuntsville. Create a new file with the updated text.

Turn in the C++ source code and a copy of the resulting file.