**COMP130 HW9: File processing  
instructor: John MacCormick**

Question 1. (10 points) Create a plain text file named quotes.txt, and save it in the folder you are using for writing Python code in this assignment. Enter at least five quotations into the file. Quotations can be from books, movies, TV shows, songs, or any other source that interests you. Feel free to show some creativity and make a selection of your favorite quotations. But if you wish to save time, you can also choose a selection of quotations from the ones given at the end of this assignment. For each quotation, put the quote itself on one line. On the next line, put the name of the entity to which the quote is attributed. For example, the first few lines of the file might be:

A toad does not run in the daytime for nothing

Chinua Achebe

Leave all thought of expectation to the weather man

Bic Runga

...

To confirm you have completed this question, paste the content of your file into your submission document.

Question 2. (5 points) Write Python statements that open the quotes.txt file, read and print the first line of the file, and then close the file.

Question 3. (5 points) Write a program that prints out all of the lines in the quotes.txt file.

Question 4. (10 points) Write a program that prints the total number of lines and the total number of characters in your quotes.txt file.

Question 5. (10 points) Consider the following string variables:

s1 = "Grits ain’t grocery Eggs ain’t poultry And Mona Lisa was a man"

s2 = "Everything gonna be alright this mornin'"

s3 = "Born under a bad sign been down since I began to crawl"

Write Python statements that use the split method and the [] notation to print out:   
(a) the 6th word (index 5) of s1  
(b) the last word of s2  
(c) the first word of s3

Question 6. (10 points) Write a program that prints out the words in your quotes.txt file one per line.

Question 7. (10 points) Copy your program from an earlier question and extend it to print out the number of words in your quotes.txt file as well as the number of lines and the number of characters.

Question 8. (10 points) Rearrange the statements below into a program that creates a plain text file containing the text:

one

three two

four

Statements to rearrange:

num\_file.write(nums[2] + ' ')

num\_file.close()

num\_file.write(nums[0] + '\n')

num\_line = 'one,two,three,four'

nums = num\_line.split(',')

num\_file.write(nums[1])

num\_file = open('numbers.txt','w')

num\_file.write(nums[3])

num\_file.write('\n')

Question 9. (15 points) Write a program that writes a file containing four columns of data in CSV format. The four columns are:

* x
* x^2
* x^3
* x^4

The file should have a header row labeling the columns and then one row for each integer -value from 0 to 100. The first few rows of the file should be:

x,x^2,x^3,x^4

0,0,0,0

1,1,1,1

2,4,8,16

...

Suggestion: open your file in Excel to check that it looks correct.

***Selection of quotations which can be used for question 1 if desired:***

* Chinua Achebe: A toad does not run in the daytime for nothing
* Bic Runga: Leave all thought of expectation to the weather man
* Pink Floyd: Long you live and high you fly
* Chimamanda Ngozi Adichie: Most of all, do not be angry
* Jane Austen: But how shall we prove anything?
* Linda Alcoff: What I seek now is no longer a home, but perhaps a lighthouse
* Latanya Sweeney: I warn against doing nothing
* Ho Xuan Huong: Hey sisters, do you know
* David Hilbert: We know that every age has its own problems
* Radiohead: I may be paranoid, but not an android

Total points on assignment: 85