Specification for Assignment 3 for COMP1405 (Fall 2016)

Instructions

There are two questions in this assignment. For each question you will be submitting your solution as multiple files, each containing source code written in Python 3. These files must be compressed into a single "zip" file, and you will submit this file using cuLearn.

- ☐ *The source file for question 1 must be named "a4q1.py".*
- ☐ *The source file for question 2 must be named "a4q2.py".*
- ☐ *The compressed archive (i.e., the .zip file) must be named "a4.zip".*
- ☐ *The due date for this assignment is Saturday, November 19, 2016, by 11:30pm.*

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Late assignments will be accepted for 48 hours after the deadline, but the penalty for submitting a late assignment is a loss of 2.0% per hour.

♦

You are expected to demonstrate good programming practices at all times (e.g., choosing descriptive variable names, provide comments in your code, etc.) and your code will be penalized if it is poorly written.

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You are expected to do the necessary preparatory work (e.g., devising an algorithm) before you begin coding. Whenever appropriate, you will be asked to present either pseudocode or a flowchart before you will receive any assistance from the instructor or a teaching assistant.

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This assignment is uniquely generated; every student in the class is required to complete a slightly different version of this assignment. To ensure that each unique assignment shares the same level of difficulty, a unique assignment generator (and supporting files) has been made available on cuLearn.

To receive the assignment instructions that are specific to you, download the "unique-assignment-generator-for-A4.zip" file from cuLearn. Once you have extracted the contents to your working folder, use the command prompt to run the "generator-for-A4.py" program and then enter and confirm your student number.

Questions 1 and 2 (of 2)

When you run the unique assignment generator for this assignment, it will describe four functions that you are expected to design and implement by adding them to the "a4q1.py" file provided in the "unique-assignment-generator-for-A4.zip" file from cuLearn. To create these functions you will need to look carefully at a long, apparently random string of characters provided by the generator and determine how this string could be "sliced" into pieces that can then be concatenated into the specified word. As a clarifying example, if you were provided the apparently random string "aqwroubjkerltmn" and told to produce "robert", your function would be expected to "slice" out the "ro", "b", "er", and "t" substrings and concatenate them together. The functions must also behave in the way described by the generator, and are expected to function with precisely the arguments and return values specified - each of your functions that does not follow the specification provided by the generator will receive no marks.

The teaching assistants will be provided software to help them mark these submissions, so you must not modify "a4q1.py" in any way other than to add your function definitions. Global variables and constants are explicitly prohibited, as is any modification to the "main" function. Failure to observe these instructions will result in a mark of zero for this question, and submissions that "crash" can also expect to receive a mark of zero.

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When you ran the unique assignment generator for this assignment, it also explained the quiz program that you are expected to create for this assignment. Before attempting to implement your submission for this question you are REQUIRED to create either a flowchart or a pseudocode version of your solution. If you seek assistance from the instructor or a teaching assistant you will be asked to present this preparatory work, and if you have not completed these preparations you will not receive any assistance.

The required functionality for the quiz program is explicitly described by the generator, and the generator will also describe precisely HOW your quiz questions must be stored in memory. If you submission fails to follow these instructions it will incur a heavy penalty.

You are STRONGLY ENCOURAGED to design your questions IMMEDIATELY so that your can spend the time closer to the due date focusing on implementing the required functionality. Sample questions in your required format will be provided by the generator.