**Assignment 3**

**CSC 130, Fall 2016**

**Create Python 2.7 recursive programs using the Python Module 2.7 window and save them in one .py file**

**(a) with the name “Assignment 3” appended to your last name**

**(b) containing print statement to display the name of the assignment i.e. “Assignment 3”**

**(c) containing print statement to display the name of the programmer (student)**

**(d) containing print statement to display the date when the assignment was uploaded**

**(e) for each problem within the assignment include print statement to display the problem number**

**(f) for each problem within the assignment include print statement to display the problem description**

**(g) for each problem within the assignment include print statement to prompt user for an entry (e.g. “Enter a character”, “Enter a string”, or “Enter a score (integer number between 0 and 100”).**

**(h) for each problem within the assignment include print statement to display the intermediate results.**

**(i) for each problem within the assignment write a program and display the results with the text starting with “Result …”**

**Make each program independent and do not reuse any values of variables from the previous programs!**

1. **Based on slides from the Chapter 3 Recursion write a recursive function getGrades() to input (using raw\_input command for Python 2.7 and input for Python 3.5) John’s scores (e.g. 10, 99, 77, 0, and 100) terminated by an empty string. Provide function call and print the list of all entered scores after the function call returned the results.**
2. **Based on slides from the Chapter 3 Recursion write a recursive function getGradesNoZeros() to input (using raw\_input command for Python 2.7 and input for Python 3.5) John’s scores (e.g. 10, 99, 77, 0, and 100) terminated by an empty string but skipping all zeros. Provide function call and print the list of all entered scores (except zeros!!!) after the function call had returned the results.**
3. **Based on slides from the Chapter 3 Recursion write a recursive function getNames() to input (using raw\_input command for Python 2.7 and input for Python 3.5) student names terminated by an empty string. Provide function call and print the list of all entered names (without empty string!!!) after the function call has returned the results.**
4. **Based on slides from the Chapter 3 Recursion write a recursive function countA() to accept a string from the main program and count number of uppercase characters in the string. In the main program: input a string (using an input command), provide the appropriate function call and print the result.**
5. **Based on slides from the Chapter 3 Recursion write a recursive function isAlphabetic() to accept a string from the main program and finds if the string characters are in the alphabetic order. In the main program: input a string (using an input command), provide the appropriate function call and print the result. Make your function isAlphabetic() efficient i.e. stop processing characters when the first character out of order is found.**