COMP 2067: Programming for Beginners

Winter 2022, Assignment #2

Due Date: *Monday, Mar 14*

Covers Lessons 4-7

For each question, write a Python program **with comments** to perform the required tasks. Each program should be submitted in a **separate** file.

1. Write a program, with comments, to do the following: **(18+2=20)**
   a. Ask the user to enter their first name. The user may enter the name using uppercase or lowercase letters.
   b. If the name starts with a vowel, print the message '*Your name starts with a vowel*.'; otherwise print the message '*Your name starts with a consonant*.'
   c. Print the first letter of the name in uppercase, along with a suitable message. This part should be executed for all cases, whether the name starts with a vowel or consonant.

   An example run is shown below.

2. Write a program, with comments, to do the following: **(20+2=22)**
   a. Ask the user to enter a positive integer. (The user should enter digits only).
   b. Check the value entered to see if it corresponds to a positive integer.
   c. If the user entered a positive integer do the following:
      i. If the integer is even print "*You entered an even number*"
      ii. Otherwise if the integer is a multiple of 7 print "*You entered an odd number that is a multiple of 7*"
      iii. Otherwise print "*You entered an odd number that is NOT a multiple of 7*"
   d. Otherwise, print the message '*You did not enter a valid input!*'.

   HINT: Use the built-in **isdigit()** method for strings in step **b**. Some sample sessions are shown below.

3. Write a program, with comments, to do the following: **(37+2=39**
   a. Define a list L1 consisting of at least 10 integers (e.g. L1 = [5, -34, 0, 98, -11, 244, 193, 28, -10, -20, 45, 67]) and print L1 with suitable message.
   b. Ask the user to enter a value between 0 and *n*-1, where *n* is the number of items in the list L1. You may assume the user will enter a positive integer, but it may not be in the specified range.
   c. Check the value *x* entered by the user is in the proper range (i.e. $0 \leq x \leq n-1$).
   d. If *x* is in the proper range:
      i. Print the x^{th} element of L1 with a suitable message.
      ii. If the integer *x* occurs in L1, print a message indicating the position of *x* in L1; otherwise print a message indicating *x* does not occur in L1.
      iii. If *x* is an even number and greater than 0, print the first *x* elements of L1. If *x* is an odd number and greater than 0, print the last *x* elements of L1. If *x* is 0, print an empty list.
   e. Otherwise (i.e. *x* is not in the proper range), print the message '*You did not enter a valid input!*'.

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Below is a screenshot showing a sample output for each question. Note that while the sample outputs below are all shown together for convenience, you should be submitting three **separate** files.