NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES
ISLAMABAD CAMPUS
CS103 - Computer Programming(All sections)

Spring 2014   Assignment#06
Issue Date: March 16th, 2014   Due Date: **March 20th, 2014 @ 11:30pm**

Instructions

- Submit the source code of the assignment via Slate only.

- Use proper naming convention to name the file containing the source code. For example, the file containing the source code for second question of the third assginment should be named as A3Q2.cpp, that of the third question of the second assignment as A2Q3.cpp, etc.

- Write two files per class (separating the interface from the implementation).

- Write your name and roll number at the beginning of each program using comments.

- **Plagiarism:** Plagiarism is not allowed. If found plagiarized a case would be submitted against both parties to the DC committee.

- **Upload only cpp files, do not upload a zip file**

1   LongInt Class

Recall that *int*, *long*, and other native types come with a small range of values that can be stored in a variable of that type. As part of this problem, you are required to write a class named LongInt, such that instances of this class can hold upto 1000 digits. The class should have functions to allow operators for the following operations:

1. Addition,

2. Subtraction,

3. Multiplication,

4. Division,

5. Increment/Decrement (pre and post, both)

6. Negation and

7. Logical operators ($<,>,<=,==,!=$, etc).

8. Stream Insertion and Extraction operators

These operations can be performed between two LongInts or between a LongInt and the native integer types.

Write a program that uses this class to implement a calculator. This program is required to show a menu of operations and depending on the operation chosen, asks for the operand(s), performs that operation on the given operand(s) and finally displays the result. The menu should be displayed again after showing the result of the previous operation, quiting only when the option corresponding to exit is selected by the user.

Submit three files (uncompressed) on Slate: LongInt.h, LongInt.cpp and A6Q1.cpp.