Homework 6

CSCI 60, Linnell, Spring 2016

Due Wednesday May 11

Problem 1 (35 points). Implement a basic **biguint** calculator using C++ and Qt. Only non-negative numbers are required, and no overflow handling is required. Your app should support the following features:

- two spots to display/enter the left and right operands
- a spot to display the result
- a spot to display the memory value.

  Note: You may wish to use QLineEdits for these. http://doc.qt.io/qt-5/qlineedit.html You'll want to use its text() function, which gives you the text in the QLineEdit as a QString, and its setText function, which takes in a QString. You can convert a QString into a string by setting a string variable equal to the result of a call to a QString variable's member function toStdString(). Here's how to turn a string into a QString:

  ```
  std::string str = "Hello world";
  QString qstr = QString::fromStdString(str);
  ```

- QPushButton items to support addition, subtraction, memory store (save result), memory recall (restore to left operand). Note that our calculator does not support negative numbers, so if the result of the subtraction would become negative, it should instead be zero.

- (up to 5 points extra credit) A menu and a tool bar (3 points), both with two items: About … and Quit . And any other UI bells and whistles you like (up to 2 more points). Note, I am not going to talk about these things in class, and I will not help you with them in office hours. If you want to do the extra credit, it's up to you to explore the new widgets on your own; of course you're free to google to your heart's content.

First, you must add to the posted biguint class the following: member overload for -=, and non-member overload for +, -, >, >=. Writing these functions is the most important part of the assignment; especially -=.

Submission instructions: Softcopy and hardcopy are both due at the beginning of class. You will print out your code for each problem (all .h and .cpp files), as well as the results of running your code with some input (If the problem involves file I/O include your input and output files; if it has a QT UI take a screenshot). You must staple together multiple sheets (there will be deductions for unstapled homework!). **For QT projects, attach ALL the files in your project folder to your email (NOT as a zip – as separate files)**, and send it to:

cs60@math.scu.edu

The subject line of the email should be "CS60 HW6 YourLastName YourIDNumber "