As discussed in class, you are doing to submit the work for the following problem by Thursday, October 13, 2011 as follows,

- **Emailing the source file (cpp) file by 6:00pm, and**
- **Turning in a hard copy of source copy in class on Thursday.**

Problem #1

1. Write a function named as **`analyzeDigitPatternYourName()`** that will
   (i) Receive an integer as argument, and
   (ii) Start the process of searching for patterns of repeated digits as follows,
   - Ask for the digit to be found in the repeated patterns (for example, '3' as the entered character digit), and
   - Ask for how many digits in the pattern, which is a non-negative integer greater than 1 (for example, 2 as the number of character digits of '3' seen to be repeated "33"), and
   - Begin the search process starting from the right most digit of the integer (least significant digit). If there is a pattern found (that means "33"), increase the count by 1 and replace the **left-most** digit (i.e., '3') with a '0' digit (that means a "33" will become a "03"), and
   - Go back to the beginning of the integer and search for the patterns (i.e., "33") again. If there is a pattern found (that means "33"), increase the count by 1 and replace the **left-most digit** (i.e., '3') with a '0' digit (that means a "33" will become a "03"), and
   - Continue until finding and updating all patterns.

   (iii) Display the **updated integer**, and
   (iv) Return the number of patterns found.
2. Write a program with function **`main()`** named as **`cis25Fall2011MT1Problem2YourName.cpp`** that will make 2 calls to the above function with the following sample series of values,

   Data for Call #1:

   ```
   Integer received as argument: 1333343333
   The digit in pattern: 3
   Number of character digit: 2
   ```

   Data for Call #2:

   ```
   Integer received: -1333343333
   The digit in pattern: 3
   Number of character digit: 3
   ```

   What is the **EXACT** output of the program?

Note! Provide all correct logic, syntax and statements for full credits.