**CS160 Introduction to Computer Science I Fall 2015**

**Lab 3: Input Boxes and Decision Structures**

**20 pts**

***Monday Lab Wednesday Lab***

**Start Date:** 09-21-2015 **Start Date:** 09-16-2015

**Due:** 09-24-2015 **Due:** 09-19-2015

**Learning Outcomes**

Utilize Java Syntax in fundamental programming algorithms (a)

Recognize and apply the various input and output devices in programming (c)

Recognize and apply the various control structures (b)

Recognize and apply the basic debugging strategies in programming©

**Requirements**

The goal of this lab is to familiarize students with input boxes and if statements.

***Preliminaries***

1) Create an Eclipse Java Project.

2) Add a Java class named RomanConv to your project

3) Create a project submission folder, in the form Lab#FirstNameLastName. For example, mine would be Lab3SrikanthChalla

**Exercises**

For this lab, you will use a series of nested if-else (or if-else-if, if we get to them and you know how to use them by this point!) statements in order to a Roman Numeral number into its String word form. The numerals we are concerned with are **I, II, III, IV, V, VI, VII, VIII,** which coincide with **One, Two, Three, Four, Five, Six, Seven, Eight**. Numbers outside of this range are denied – you must tell the user that they are.

Further, all input and output must be obtained by using input and message boxes. All boxes need to have a title and may use a box type of your choice (error, warning, question, information, or even the dreaded *plain* message box are all acceptable).

As a final requirement, the outermost if statement must check to see if the string starts with an ‘I’ or a ‘V’. The general structure of the code is:

***if the first character is I***

***check to see if it is 1, 2, 3, or 4***

***else***

***check to see if it is 5, 6, 7, or 8***

Your code must not fall for inputs like ‘I am totally a roman numeral’, ‘IIIlikefish’, or ‘VIII is delicious.’ Those inputs should be denied just like an input outside of I to VIII would be.

As a final hint, remember that the first character in a roman numeral, the first character tested, will be your input string(let’s call it input) at character 0: input.charAt(0).

Sample Execution for inputs ‘I’ and ‘X’:

**Submission Guidelines:** Copy all the source code (the .java files) into the submission folder made during the preliminaries step. Then zip this folder and submit it onto blackboard.

Remember to click on the assignment’s name when submitting, as the blue link is just the pdf!

And be sure to double check your submission, in case blackboard eats it.