Program Design: Lab 4

## Input

1. In detail indicate what the inputs to this program are?
   1. The inputs to this program is a positive integer
2. How do you validate the input
   1. Java helps with this as it restricts the input objects, and then I restrict it to which the input cannot go over 3,999.
3. Pseudocode: Briefly explain how this section will look like

This section would look like generally two functions along with main. There will be a function that accepts an integer named Numeralize in which it calls another function called translate 4 times, once for each place of the number.

## Processing

1. What is this program calculating?
   1. The program is calculating the integer into a string
2. Can we divide the calculations to the smaller “modules”
   1. Yes
3. Pseudocode: Briefly explain how this section will look like – Each module should have its own section.

Numeralize: checks the entry for a valid response

* If not, then return a string with an error message.
* Calls Translate 4 times

Translate: Checks for the place inputed, then returns a string for that place.

## Output

1. What will this program display to the users?
   1. The program will only display “MCMLXXVIII” to the user.
      1. Additional numbers could be used within the code.
2. What kind of formatting this output will use (Currency with $ …)?
   1. The output formats the string in Roman Numerals
3. Pseudocode: Briefly explain how this section will look like

System will print out the start and end of the program with the output of roman numerals of a given number.

## Library

What Libraries do you need for this program?

No Libraries are needed for this program.

## Initialization and constant variables

1. What variables need to be initialized?
   1. Multiple strings must be initialized but primarily 3 ints and 2 strings are used in my code in any given process.
2. What variables need to be defined as constant
   1. No variables are needed to be defined as constant.