PROGRAM SPECIFICATIONS:

Complete the code for lab 6. The lab reads in a *non-negative* integer (1 or greater) from the user. The user is prompted with a menu of choices. The menu is displayed repetitively until the user chooses to quit.

The menu choices are
1. Enter a new number
2. Print the number of odd digits, even digits and zeros in the integer
3. Print the prime numbers between 2 and the integer (inclusive)
4. Quit the program

PROGRAM PARTICULARS:

- I have provided some starting code. The java file contains comments about what you need to do. When the program starts up, the user is asked for a positive integer. Using a while loop ensure it is positive.

- After the user enters a positive integer, the above menu is displayed. Remember the user can choose to do #2, and #3 on the same number. Meaning, once you have the number from the user do not make the user enter a new number each time. The user can keep the same number until the user selects option 1.

- There must be error checking on the input integer: if it is negative or 0, the program will print an error message and re-prompt. This process will continue until valid input is entered. You may assume an integer of some form will be entered by the user.

- There must be error checking on the menu choice entered: if the user enters a choice not on the menu, the program will print an error message, re-display the menu and re-prompt. This process will continue until valid input is entered. You musst use a do while for this input checking

- No string or array variables are allowed.

- No built-in methods for integer manipulation are allowed.

- You may assume that no integer entered will be greater/smaller than -2 billion to +2 billion.

- No methods, everything will happen within main.

- No break or continue statements other than those for the switch statement.

- You may use System and Scanner but NO other classes, including you can't use the Math class.

- I have provided a sampleRun.txt

TURN IN:
A zip file containing
- You package code and all your java code
- cscd210lab6out.txt – at least 4 full sample runs of your program (choices 1 – 4 for each run)

Name your zip file your last name first letter of your first name lab6.zip (Example: steinerslab6.zip)