CPS109 Lab 4

This lab gives you practice writing programs similar to the ones in Chapter 3 of the course text: Introduction to Computation and Programming Using Python, by John Guttag. There are for you to write. Put all of your programs into a .txt document and submit your single file on D2L. These problems start with basic iteration, and move on to more tricky iterative problems.

Simple iteration:

1) Write a program that uses a loop to computer the sum of all the even numbers from 2 to 100 inclusive.
2) Write a program with a loop to compute the sum of all the squares from 1 to 100 inclusive
3) Write a program with a loop to compute and print the powers of 2, for powers 0 to 20 inclusive.
4) Write a program with a loop to compute the sum of all the odd numbers from a to b inclusive, where a and b are inputs from the user.
5) Write a program with a loop to compute the sum of all odd digits of an input. For example, if the input is 32677, the sum would be 3 + 7 + 7 = 17.

Trickier iteration:

6) Ask the user to input 10 integers, and then the program prints the largest odd number that was entered. For example of the integers were: 10, 9, 7, 12, 2, 5, 15, 100, 90, 60, then the program would print 15 as the largest odd number. If there is no odd number, then the program should print a message saying so.
7) Write a program which reads a string containing any characters from the user and prints the sum of the digits in the string. For example, if the string from the user is "I want 3 oranges and 24 bananas, 1abc.", then the output would be 10, since 3 + 2 + 4 + 1 = 10. Note that a character is a digit if it is greater than or equal to '0' and less than or equal to '9'.
8) Similar to Q7, from the text, read a string from the user which is a sequence of decimal numbers separated by commas, e.g., "1.23,2.4,3.123". Print the sum of the numbers, which for this example is the sum of 1.23 + 2.4 + 3.123 = 6.753.