Programming Exercise 5A

NOTE: All programs that you write must have comments at the top with 1) the program name, 2) your name, and 3) a sentence describing what the program does.

For all programs going forward, whenever you print something, make sure it has a label.

1. Create a program called **Program5A1** that will do the following:
   - Read a set of integers from the text file, Lab5A1.txt. (They will all be between 0 and 10.)
   - Put the numbers into a list and print the list. (Make sure it is a list of integers, not strings.)
   - Add the numbers in the first 5 positions and print the total.
   - Ask the user for a number and count how many times that number is in the list. Print the count.
   - Ask the user for another number and make a new list which is equal to the current list with the input number removed from it. Print the new list.

2. Create a program called **Program5A2** that will do the following:
   - Generate 15 random integers between 1 and 20 and put them into a list.
   - Print the list
   - Count the number of odd values in the list and print that value.
   - Create a new list with only the odd numbers from the original list and print it.
   - Count the number of even values in the original list and print that value.
   - Create a new list with only the even numbers from the original list and print it.

3. Create a program called **Program5A3** that will do the following:
   - Read a set of integers from the text file, Lab5A31.txt.
   - Put the numbers into a list and print the list. (Make sure it is a list of integers, not strings.)
   - Determine if the list is going up and print a statement to say if the list is going up or not. (Going up means all the values are increasing like [1,2,3,4,5]).
   - Determine if the list is going down and print a statement to say if the list is going down or not. (Going down means all the values are decreasing like [9,6,5,3,2,0]).
   - Run your program 3 more times and change the text file to each of the following for each run to test different scenarios. (Lab5A32.txt, Lab5A33.txt, and Lab5A34.txt)