**Intro Lists – Day 2 \*\* Save all your programs \*\***

1. Write the following functions.

a) linear\_list(n) - This function returns a list that contains the integers 1 to n. For instance, calling linear\_list(8) in the main program will return   
[1, 2, 3, 4, 5, 6, 7, 8].

b) random\_list(n, m, k) – This function returns a list of n random integers between m and k. For instance, calling create\_random(10, 3, 12) will create a list of 10 randomly generated integers between 3 and 12.

c) user\_list(n) – This function returns a list of n values as read in from the user.

2. **Using the above functions**, write the following programs.

a) Read 10 integers from the user and store them in a 10-element list. Determine the following:

* + - the sum of the values
    - the average of the values
    - the highest and lowest values
    - the number of odd and even values

b) Create a 5-element list containing 5 random integers between 1 and 5. Determine if the elements are in descending order.

c) Create two lists – one from 1 to n and the other from 1 to m where n and m are values provided by the user. Print the sum of these two lists.

Enter the length of the first list: 6

Enter the length of the second list: 7

The two lists added together is …

[1, 2, 3, 4, 5, 6, 1, 2, 3, 4, 5, 6, 7]