**ArrayList Lab**

Create a new project named arraylist\_lab with a new class named ArrayListLab. Your main method should call each method you write below.

Make sure you use comments and correct java conventions.

1. Write a new method named “createList” that returns an ArrayList. Inside createList, you should create a new ArrayList and add a bunch of words and names to it. You can either add words manually or add them by reading in words from the console. Print the list before returning to verify that the list was populated correctly.
2. Write a new method named “reverseList” that reverses the order of the elements in an ArrayList of strings. It accepts the list that was created in “createList” as a parameter. Print the list to verify that it indeed was reversed.
3. Write a new method named “capitalizePlurals” that accepts an ArrayList of strings (the return value from createList) and replaces every word ending with an “s” with its uppercased version (drummers becomes DRUMMERS).
4. Write a new method named “removePlurals” that accepts an ArrayList of strings and removes every word in the list ending with an “s” or “S”.
5. Write a new method named “intersectLists” that accepts two sorted array lists of integers as parameters and returns a new list that contains only the elements that are found in both lists. You need to create two integer lists in your main.

**For Each Lab (Homework)**

Continue to use the project named arraylist\_lab. Your main method should call each method you write below.

1. Create a new method named “inOrder” without a return value and without any parameters. Create your own array (not an ArrayList) of 20 integers. Verify that the list is in order (1, 2, 3, 4) by comparing each element using a for each loop. If it is not, print “Not in order”, if it is, print “In order”. Verifying by making two arrays, one in order and one not in order.
2. Create a random array of 10 integers in your main (between 1 and 10). Create a new method named “randomArray” that has an array of integers as it parameters (not an ArrayList). Using a for each loop, count the number of times 8 is in the array and print the sum after the for each loop. Now print your loop using a for each loop to verify your results.
3. Create a new method named “forJames” that reads in 5 Strings from the console storing each value into an array. Write a for each loop to see if the String “James” was inputted in the Console.
4. Create a new method named “forSchool” that reads in 5 doubles from the console storing each value into an array. Write a for each loop to see if all your grades are over 85.0.
5. Create a new method named “forSchool2” that reads in 5 integers from the console storing each value into an array. Write a for each loop to see if all your grades are over 85 AND they are even numbers.