Assignment 17: ArrayLists

1. You are not given a starting project. Create one of your own with a main class called SearchList.java.
2. Create an ArrayList and fill it with 10 random integers between 0 and 50.
3. Prompt the user for a number to search.
4. Go through the ArrayList and see if that number is in it. The best way to do with will be to create a boolean called found, that begins as false. Then, loop through the ArrayList with a while or for loop and change found to true if any value in it is equal to the user’s number.
5. Print that you found the number or that you didn’t find it, depending on the boolean.
6. Next, find the largest number in the ArrayList. You can use a similar loop as before, except instead of a boolean you should create an integer that holds the largest value so far as you go through the ArrayList. Print that value at the end.
7. Create another ArrayList and add all the words in this sentance to it as Strings: A bunch of revolutionary manumission abolitionists, give me your position show me where the ammunition is!
8. Use String comparison (the .compareTo) method to sort this list into alphabetical order. This is tricky! Scan through the list to find the index of the first alphabetic word. Copy it into a second ArrayList, remove it from the first, and repeat the process until the first ArrayList is empty. Print the sorted list.
9. Run the program and make sure it works as expected.
10. Save the program in Git.