1. Start with <SearchingAndSorting.java>. Examine the program. It contains and empty main( ) method and two other local methods, load( ) and print( ), that are already written.
2. in the main( ) method declare and instantiate an array of 100 int(s); call it whatever you want. Then call the load( ) method, passing your array to it. That will load your array with random values.
3. After calling load( ), call print( ), passing the array to it. That will print your array out on the screen. Run it to make sure you get a list of numbers printed out.
4. Now, copy the linear search and selection sort methods from the notes section of my web page, and put them into your program as new methods. They will need to be static methods since this program is running in a static context (there is no instance of the class, it’s just a static main method running).
5. Next prompt for and get a integer value from the keyboard. Then call the linear search method to see if the keyboard value is in the list. Print the result of linear search. When you test your program, be sure to test it for both a value that is in the list and for a value that is not in the list.
6. Call the selection sort algorithm to put the array in order. Then call print( ) to print the array and verify that it worked.
7. Next write a new method that will sort the array into decreasing order. Copy the selection sort algorithm, and modify it to sort in reverse. It might be a good idea to change some of the variable names so they continue to be meaningful. Call this new method from the main( ) method, and call print( ) again to verify that the array got sorted in reverse.