**Instructions:**

Download the hw3b-files.zip. The only file that you will be modifying is SequentialSearchST.java.

Modify the 3 methods, put, get, and delete in SequentialSearchST.java so thatthe list is maintained in increasing order of the keys. When implementing put, get and delete, make sure to take advantage of the fact that the list is in order to avoid looking at all the items in the list. Also, whenever the list is modified, you will need to make sure it is still in sorted order after the modification. **Note:** You are modifying the implementation of the methods, but not their interface or contract. To the external world, the methods should behave exactly as before. Make sure you code takes advantage of the sorted order. We will be checking for this and you will receive no credit for a method that blindly checks the entire list when it isn’t necessary. The code you were given already does exactly that.

Use the HW3bTest.java file to test the correctness of your SequentialSearchST.java code.

Run the JUnitTiming.java file. It will call put, get, and delete multiple times, checking for how long the calls take. If these tests fail, it is almost certainly because your code is not taking advantage of the sorted order of the keys to stop its search early.

**Grading:**

Note that the test files only test if your code gives the right answer. It doesn’t indicate if you make use of a sorted list. You will not get credit if your code doesn’t maintain the keys in sorted order or if it doesn’t make use of the sorted order to terminate early when searching for a key. This is what the timing tests will help us to determine. Note that the code I gave you passes the vast majority of the Test, but (should!) fail the Timing tests because it doesn’t make use of the sorted list.