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# CS 122 Lab 5

02/09/2017

## Complete Lab 4 first. Then preview 10.3-10.4 before coding the following lab.

## Task 1—Primitive and Object Types in Polymorphic Sorting

1. The file Numbers.java reads in an array of integers, invokes the selection sort algorithm to sort them, and then prints the sorted array. Save Sorting.java and Numbers.java to your directory.
2. Numbers.java won’t compile in its current form, because int type is primitive but not object in java. Change the array type from int to Integer (autoboxing). The numbers should be sorted now.
3. Write a program Strings.java, similar to Numbers.java, that reads in an array of String objects and sorts them. You may just copy and edit Numbers.java.
4. Now the selectionSort method can sort both Integer and String types. This polymorphism is implemented through interface.
5. Modify the selectionSort algorithm so that it sorts in descending order rather than ascending order. Run Numbers.java and Strings.java again to check the descending output.