

Lab 12- 20 points

For today's lab you will be doing two very small exercises pertaining to sorting. The learning objective is to demonstrate and develop your knowledge of sorting by solving two basic problems. This lab is due today end of day, so you can spend your time finishing your projects due Thursday May 4th!

Part 1 (5 points)

Consider the selection sort algorithm we presented in class (and in the textbook in section 14.1). That algorithm sorts an array of integers in ascending order (smallest -> biggest). Re-implement and Modify the SelectionSorter class' sort algorithm to sort an array of integers in descending order (biggest -> smallest). You must use and **not modify** the Provided SelectionSortDemo.java and ArrayUtil.java files in the Canvas Assignment page. That is, we will be using those files to run your SelectionSort, so you should too.

3 points – Correctness of algorithm

2 points – Comments, variable, and code quality

Part 2 (15 points)

Create a class Person that implements the Comparable interface and has a single String instance variable, name. Compare persons by their names (HINT: String has a comparison method). Override/implement the Person's toString() method. (5 points)

In the main of Person, ask the user to input ten names to the console and, from that, generate ten Person objects. Place those objects in an ArrayList or other collection. (5 points) Sort them using [Collections.sort\(list\)](#). Once that is complete, determine, and output the first AND last person in that list and print those to the console. (5 points)

Submission

Turn in a zip of all your src folder containing your java files in a package of your MUID to Canvas by your deadline. Ensure you have actually submitted (received confirmation and checked online), since no late labs will be accepted. Grading will be based on conforming to the standards we reviewed in class as well as following the requirements of this lab.