Running Head: Array Sorting

Week 2 Assignment: Array Sorting

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The arraySorting class takes twelve inputs of type double from a user and stores them in an array. It then sorts that array from smallest to largest. After sorting, it outputs, in a formatted manner, the contents of the stored array. The user is then prompted to either end the application or continue another loop. This class implements both the arrayBubbleSort class and the Menu class (for which I described last week). Output for this class can be found in the index of this paper.

When building the arrayBubbleSort class, I chose to overload its sort method so that if I wished to use it in the future I could use integers or doubles, without having to choose a different method. The bubbleSort() method takes a given array of type integer or double and sorts it in ascending order. It does this by comparing each element with the element directly after it, then swapping them if the first element is larger than the second. I chose to implement the bubble sort method as described on page 384 of our course text. That is, using the more efficient comparisonsToMake attribute. Essentially, on each pass, the largest element will already be at the bottom, so there is no need to continuously check to see if it is the greatest (Farrell, 2012, p. 384).

Things I should consider if I ever use the arrayBubbleSort class in the future is adding differing methods for both ascending and descending sorts. As the difference between the two methods is so miniscule, I could potentially have the user pass a command to an overloaded method that simply describes the type of sorting.

E.g.: bubbleSort(“>”, array) or bubbleSort(“<”,array)

Once again, this would allow for the use of the same method, without having to resort to remembering different code.

Reference

Farrell, J. (2012). *Java Programming, Sixth Edition.* Boston: Course Technology, Cengage Learning.

Index

Program Output:

