COSC 201 – Lab #7

Visual Learning

Purpose: time to visualize a sorting routine

Tasks:

1.) Open Eclipse and start a new Java Project called SortingViz Project.

2.) For this lab, take the mergesort code from your book and develop a way to visualize each step in the sort. I need to see the splitting and the merging of the array. You should assume that the user will pass in an integer array, so adjust your method to have the following signature:

    public void mergesortViz(int[] arr){ … }

    and adjust your code accordingly. As far as the visualization goes, for an example array arr = {12, 4, 3, 66, -2, 8, 1, 0}, I expect to see something like this:

```
Start: {12, 4, 3, 66, -2, 8, 1, 0}
Step 1: {12, 4, 3, 66} {-2, 8, 1, 0}
Step 2: {12, 4} {3, 66} {-2, 8} {1, 0}
Step 3: {12} {4} {3} {66} {-2} {8} {1} {0}
Merge 1: {4, 12} {3, 66} {-2, 8} {0, 1}
Merge 2: {3, 4, 12, 66} {-2, 0, 1, 8}
Merge 3: {-2, 0, 1, 3, 4, 8, 12, 66}
```

    Of course, you have no way of telling what array your user will pass in, the above is just one example of many. As a note, you may choose to implement mergesort yourself without using the book's code if that's helpful.

3.) Create a main method that will test your method. You may work in pairs on this lab.

4.) Turn in your code via Blackboard by 11:59pm Tuesday, November 29.