

Object Oriented Programming

Assignment 5 - Sorting

Mr. D Bylsma
Chris
Adrian

1 Hmmmmmm

You will write your own sorting algorithm for an array of Strings (google how to compare strings). Sorting is well documented; you do not need to and should not google it. Just think about what you do to sort say, a deck of cards. We don't care about efficiency, just to see your algorithm-thinking. *Hint: use helper methods. Try it out with ints first, because they're easier to compare.*

Bonus: Come up with different algorithms (on your own). Test them out; run time trials and show the results (don't need to write a lab, just create a driver that runs the tests and prints the times). Explain what is going on when you enter larger and larger lists.

2 Some useful methods you may want

I used an array of ints but you could use other things too. If you're comparing strings, make sure you use `compareTo(anotherString)` (you can google 'Java comparable' for more information - basically, it returns an int: 0 means they're equal, and numbers greater than or less than 0 depending on whether a String should come before or after in a dictionary. You can find it in the String documentation (<http://docs.oracle.com/javase/1.5.0/docs/api/java/lang/String.html>) but it may be better to test it yourself)

```
/** Swaps two items in an array */  
public void swap(int [] array , int index1 , int index2 );  
/** Returns the INDEX of the smallest item in an array */  
public int getSmallestValueIndex(int [] array );
```

3 Some references

- http://homeandlearn.co.uk/java/java_methods.html
- Rest of section 6 at <http://homeandlearn.co.uk/java/java.html> . The key to doing this assignment well is breaking down the algorithm into easy-to-understand methods (decomposition)