

Bubble Sort

1. Make a table to show the comparisons and exchanges that would take place in using a bubble sort to put the following data in ascending order.

3 8 3 2 7

2. **BubbleSortSimple.java:** Create a method `bubbleSort` that uses a bubble sort to arrange an array of double values in ascending order. Create a `main` method in the class to test the method.

3. A modification of bubble sort is the *cocktail shaker sort* in which, on odd-numbered passes, large values are carried to the top of the list while, on even-number passes, small values are carried to the bottom of the list. Make a table to show passes of a cocktail-shaker sort on the following data.

2 9 4 6 1 7 8

4. **CocktailShakerSort.java:** Write a method `shakeSort` to implement the cocktail shaker sort algorithm to arrange an array of double values in ascending order. Use a Boolean flag to stop processing once the items have been completely sorted. Create a `main` method to test the method.