

**CST 370**  
**Homework (Sorting)**

1. Sort the array of numbers 10, 4, -3, 8, 1 in ascending order using the **selection sort algorithm**. Show the state of the array after each iteration of the algorithm.
2. Sort the array of numbers 10, 4, -3, 8, 1 in ascending order using the **bubble sort algorithm**. Show the state of the array after each iteration of the algorithm.
3. Sort the array of numbers 10, 7, 3, 8, 1, 9, 0 in ascending order using the **insertion sort algorithm**. Show the state of the array after each iteration of the algorithm.
4. Use diagrams similar to the one shown in the slides and in your textbook to show the various stages of the **merge sort algorithm** for the following array of numbers: 13, 57, 39, 85, 70, 22, 64, 48