Name:
NetID:

Exercise 11 Solution

Due Monday 7/21 at 10:00 AM

Sorting: Consider the array if integers A = {8, 2, 45, 1, 9, 67, 3, 5, 11} to be sorted from smallest to largest. On the lines below, write the state of the array A after each pass of the **selection sort** algorithm.

Pass 1: **1 2 45 8 9 67 3 5 11**

Pass 2: **1 2 45 8 9 67 3 5 11**

Pass 3: **1 2 3 8 9 67 45 5 11**

Pass 4: **1 2 3 5 9 67 45 8 11**

Pass 5: **1 2 3 5 8 67 45 9 11**

Pass 6: **1 2 3 5 8 9 45 67 11**

Pass 7: **1 2 3 5 8 9 11 67 45**

Pass 8: **1 2 3 5 8 9 11 45 67**

On the lines below, write the state of the array A after each main pass of the **bubble sort** algorithm (starting from the original state of the array A, not the sorted state after selection sort, of course.) In this example, the array will be sorted after fewer than 8 passes, but a program which uses the **bubble sort** algorithm in a simple way would complete the remaining passes anyways, and you should do so as well.

Pass 1: **2 8 1 9 45 3 5 11 67**

Pass 2: **2 1 8 9 3 5 11 45 67**

Pass 3: **1 2 8 3 5 9 11 45 67**

Pass 4: **1 2 3 5 8 9 11 45 67**

Pass 5: **1 2 3 5 8 9 11 45 67**

Pass 6: **1 2 3 5 8 9 11 45 67**

Pass 7: **1 2 3 5 8 9 11 45 67**

Pass 8: **1 2 3 5 8 9 11 45 67**