

Handout 14

Swap sort

Write a program `swap-sort.c` that takes in 100 numbers (using `scanf`) and sorts them in order *highest to lowest* using the swap-sort method:

- This method starts by considering the first two numbers in the array. If they are listed “out of order” then it swaps them.
- Then the second and third numbers are considered. Again, if they are “out of order” they are swapped.
- One proceeds through the whole array, considering pairs of adjacent values, swapping if necessary.
- Once the program has passed through the whole array, it repeats the procedure. Important question: how many times must the procedure be repeated in order to make sure that the list is sorted? [Hint: consider the “worst case scenario.”]

When working on your program, I encourage you to set the size of the list to 10. Then at the last minute upgrade to size 100.