

BUBBLE SORT

- ▶ Simple, but inefficient.
- ▶ Compares each pair of adjacent elements and swaps them if they are in the wrong order.
- ▶ Practical in cases where the list is mostly sorted with a few unsorted elements.
- ▶ Time complexity of $O(n^2)$, which is much slower than most other sorting algorithms.

BUBBLE SORT

ALGORITHM

- ▶ Compare the 1st and 2nd elements.
- ▶ If the 1st is larger than the 2nd, swap.
- ▶ Compare 2nd and 3rd, and swap if necessary.
- ▶ Continue comparing until the last two elements.
- ▶ The largest element is now the last element in the array.
- ▶ Repeat starting from the beginning until no swaps are performed (i.e., the array is sorted).
- ▶ Each time you go through the elements bubbling up the largest element.
- ▶ No need to try the last i elements for the ' i 'th run since the end elements are already sorted.