

INSERTION SORT

- ▶ Simple quadratic sorting algorithm.
- ▶ Builds the final sorted array one item at a time.
- ▶ Less efficient on larger lists but does offer many advantages on smaller data sets.

INSERTION SORT ADVANTAGES

- ▶ Simple implementation: around 3-5 lines of code.
- ▶ Efficient on smaller data sets.
- ▶ Faster time complexity than other simple methods.
- ▶ It is stable and in place.
- ▶ It is online: meaning it can sort a list as it receives it.
- ▶ Adaptive, (ie) efficient for substantially sorted datasets: the time complexity $O(nk)$ when each element in the input is no more than k places away from its sorted position.