Sorting

is a concept in which the elements of an array are rearranged in a logical order. This order can be from lowest to highest or highest to lowest.

Bubble Sort
Selection sort
insertion sort
Merge sort

In-place means that the algorithm *does not use extra space* for manipulating the input but may require a small though non-constant extra space for its operation.

Stable sorting algorithms preserve the relative order of equal elements, while unstable sorting algorithms don't. In other words, stable sorting maintains the position of two equals elements relative to one another.

