CTA project report.

A sorting algorithm is an algorithm that orders the elements in a list. Computational complexity deals with the amount of resources that a particular algorithm will use. Time complexity is the amount of time an algorithm will take to run in terms of it’s input characteristics. Big O notation Ο(n) is the longest time (worst case) an algorithm could take to run. Omega notation Ω(n) is the fastest (best case) time taken for algorithm to run.

An in-place algorithm transforms its input using no extra space. The input is overwritten by the output. A stable sorting aélgorithm is one that preserves the original order of the input data.

A comparator function is one that takes two arguments and returns a value indicating the relative order in which they should be sorted.