

Foundations

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Note: \log (or \lg) denotes the binary logarithm (\log_2), not \log_{10} or \log_e .

1 Algorithms

This is an interesting read, but nothing really noteworthy.

2 Getting Started

2.1 Insertion Sort

Insertion sort will be our first algorithm, and it will solve the sorting problem:

Sorting Problem

Input: A sequence of n numbers (a_1, a_2, \dots, a_n) .

Output: A permutation (a'_1, \dots, a'_n) of the input sequence such that $a'_1 \leq a'_2 \leq \dots \leq a'_n$.

The numbers sorted are called *keys*.