Introduction to Algorithms Notes

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Chapter 1

The Role of Algorithms in Computing Notes

1.1 Algorithms

An example of an algorithm is as follows:

> Input: A sequence of n numbers $(a_1, a_2, \ldots, a_n)$.
> Output: A permutation (reordering) $(a'_1, a'_2, \ldots, a'_n)$
> such that $a'_1 \leq a'_2 \leq \ldots \leq a'_n$.

1.1.1 What kinds of problems are solved by algorithms

1.1.2 Data structures

Definition:

> A data structure is a way to store and organize data in order to facilitate access and modifications.

1.1.3 Technique

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