

Chapter-3: Learning and Understanding

The concepts in chapter-3 that you should know after learning and understanding the material are:

Concept & Definition:

What is *Brute force*? You should be able to construct an algorithm for a given problem using brute force method.

Section 3.1

1. Selection Sort and Bubble Sort- Algorithms, Computation of basic number of operations, recurrence relations and Order.

Section 3.2

1. Sequential Search and Brute Force String Matching- Algorithms, Computation of basic number of operations and Order.

Section 3.4

1. Concepts and Definition - What is exhaustive search?
2. Traveling Salesman Problem: What is it? Why it is computationally intensive? Given an example.
3. Knapsack Problem: What is it? Why it is computationally intensive? Give an example.
4. Assignment Problem: What is it? What is its order? How the assignments are computed?

Section 3.5

1. Complete understanding of Depth-First Search and Breadth-First Search with Order.
2. What are tree edges, back edge, cross edges Depth-First search forest, Breadth-first search forest?

The examples, practice problems and the problems in the assignments are expected to support learning.