Design and Analysis of Algorithms

Problem Statements

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# Divide and Conquer:

# Implement the Merge sort algorithm

# Dynamic Programming:

# Given a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city exactly once and returns to the origin city?

# Back Tracking:

# Place N chess queens on an N×N chessboard so that no two queens attack each other.

# Greedy Algorithm:

# The objective is to find a sequence of jobs, which is completed within their deadlines and gives maximum profit.

# Branch and Bound:

# Given a set of items, each with a weight and a value, determine the number of each item to include in a collection so that the total weight is less than or equal to a given limit and the total value is as large as possible.