Dynamic Programming

Mustafa Muhammad

 $25~{\rm September}~2021$

List of Questions:

0-1 Knapsack

- 1. Subset Sum
- 2. Equal Sum Partition
- 3. Count of Subset Sum with given Sum
- 4. Minimum Subset Sum Difference
- 5. Count number of subsets with given difference
- 6. Target Sum

Unbounded Knapsack

- 1. Rod Cutting Problem
- 2. Max coin change problem
- 3. Min number of coins

Longest Common Subsequence (LCS)

- 1. Longest common substring
- 2. Shortest common supersequence
- 3. Min number of insertion deletion to convert string a to b
- 4. Longest palindromic subsequence
- 5. Min number of deletions to make string into palindrome
- 6. Print shorest common supersequence
- 7. Longest repeating subsequence
- 8. Sequence pattern matching
- 9. Min number of insertions in a string to make it a palindrome

Dp on Trees

- 1. Diameter of binary tree
- 2. Max path sum from any node
- 3. Max path sum from leaf to leaf

0-1 Knapsack