

Indian Institute of Technology Kharagpur
Course:MA29005 Design and Analysis of Algorithms Lab
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Lab Assignment -08 (Oct 17, 2017)

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Problems

1. Given two sequences, find the length of longest subsequence present in both of them (LCS problem). For instance, LCS for input Sequences “ABCDGH” and “AEDFHR” is ADH of length 3.
2. Given weights and values of n items, put these items in a knapsack of capacity W to get the maximum total value in the knapsack. (0 – 1 Knapsack Problem). For instance, if Value= {60, 100, 120}, Weight= {10, 20, 30}, $W = 50$ then ans. 220.
3. Given n number of floors and k number of eggs, what is the minimum number of attempts it will take to find out from which floor the eggs will break (Egg Dropping problem). For instance, if $n = 10, k = 2$, ans. 2.
4. The n -queens puzzle is the problem of placing n queens on an $n \times n$ chessboard such that no two queens attack each other. Given an integer n , print all distinct solutions to the n -queens puzzle (N -Queen problem). For instance, if $n = 4$, ans. [2413][3142].

All The Best!