ADA Assignment 4

Submission Date: 27/10/2020

Q.1 Solve make a change problem using dynamic programming:

- Coin denominations: 1, 4, 7. Amount to pay: 9

Q.2 Solve make a change problem using dynamic programming:

- Coin denominations: 1, 3, 5, 6. Amount to pay: 8

Q.3 Solve make a change problem using dynamic programming:

- Coin denominations: 1, 2, 4, 6. Amount to pay: 10

Q.4

Solve the following knapsack problem using dynamic programming. $W = 10$

Object i	1	2	3	4
v_i	10	40	30	50
w_i	5	4	6	3

Q.5 Write equation for Chained matrix multiplication using Dynamic programming.

Find out optimal sequence for multiplication:

A1 [18 × 4], A2 [4 × 13], A3 [13 × 7], and A4 [7 × 15].

Also give the optimal parenthesization of matrices.

Q.6 Find any one Longest Common Subsequence of given two strings using Dynamic Programming.

S1=abbacdcba S2=bcdbbcaa

Q.7 Determine an LCS of

A = [0; 0; 1; 0; 1; 0; 1] and B =[1; 0; 1; 1; 0; 1; 1; 0]