TD 7

Exercise 1:

Given two sequences, we need to find the length of their longest common subsequence.

e.g. s1="**AB**C**DE**", s2="**A**A**B**B**DE**"; the longest common subsequence length is 4.

Suggest a recursive function then two dynamic programming solutions based respectively on memoization and tabulation.

Exercise 2:

Given an array of coin values and a target amount. Determine the number of ways to make the target amount using any combination of coins. Assuming that we have a sufficient supply of each type of coin, suggest a dynamic programming solution to the problem.

e.g. coin_values=[1,2,5], target_amount=5; there are 4 ways to have the target 5 (5×1,3×1+2,1+2×2,5).