BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Department of Computer Science and Engineering

CSE 106 Offline Assignment on Dynamic Programming

In this assignment you will have to implement the **Longest Common Subsequence (LCS)** problem. In mathematics, a subsequence is a sequence that can be derived from another sequence by deleting some or no elements without changing the order of the remaining elements. For example, the sequence $\langle ABD \rangle$ is a subsequence of $\langle ABCDEF \rangle$ obtained after removal of elements C, E, and F. The relative order of the elements remains invariant.

The input will have two lines, one for each sequence. You will have to print as output their LCS and its length. A sample is given below for easier understanding.

Input	Output
ABCBDAE	4
BDCABA	BCBA

Table 1: A sample input and corresponding output