

# Longest Common Subsequence

## Lab 7

Computer Programming  
Due date: 23 October, 2019

**Problem Statement:** Given two strings S1 and S2, find the longest common subsequence within it.  
Definition of Subsequence: A subsequence is a not contiguous subset of a string in order of the sequence it appears in the original string. For example, subsequences of the string “abcd” could be: “acd”, “abd”, “ac”, “bd” etc.

### Input

First line of input has T, number test cases. Each test case has two space separated strings, S1 and S2

### Output

For each test case, output the length of the longest common subsequence.

### Constraints

$$1 \leq T \leq 10$$

$$1 \leq |S1|, |S2| \leq 10^3$$

**Time Limit:** 1 sec

**Memory Limit:** 256 MB

### Sample Test Case

Input	Output
3	0
abc def	3
xyz xaybz	5
abcdef abdefc	