

# Longest Common Subsequence

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[English version](#)

For a given two words  $\mathbf{x} = x_1x_2\dots x_n$  and  $\mathbf{y} = y_1y_2\dots y_m$  find the longest common subsequence, i.e.  $\mathbf{z} = z_1z_2\dots z_k$  such that every two consecutive elements of  $\mathbf{z}$  are equal to some two elements of  $\mathbf{x}$ :  $x_a, x_b$ , and  $\mathbf{y}$ :  $y_c, y_d$  where  $a < b$  and  $c < d$ . Assume, that elements of words are letters 'a' - 'z' and  $m, n \leq 1000$ .

## Input

$N$  [the number of series  $\leq 1000$ ]

$n$   $\mathbf{x}$

$m$   $\mathbf{y}$

...

## Output

case 1 Y [or N when no answer to this case]

$d$  [the length of the lcs]

$z_j p q$  [position of  $z_j$  in  $\mathbf{x}$  and in  $\mathbf{y}$ , respectively]

...

Text grouped in [ ] does not appear in the input and output file.

## Example

### Input:

```
3
5 ddacc
3 cac
7 cbbccbc
4 aaca
4 cbeb
5 fdceb
```

### Output:

```
case 1 Y
2
a 3 2
c 4 3
case 2 N
case 3 Y
3
c 1 3
e 3 4
b 4 5
```

### Score

```
2
```