

ab, ac, abc, af, abcf.

String 1 = a b c d a f.

String 2 = a c b c f

			a	b	c	d	a	f
i \ j		0	1	2	3	4	5	6
0		0	0	0	0	0	0	0
1	a	0	①	1	1	1	1	1
2	c	0	①	1	2	2	2	2
3	b	0	1	②	2	2	2	2
4	c	0	1	2	③	3	3	3
5	f	0	1	2	3	3	3	④

Equal:-

$$T[i][j] = T[i-1][j-1] + 1.$$

Not Equal:-

$$T[i][j] = \max(T[i-1][j], T[i][j-1])$$

$$\begin{aligned} T[1][1] &= T[0][0] + 1 \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[1][2] &= \max(T[0][2], T[1][1]) \\ &= \max(0, 1) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[1][3] &= \max(T[0][3], T[1][2]) \\ &= \max(0, 1) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[1][4] &= \max(T[0][4], T[1][3]) \\ &= \max(0, 1) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[1][5] &= \max(T[0][5], T[1][4]) \\ &= \max(0, 1) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[2][1] &= \max(T[1][1], T[2][0]) \\ &= \max(1, 0) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[2][2] &= \max(T[1][2], T[2][1]) \\ &= \max(1, 1) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[2][3] &= T[1][2] + 1 \\ &= 1 + 1 \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[2][4] &= \max(T[1][4], T[2][3]) \\ &= \max(1, 2) \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[2][5] &= \max(T[1][5], T[2][4]) \\ &= \max(1, 2) \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[3][1] &= \max(T[2][1], T[3][0]) \\ &= \max(1, 0) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[3][2] &= T[2][1] + 1 \\ &= 1 + 1 \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[3][3] &= \max(T[2][3], T[3][2]) \\ &= \max(2, 2) \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[3][4] &= T[2][3] + 1 \\ &= 2 + 1 \\ &= 3 \end{aligned}$$

$$\begin{aligned} T[3][5] &= \max(T[2][5], T[3][4]) \\ &= \max(2, 3) \\ &= 3 \end{aligned}$$

$$\begin{aligned}T[4][1] &= \max(T[3][1], T[4][0]) \\&= \max(1, 0) \\&= 1\end{aligned}$$

$$\begin{aligned}T[4][2] &= \max(T[3][2], T[4][1]) \\&= \max(2, 1) \\&= 2\end{aligned}$$

$$\begin{aligned}T[4][3] &= \max(T[3][3], T[4][2]) \\&= \max(2, 2) \\&= 2\end{aligned}$$

$$\begin{aligned}T[4][4] &= \max(T[3][4], T[4][3]) \\&= \max(3, 2) \\&= 3\end{aligned}$$

$$\begin{aligned}T[4][5] &= \max(T[3][5], T[4][4]) \\&= \max(3, 3) \\&= 3\end{aligned}$$

$$\begin{aligned}T[5][1] &= T[4][0] + 1 \\&= 0 + 1 \\&= 1\end{aligned}$$

$$\begin{aligned}T[5][2] &= \max(T[4][2], T[5][1]) \\&= \max(2, 1) \\&= 2\end{aligned}$$

$$\begin{aligned}T[5][3] &= \max(T[4][3], T[5][2]) \\&= \max(2, 2) \\&= 2\end{aligned}$$

$$\begin{aligned} T[5][4] &= \max(T[4][4], T[5][3]) \\ &= \max(3, 2) \\ &= 3 \end{aligned}$$

$$\begin{aligned} T[5][5] &= \max(T[4][5], T[5][4]) \\ &= \max(3, 3) \\ &= 3 \end{aligned}$$

$$\begin{aligned} T[6][1] &= \max(T[5][1], T[6][0]) \\ &= \max(1, 0) \\ &= 1 \end{aligned}$$

$$\begin{aligned} T[6][2] &= \max(T[5][2], T[6][1]) \\ &= \max(2, 1) \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[6][3] &= \max(T[5][3], T[6][2]) \\ &= \max(2, 2) \\ &= 2 \end{aligned}$$

$$\begin{aligned} T[6][4] &= \max(T[5][4], T[6][3]) \\ &= \max(3, 2) \\ &= 3 \end{aligned}$$

$$\begin{aligned} T[6][5] &= \max(T[5][5], T[6][4]) \\ &= \\ &= \end{aligned}$$

$$\begin{aligned} T[6][5] &= T[5][4] + 1 \\ &= 3 + 1 \\ &= 4 \end{aligned}$$