

	j	0	1	2	3	4	5	6
i		y <sub>j</sub>	B	D	C	A	B	A
0	x <sub>i</sub>	0	0	0	0	0	0	0
1	A	0						
2	B	0						
3	C	0						
4	B	0						
5	D	0						
6	A	0						
7	B	0						

for  $i = 1$  to  $m$   
 $c[i, 0] = 0$   
 // make all entries of 0<sup>th</sup> column to zero.  
 for  $j = 1$  to  $n$   
 $c[0, j] = 0$   
 // make all entries of 0<sup>th</sup> row to zero.

	j	0	1	2	3	4	5	6
i		y <sub>j</sub>	B	D	C	A	B	A
0	x <sub>i</sub>	0	0	0	0	0	0	0
1	A	0	0	0	0	1	1	1
2	B	0						
3	C	0						
4	B	0						
5	D	0						
6	A	0						
7	B	0						

1<sup>st</sup> row  
 $c[1, 1] = 0$   
 $c[1, 2] = 0$   
 $c[1, 3] = 0$   
 $c[1, 4] = 0 + 1 = 1$   
 $c[1, 5] = 1$   
 $c[1, 6] = 1$

(2)

2nd row

j	0	1	2	3	4	5	6
i	$y_j$	B	D	C	A	B	A
0	$x_i$	0	0	0	0	0	0
1	A	0	0	0	1	1	1
2	B	0	1	1	1	2	2
3	C	0					
4	B	0					
5	D	0					
6	A	0					
7	B	0					

$$c[2,1] = 0+1 = 1$$

$$c[2,2] = \max(0,1) = 1$$

$$c[2,3] = \max(0,1) = 1$$

$$c[2,4] = \max(1,1) = 1$$

$$c[2,5] = 1+1 = 2$$

$$c[2,6] = \max(1,2) = 2$$

3rd row

j	0	1	2	3	4	5	6
i	$y_j$	B	D	C	A	B	A
0	$x_i$	0	0	0	0	0	0
1	A	0	0	0	1	1	1
2	B	0	1	1	1	2	2
3	C	0	1	1	2	2	2
4	B	0					
5	D	0					
6	A	0					
7	B	0					

$$c[3,1] = 1$$

$$c[3,2] = 1$$

$$c[3,3] = 2$$

$$c[3,4] = 2$$

$$c[3,5] = 2$$

$$c[3,6] = 2$$



7th row

	j	0	1	2	3	4	5	6
i	y <sub>j</sub>	B	D	C	A	B	A	
0	x <sub>i</sub>	0	0	0	0	0	0	
1	A	0	0	0	1	1	1	
2	B	0	1	1	1	2	2	
3	C	0	1	1	2	2	2	
4	B	0	1	1	2	3	3	
5	D	0	1	2	2	3	3	
6	A	0	1	2	2	3	3	4
7	B	0	1	2	2	3	4	4

$$c[7,1] = 0+1 = 1$$

$$c[7,2] = 2$$

$$c[7,3] = 2$$

$$c[7,4] = 3$$

$$c[7,5] = 3+1 = 4$$

$$c[7,6] = 4$$

	j	0	1	2	3	4	5	6
i	y <sub>j</sub>	B	D	C	A	B	A	
0	x <sub>i</sub>	0	0	0	0	0	0	
1	A	0	0	0	1	1	1	
2	B	0	1	1	1	2	2	
3	C	0	1	1	2	2	2	
4	B	0	1	1	2	3	3	
5	D	0	1	2	2	3	3	
6	A	0	1	2	2	3	4	
7	B	0	1	2	2	4	4	

LCS (1<sup>st</sup> possibility)

< B, C, B, A >

(4)

		j	0	1	2	3	4	5	6
i			y <sub>j</sub>	B	D	C	A	B	A
	x <sub>i</sub>		0	0	0	0	0	0	0
1	A		0	0	0	0	1	1	1
2	B		0	1	1	1	1	2	2
3	C		0	1	1	2	2	2	2
4	B		0	1	1	2	2	3	3
5	D		0	1	2	2	2	3	3
6	A		0	1	2	2	3	3	4
7	B		0	1	2	2	3	4	4

LCS (2<sup>nd</sup> possibility)

&lt; B, C, A, B &gt;

		j	0	1	2	3	4	5	6
i			y <sub>j</sub>	B	D	C	A	B	A
0	x <sub>i</sub>	0	0	0	0	0	0	0	0
1	A	0	0	0	0	1	1	1	
2	B	0	1	1	1	1	2	2	
3	C	0	1	1	2	2	2	2	
4	B	0	1	1	2	2	3	3	
5	D	0	1	2	2	2	3	3	
6	A	0	1	2	2	3	3	4	
7	B	0	1	2	2	3	4	4	

LCS (3<sup>rd</sup> possibility)

&lt; B, D, A, B &gt;