

Contents

1 LCS

1.1

Longest Common Sequence1BDCABA2ABCBDA
4BCBA

1.2

$dp[i][j]$ 1 1~i 2 1~j

1.3

```
if (s1[i] != s2[j])
    dp[i][j] = max(dp[i-1][j], dp[i][j-1]);
else {
    dp[i][j] = max(dp[i-1][j], dp[i][j-1]);
    dp[i][j] = max(dp[i][j], dp[i-1][j-1]+1);
}
```

1.4

		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	0
1	A		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

图1 效果演示图