

Example:

$S = "a b c c a b"$
 0 1 2 3 4 5

Compute table

$L[i, j]$ = length of longest
 palindrome subsequence in
 S . substring (i, j)
 $(0 \leq i \leq j \leq 6)$ inclusive exclusive

L	$j = 0$	1	2	3	4	5	6
$i = 0$	0	1	1	1	2	4	4
$i = 1$		0	1	1	2	2	4
2			0	1	2	2	2
3				0	1	1	1
4					0	1	1
5						0	1
6							0

acca
~~abba~~

base cases

For $i < j - 1$:

$$L[i, j] = \max \begin{cases} L[i+1, j], \\ L[i, j-1], \\ L[i+1, j-1] + 2 \\ \text{if } S[i] == S[j-1] \end{cases}$$