

# LO-6

count occurrences of bit string 'u' in 'v'

$N(i, j)$  → denote No. of occurrences of prefix of  $u[1:i]$  to prefix of  $v[1:j]$

i.e)  $u[i:]$  to  $v[j:]$

$$N(i, j) = \begin{cases} \text{if } u = "u" \\ \text{if } v = "u" \\ \text{if } u[i] = v[j] \\ N[i-1][j-1] + N[i][j-1] \text{ (include the character)} \\ \text{else} \\ N[i][j-1] \text{ exclude the character and continue subsequence} \end{cases}$$

$u = 101$      $v = 1101011$

		1	1	1	0	1	0	1	1
1	1	1	1	1	1	1	1	1	1
0	0	0	0	0	2	2	5	5	5
1	0	0	0	0	2	2	7	12	