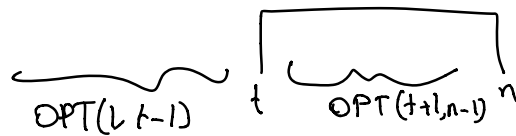


$OPT(i, j) = \max \# \text{ matches on } b_i \dots b_j$
 Solve $OPT(1, n)$.

Case 1: n is unmatched $\rightarrow OPT(1, n-1)$.

Case 2: n is matched to t . $OPT(1, t-1) + OPT(t+1, n-1) + 1$



to match
 n to t .

Brute force over t . Take max over all t .

$OPT(i, j) = \max \# \text{ matches for } \begin{matrix} x_i \dots x_i \\ y_i \dots y_j \end{matrix}$

Case 1: OPT matches $x_i \leftrightarrow y_j \quad 1 + OPT(i-1, j-1)$.

Case 2: It doesn't.

- \oplus mismatch $OPT(i-1, j-1)$
- $i \leftrightarrow \text{Blank}$ $OPT(i-1, j)$
- $j \leftrightarrow \text{Blank}$ $OPT(i, j-1)$.