

Wild Card matching

DP solution

input: $s \rightarrow$ string

$p \rightarrow$ wild card expression
(contains '*' or '?')

$T[i][j] \Rightarrow T[i][j] = \text{True if}$

\hookrightarrow fill T row by row
Top \rightarrow bottom

$s[i]$ matches $p[j]$
 \Downarrow
 $s[i] \dots s[i-1]$

$T[i][j] = \left\{ \begin{array}{l} \text{if } p[j-1] == '*' : T[i][j] \text{ or } T[i][j-1] : \\ \quad \Downarrow \\ \quad \text{Use '*' to cancel current char} \quad \text{'*' does not cancel anything} \\ \text{if } p[j-1] == '?' \text{ or } p[j-1] == s[i-1] : T[i-1][j-1] \\ \quad \hookrightarrow \text{current char is a match} \Rightarrow \text{depend on prev substring} \\ \text{if } p[j-1] \neq s[i-1] : \text{False} \end{array} \right.$

