

* Regular expression Matching

aa \rightarrow a* * \rightarrow 0 or more of previous

ab \rightarrow .*; 0 or more of any char

abcd \rightarrow .*

aab \rightarrow ~~c~~ ~~a~~ ~~a~~ ~~b~~
in
0 times

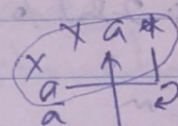
if $str[i] == pattern[j]$ // ~~str~~ $pattern[j] == '*'$
 $dp[i-1][j-1]$

$dp[i][j]$

if $pattern[j] == '*'$
 $dp[i][j-1] \rightarrow 1$ occurrence
 $dp[i][j-2] \rightarrow 0$ occurrence

if $str[i] == pattern[j-1]$ // $pattern[j-1] == '*'$
 $dp[i-1][j]$ // $dp[i][j-1]$ // $dp[i][j-2]$
 false else $dp[i][j] = dp[i][j-2]$

	x	a	*	b	.	c
T	F	F	F	F	F	F
x	F	T	F	F	F	F
a	F	F	T	F	F	F
a	F	F	F	T	F	F
b	F	F	F	F	T	F
y	F	F	F	F	F	T
c	F	F	F	F	F	T



place those match

valid reg Ex

Can optimize to use 1D grid

	m	i	s	*	i	s	*	p	*	i	i
T	F	F	F	F	F	F	F	F	F	F	F
m	F	T	F	F	F	F	F	F	F	F	F
i	F	F	T	F	T	F	F	F	F	F	F
s	F	F	F	T	T	F	F	F	F	F	F
s	F	F	F	F	T	F	F	F	F	F	F
i	F	F	F	F	F	T	F	T	F	F	F
s	F	F	F	F	F	T	T	F	T	T	T
s	F	F	F	F	F	F	F	T	F	T	T
i	F	F	F	F	F	F	F	F	F	F	T
p	F	F	F	F	F	F	F	F	F	F	F
p	F	F	F	F	F	F	F	F	F	F	F
i	F	F	F	F	F	F	F	F	F	F	F

not valid
reg Ex