

ex

$$L = \{a^n b^n : n \geq 0\}$$

$$M = (\{q_0, q_1, q_f\}, \{a, b\}, \{\$, \lambda\}, \delta, q_0, \$, \{q_f\})$$

$$\begin{aligned} s &= a^1 b \\ s &= a a b b \\ s &= a a a b b b \end{aligned}$$

$$(q_0, a, \$) = (q_0, a\$) \text{ // } 1^{\text{st}} a$$

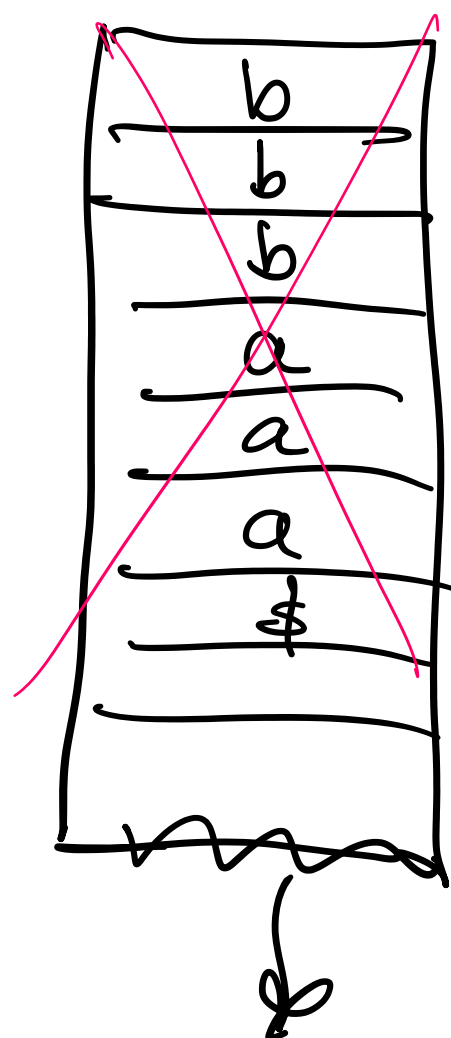
$$(q_0, a, a) = (q_0, aa) \text{ // subsequent } a$$

$$(q_0, b, a) = (q_1, \lambda) \text{ // } 1^{\text{st}} b$$

$$(q_1, b, a) = (q_1, \lambda) \text{ // subsequent } b$$

$$(q_1, \lambda, \$) = (q_f, \lambda)$$

$$(q_0, \lambda, \$) = (q_f, \lambda) \text{ // empty string}$$



ex
$$L = \{a^n b^{n+1} : n \geq 0\}$$

$$(q_0, a, \$) = (q_0, a\$)$$

~~$$(q_0, b, \$) = \dots$$~~

$$(q_0, b, \$) = (q_t, b\$) \quad \checkmark$$

finish for assignment