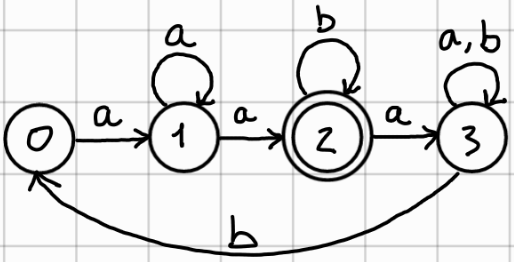
M AFND

$M = (Q, \Sigma, \delta, q_0, F)$ $\quad Q = \{0,1,2,3\}$ $\quad \Sigma = \{a,b\}$ $\quad q_0 = 0$ $\quad F = \{2\}$

δ	a	b
0	$\{1\}$	$\emptyset$
1	$\{1,2\}$	$\emptyset$
2	$\{3\}$	$\{2\}$
3	$\{3\}$	$\{3,0\}$



Acepta: aa aaaaa aab aabbb aabaabbbaa

No acepta: λ a ab b ba aaabb

ER a ojo: $(aa^*ab^*a(a|b)^*b)^*(aa^*ab^*)^+$ Veamos...

casi, este + no iba

$$\begin{cases} L_0 = aL_1 \\ L_1 = aL_1 \mid aL_2 \\ L_2 = aL_3 \mid bL_2 \mid \lambda \\ L_3 = aL_3 \mid bL_3 \mid bL_0 \end{cases}$$

$L_3 = \underbrace{(a|b)}_{\alpha} L_3 \mid \underbrace{bL_0}_{\beta}$ $\quad \overset{\text{ARDEN}}{\Rightarrow} \quad L_3 = \alpha^* \beta = (a|b)^* bL_0$

$\lambda \notin L(\alpha)$

$L_2 = \underbrace{b}_{\alpha} L_2 \mid \underbrace{aL_3 \mid \lambda}_{\beta}$ $\quad \overset{\text{ARDEN}}{\Rightarrow} \quad L_2 = b^*(aL_3 \mid \lambda)$

$\lambda \notin L(\alpha)$

$$L_1 = \underbrace{a}_{\alpha} L_1 \mid \underbrace{a L_2}_{\beta} \quad \overset{\text{ARDEN}}{\Longrightarrow} \quad L_1 = a^* a L_2$$

$\lambda \notin L(\alpha)$

$$L_0 = a L_1 = a a^* a L_2 = a a^* a b^* (a L_3 \mid \lambda)$$

$$= a a^* a b^* (a (a|b)^* b L_0 \mid \lambda)$$

$$= \underbrace{a a^* a b^* a (a|b)^* b}_{\alpha} L_0 \mid \underbrace{a a^* a b^*}_{\beta}$$

$\lambda \notin L(\alpha)$

$$\overset{\text{ARDEN}}{\Longrightarrow} \quad L_0 = (a a^* a b^* a (a|b)^* b)^* a a^* a b^*$$