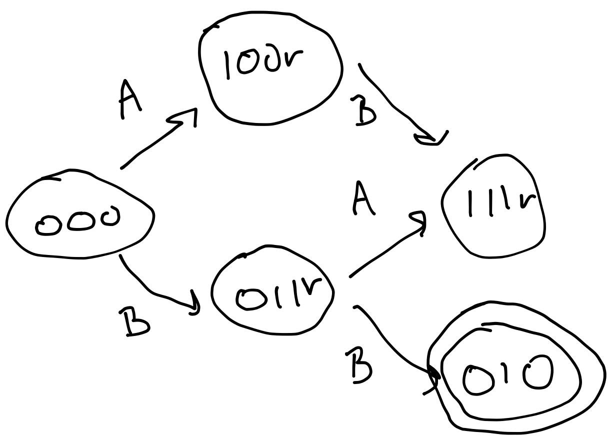
Ejercicio

- $\Sigma = \{A, B, \cancel{C}, \cancel{D}\} \sim \{A, B\}$
- $x_1, x_2, x_3 \longrightarrow x_1x_2x_3$ $0 \to$ Izq
 $1 \to$ dere
  000 – 111
- $2^3 = 8$ posibles conf.
- 000

¿cómo?



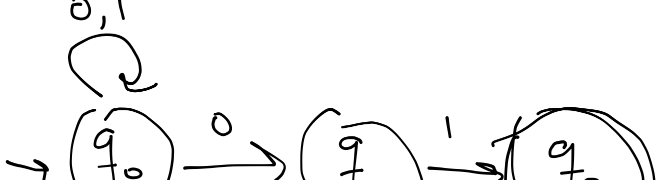
AFN

$$A = (Q, \Sigma, \delta, q_0, F)$$

$$\delta : Q \times \Sigma \longrightarrow 2^Q$$

AFD

$\delta : Q \times \Sigma \to Q$

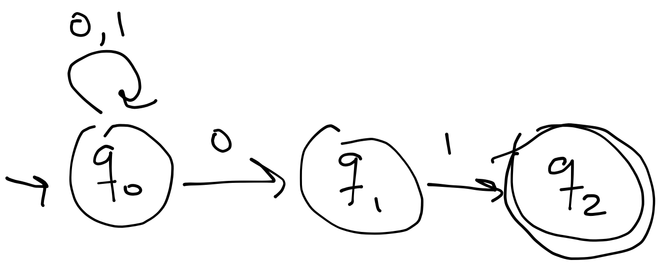


* construir AFD a partir de AFN

- construcción subconjuntos

$N \rightarrow Q = n$ estados

$D \rightarrow 2^n$ estados

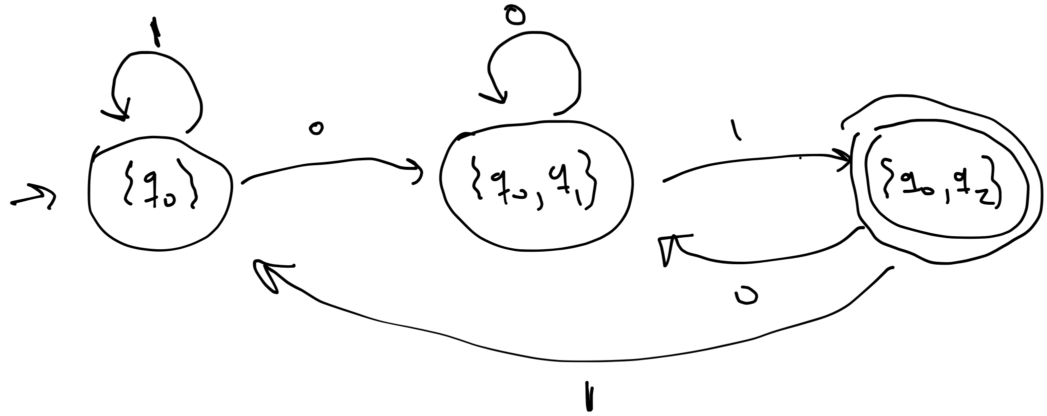


$Q_N = \{q_0, q_1, q_2\}$ $\qquad 2^3 = 8$

$$Q_D = 2^{Q_N} = \{\phi, \{q_0\}, \{q_1\}, \{q_2\}, \{q_0, q_1\}, \{q_0, q_2\}, \{q_1, q_2\}, \{q_0, q_1, q_2\}\}$$

	0	1
ϕ	ϕ	ϕ
$\rightarrow \{q_0\}$	$\{q_0, q_1\}$	$\{q_0\}$

$\rightarrow$ [illegible]	[illegible]	[illegible]
~~$\{q_1\}$~~	~~$\emptyset$~~	~~$\{q_2\}$~~
~~$\{q_2\}$~~	~~$\emptyset$~~	~~$\emptyset$~~
$\{q_0, q_1\}$	$\{q_0, q_1\} \cup \emptyset$	$\{q_0, q_2\}$ ✓
$\{q_0, q_2\}$	$\{q_0, q_1\}$	$\{q_0\}$
~~$\{q_1, q_2\}$~~	~~$\emptyset$~~	~~$\{q_2\}$~~
~~$\{q_0, q_1, q_2\}$~~	~~$\{q_0, q_1\}$~~	~~$\{q_0, q_2\}$~~



AFD

$$L(N) = L(D)$$

AFN $\quad N = (Q_N, \Sigma, \delta_N, q_0, F_N)$

AFD $\quad D = (Q_D, \Sigma, \delta_D, \{q_0\}, F_D)$

1. $Q_N \sim n$ estados

$Q_D \sim 2^n$ estados (muchos se eliminan)

2. Σ el mismo

3. F_D conjunto de conjunto $Q_N = S$

tal que $S \cap F_N \neq \emptyset$

4. $\delta_D(S, a) = \bigcup_{p \in S} \delta_N(p, a)$

Teorema 2.11

Si D es AFD, construido a partir de N es AFN, usando construccion de sub-conjuntos

$$L(D) = L(N)$$

Teorema 2.12

Un Lenguaje L aceptado AFD
Si y Solo si L es aceptado
AFN