

Práctica 2

Javier Cestino Urdiales

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1 Ejercicio 1:

Consider the language over the alphabet a, b that only contains the string a .

a) Build a DFA that recognizes this language and rejects all those strings that do not belong to the language.

b) Test the automaton that you have created by introducing 6 chains.

2 Description of the automata: Deterministic finite automata

A deterministic finite automaton (**DFA**) is a 5-tuple $(K, \Sigma, \delta, s, F)$, where

- K is a non-empty set of states
- Σ is an alphabet
- $s \in K$ is the initial state
- $F \subseteq K$ is a set of final states
- $\delta : K \times \Sigma \rightarrow K$ is the transition function

En nuestro caso será:

- $K = \{q_0, q_1\}$
- $\Sigma = \{a, b\}$
- $s \in K = q_0$
- $F \subseteq K = \{q_1\}$

3 Ejercicio 2: Finite automaton in Octave

example (see script help) in the GitHub repository. a) Open the Octave `finiteautomata.m` script and test it with the given

example (see script help) in the GitHub repository.

b) Test the automaton that you have created by introducing 6 chains.

δ	a	b
q0	q1	q0
q1	q1	

Table 1: Tabla de transición.

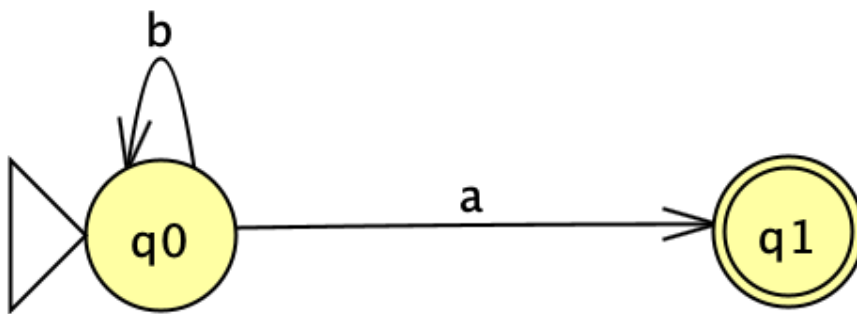


Figure 1:
foto automata