

Teoría de Autómatas y Lenguajes Formales

Práctica 2: Latex y Autómatas

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1 Deterministic finite automata

Definición 1.1. Deterministic finite automaton autómata finito determinista

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

K is a non-empty set of states $\{q_0, q_1, q_2\}$

Σ is an alphabet $\{a, b\}$

$s \in K$ is the initial state q_0

$F \subseteq K$ is a set of final states $\{q_1\}$

$\delta : K \times \Sigma \rightarrow K$ is the transition function

$\delta : (q_0, a, q_1), (q_0, b, q_2), (q_1, a, q_2), (q_1, b, q_2), (q_2, a, q_2), (q_2, b, q_2)$

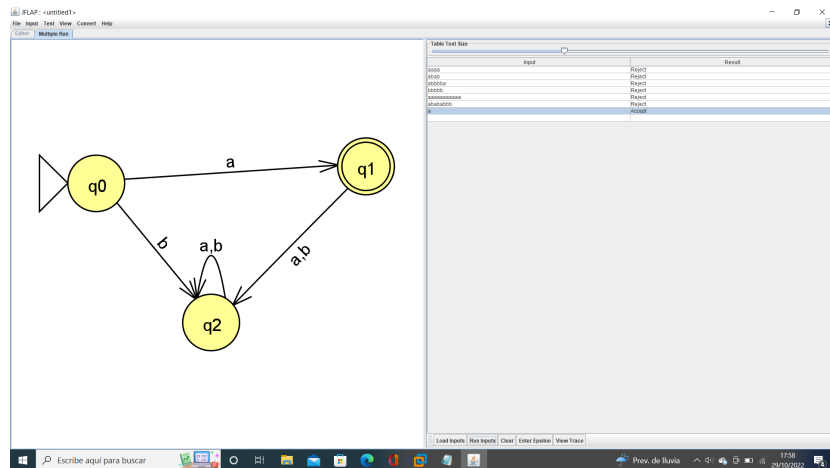


Figure 1: Autómata Finito Determinista

Ejemplo 1.1. Autómata en JFLAP

Ejemplo 1.2. Autómata en Oracle

```

{
  "name" : "a",
  "representation" : {
    "K" : ["q0", "q1", "q2"],
    "A" : ["a", "b"],
    "s" : "q0",
    "F" : ["q1"],
    "t" : [
      ["q0", "a", "q1"],
      ["q0", "b", "q2"],
      ["q1", "a", "q2"],
      ["q1", "b", "q2"],
      ["q2", "a", "q2"],
      ["q2", "b", "q2"]
    ]
  }
},

```