Practica 1, Ejercicio 1

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31 de octubre de 2022

1. Ejercicio 1.

$$M = (\{q0, q1\}, \{a, b\}, \delta, q0, \{q0\})$$

$\delta(q, \sigma)$	a	b
q_0	q_0	q_1
q_1	q_1	q_1

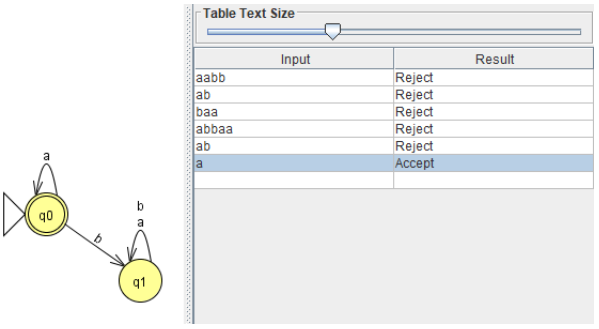

Figura 1:

$(q0, aabb) \vdash (q0, abb) \vdash (q0, bb) \vdash (q1, b) \vdash (q1, \varepsilon) \wedge q1 \notin F \Rightarrow aabb \notin \mathcal{L}(M)$

$(q0, ab) \vdash (q0, b) \vdash (q1, \varepsilon) \wedge q1 \notin F \Rightarrow ab \notin \mathcal{L}(M)$

$(q0, baa) \vdash (q1, aa) \vdash (q1, a) \vdash (q1, \varepsilon) \wedge q1 \notin F \Rightarrow baa \notin \mathcal{L}(M)$

$(q0, abbaa) \vdash (q0, bbaa) \vdash (q1, baa) \vdash (q1, aa) \vdash (q1, a) \vdash (q1, \varepsilon) \vdash (q1, \varepsilon) \wedge q1 \notin F \Rightarrow abbaa \notin \mathcal{L}(M)$

$(q0, ab) \vdash (q0, b) \vdash (q1, \varepsilon) \wedge q1 \notin F \Rightarrow ab \notin \mathcal{L}(M)$

$(q0, a) \vdash (q2, \varepsilon) \wedge q2 \in F \Rightarrow a \in \mathcal{L}(M)$

2. Ejercicio 2.

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