

# Practica 2

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## EJERCICIO 1

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

Apartado a

$M = (\{q_0, q_1, q_2\}, \{a, b\}, \delta, q_0, \{q_1\})$

$\delta = \{(q_0, a, q_1), (q_0, b, q_2), (q_1, a, q_2), (q_1, b, q_2), (q_2, a, q_2), (q_2, b, q_2)\}$

TALF/PRACTICA 2/figura ejercicio 1.jpg

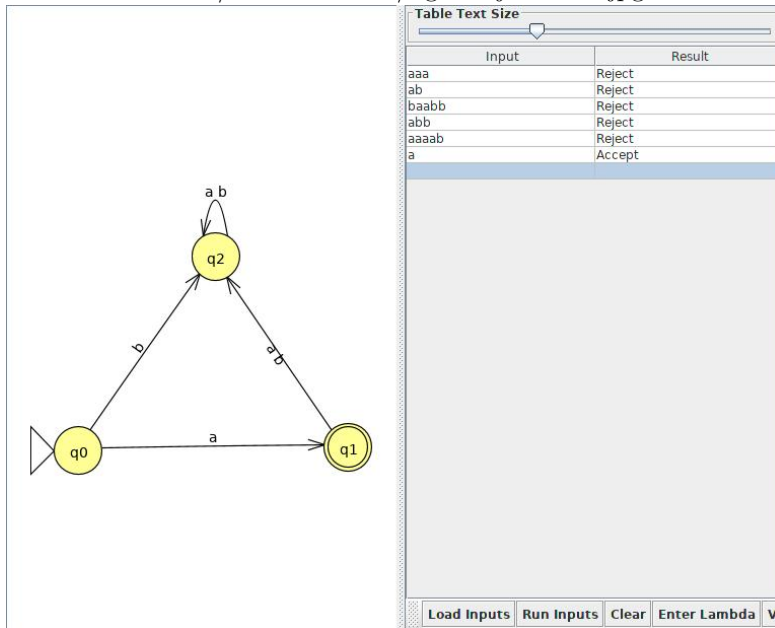


Figura 1: Figura ejercicio 1a

## EJERCICIO 2

Finite automaton in Octave:

- Open the Octave finiteautomata.m script and test it with the given example (see script help) in the GitHub repository.
- Specify in finiteautomata.json the automaton created in Activity 1 and test it with the script

```
'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']]
```