

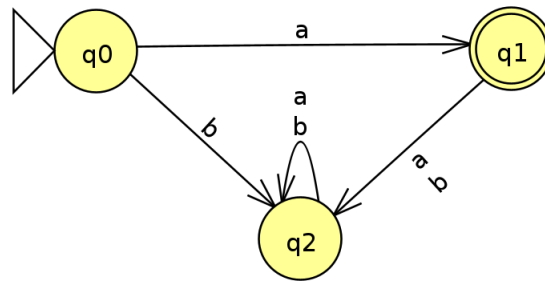
Práctica 2

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Ejercicio 1

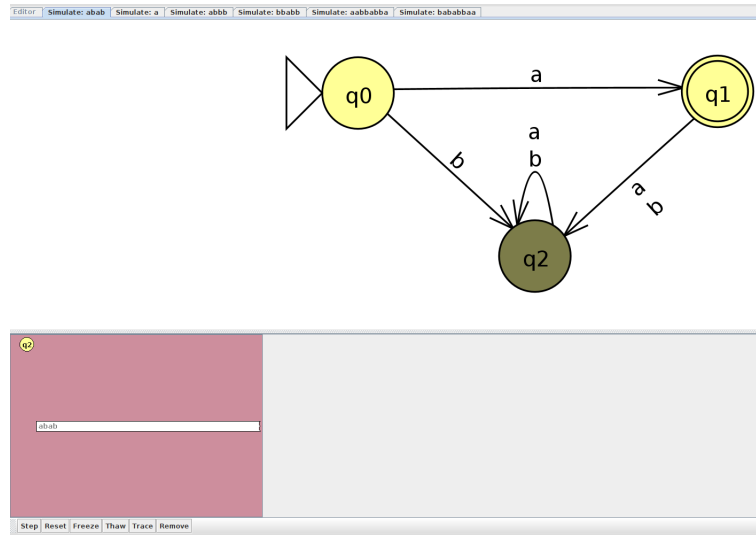
Consider the language over the alphabet $\{a, b\}$ that only contains the string a .

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



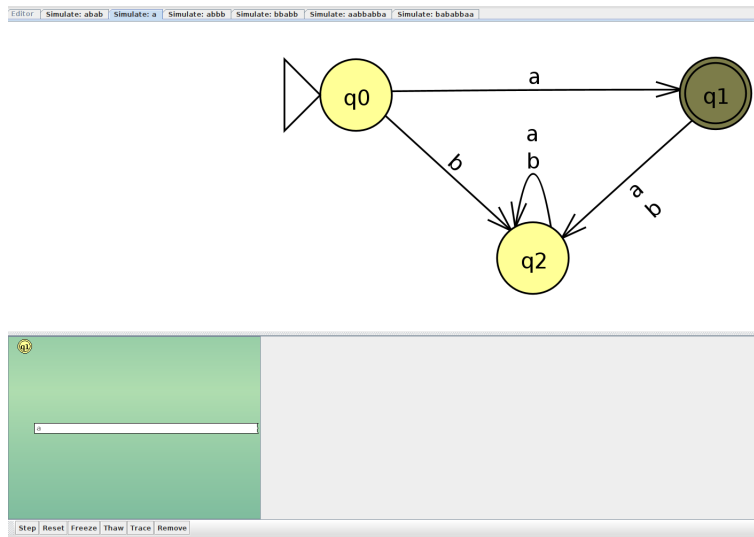
$$M = (\{q_0, q_1, q_2\}, \{a, b\}, \delta, q_0, \{q_1\}) \quad (1)$$

$\delta(q, \sigma)$	a	b
q_0	q_1	q_2
q_1	q_2	q_2
q_2	q_2	q_2

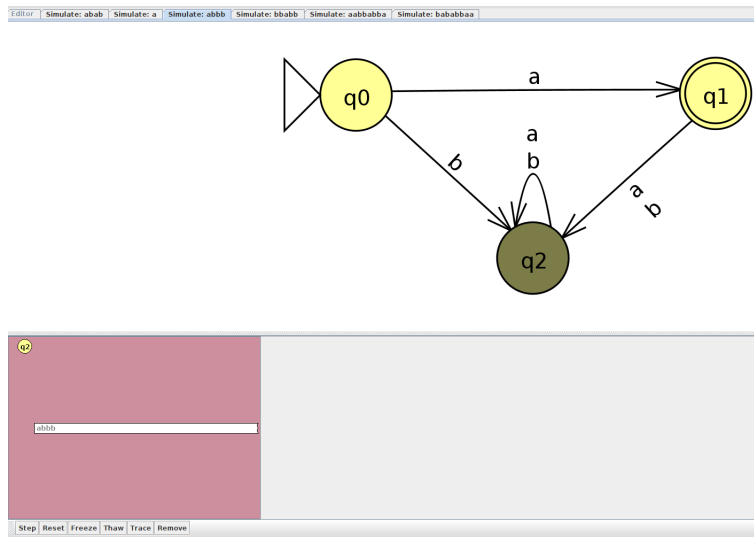


Prueba de la cadena "abab"

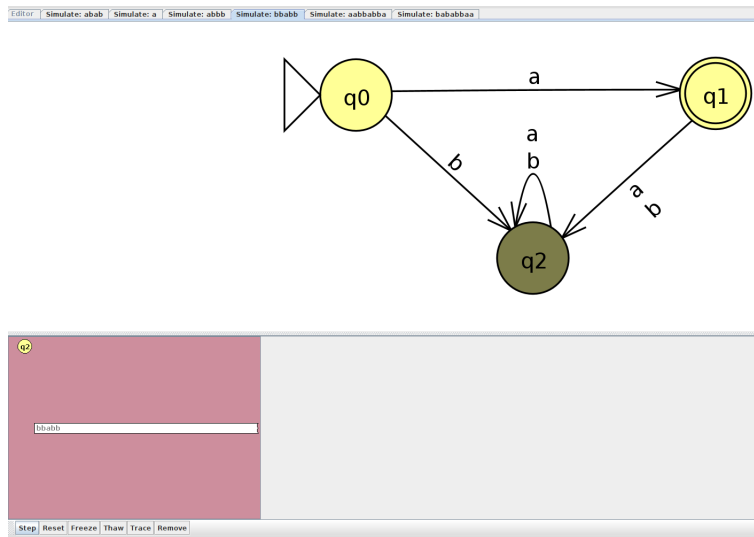
2. Test the automaton that you have created by introducing 6 chains.



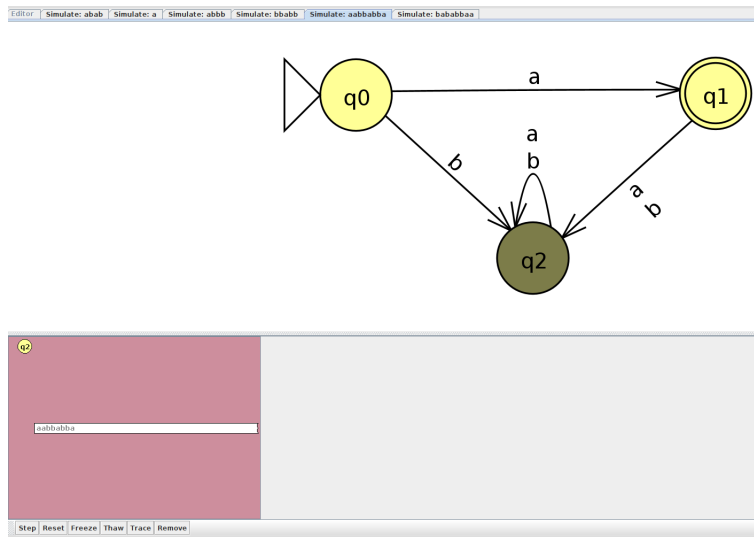
Prueba de la cadena "a"



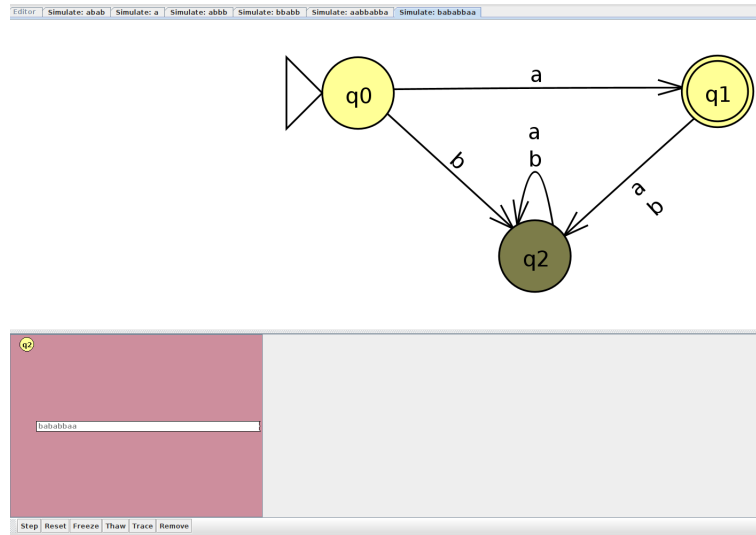
Prueba de la cadena "abb"



Prueba de la cadena "bbabb"



Prueba de la cadena "aabbabba"



Prueba de la cadena "bababbaa"

Ejercicio 2

Finite automaton in Octave:

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

Prueba con octave usando el script:

```
>> finiteautomata("aa*bb*", "ab")
warning: strmatch is obsolete; use strncmp or strcmp instead

M = ({q0, q1, q2}, {a, b}, q0, {q2}, {(q0, a, q1), (q1, a, q1), (q1, b, q2), (q2, b, q2)})

w = ab

(q0, ab) ⊢ (q1, b) ⊢ (q2, ε)

x ∈ L(M)
ans = 1
```

2. Specify in finiteautomata.json the automaton created in Activity 1 and test it with the script!

Prueba con Octave utizando mi propio autómata en el script:

```

>> finiteautomata("automata_mio","a")
M = ({q0, q1, q2}, {a, b}, q0, {q2}, {(q0, a, q1), (q0, b, q2), (q1, a, q2), (q1, b, q2), (q2, a, q2),
q2}))
w = a
(q0, a) ⊢ (q1, ε)
x ∉ L(M)
ans = 0

```