Práctica 2

Rocío Sánchez Cerván
2º A Ingeniería Informática

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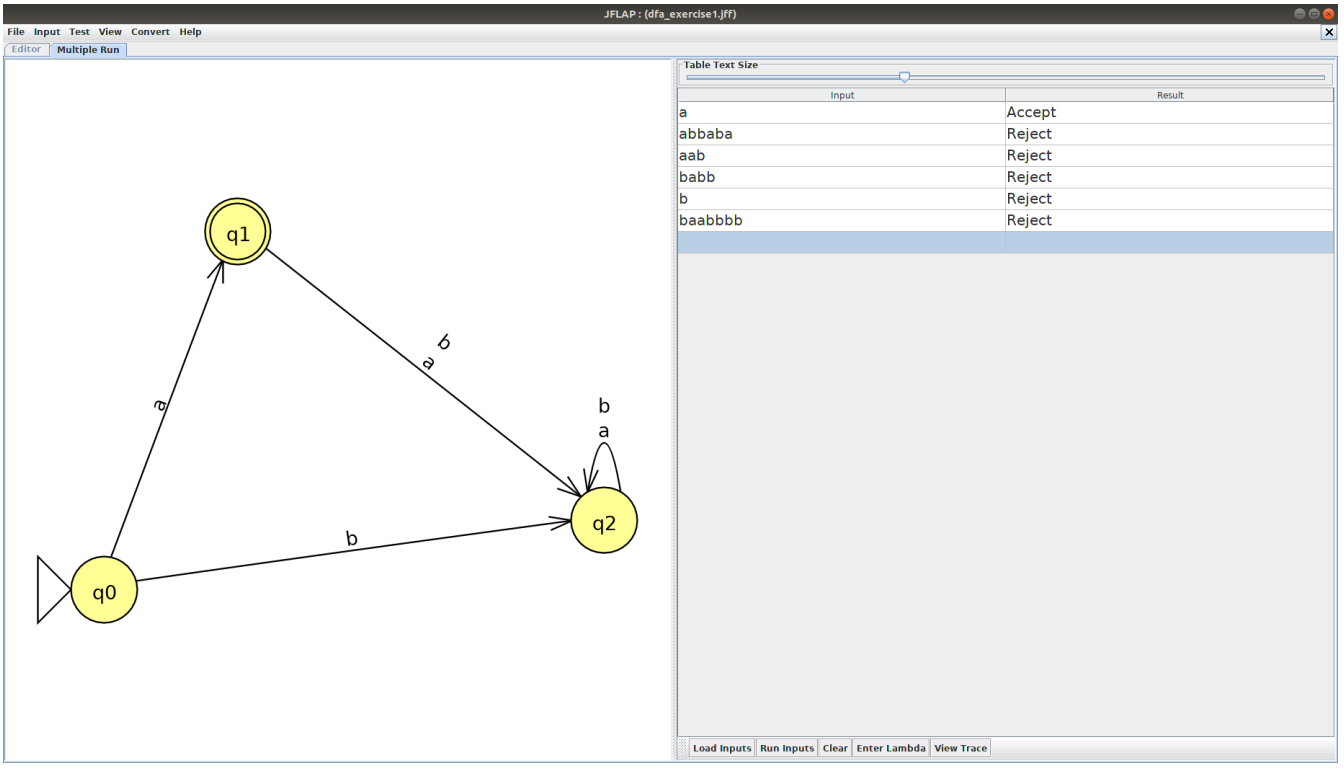
Activities

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.
   Sea $M = (K, \Sigma, \delta, s, F)$ el autómata pedido, luego:
   $K = \{q_0, q_1, q_2\}$
   $\Sigma = \{a, b\}$
   $\delta = \{(q_0,\ a,\ q_1),\ (q_0,\ b,\ q_2),\ (q_1,\ a,\ q_2),\ (q_1,\ b,\ q_2),\ (q_2,\ a,\ q_2),\ (q_2,\ b,\ q_2)\}$
   $s = q_0$
   $F = q_1$

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



2. Finite automaton in Octave:

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

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

```
[
  {
    "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"]]
    }
  }
]
```