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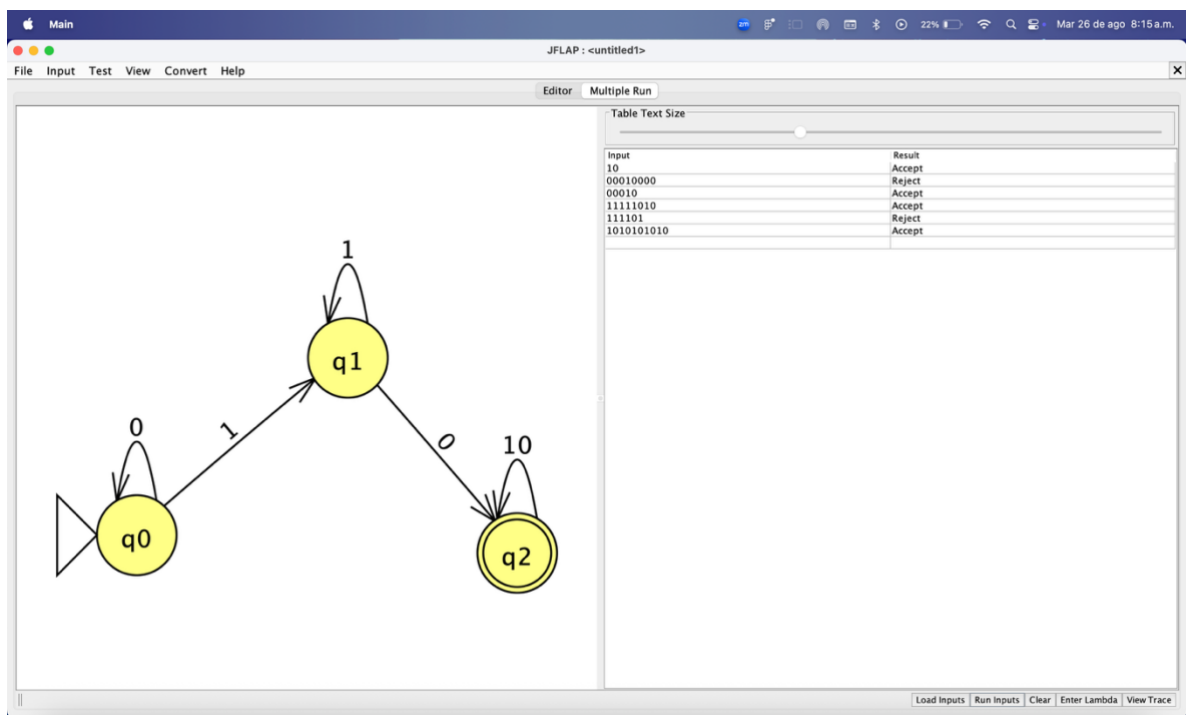
Implementación de métodos computacionales

Actividad 3.1: NFA

For each of the following languages, construct an NFA, with the specified number of states, that accepts the language. In all the cases, the alphabet is $\{0, 1\}$.

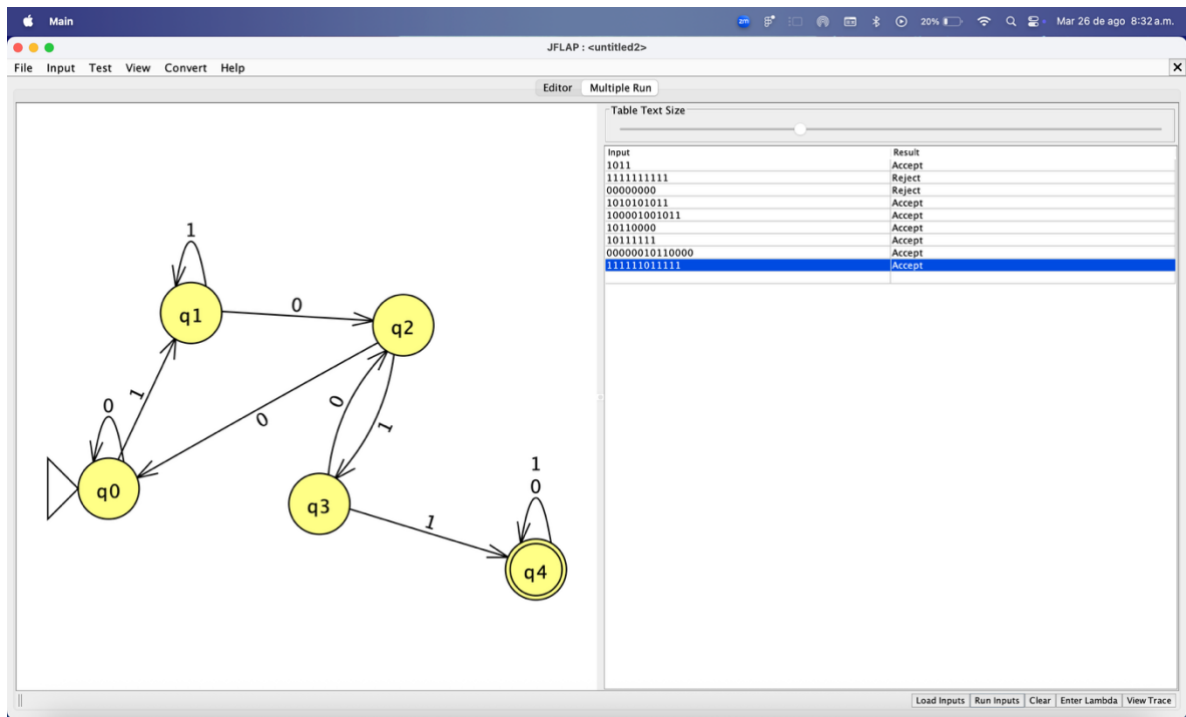
1. The language $\{w : w \text{ ends with } 10\}$ with three states.

$M = (\{q_0, q_1, q_2\}, \{0, 1\}, \{(q_0, 0, q_0), (q_0, 1, q_1), (q_1, 1, q_1), (q_1, 0, q_2), (q_2, 10, q_2)\}, q_0, \{q_2\})$



2. The language $\{w : w \text{ contains the substring } 1011\}$ with five states.

$M = (\{q_0, q_1, q_2, q_3, q_4\}, \{0, 1\}, \{(q_0, 0, q_0), (q_0, 1, q_1), (q_1, 1, q_1), (q_1, 0, q_2), (q_2, 0, q_0), (q_2, 1, q_3), (q_3, 0, q_2), (q_3, 1, q_4), (q_4, 0, q_4), (q_4, 1, q_4)\}, q_0, \{q_4\})$



3. The language $\{w \mid w \text{ contains an odd number of 1s or exactly two 0s}\}$ with six states.

$M = (\{q_0, q_1, q_2, q_3, q_4, q_5\}, \{0, 1\}, \{(q_0, \epsilon, q_1), (q_0, \epsilon, q_3), (q_1, 0, q_1), (q_1, 1, q_2), (q_2, 0, q_2), (q_2, 1, q_1), (q_3, 0, q_4), (q_3, 1, q_3), (q_4, 0, q_5), (q_4, 1, q_4), (q_5, 1, q_5)\}, q_0, \{q_2, q_5\})$

