

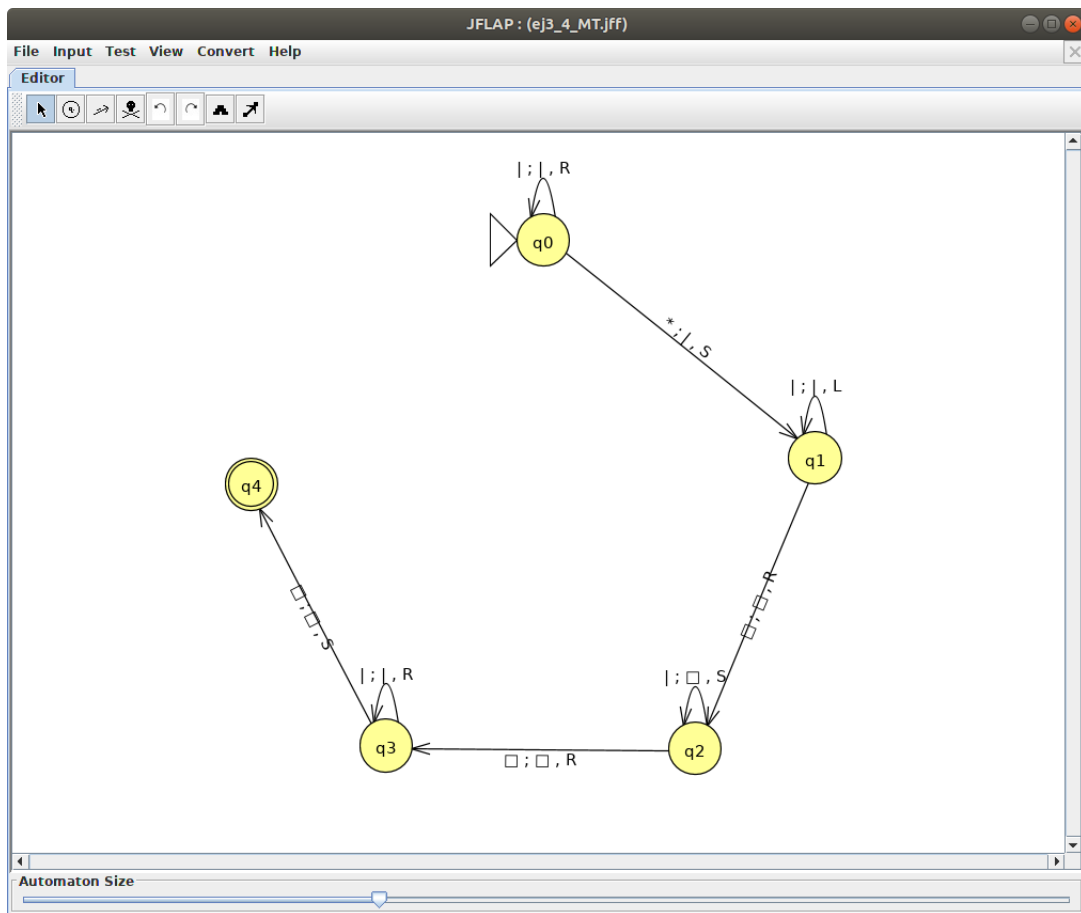
# Práctica 3

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## Activities

1. Define the TM solution of exercise 3.4 of the problem list and test its correct behaviour.



2. Define a recursive function for the sum of three values.

$$<< \pi_1^1 | \sigma(\pi_3^3) > | \sigma(\pi_4^4) >$$

```

alumno@TALF: ~/talfuma/software/recursivefunctions
Archivo Editar Ver Buscar Terminal Ayuda
octave:5> evalrecfunction('<n^1_1|σ(n^3_3)>|σ(n^4_4)>',1, 2, 1)
<<n^1_1|σ(n^3_3)>|σ(n^4_4)>(1,2,1)
<<n^1_1|σ(n^3_3)>|σ(n^4_4)>(1,2,0)
<n^1_1|σ(n^3_3)>(1,2)
<n^1_1|σ(n^3_3)>(1,1)
<n^1_1|σ(n^3_3)>(1,0)
n^1_1(1) = 1
σ(n^3_3)(1,0,1)
n^3_3(1,0,1) = 1

σ(1) = 2
σ(n^3_3)(1,1,2)
n^3_3(1,1,2) = 2

σ(2) = 3
σ(n^4_4)(1,2,0,3)
n^4_4(1,2,0,3) = 3

σ(3) = 4
ans = 4
octave:6>

```

3. Implement a WHILE program that computes the sum of three values. You must use an auxiliary variable that accumulates the result of the sum.

$Q = (3, s)$

s:

```

X4:= X1;
  while X2 ≠ 0 do
    X4 := X4 + 1;
    X2 := X2 - 1
  od

  while X3 ≠ 0 do
    X4 := X4 + 1;
    X3 := X3 - 1
  od
X1:= X4;

```