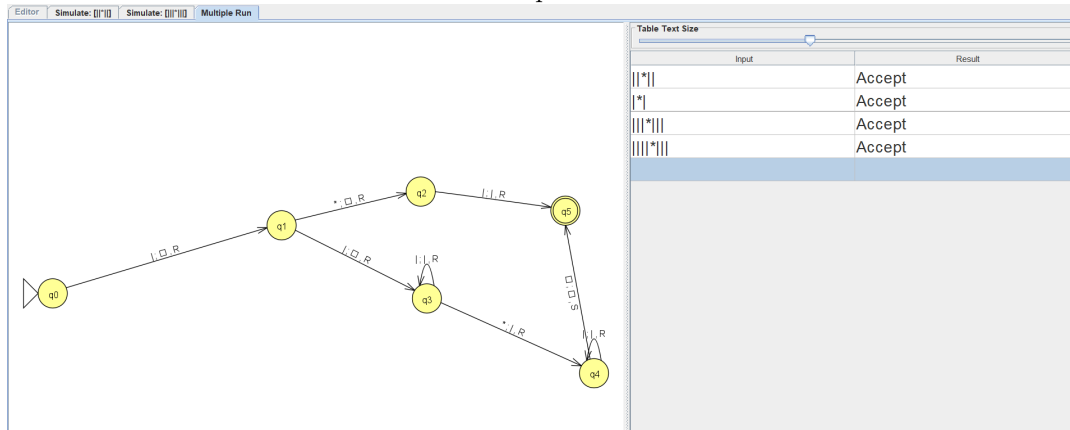


Práctica 3

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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.

$$\langle\langle \pi_1^1 | \sigma(\pi_3^3) \rangle | \sigma(\pi_4^4) \rangle$$

```
octave:6> evalrecfunction('<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>',1,2,3)
<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>(1,2,3)
<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>(1,2,2)
<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>(1,2,1)
<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>(1,2,0)
<pi^1_1|sigma(pi^3_3)>(1,2)
<pi^1_1|sigma(pi^3_3)>(1,1)
<pi^1_1|sigma(pi^3_3)>(1,0)
pi^1_1(1) = 1
sigma(pi^3_3)(1,0,1)
pi^3_3(1,0,1) = 1

sigma(1) = 2
sigma(pi^3_3)(1,1,2)
pi^3_3(1,1,2) = 2

sigma(2) = 3
sigma(pi^4_4)(1,2,0,3)
pi^4_4(1,2,0,3) = 3

sigma(3) = 4
sigma(pi^4_4)(1,2,1,4)
pi^4_4(1,2,1,4) = 4

sigma(4) = 5
sigma(pi^4_4)(1,2,2,5)
pi^4_4(1,2,2,5) = 5

sigma(5) = 6
ans = 6
octave:7> □
```

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;
```