Teoría de Autómatas y Lenguajes Formales
Práctica 3

Raquel Contreras Rosa

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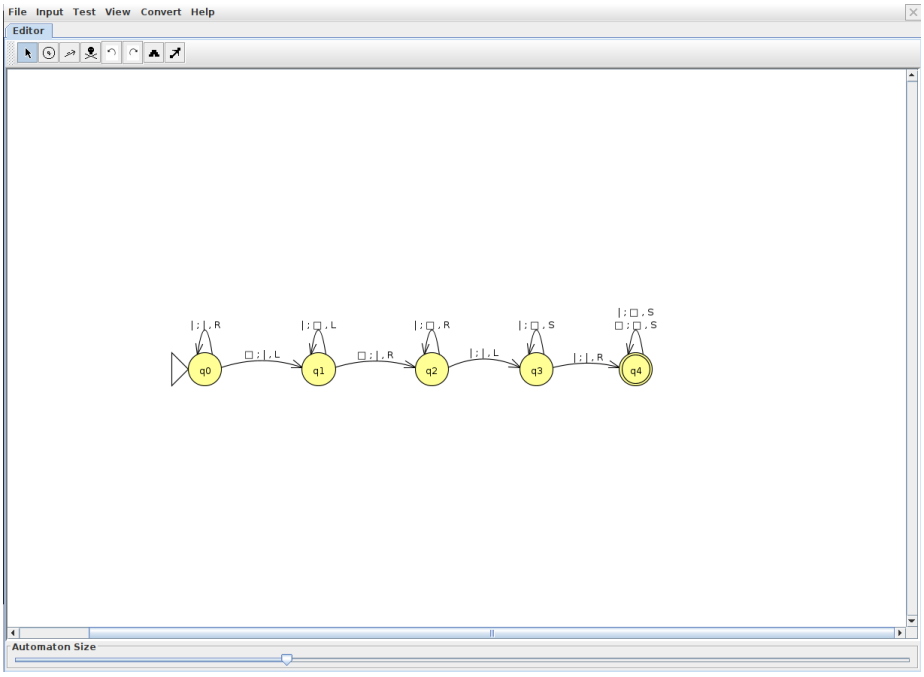
1. Define the TM solution of exercise 3.4 of the problem list and test its correct behaviour.



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

```
octave:4> evalrecfunction('<<pi^1_1|sigma(pi^3_3)>|sigma(pi^4_4)>', 2,3,4)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(2,3,4)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(2,3,3)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(2,3,2)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(2,3,1)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(2,3,0)
<π¹₁|σ(π³₃)>(2,3)
<π¹₁|σ(π³₃)>(2,2)
<π¹₁|σ(π³₃)>(2,1)
<π¹₁|σ(π³₃)>(2,0)
π¹₁(2) = 2
σ(π³₃)(2,0,2)
π³₃(2,0,2) = 2

σ(2) = 3
σ(π³₃)(2,1,3)
π³₃(2,1,3) = 3

σ(3) = 4
σ(π³₃)(2,2,4)
π³₃(2,2,4) = 4

σ(4) = 5
σ(π⁴₄)(2,3,0,5)
π⁴₄(2,3,0,5) = 5

σ(5) = 6
σ(π⁴₄)(2,3,1,6)
π⁴₄(2,3,1,6) = 6

σ(6) = 7
σ(π⁴₄)(2,3,2,7)
π⁴₄(2,3,2,7) = 7

σ(7) = 8
σ(π⁴₄)(2,3,3,8)
π⁴₄(2,3,3,8) = 8

σ(8) = 9
ans =  9
octave:5>
```

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.