Teoría de Autómatas y Lenguajes Formales

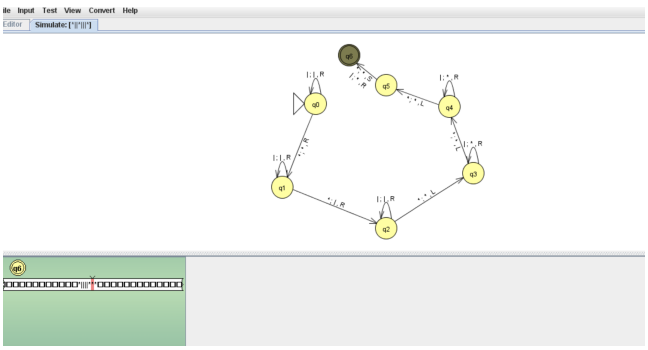
Práctica 3: Turing Machine, Recursive Functions and WHILE Language

Alberto Estrada Gomez

26 de diciembre de 2022

1. Actividad-1

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



2. Actividad-2

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

$('\ll \pi_1^1|\sigma(\pi_3^3) > |\sigma(\pi_4^4) >', 1, 1, 2)$

3. Actividad-3

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

Q: (3, 4, 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