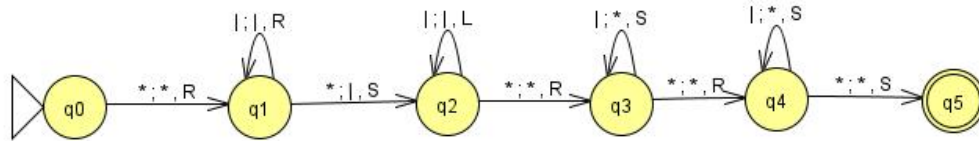


PRACTICA 3. Temas 7,8,9

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1 Ejercicios

T7. Define the TM solution of exercise 3.4 of the problem list and test its correct behaviour



T9. 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=(3,3,S)
s:
  X4 := X1;
  while G(X2) ≠ 0 do
    X4 := X4 + 1;
    X2 := X2 - 1;
  od
  while G(X3) ≠ 0 do
    X4 := X4 + 1;
    X3 := X3 - 1;
  od
  X1 := X4;
```

T8. Define a recursive function for the sum of three values.

$$addition3 : << \pi_1^1 | \theta(\pi_3^3) > | \theta(\pi_4^4) >$$

The screenshot shows the GNU Octave interface with the following components:

- File Explorer:** Shows the directory `/home/alumno/tafluma/software/recursivefunctions` containing files `evalrecfunction.m`, `recursiveexpression.m`, and `recursivefunctions`.
- Command Window:** Displays the execution of the recursive function `addition3` for various inputs, showing the sequence of recursive calls and the final result.


```

sigma(n^4)(1,2,1,4)
n^4(1,2,1,4) = 4

sigma(4) = 5
sigma(n^4)(1,2,2,5)
n^4(1,2,2,5) = 5

sigma(5) = 6
ans = 6
>> evalrecfunction('addition3',1,2,3)
addition3(1,2,3)
<<n^1:|sigma(n^3):>|sigma(n^4):>(1,2,3)
<<n^1:|sigma(n^3):>|sigma(n^4):>(1,2,2)
<<n^1:|sigma(n^3):>|sigma(n^4):>(1,2,1)
<<n^1:|sigma(n^3):>|sigma(n^4):>(1,2,0)
<n^1:|sigma(n^3):>(1,2)
<n^1:|sigma(n^3):>(1,1)
<n^1:|sigma(n^3):>(1,0)
n^1(1) = 1
sigma(n^3)(1,0,1)
n^3(1,0,1) = 1

sigma(1) = 2
sigma(n^3)(1,1,2)
n^3(1,1,2) = 2

sigma(2) = 3
sigma(n^4)(1,2,0,3)
n^4(1,2,0,3) = 3

sigma(3) = 4
sigma(n^4)(1,2,1,4)
n^4(1,2,1,4) = 4

sigma(4) = 5
sigma(n^4)(1,2,2,5)
n^4(1,2,2,5) = 5

sigma(5) = 6
ans = 6
>> |
      
```
- Workspace:** Shows the variable `ans` of type `double` with a value of `6`.
- Command History:** Lists the commands entered, including `evalrecfunction('addition3', 3, 2)`, `exit`, and several calls to `evalrecfunction`.