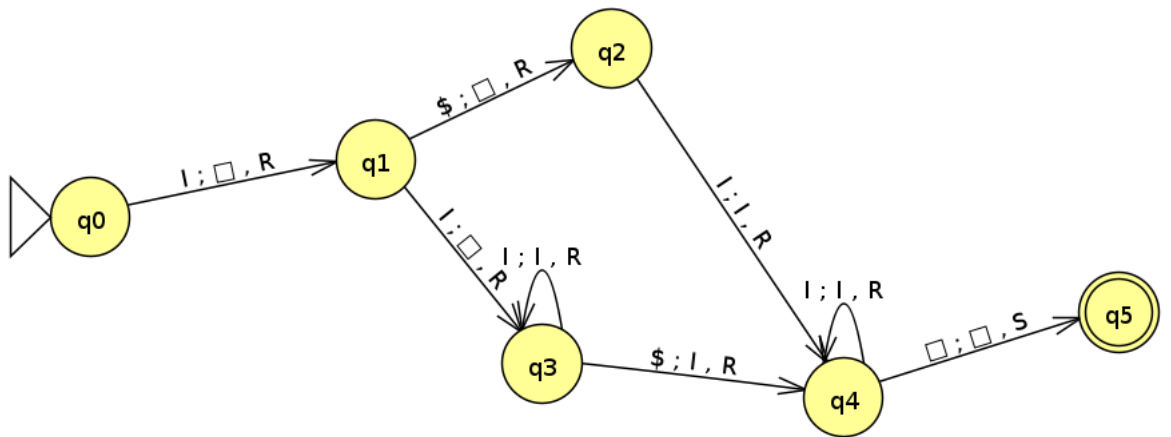


# Practica 3

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## Actividad 1

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



## Actividad 2

Define a recursive function for the sum of three values.

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

```

octave:11> evalrecfunction('addition3',2,1,3)
addition3(2,1,3)
<addition|σ(n44)>(2,1,3)
<addition|σ(n44)>(2,1,2)
<addition|σ(n44)>(2,1,1)
<addition|σ(n44)>(2,1,0)
addition(2,1)
<n11|σ(n33)>(2,1)
<n11|σ(n33)>(2,0)
n11(2) = 2
σ(n33)(2,0,2)
n33(2,0,2) = 2

σ(2) = 3
σ(n44)(2,1,0,3)
n44(2,1,0,3) = 3

σ(3) = 4
σ(n44)(2,1,1,4)
n44(2,1,1,4) = 4

σ(4) = 5
σ(n44)(2,1,2,5)
n44(2,1,2,5) = 5

σ(5) = 6
ans = 6
octave:12> 

```

### Actividad 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:

```

while  $G(X_1) \neq 0$  do
     $X_1 := X_1 - 1;$ 
     $X_4 := X_4 + 1;$ 
od
while  $G(X_2) \neq 0$  do
     $X_2 := X_2 - 1;$ 
     $X_4 := X_4 + 1;$ 
od
while  $G(X_3) \neq 0$  do
     $X_3 := X_3 - 1;$ 
     $X_4 := X_4 + 1;$ 
od
 $X_1 := X_4;$ 

```