Tarea #6 Microprocesadores

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Memoria de calculo

para la comunicacion serial

$$SBR = \frac{bus\_clk}{16 \times baud} = \frac{24\,MHz}{16 \times 38400} = 39,06 \approx 39$$

ATD:

$$f_s = \frac{bus\_clk}{2 \times (Prst+1)} \rightarrow Prs = \frac{bus\_clk}{2 f_s} - 1 = 16,14 \approx 16$$

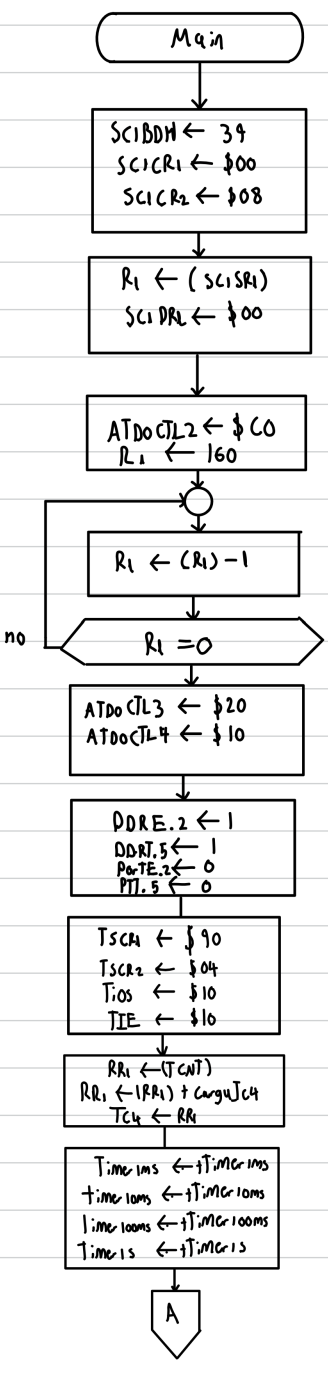
Estructura de datos utilizados

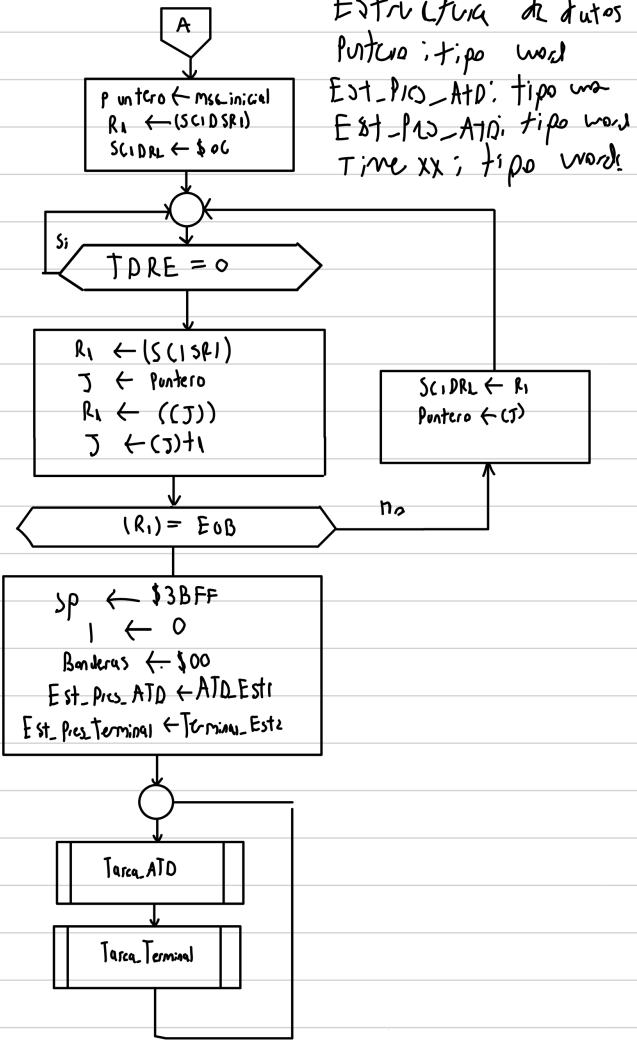
Nombre	direccion	MSG despues de la direccion $1013
Puntero	$1000 - $1001	
Puntero_2	$1002 - 1003	
Est_Pres_ATD	$1004 - 1005	Timers
Nivel_prom	$1006 - 1007	base t:
temp	$1008 - 1009	Time 1ms
Volumen	$100A	Time 10ms
Nivel	$100B	time 100ms
		time 1S
Est_Pre_Terminal	$100C - 100D	base 100 ms
BCD	$100E	time ATD
Cont-BCD	$100F	Base 1S
ASCII	$1010 - 1011	time Terminal
Banderas	$1012	time SS

↓

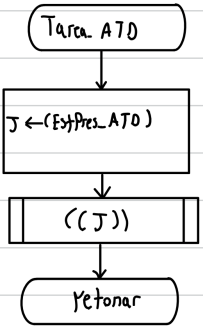
X, x, x, x, x, x empty, Alarm

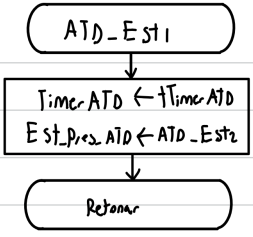
Main

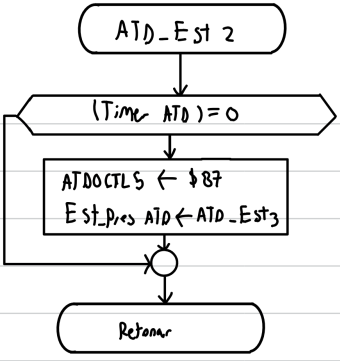




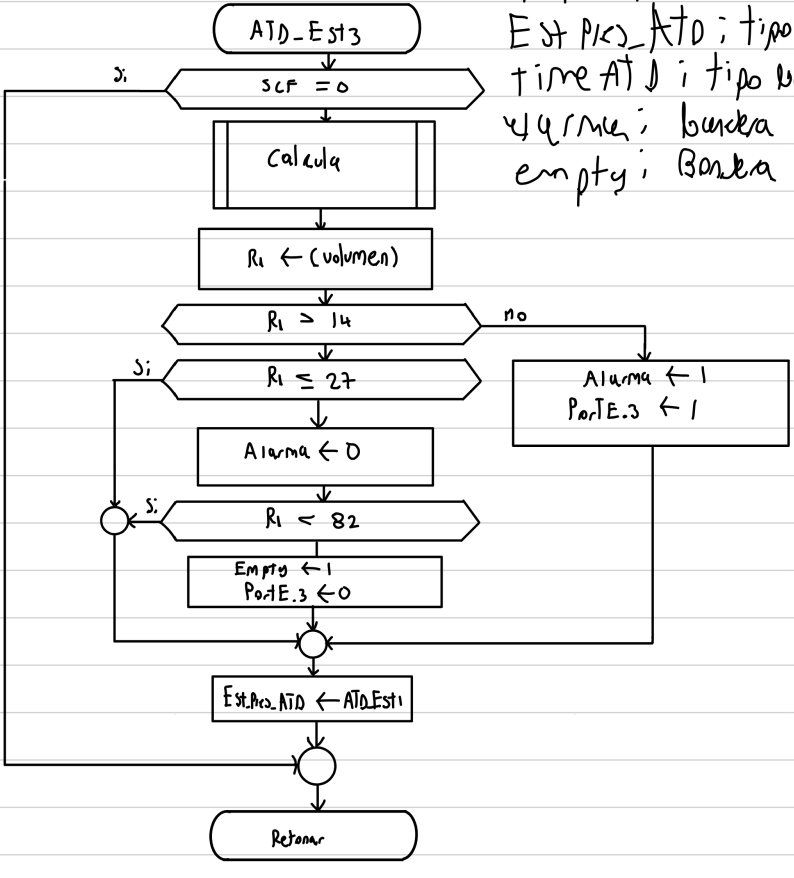
Estructura de datos
Puntero : tipo word
Est_Pres_ATD: tipo wa
Est_Pres_ATD: tipo word
Time XX ; tipo word

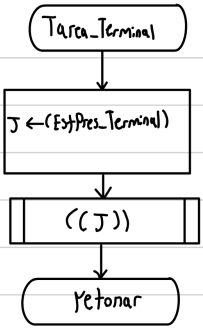


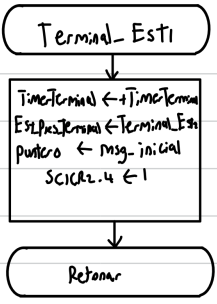


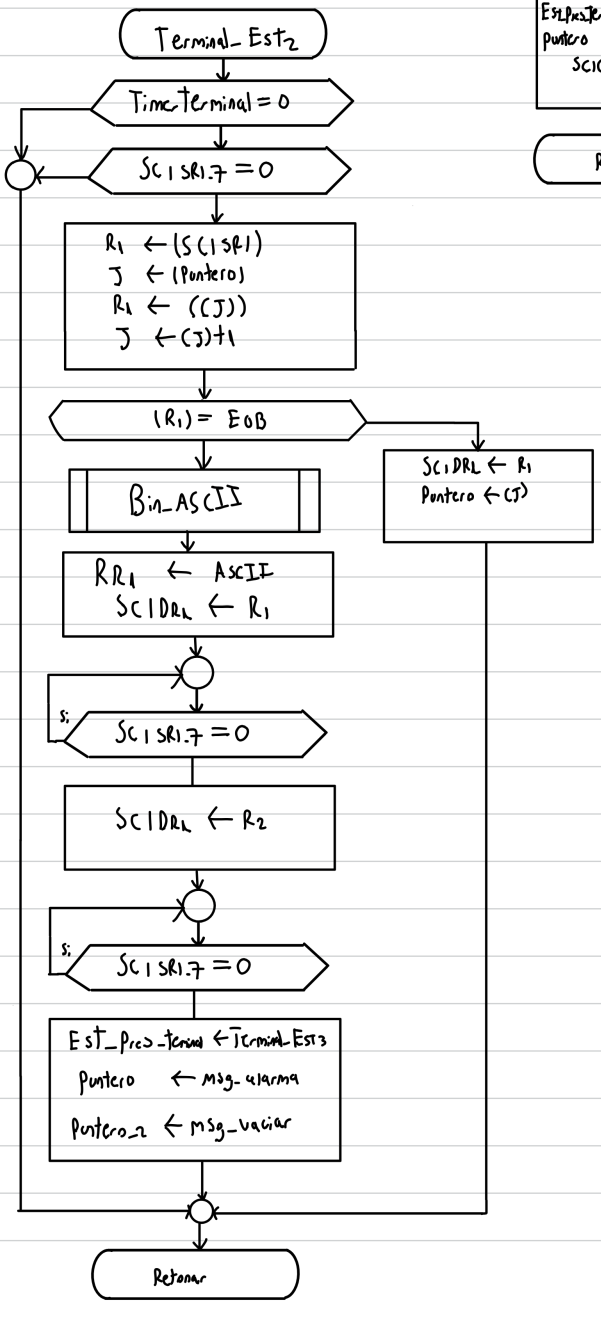


Estructura de datos
Est_Pres_ATD ; tipo word
timeATD ; tipo byte
alarma ; bandera
empty ; Bandera



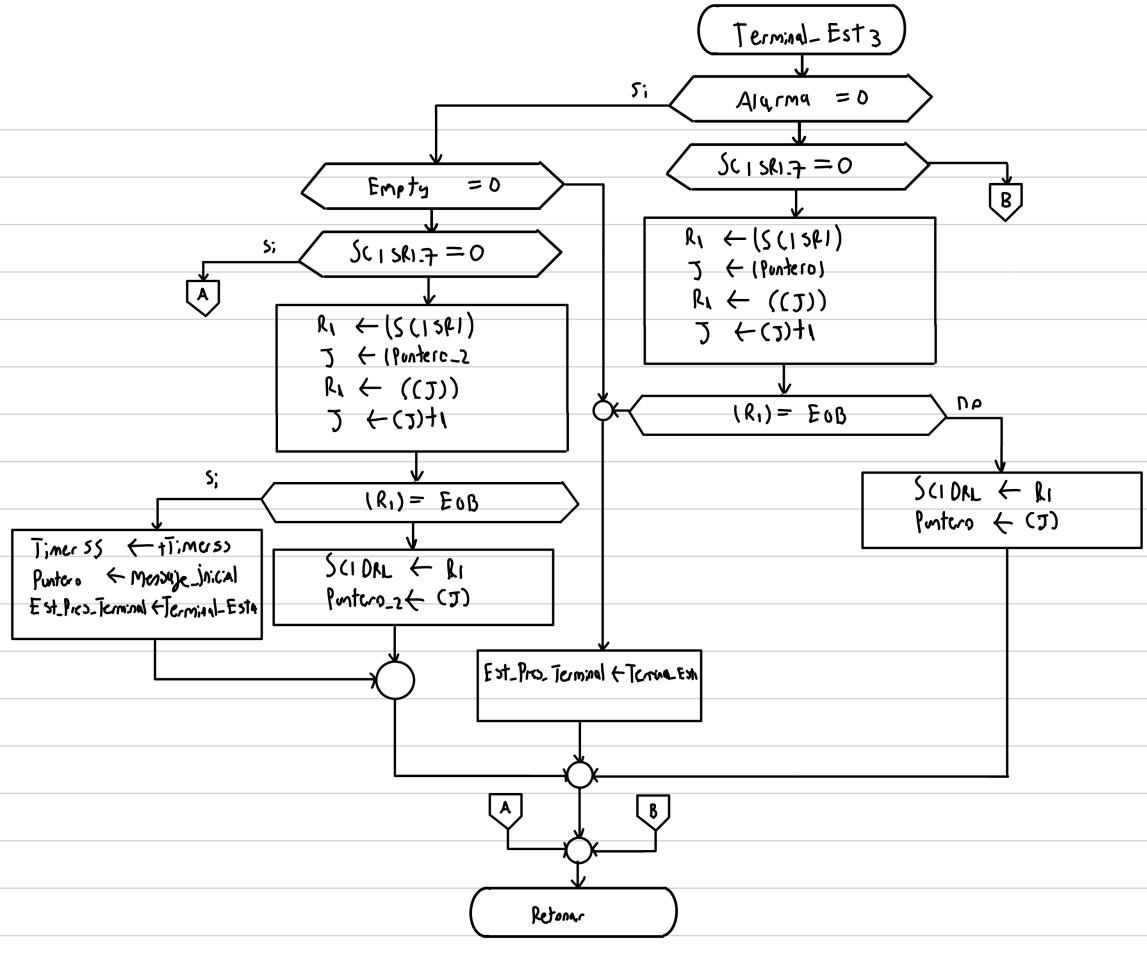


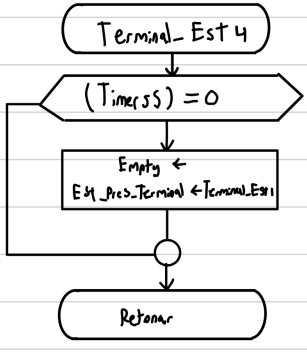


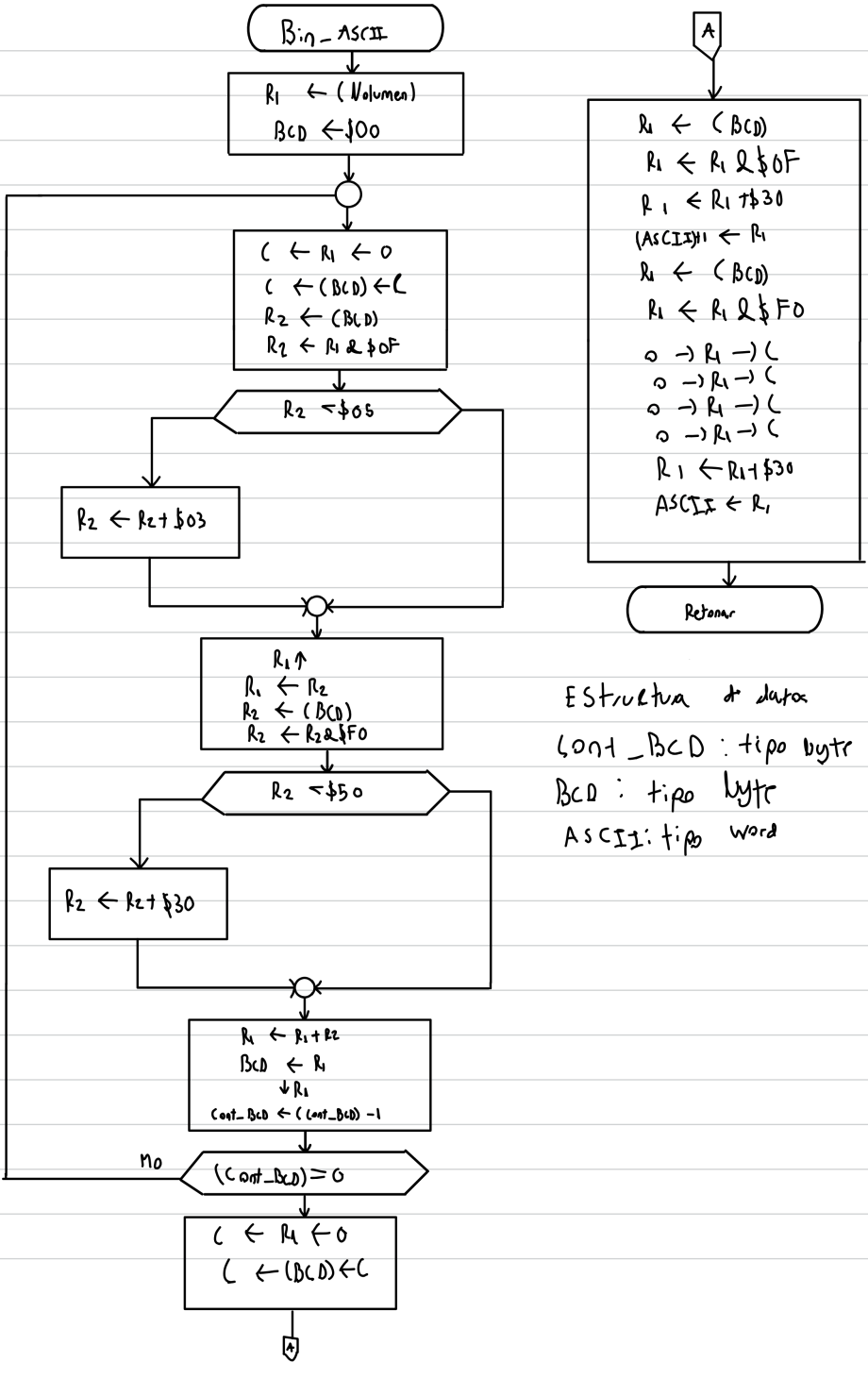


Estructura de datos

Est_Pres_Terminal: tipo word
time_terminal: tipo byte
Puntero: tipo word
puntero_2 tipo word
ASCII; tipo word


Terminal_Est3
Si
Alarma = 0
Empty = 0
SC1SR1.7 = 0
B
Si
SC1SR1.7 = 0
A
R1 ← (SC1SR1)
J ← (Puntero_2
R1 ← ((J))
J ← (J)+1
R1 ← (SC1SR1)
J ← (Puntero)
R1 ← ((J))
J ← (J)+1
(R1) = EOB
no
Si
(R1) = EOB
SC1DAL ← R1
Puntero ← (J)
Timer55 ← Timer55
Puntero ← Mensaje_Inicial
Est_Pres_Terminal ← Terminal_Est4
SC1DAL ← R1
Puntero_2 ← (J)
Est_Pres_Terminal ← Terminal_Est
A
B
Retornar


Terminal_Est4
(Timer55) = 0
Empty ←
Est_Pres_Terminal ← Terminal_Est1
Retornar

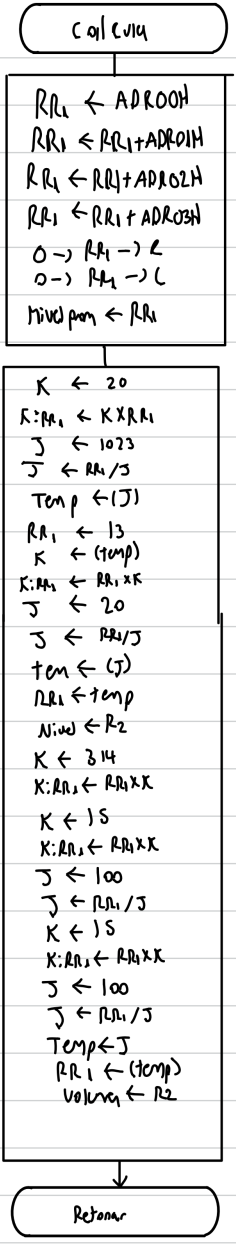


Estructura de datos

Cont_BCD : tipo byte

BCD : tipo byte

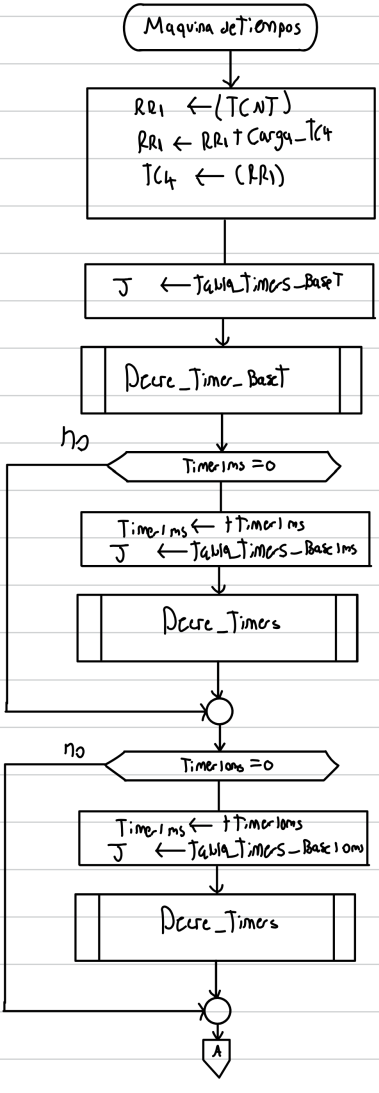
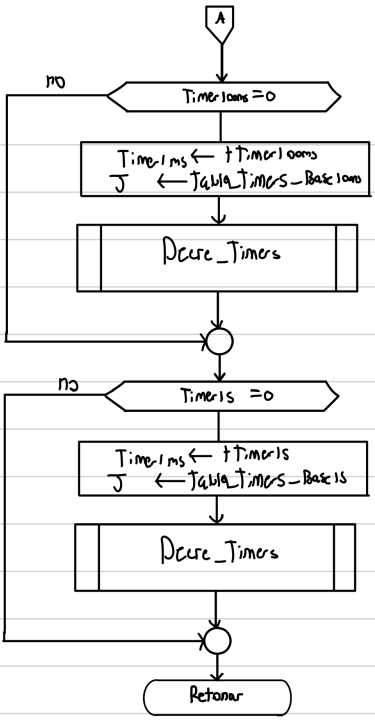
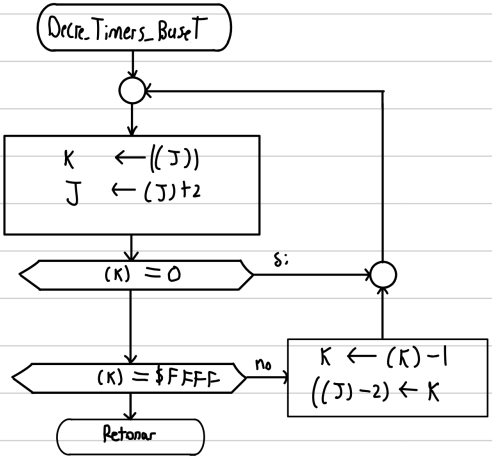
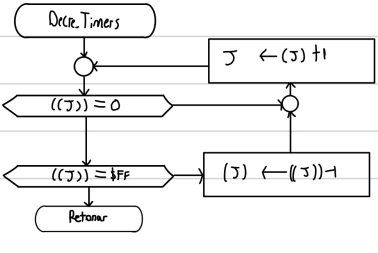
ASCII: tipo word



Calcula

$RR_1 \leftarrow ADR00H$
$RR_1 \leftarrow RR_1 + ADR01H$
$RR_1 \leftarrow RR_1 + ADR02H$
$RR_1 \leftarrow RR_1 + ADR03H$
$0 \rightarrow RR_1 \rightarrow R$
$0 \rightarrow RR_1 \rightarrow C$
Nivel prom $\leftarrow RR_1$

$K \leftarrow 20$
$K:RR_1 \leftarrow K \times RR_1$
$J \leftarrow 1023$
$J \leftarrow RR_1 / J$
Temp $\leftarrow (J)$
$RR_1 \leftarrow 13$
$K \leftarrow (temp)$
$K:RR_1 \leftarrow RR_1 \times K$
$J \leftarrow 20$
$J \leftarrow RR_1 / J$
tem $\leftarrow (J)$
$RR_1 \leftarrow temp$
Nivel $\leftarrow R_2$
$K \leftarrow 314$
$K:RR_1 \leftarrow RR_1 \times K$
$K \leftarrow 15$
$K:RR_1 \leftarrow RR_1 \times K$
$J \leftarrow 100$
$J \leftarrow RR_1 / J$
$K \leftarrow 15$
$K:RR_1 \leftarrow RR_1 \times K$
$J \leftarrow 100$
$J \leftarrow RR_1 / J$
Temp $\leftarrow J$
$RR_1 \leftarrow (temp)$
Volumen $\leftarrow R_2$

Retornar

Sub rutina de interrupcion OC
Atiende la subrutina y decrementa
los time correspondientes