ESCOM
Escuela Superior de Cómputo

INTRODUCCIÓN A LOS MICROCONTOLADORES

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"Sleep - FOCO"

GRUPO: 3CM10

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1 | DIAGRAMAS

2 | CÓDIGO

```
.include"m8535def.inc"
.def d=r16

rjmp main
rjmp m1
rjmp m2

main:

    ldi d,low (RAMEND)
    out spl, d

    ldi d, high (RAMEND)
    out sph, d

    ser d

    out ddrb, d

    out portd, d


    ldi d,$22
    out mcucr,d
    ldi d,$e0
    out gicr,d
    sei


    ldi d, $01
    out portb, d

    rcall delay1min

    ldi d, $00
    out portb, d

et_sleep:

    ldi d,$62
    out mcucr,d
    nop
    sleep

rjmp et_sleep


m1:

    ldi d,$22
    out mcucr,d

    ldi d, $01
    out portb, d

    rcall delay5min

    ldi d, $00
    out portb, d

reti


m2:

    ldi d,$22
    out mcucr,d

    ldi d, $01
    out portb, d

    rcall delay1min
    rcall delay1min

    ldi d, $00
    out portb, d


reti
```

```
delay1min:

; Generated by delay loop calculator
; at http://www.bretmulvey.com/avrdelay.html
;
; Delay 59 999 999 cycles
; 59s 999ms 999us at 1 MHz

        ldi  r18, 2
        ldi  r19, 49
        ldi  r20, 98
        ldi  r21, 70
L1: dec  r21
        brne L1
        dec  r20
        brne L1
        dec  r19
        brne L1
        dec  r18
        brne L1

ret


delay5min:

; Generated by delay loop calculator
; at http://www.bretmulvey.com/avrdelay.html
;
; Delay 299 999 999 cycles
; 4m 59s 999ms 999us at 1 MHz

        ldi  r18, 6
        ldi  r19, 242
        ldi  r20, 231
        ldi  r21, 106
L2: dec  r21
        brne L2
        dec  r20
        brne L2
        dec  r19
        brne L2
        dec  r18
        brne L2

ret
```