INSTITUTO POLITÉCNICO NACIONAL
ESCUELA SUPERIOR DE CÓMPUTO

INTRODUCCIÓN A LOS MICROCONTOLADORES

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"INTERRUPCIONES INT0, INT1 E INT2"

GRUPO: 3CM10

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1 | DIAGRAMAS

```
.include"m8535def.inc"
.def d = R16

rjmp main
rjmp m1
rjmp m2
.org $12
rjmp m3

main:
    ldi d, low(ramend)
    out spl,d
    ldi d, high(ramend)
    out sph,d
    ser d
    out ddrc,d
    out ddra,d
    out portb,d
    out portd,d
    ldi d,2
    out mcucr,d
    ldi d,$e0
    out gicr,d
    sei
    ldi d,$76; -
    mov r0,D ; -H
    ldi d,$86
    mov r5,d ; -!
    ldi d,$3F ; - O
    mov r4,d
    ldi d,$38 ; - L
    mov r3,d
    ldi d,$38 ; - L
    mov r2,d
    ldi d,$79 ; - E
    mov r1,d
    clr zh
```

```asm
barre:
    ldi zl,5
    ldi d,$20
sigue:
    out portc,d
    ld r17,z
    out porta, r17
    rcall delay
    out porta,zh
    in d,pinc
    lsr d
    dec zl
    brpl sigue
    rjmp barre
m1:
    ldi d,$30  ;-- -
    mov r0,d  ;  -I
    ldi d,$08
    mov r5,d  ;  -
    ldi d,$6D  ;-S
    mov r4,d
    ldi d,$30  ;-I
    mov r3,d
    ldi d,$08  ;  _
    mov r2,d
    ldi d,$78  ;  -T
    mov r1,d
    reti

m2:
    ldi d,$08  ; -
    mov r0,d  ;   _
    mov r5,d  ;
    ldi d,$79  ; E
    mov r4,d
    ldi d,$54  ;-M
    mov r3,d
    ldi d,$74  ; -M
    mov r2,d
    ldi d,$08  ; _
    mov r1,d
    reti
```

```
m3:
    ldi d,$77 ;-- -
    mov r0,d ;-A
    ldi d,$86
    mov r5,d ; _!
    ldi d,$79 ; -E
    mov r4,d
    ldi d,$38; - L
    mov r3,d
    ldi d,$79 ; _E
    mov r2,d
    ldi d,$5E ; -D
    mov r1,d
    reti

delay:

    ldi r17,$0b
    p0:
        ldi r18,$d3
    p1:
        dec r18
        brne p1
        dec r17
        brne p0
        ldi r17,$01
    p2:
        dec r17
        brne p2
        nop
ret
```