jmp main ;jump past interrupt vector

org 0x30 ;start at RAM location 0x30

;--+ configuration section +--

main:

mov p1, #0x00 ;set p1 as output

;--+ main program section +--

mainLoop:

call checkInput

call Delay

mov p1, #0xFF ;LEDs on

call checkInput

call Delay

mov p1, #0x00 ;LEDs off

jmp mainLoop

;--+ checkInput subroutine +--

checkInput:

mov r7, p0 ;read switch positions into r7

cjne r7, #0xFC, not0 ;if switch value is not FC jump to the label not0

mov r5, #10 ;r5 has the value of #10

jmp goback

not0:

cjne r7, #0xFD, not1 ;if switch value is not FD jump to the label not1

mov r5, #20 ;r5 has the value of #20

jmp goback

not1:

cjne r7, #0xFE, not2 ;if switch value is not FE jump to the label not2

mov r5, #40 ;r5 has the value of #40

jmp goback

not2:

mov r5, #90 ;r5 has the value of #90

goback:

ret ;return from subroutine

;--+ Delay subroutine+--

Delay:

again: mov r0, #250

outer: mov r1, #250

inner:

djnz r1, inner ;r1 decrements to 0 from #250

djnz r0, outer ;r0 decrements to 0 from #250

djnz r5, again ;r5 jumps to the label again

ret ;return from subroutine

end