Kunal Mukherjee

Assignment 2

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MainSeg SEGMENT CODE

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CSEG at 0h

ljmp Start

RSEG MainSeg

Start:

mov a, p3 ;read p3 into accumulator

mov r3, p3 ;move p3 in r3

anl a, #80h ;see if p3.7 is 1 or 0

jz L1 ;if 3.7 = 0 jump to L1

jnz L2 ;if 3.7 = 1 jump to L2

L1: mov a, r3

anl a, #40h ;see if p3.6 is 1 or 0

jz L3 ;if 3.6 is 0, then L3

jnz L4 ;if 3.6 is 1, then L4

L2: mov a, r3

anl a, #40h ;see if p3.6 is 1 or 0

jz L5 ;if 3.6 is 0, then L3

jnz L6 ;if 3.6 is 1, then L4

L3: clr P1.0 ;turn P1.0 LED on

clr P1.1 ;turn P1.1 LED on

sjmp Lo1 ;jump to Lo1

L4: setb P1.0 ;turn P1.0 LED on

setb P1.1 ;turn P1.1 LED on

jmp Start ;jmp to start

L5: clr P1.0 ;turn P1.0 LED off

clr P1.1 ;turn P1.1 LED off

jmp Start ;jmp to start

L6: clr P1.0 ;turn P1.0 LED on

clr P1.1 ;turn P1.1 LED on

sjmp Lo4

Lo1: mov r2, #128

jmp Lo2

Lo4: mov r2, #255

jmp Lo2

Lo2: dec r2

mov r1, #255

Lo3: dec r1

mov a, r1

jnz Lo3

mov a, r2

jnz Lo2

setb P1.0 ;turn P1.0 LED off

setb P1.1 ;turn p1.1 LED off

mov r2, #128

Lo6: dec r2

mov r1, #255

Lo5: dec r1

mov a, r1

jnz Lo5

mov a, r2

jnz Lo6

jmp Start

END