EE 354 Assignment 2

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; Assn2.A51

; This program should turn on the speaker at P1.0 when

; the switch at 3.4 is pressed

MainSeg SEGMENT CODE

;

OutBit MACRO x ; output a bit to Port 1 to turn it on

mov a, #x ; move #x value to the accumulator

mov P1, a ; move the accumulator into Port 1

clr a ; clear the accumulator

endm

CSEG at 0h ; Start code segment at 0

jmp START ; Jump to Start

RSEG MainSeg

START:

loop:

JNB P3.4, Switch\_34 ; Jump to Switch\_34 when it P3.4 is 0

jmp loop ; go back to the loop

Switch\_34:

; Get those cycles for the delay

; This is a really bad implementation, but it works

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

OutBit 254 ; turn Port 1.0 on

; Get those cycles for the delay

; This is a really bad implementation, but it works

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

acall WAIT

OutBit 255 ; turn Port 1.0 off

jmp loop

WAIT:

MOV P2,0x00 // mov 0 to Port 2

MOV A,0x00 // mov 0 into the Accumulator

Lp: MOV R6,#0h // set Reg 6 to 0 hex

LOOP1:

DJNZ R6,LOOP1 // R6 <-R6-1 until 0

CPL A // Complement the accumulator

MOV P2, A // Move the accumulator to Port 2

ret // return to where we left off

END // End Program