EE 354 Assignment 4

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Date Submitted: October 13, 2017

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//

// This program sets a potentiometer up to dim an LED

// It uses sets the LED up at P1.3 which is PWN0

// and the potentiometer is set up at P1.0 which is ADC0

//

//

#include <at89c51cc03.h> // CC03 library file

void main(void) //This is the start of the main program

{

// Variable declaration

unsigned char temp;

// PWN Stuff

CKCON = 0x01; // x2 mode

CMOD = 0x02; // cpu clock/2

CCON = 0x40; //Bit 6 in CCON turns on PCA timer

CCAPM0 = 0x42; //Bit 6 enables the compare

// ADC Stuff

ADCF = 0x01; // P1.0 = ADC[0]

ADCON = 0x20; // Enable ADC Function

ADCLK = 0x00; // Prescaler to 0

EA = 0; // Turn off interrupts

while(1) // Loop Forever

{

ADCON &= 0xF8; // Reset ADC Channel Select

ADCON |= 0x00; // Select ADC = Ch0

ADCON |= 0x20; // Use Standard mode

ADCON |= 0x08; // Start ADC Convert

CCAP0H = ADDH; // send MSB to PWN0

temp = (ADCON & 0x10); // Get done bit

while(temp != 0x10)// Loop until complete

temp = (ADCON & 0x10); // set temp

ADCON &= 0xEF; // Clear ADEOC = 0

}

}