External Interrupts

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RBT211 – Arduino Embedded Programming

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Engineering Notebook Entry 3

I have provided a copy of the code that was mostly copied and pasted along with some notes from class. I enjoyed making the breadboard and I have fun with them every time I do one. I went in to see if I could find a way to eliminate the Asian script, or at least turn it into English but I couldn’t find anything.

This project builds fine and runs fine. I will show screenshots and pictures below the code.

/\*

\* External\_Interrupts.c

\*

\* Created: 20-Jun-23 19:04:44

\* Author : Michael Caruana

\*/

#ifndef *F\_CPU*

#define *F\_CPU* 16000000UL //Utilizes the 16Mhz clock onboard the arduino

#endif

#include <avr/io.h>

#include <util/delay.h> // add this to use the delay function

#include <avr/interrupt.h>

int main(void)

{

//Set inputs and outputs

DDRD &= ~(1 << PD2); //Clear pin PD2 for input

PORTD |= (1 << PD2); //Set the internal pull-up resistor

DDRD |= (1 << PD7); //Set pin PD7 as output

EIMSK |= (1<< ISC00);

EICRA |= (1<< INT0);

sei();

/\* Replace with your application code \*/

while (1) {

if(!(PIND & (1 << PD2))){

PORTD |= (1<<PD7);

}else if (PIND & (1 << PD2)){

PORTD &= ~(1<<PD7);

}else { //do nothing

}

}

return(0);

}

ISR(INT0\_vect){

if(!(PIND & (1 << PD2))){

PORTD |= (1<<PD7);

}else if (PIND & (1 << PD2)){

PORTD &= ~(1<<PD7);

}else { //do nothing

}

}

A picture containing electronics, electronic engineering, circuit component, electrical wiring

Description automatically generated A picture containing electronics, electronic engineering, circuit component, electronic component

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<https://youtu.be/y1NeHwf8taQ>

Link to a short video. Until next time.