Elijah James Lab 01 report spring 23 ECE241-10b

Objective: The objective was to get familiar with the arduino IDE and start writing code for the lab

Prelab: code was given on canvas and pasted into arduino

Part 1) The first program was debugged and executed in the lab. Set up the arduino in the lab and ran the given code the code that was debugged in appendix A. The lab instructor verified my code after he saw the pulsing led after each second. Changed the port from one to four because it kept defaulting in the arduino app.

Part 2)The second program was adopted to a second pin every three seconds. Changed my code and changed pinMode ,digitalRead, and digitalWrite to 12 and changed the LedTimer variable to 3000. The debugged code is in appendix B. The lab instructor verified my code after I put the probe over d12 and held it there and it went from high to low every three seconds and he checked it off. Changed the port from one to four because it kept defaulting in the arduino app.

Appendix A code for part 1 :

unsigned long LedTimer; // =>

// Setup will set up hardware

void setup()

{

pinMode( 13, OUTPUT ); // => Setting the LED pin to Output using pinMode() function at 13

LedTimer = millis(); // => Recording and making the value of millis() into the variable LedTimer which will be called later on

} // => end of the setup beginning of the loop below

// => beginning of loop below

void loop()

{

if ( millis() - LedTimer >= 1000 ) // =>if millis subtract the variable LedTimer >= 1000

{

if ( digitalRead(13) == HIGH ) // =>if digitalRead function LED is high if == 13

{

digitalWrite( 13, LOW ); // =>if you want to set LED to low use digitalWrite function

}

else { // => digitalWrite( 13, HIGH ); // =>if all fails set LED to high using digitalWrite function

}

// => closed else LedTimer += 1000; // => adding 1000 to LedTimer variable

}

// =>closed if statement } // =>end of loop

Appendix B code for part 2 :

unsigned long LedTimer; // =>

// Setup will set up hardware

void setup()

{

pinMode( 12, OUTPUT ); // => Setting the LED pin to Output using pinMode() function at 12

LedTimer = millis(); // => Recording and making the value of millis() into the variable LedTimer which will be called later on

} // => end of the setup beginning of the loop below

// => beginning of loop below

void loop()

{

if ( millis() - LedTimer >= 3000 ) // =>if millis subtract the variable LedTimer >= 3000

{

if ( digitalRead(12) == HIGH ) // =>if digitalRead function LED is high if == 12

{

digitalWrite( 12, LOW ); // =>if you want to set LED to low use digitalWrite function

}

else { // => digitalWrite( 12, HIGH ); // =>if all fails set LED to high using digitalWrite function

}

// => closed else LedTimer += 3000; // => adding 3000 to LedTimer variable

}

// =>closed if statement } // =>end of loop