TERRAN BLAKE // WEDNESDAY 7:30AM // ECE 241

BLUE = PART 1 RED = BOTH PARTS GREEN = PART 2

#include<LiquidCrystal.h>

int minutes = 00; //These global integers keep the value of the clock

int sec = 00;

int hr = 0;

const long interval = 1000; //This interval is equal to 1 second and will be added to seconds

const long intervalShort = 500;

unsigned long oldMillis = 0;

LiquidCrystal LcdDriver(11, 9, 5, 6, 7, 8);

int count = 0;

void setup() {

// put your setup code here, to run once:

LcdDriver.begin(16, 2);

LcdDriver.clear();

LcdDriver.setCursor(0, 0);

}

void loop() {

LcdDriver.setCursor(0,1);

unsigned long currentMillis = millis();

if(currentMillis - oldMillis >= intervalShort) { //This sets up the timer so that it can add one second to the integer

oldMillis = currentMillis;

count++;

LcdDriver.clear();

LcdDriver.print(count);

}

if(currentMillis - oldMillis >= interval) { //This sets up the timer so that it can add one second to the integer

oldMillis = currentMillis;

sec++;

if(hr < 10) {

LcdDriver.print(0); //Prints an extra 0 if hr < 10

}

LcdDriver.print(hr); //These LcdDriver print values print the values of the clock

LcdDriver.print(":");

LcdDriver.print(minutes);

if(minutes < 10) {

LcdDriver.print(0); //Prints an extra 0 if minutes < 10

}

LcdDriver.print(":");

if(sec < 10) {

LcdDriver.print(0); //Prints an extra 0 if minutes < 10

}

LcdDriver.print(sec);

if(sec > 59) { //Adds to minutes whenever seconds is = to 60

minutes++;

sec = 0;

}

if(minutes > 59) { //Adds to hours whenever minutes is = to 60

hr++;

minutes = 0;

}

if(hr > 23) { //Resets the clock whenever hours is = to 24

hr = 0;

}

}

}