#include<LiquidCrystal.h>

LiquidCrystal lcd(2,3,4,5,6,7);

#define e\_s1 A0

#define t\_s1 A1

#define e\_s2 A2

#define t\_s2 A3

const int ledPin = 13;

long dis\_a = 0,dis\_b=0;

int flag1=0,flag2=0;

int person=0; // intitalise person count as 0

void ultra\_read(int pin\_t, int pin\_e , long &ultra\_time){

long time;

pinMode(pin\_t , OUTPUT);

pinMode(pin\_e , INPUT);

digitalWrite(pin\_t,LOW);

delayMicroseconds(2);

digitalWrite(pin\_t,HIGH);

delayMicroseconds(10);

time = pulseIn(pin\_e , HIGH);

ultra\_time = (time / 2)/29;

}

void setup() {

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

Serial.begin(9600);

pinMode(ledPin , OUTPUT);

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lcd.begin(16,2);

lcd.setCursor(0,0); //sets cursor for 16\*2 LCD display

lcd.print(" WELCOME ");

delay(1000);

lcd.clear();

}

void loop() {

// put your main code here, to run repeatedly:

ultra\_read(t\_s1 , e\_s1 , dis\_a);

delay(30);

ultra\_read(t\_s2 , e\_s2 , dis\_b);

delay(30);

Serial.print("da: ");

Serial.println(dis\_a);

Serial.print("db: ");

Serial.println(dis\_b);

if(dis\_a<50 && flag1==0){

flag1=1;

if(flag2==0){

person = person+1;

}

}

if(dis\_b<50 && flag2==0){

flag2=1;

if(flag1==0){

person = person-1;

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}

}

if(dis\_a>50 && dis\_b>50 && flag1==1 && flag2==1){

flag1=0;

flag2=0;

delay(1000);

}

lcd.setCursor(0,0);

lcd.print("Have Person ");

lcd.print(person);

lcd.print(" ");

lcd.setCursor(0,1);

lcd.print("Light is ");

if(person>0){

digitalWrite(ledPin,HIGH); // to on led when someone in room

lcd.print("ON ");

}

else{

digitalWrite(ledPin,LOW); // to off led when no one in room

lcd.print("OFF");

}

}