|  |
| --- |
| # Cde for sensor working |
|  |  |
|  | #include <LiquidCrystal\_I2C.h> |
|  | LiquidCrystal\_I2C lcd(0x27, 20, 4); |
|  | float cm; |
|  | float inches; |
|  |  |
|  |  |
|  | #define ECHO\_PIN 12 |
|  | #define TRIG\_PIN 13 |
|  | float dist; |
|  |  |
|  | void setup() |
|  | { |
|  | Serial.begin(115200); |
|  | pinMode(LED\_BUILTIN, OUTPUT); |
|  | pinMode(TRIG\_PIN, OUTPUT); |
|  | pinMode(ECHO\_PIN, INPUT); |
|  | //pir pin |
|  | pinMode(34, INPUT); |
|  |  |
|  | //ledpins |
|  | pinMode(23, OUTPUT); |
|  | pinMode(22, OUTPUT); |
|  | pinMode(21, OUTPUT); |
|  | pinMode(15, OUTPUT); |
|  |  |
|  |  |
|  | lcd.init(); |
|  | lcd.backlight(); |
|  | lcd.setCursor(1, 0); |
|  | lcd.print(""); |
|  | } |
|  |  |
|  | float readcmCM() |
|  | { |
|  | digitalWrite(TRIG\_PIN, LOW); |
|  | delayMicroseconds(2); |
|  | digitalWrite(TRIG\_PIN, HIGH); |
|  | delayMicroseconds(10); |
|  | digitalWrite(TRIG\_PIN, LOW); |
|  | int duration = pulseIn(ECHO\_PIN, HIGH); |
|  | return duration \* 0.034 / 2; |
|  | } |
|  |  |
|  | void loop() |
|  | { |
|  |  |
|  |  |
|  | if(digitalRead(34)) //pir motion detection |
|  | { |
|  | Serial.println("Motion Detected"); |
|  | Serial.println("Lid Opened"); |
|  | digitalWrite(10, HIGH); |
|  | delay(10000); |
|  | Serial.println("Lid Closed"); |
|  |  |
|  | } |
|  | else |
|  | { |
|  | digitalWrite(10, LOW); |
|  | } |
|  |  |
|  | if(cm <= 100) //Bin level detection |
|  | { |
|  | digitalWrite(21, HIGH); |
|  | Serial.println("High Alert!!!,Trash bin is about to be full"); |
|  | digitalWrite(22, LOW); |
|  | digitalWrite(23, LOW); |
|  | } |
|  | else if(cm > 150 && cm < 250) |
|  | { |
|  | digitalWrite(22, HIGH); |
|  | Serial.println("Warning!!,Trash is about to cross 50% of bin level"); |
|  | digitalWrite(21, LOW); |
|  | digitalWrite(23, LOW); |
|  | } |
|  | else if(cm > 250 && cm <=400) |
|  | { |
|  | digitalWrite(23, HIGH); |
|  | Serial.println("Bin is available"); |
|  | digitalWrite(21, LOW); |
|  | digitalWrite(22, LOW); |
|  | } |
|  |  |
|  | float inches = (cm / 2.54); //print on lcd |
|  | lcd.setCursor(0,0); |
|  | lcd.print("Inches"); |
|  | lcd.setCursor(4,0); |
|  | lcd.setCursor(12,0); |
|  | lcd.print("cm"); |
|  | lcd.setCursor(1,1); |
|  | lcd.print(inches, 1); |
|  | lcd.setCursor(11,1); |
|  | lcd.print(cm, 1); |
|  | lcd.setCursor(14,1); |
|  | delay(1000); |
|  | lcd.clear(); |
|  |  |
|  | } |