SPRINT -2

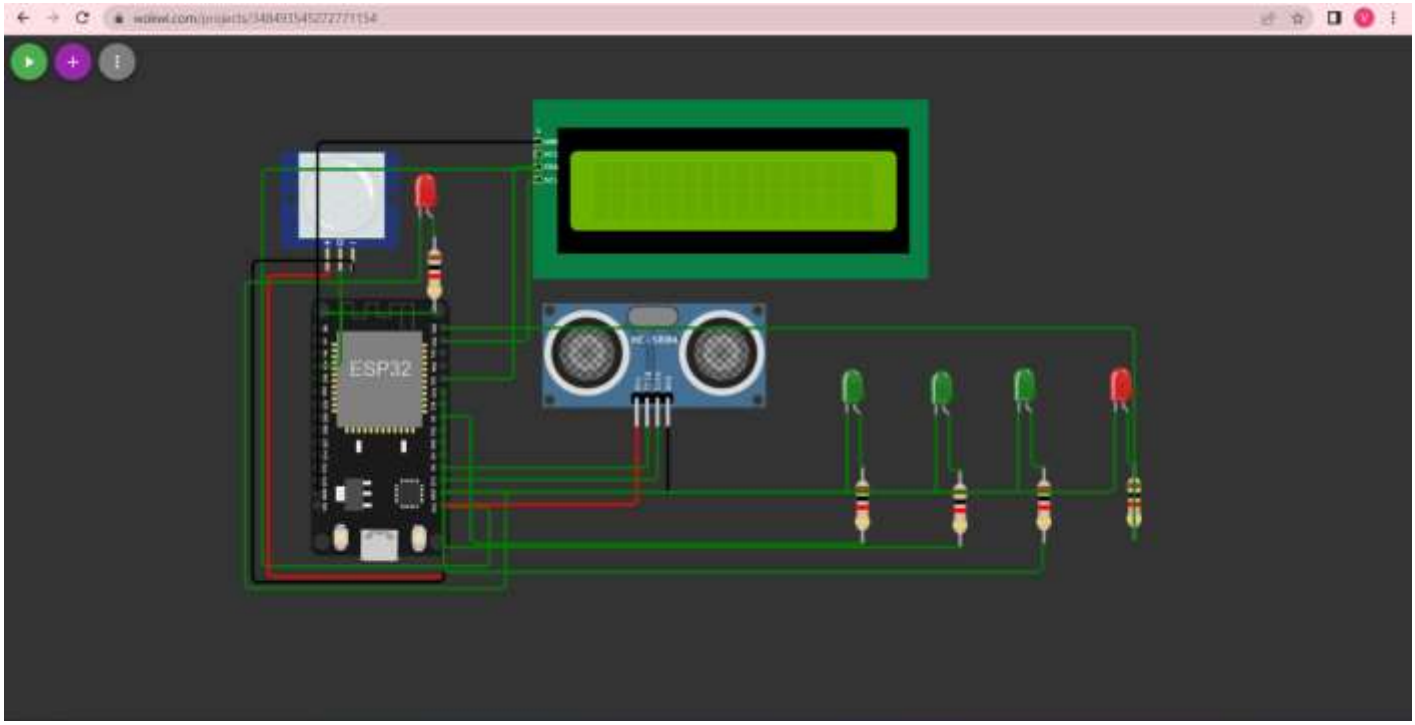
DATE	**14November 2022**
TEAM ID	**PNT2022TMID08724**
PROJECT NAME	**SMART WASTE MANAGEMENT FOR METROPOLITAN CITIES**

Code for Data Transfer fromSensors

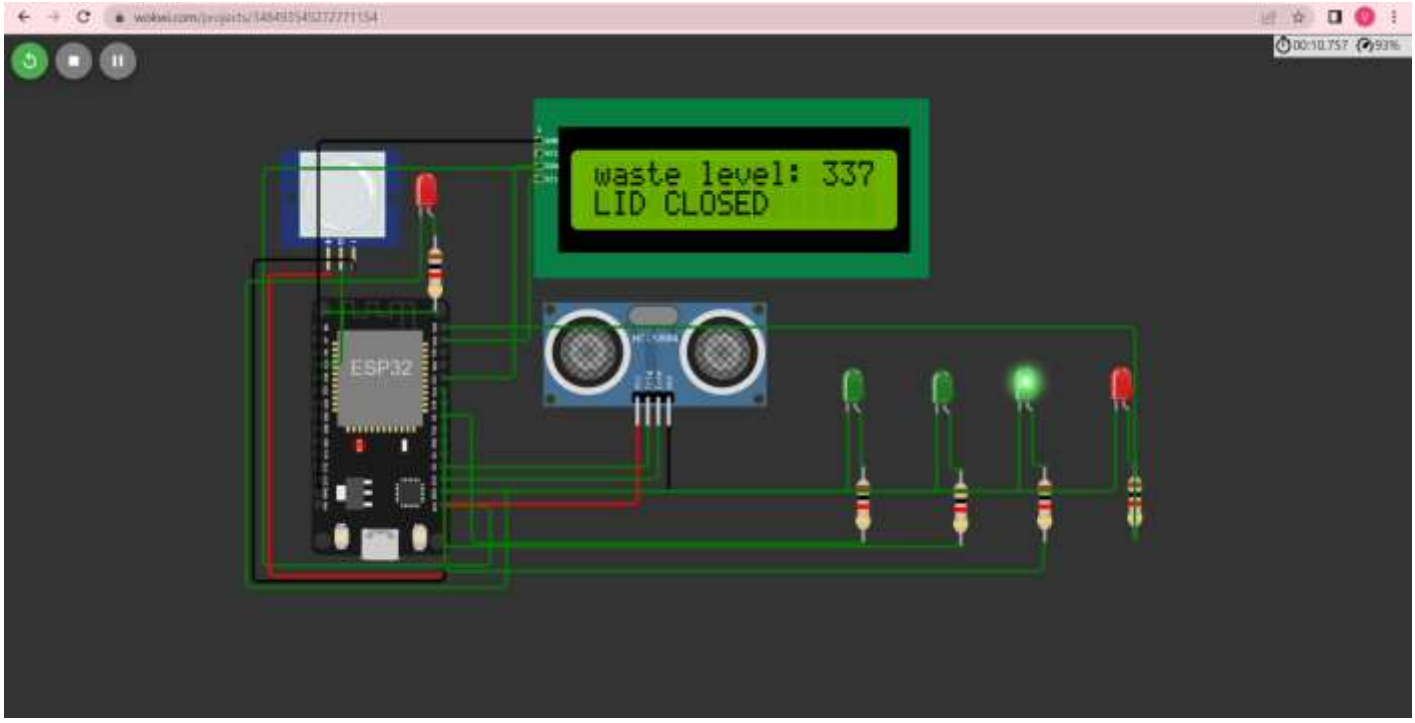
```
#include <LiquidCrystal_I2C.h>
#include <WiFi.h>
LiquidCrystal_I2C lcd(0x27, 16, 2); // I2C address 0x3F, 16 column and 2 rows

int trigPin = 2;    // TRIG pin
int echoPin = 15;    // ECHO pin

float duration_us, distance_cm,distance;

void setup() {
  lcd.init();               // initialize the lcd
  lcd.backlight();
  pinMode(5,OUTPUT);
  pinMode(18,OUTPUT);
  pinMode(19,OUTPUT);
  pinMode(23,OUTPUT);
  pinMode(34,INPUT);
  pinMode(14,OUTPUT);
  // open the backlight
  pinMode(trigPin, OUTPUT); // config trigger pin to output mode
  pinMode(echoPin, INPUT);
  Serial.println(9600); // config echo pin to input mode
}

void loop() {
  lcd.clear();
  lcd.setCursor(0, 0); // start to print at the first row
  lcd.print("waste level: ");
  lcd.print(distance);
  // generate 10-microsecond pulse to TRIG pin
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  // measure duration of pulse from ECHO pin
  duration_us = pulseIn(echoPin, HIGH);
```

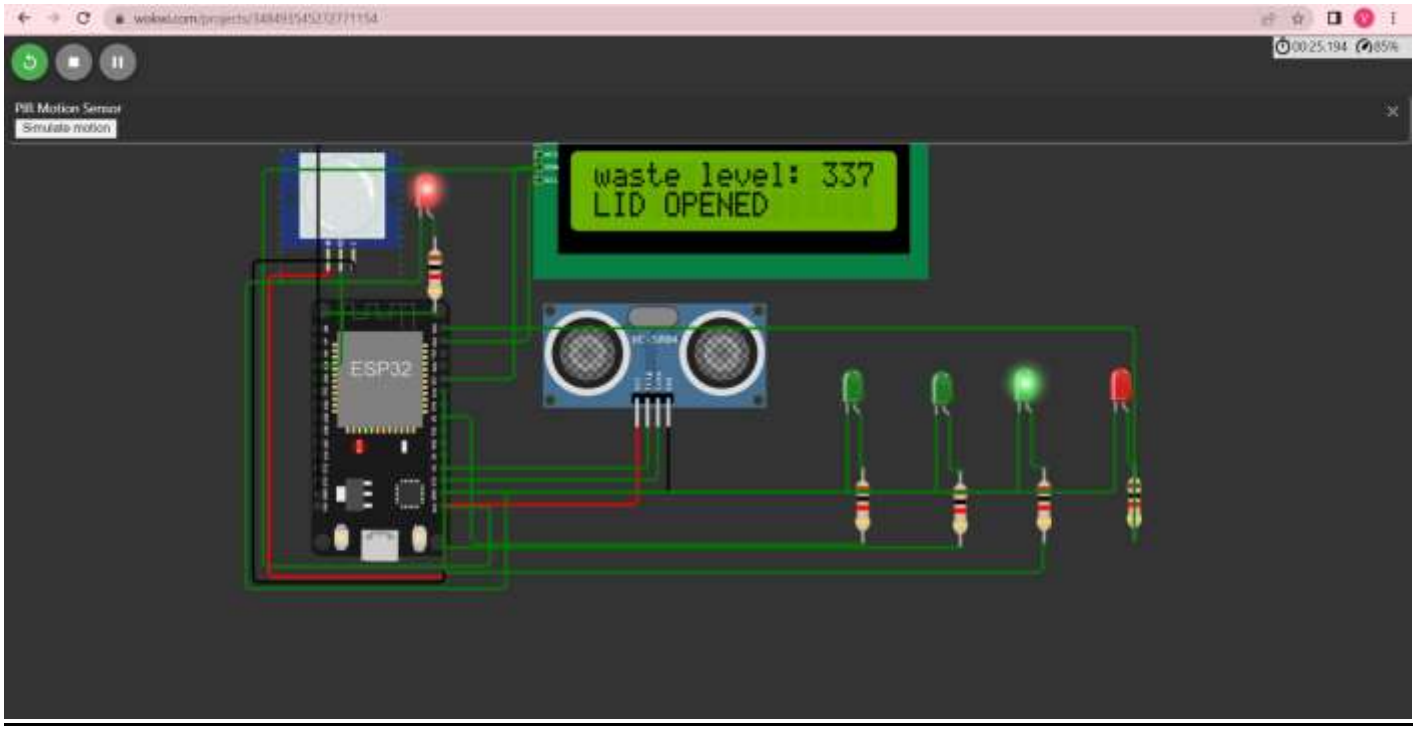
```
  // calculate the distance
  distance_cm = 0.017 * duration_us;
  distance=400-distance_cm;
  if(digitalRead(34))
{
Serial.println("Motion Detected");
 Serial.println("Lid Opened");
  lcd.setCursor(0, 1); // start to print at the first row
  lcd.print("LID OPENED ");
 digitalWrite(14, HIGH);

}
else
{
digitalWrite(14, LOW);
lcd.setCursor(0, 1); // start to print at the first row
  lcd.print("LID CLOSED ");
}


  digitalWrite(5,HIGH);
  digitalWrite(18,LOW);
  digitalWrite(19,LOW);
  digitalWrite(23,LOW);
  if(distance>=175)
  {
    digitalWrite(18,HIGH);
    digitalWrite(5,LOW);
    digitalWrite(19,LOW);
    digitalWrite(23,LOW);
  }
  if(distance>=275)
  {
    digitalWrite(19,HIGH);
    digitalWrite(5,LOW);
    digitalWrite(18,LOW);
    digitalWrite(23,LOW);
  }
  if(distance>=375)
  {
    digitalWrite(23,HIGH);
    digitalWrite(18,LOW);
    digitalWrite(5,LOW);
    digitalWrite(19,LOW);
  }

  delay(500);

}
```

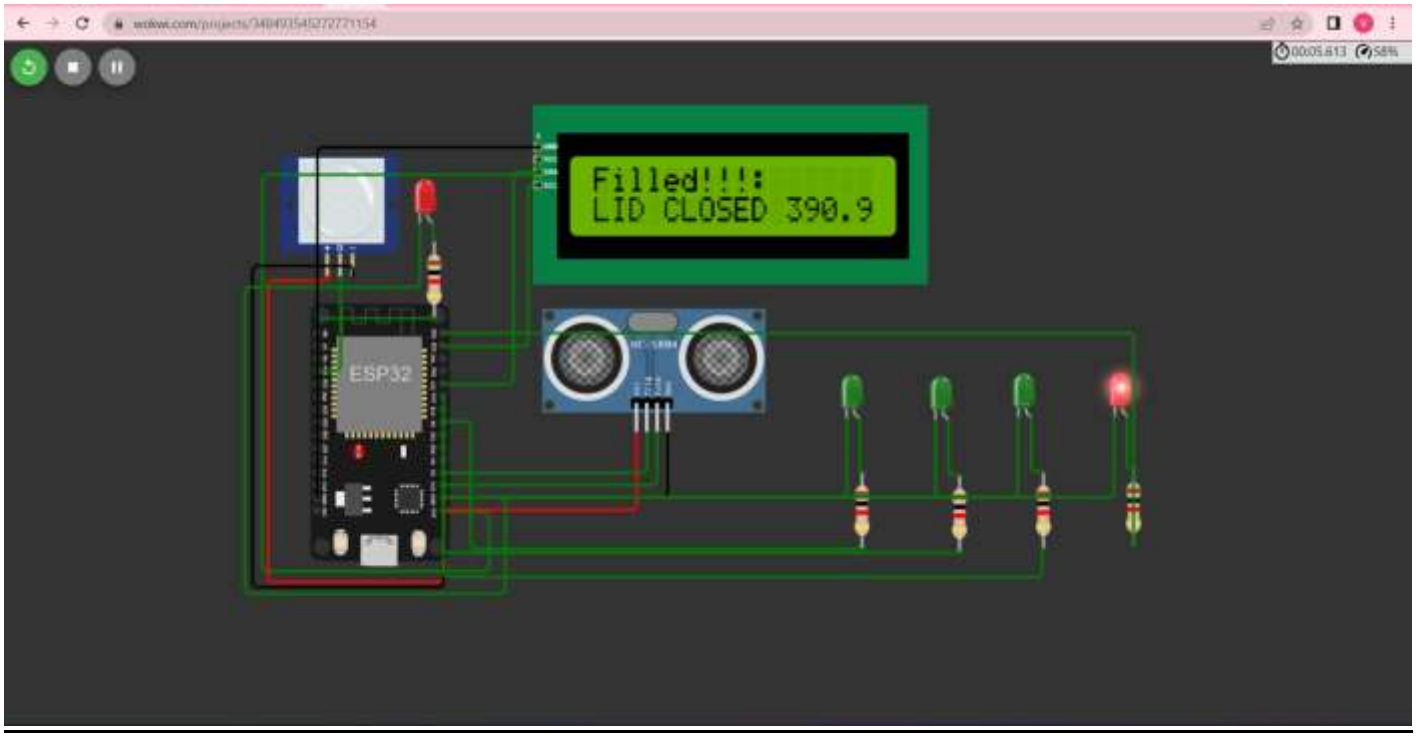
Connection Diagram



Working




Pill Motion Sensor
Simulate motion
waste level: 337
LID OPENED
ESP32


Filled!!!:
LID CLOSED 390.9
ESP32