Delivery of Sprint_1

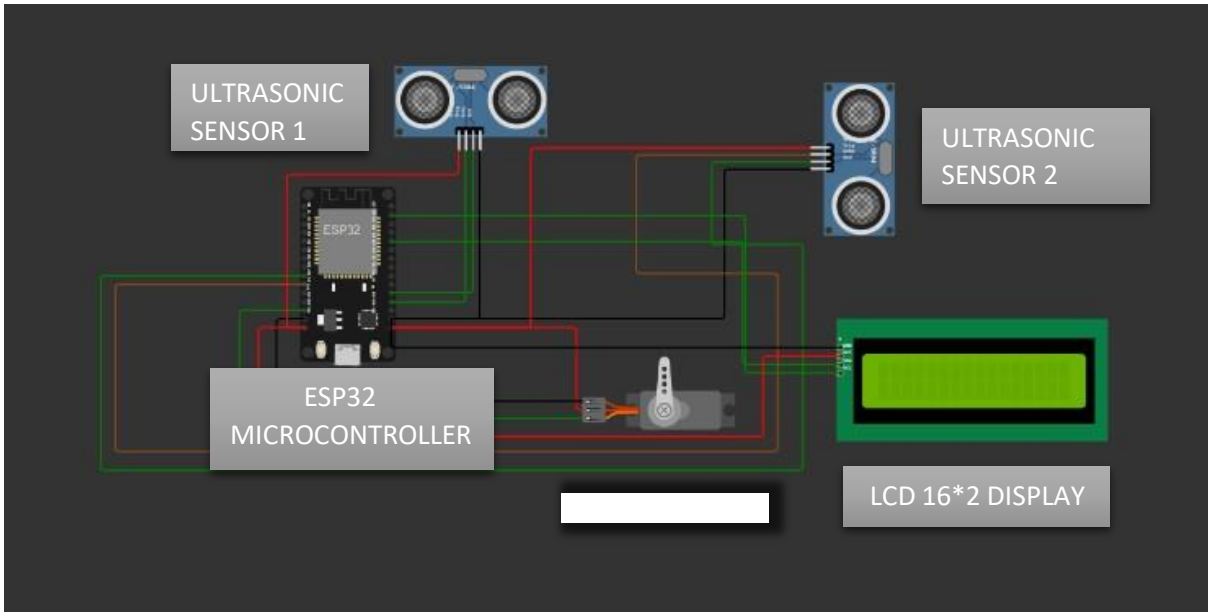
Team ID	PNT2022TMID13797
Project Name	Smart Waste Management System For Metropolitan Cities

CIRCUIT CODE:

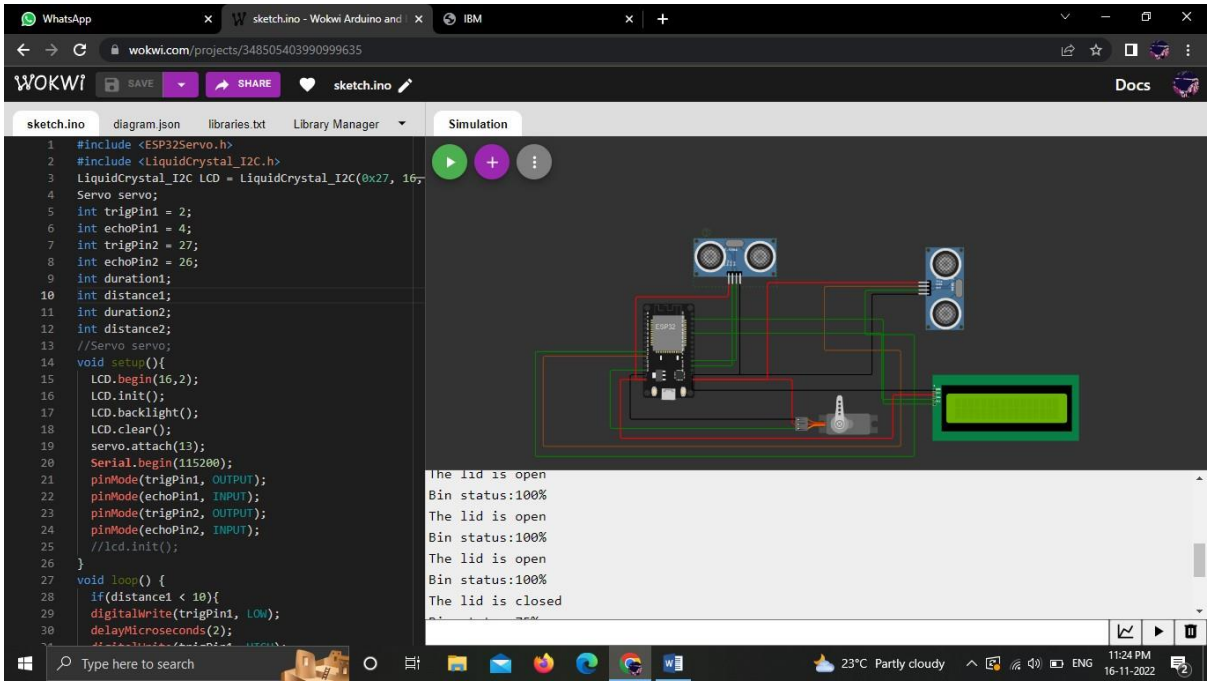
```
#include <ESP32Servo.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C LCD = LiquidCrystal_I2C(0x27, 16, 2);
Servo servo;
int trigPin1 = 2;
int echoPin1 = 4;
int trigPin2 = 27;
int echoPin2 = 26;
int  duration1;
int  distance1;
int  duration2;
int distance2;
//Servo servo;
void setup(){
  LCD.begin(16,2);
  LCD.init();
  LCD.backlight();
  LCD.clear();
  servo.attach(13);
  Serial.begin(115200);
  pinMode(trigPin1, OUTPUT);
  pinMode(echoPin1, INPUT);
  pinMode(trigPin2, OUTPUT);
  pinMode(echoPin2, INPUT);
  //lcd.init();
}
void loop() {
  if(distance1 < 10){
  digitalWrite(trigPin1, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin1, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin1, LOW);
  duration1 = pulseIn(echoPin1, HIGH);
  distance1= duration1*0.034/2;
  Serial.println("The lid is open");
  delay(100);
  }
  else{
```

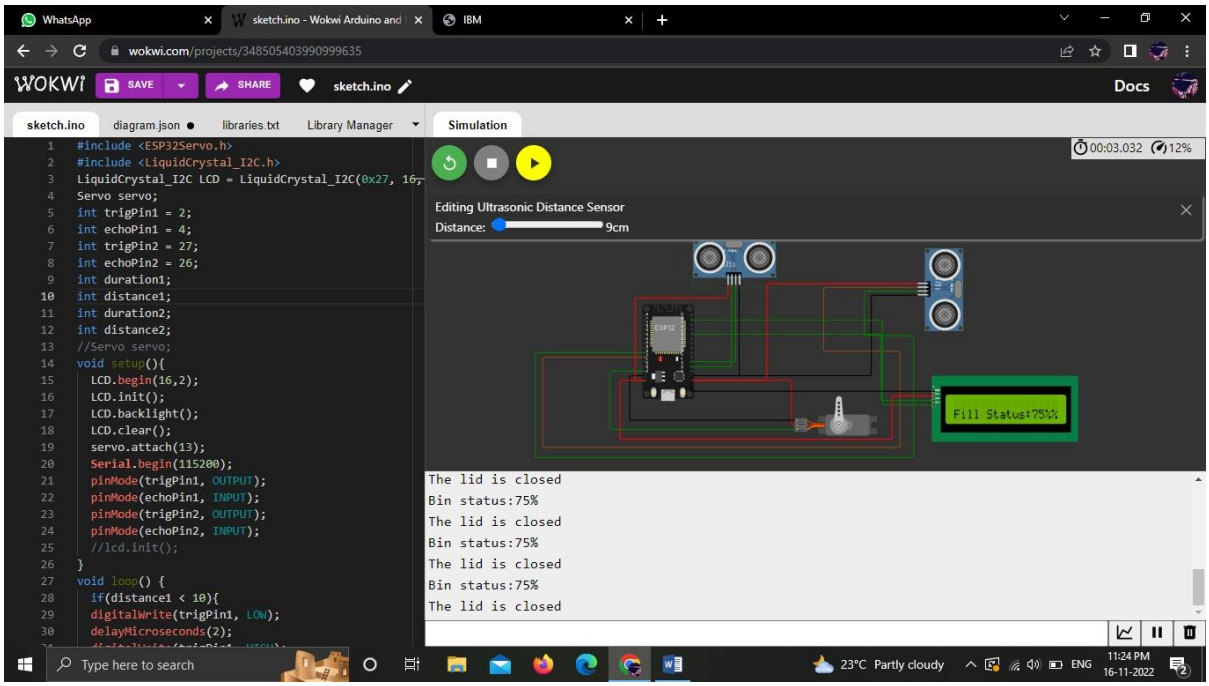
```
  digitalWrite(trigPin2, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin2, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin2, LOW);
  duration2 = pulseIn(echoPin2, HIGH);
  distance2= duration2*0.034/2;
  Serial.println("The lid is closed");

  }
  LCD.setCursor(0,1);
  LCD.print("Fill Status: ");

  if(distance2>300 && distance2<=400){
    LCD.setCursor(12,1);
    LCD.print("25% ");
    Serial.println("Bin status:25%");
  }
  else if(distance2 > 200 && distance2<= 299){
    LCD.setCursor(12,1);
    LCD.print("50%");
    Serial.println("Bin status:50%");
  }
  else if(distance2 >50 && distance2<=199){
    LCD.setCursor(12,1);
    LCD.print("75%");
    Serial.println("Bin status:75%");
  }
  else{
    LCD.setCursor(12,1);
    LCD.print("100%");
    Serial.println("Bin status:100%");
  }
  if(distance1<=50){
    servo.write(90);
  }
  else{
    servo.write(0);
  }
}
```

CIRCUIT DESIGN:



OUTPUT:




WhatsApp
sketch.ino - Wokwi Arduino and
IBM
wokwi.com/projects/348505403990999635
WOKWI
SAVE
SHARE
sketch.ino
Docs
sketch.ino
diagram.json
libraries.txt
Library Manager
Simulation
#include <ESP32Servo.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C LCD = LiquidCrystal_I2C(0x27, 16,
Servo servo;
int trigPin1 = 2;
int echoPin1 = 4;
int trigPin2 = 27;
int echoPin2 = 26;
int duration1;
int distance1;
int duration2;
int distance2;
//Servo servo;
void setup(){
LCD.begin(16,2);
LCD.init();
LCD.backlight();
LCD.clear();
servo.attach(13);
Serial.begin(115200);
pinMode(trigPin1, OUTPUT);
pinMode(echoPin1, INPUT);
pinMode(trigPin2, OUTPUT);
pinMode(echoPin2, INPUT);
//lcd.init();
}
void loop() {
if(distance1 < 10){
digitalWrite(trigPin1, LOW);
delayMicroseconds(2);
00:03.032
12%
Editing Ultrasonic Distance Sensor
Distance:
9cm
Fill Status:75%
The lid is closed
Bin status:75%
The lid is closed
Bin status:75%
The lid is closed
Bin status:75%
The lid is closed
Type here to search
23°C Partly cloudy
ENG
11:24 PM
16-11-2022