

# Delivery of Sprint\_1

Team ID	PNT2022TMID27888
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{
```

```

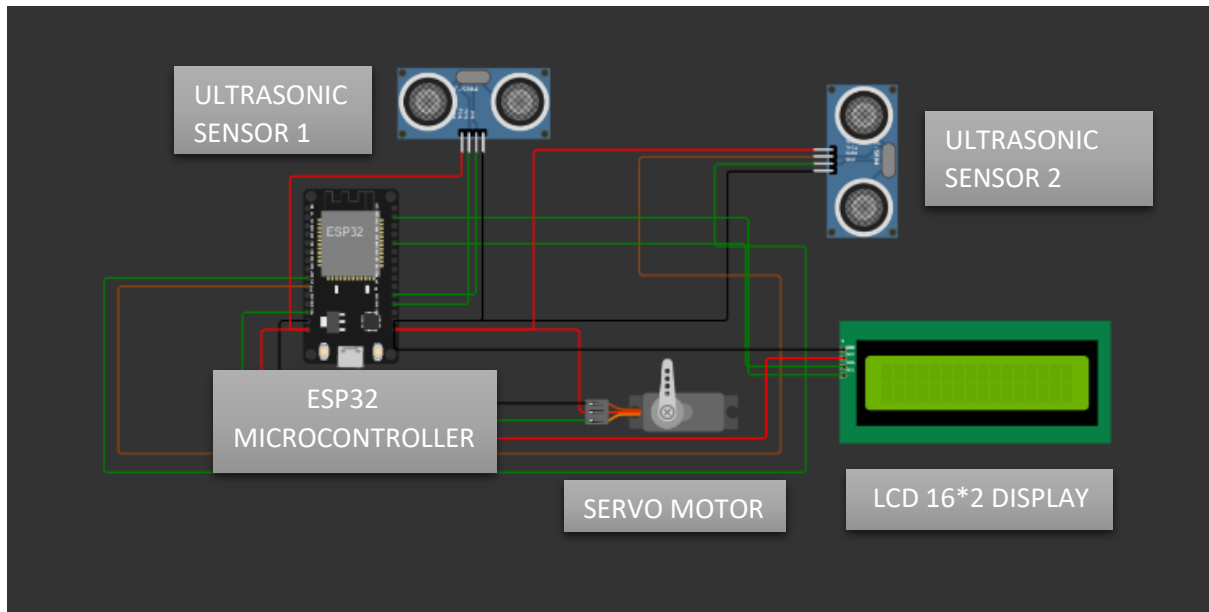
digitalWrite(trigPin2, LOW);
delayMicroseconds(2);
digitalWrite(trigPin2, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin2, LOW);
duration2 = pulseIn(echoPin2, HIGH);
distance2= duration2*0.034/2;
Serial.println("The lid is closed");

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

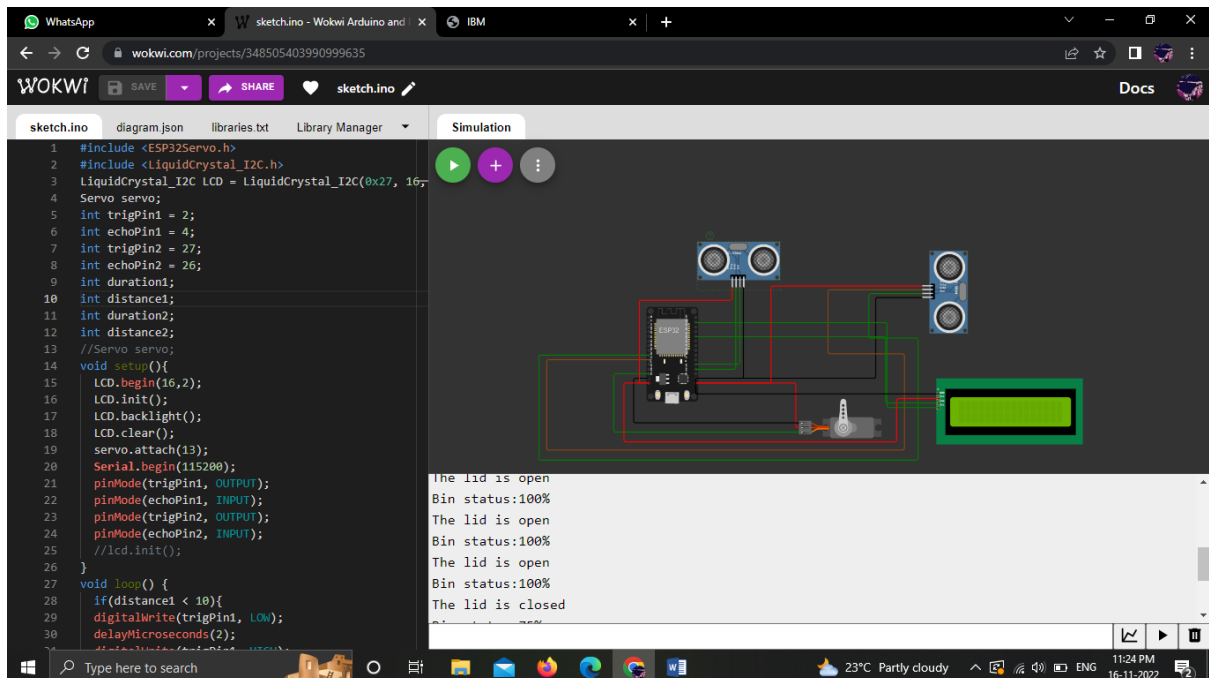
if(distance2>300 && distance2<=400){
    LCD.setCursor(12,1);
    LCD.print("25% ");
    Serial.println("Bin status:25%");
}
else if(distance2 > 200 && distance2<= 299){
    LCD.setCursor(12,1);
    LCD.print("50%");
    Serial.println("Bin status:50%");
}
else if(distance2 >50 && distance2<=199){
 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



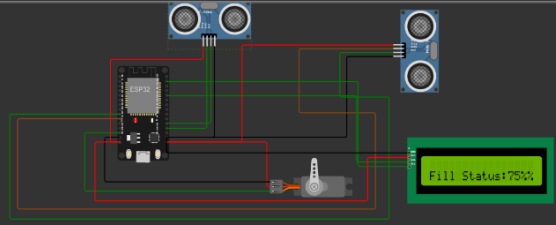
WhatsApp sketch.ino - Wokwi Arduino and IBM wokwi.com/projects/348505403990999635

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sketch.ino diagram.json libraries.txt Library Manager Simulation

```
1 #include <ESP32Servo.h>
2 #include <LiquidCrystal_I2C.h>
3 LiquidCrystal_I2C LCD = LiquidCrystal_I2C(0x27, 16,
4 Servo servo;
5 int trigPin1 = 2;
6 int echoPin1 = 4;
7 int trigPin2 = 27;
8 int echoPin2 = 26;
9 int duration1;
10 int distance1;
11 int duration2;
12 int distance2;
13 //Servo servo;
14 void setup(){
15   LCD.begin(16,2);
16   LCD.init();
17   LCD.backlight();
18   LCD.clear();
19   servo.attach(13);
20   Serial.begin(115200);
21   pinMode(trigPin1, OUTPUT);
22   pinMode(echoPin1, INPUT);
23   pinMode(trigPin2, OUTPUT);
24   pinMode(echoPin2, INPUT);
25   //lcd.init();
26 }
27 void loop() {
28   if(distance1 < 10){
29     digitalWrite(trigPin1, LOW);
30     delayMicroseconds(2);
```

Editing Ultrasonic Distance Sensor  
Distance: 9cm



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

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