

Delivery of Sprint_1

Team ID	PNT2022TMID26538
Project Name	Smart Waste Management System For Metropolitan Cities

CIRCUIT CODE:

```
#include
<ESP32Se
rvo.h>
#include
<LiquidC
rystal_I
2C.h>
LiquidCrystal_I2C LCD =
LiquidCrystal_I2C(0x27, 16, 2);
Servo servo;
i
n
t

t
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i
n
1
=
2
;
```

```

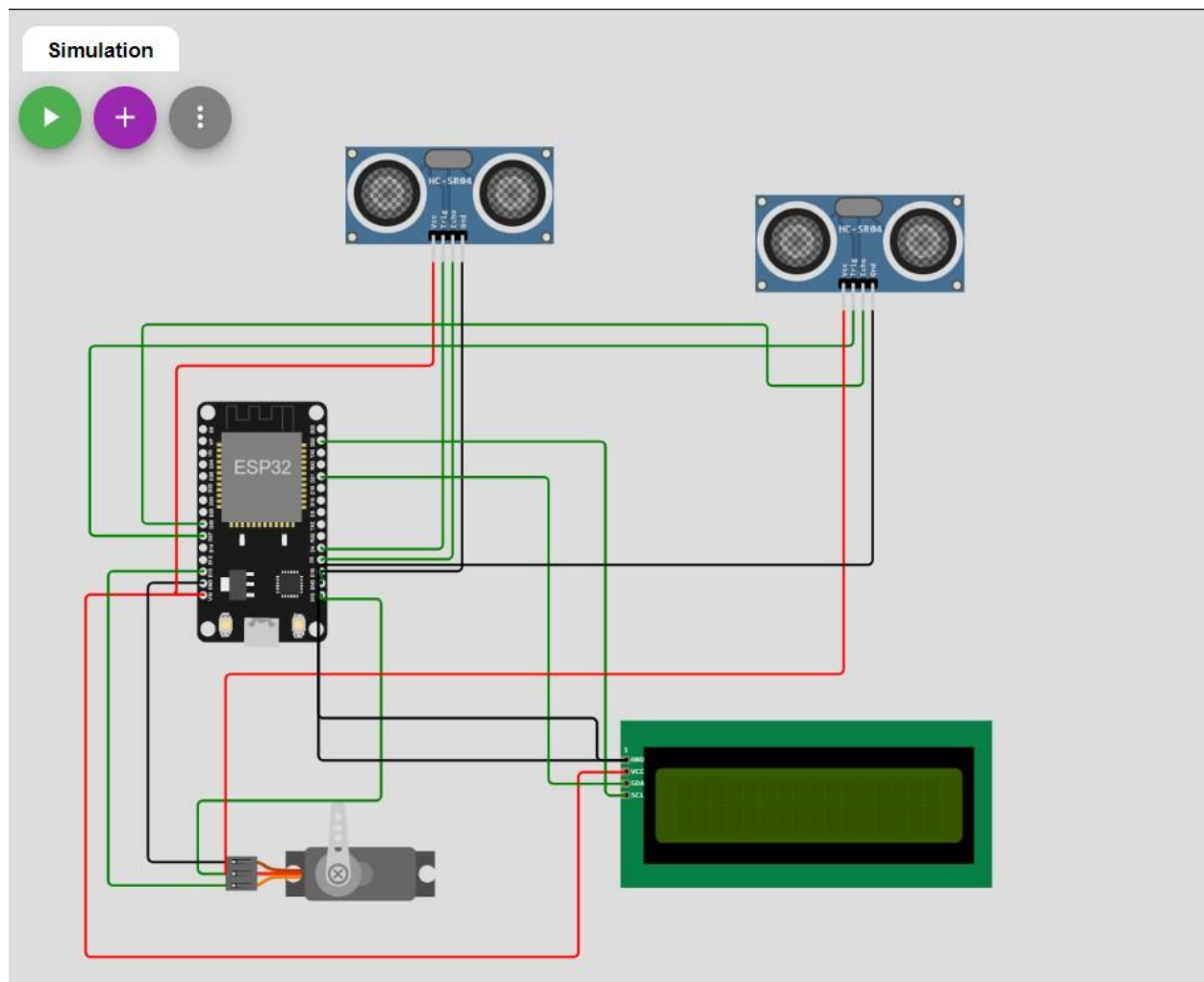
digitalWrite(trigPin2, LOW);
delayMicroseconds(2);
digitalWrite(trigPin2, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin2, LOW);
duration2 = pulseIn(echoPin2, HIGH);
distance2= duration2*0.034/2;
Serial.println("The lid is closed");

}
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:

Service Detail x IBM Watson x IBM x IBM-Project x (10) WhatsApp x IBM-Project x Circuit Code x W New ESP32 Pi x Wokwi x +

← → woku.com/projects/new/esp32

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WOKWI SAVE SHARE Docs

sketch.ino diagram.json libraries.txt Library Manager

```
48 }
49 LCD.setCursor(0,1);
50 LCD.print("Fill Status: ");
51
52 if(distance2>300 && distance2<=400){
53   LCD.setCursor(12,1);
54   LCD.print("25% ");
55   Serial.println("Bin status:25%");
56 }
57 else if(distance2 > 200 && distance2<= 299){
58   LCD.setCursor(12,1);
59   LCD.print("50% ");
60   Serial.println("Bin status:50%");
61 }
62 else if(distance2 >=0 && distance2<=199){
63   LCD.setCursor(12,1);
64   LCD.print("75% ");
65   Serial.println("Bin status:75%");
66 }
67 else{
68   LCD.setCursor(12,1);
69   LCD.print("100% ");
70   Serial.println("Bin status:100%");
71 }
72 if(distance1<=50){
73   servo.write(90);
74 }
75 else{
76   servo.write(0);
77 }
78
79
80
```

Simulation

Bin status:100%
The lid is open
Bin status:100%
The lid is open
Bin status:100%
The lid is open
Bin status:100%

00:15.265 69%

Type here to search 79% 26°C 09:59 17-11-2022

Service Detail x IBM Watson x IBM x IBM-Project-2 x (10) WhatsApp x IBM-Project-1 x Circuit Code x W New ESP32 Pi x W sketch.ino - V x +

wokwi.com/projects/new/esp32

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sketch.ino diagram.sch libraries.bst Library Manager

```
48 }
49 LCD.setCursor(0,1);
50 LCD.print("Fill Status: ");
51
52
53 if(distance2>300 && distance2<=400){
54   LCD.setCursor(12,1);
55   LCD.print("25% ");
56   Serial.println("Bin status:25%");
57 }
58 else if(distance2 > 200 && distance2<= 299){
59   LCD.setCursor(12,1);
60   LCD.print("50%");
61   Serial.println("Bin status:50%");
62 }
63 else if(distance2 >50 && distance2<=199){
64   LCD.setCursor(12,1);
65   LCD.print("75%");
66   Serial.println("Bin status:75%");
67 }
68 else{
69   LCD.setCursor(12,1);
70   LCD.print("100%");
71   Serial.println("Bin status:100%");
72 }
73 if(distance1<=50){
74   servo.write(90);
75 }
76 else{
77   servo.write(0);
78 }
79 }
80 }
```

Simulation

00:25.281 90%

The lid is open
Bin status:100%
The lid is open
Bin status:100%
The lid is open
Bin status:100%
The lid is open

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79% 26°C 09:59 17-11-2022 ENG