SPRINT 3
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Smart Waste Management System For Metropolitan Cities

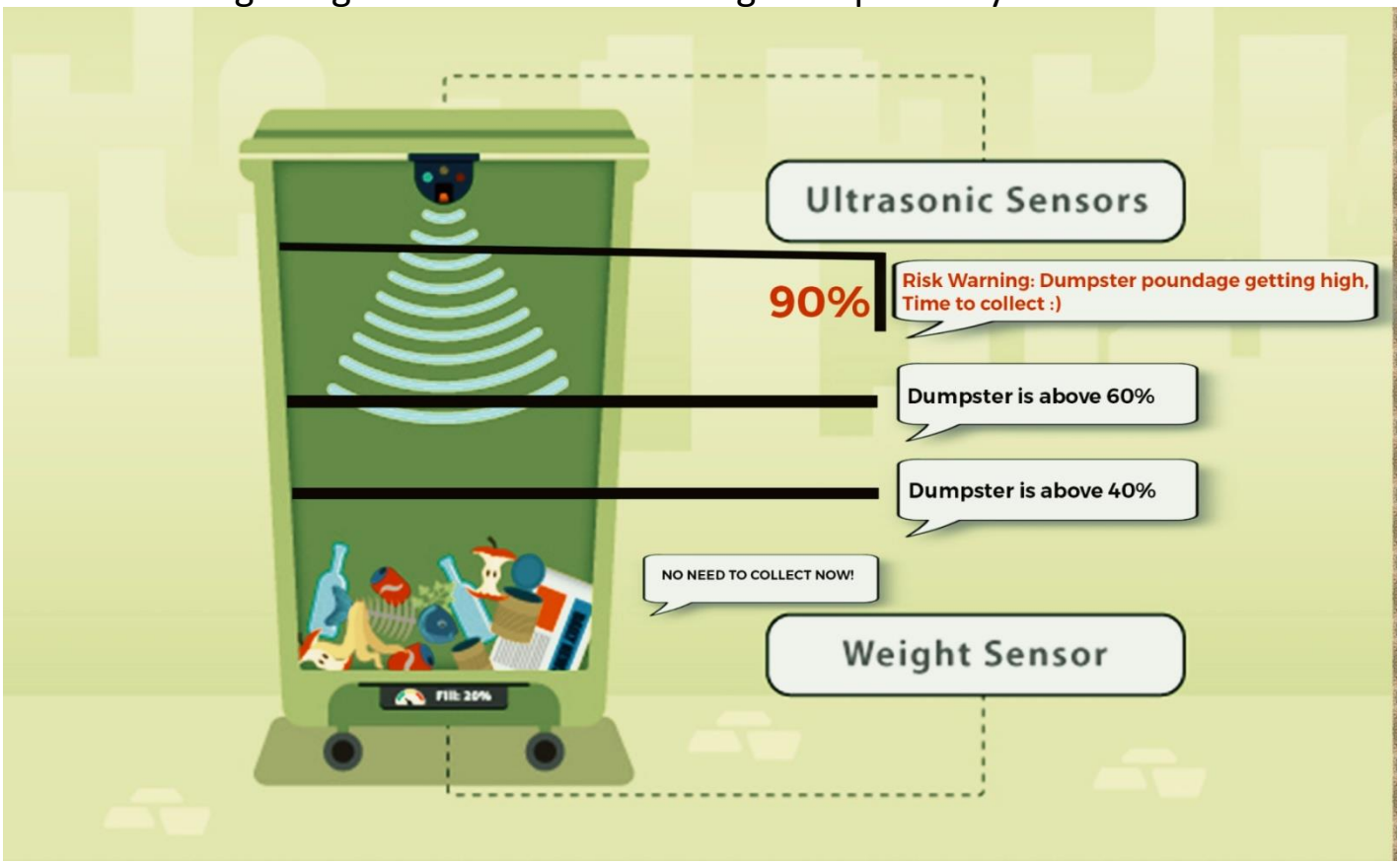
DESIGN AN WEB PAGE :

PARAMETERS ARE:

1. **DISTANCE**
2. **WEIGHT**

PROJECT MODEL :

The ultrasonic sonic sensor and the weight sensor which are used to calculate the garbage distance and the weight respectively.



There are certain assumptions assumed by us, They are

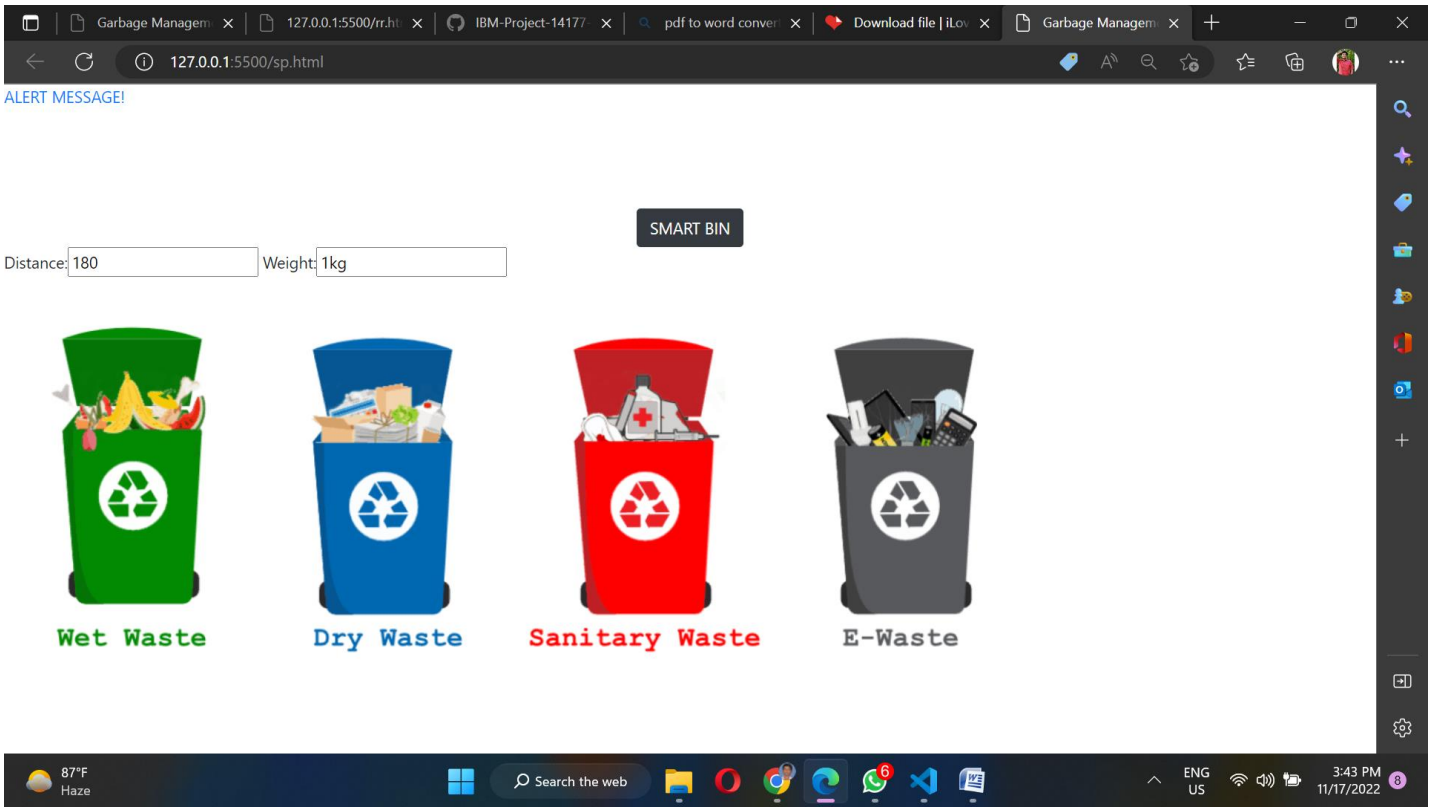
- The length of the trash can is assumed to be 200 cm.
- The maximum weight of the can is assumed to be 2 Kg.
- If the garbage distance goes more than 180cm i.e more than 90% of the trash can , the sensor is has to send to send an alert to the garbage collector.
- If the alert is received , then the garbage collector has to come and collect the garbage.
- The current weight and the garbage distance is to be updated periodically, i.e for 5 minutes.

Webpage code:

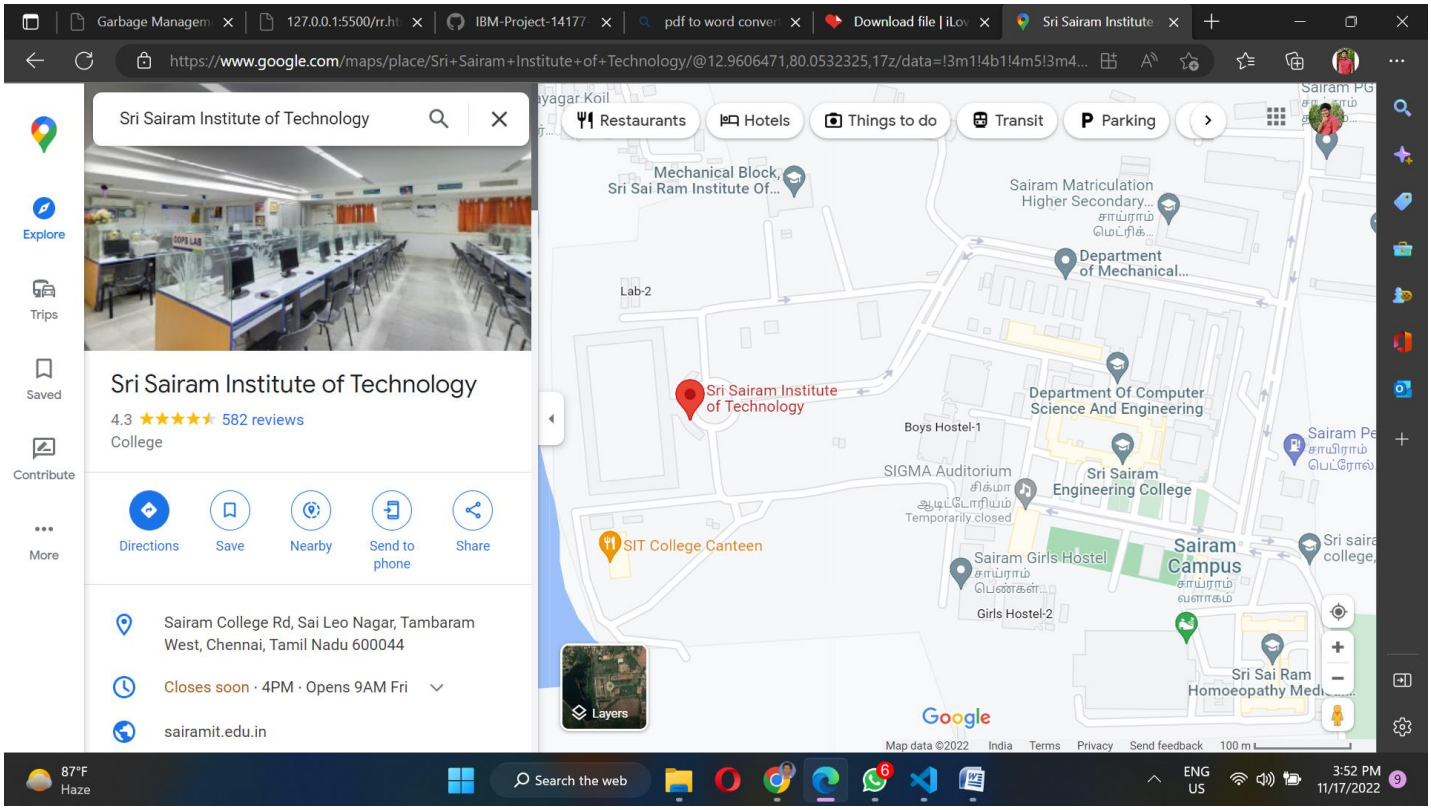
```
<!DOCTYPE html>
<html>

<head>
  <style>
    .container{
      text-align: center;
      border: 7px rgb(255, 255, 255);
      width: none;
      height: none;
      padding-top: 100px;

    }
    .smartbin{
      align-items: center;


    }


  </style>
  <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@4.3.1/dist/css/bootstrap.min.css" integrity="sha384-
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width">
  <title>Garbage Management System</title>
  <link rel="icon" type="image/x-icon" href="/Images/DUMPSTER.png">
  <link href="style.css" rel="stylesheet" type="text/css" />
  <script src="https://www.gstatic.com/firebasejs/8.10.1/firebase-app.js"></script>
  <script src="https://www.gstatic.com/firebasejs/8.10.1/firebase-database.js"></script>

  <script>
    var firebaseConfig =
    {
      apiKey: "AIzaSyB9ysbnaWc3IyeCioh-aJQT_UCMd5CBFeU",
      authDomain: "fir-test-923b4.firebaseapp.com",
      databaseURL: "https://fir-test-923b4-default-rtdb.firebaseio.com",
      projectId: "fir-test-923b4",
      storageBucket: "fir-test-923b4.appspot.com",
      messagingSenderId: "943542145393",
      appId: "1:943542145393:web:9b5ec7593e6a3cbd7966d0",
      measurementId: "G-BN7JNX1Q7B"
    };
    firebase.initializeApp(firebaseConfig)
  </script>
  <script defer src="database.js"></script>
</head>

<body style="background-color:rgb(255, 255, 255);">
  <script src="map.js"></script>


    <div id="map_container">

      <div id="map"></div>
      <div id="alert_msg"><a href="rr.html" target="_blank">ALERT MESSAGE!</a></div>
    </div>
  </div>
  <div class="container">
```

```
<center><a href="https://g.page/sairamengg?share"
  type="button" class="btn btn-dark">SMART BIN</a></center></div>
  <form>

      Distance:<input type="text" name="Distance" value="180">
      Weight:<input type="text" name="Weight" value="1kg">



  </form>
  <div class="smartbin">
    <img src="Waste-Segregation-1024x398.png" alt="Waste segregation">
  </div>

  <script
    src="https://maps.googleapis.com/maps/api/js?key=AIzaSyBBLyWj-3FWtCbCXGW3ysEiI2fDfrv2v0Q&callback=myMap"></script></div>

</body>

</html>
```

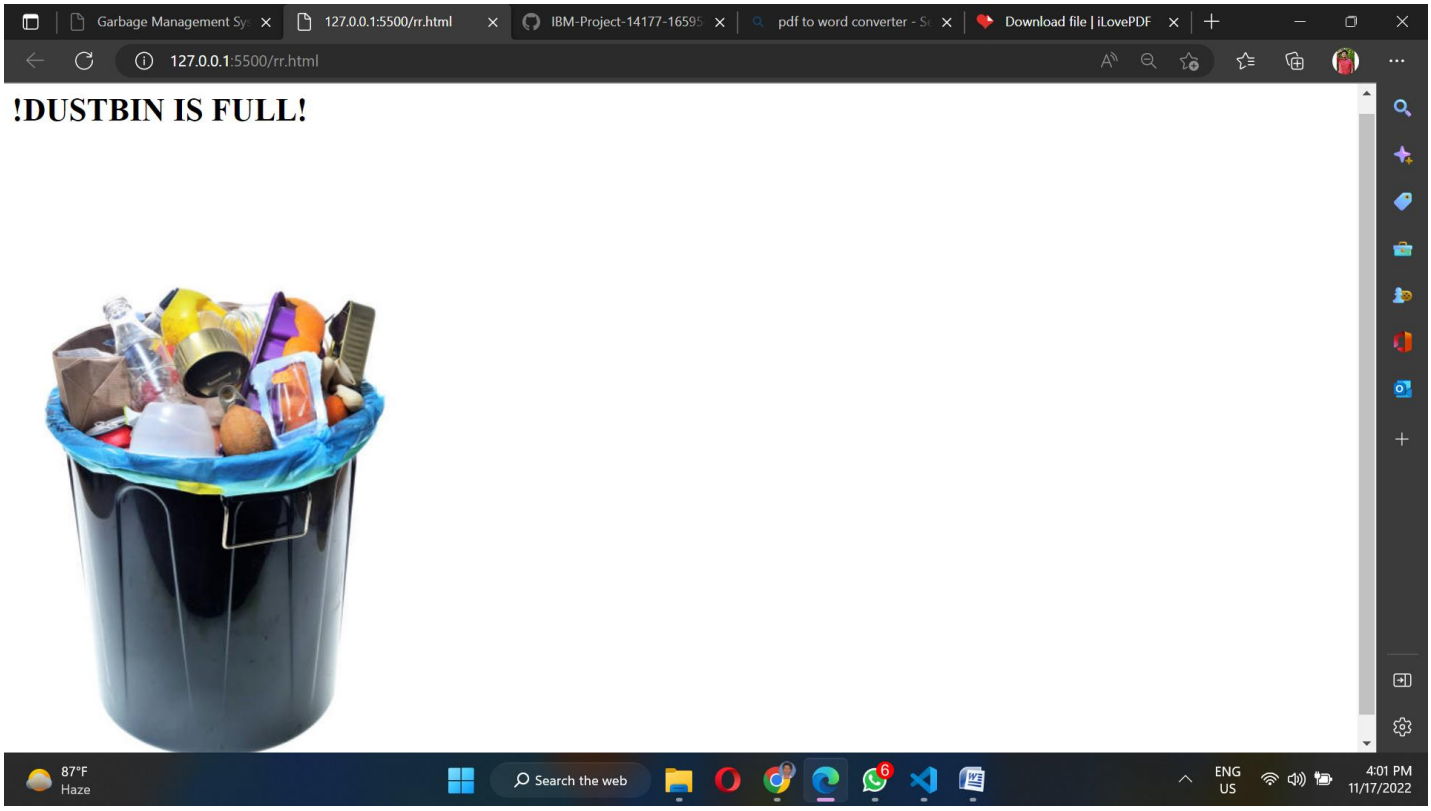
Output :



When you click the smartbin button it will show the exact location where the garbage can is filled.



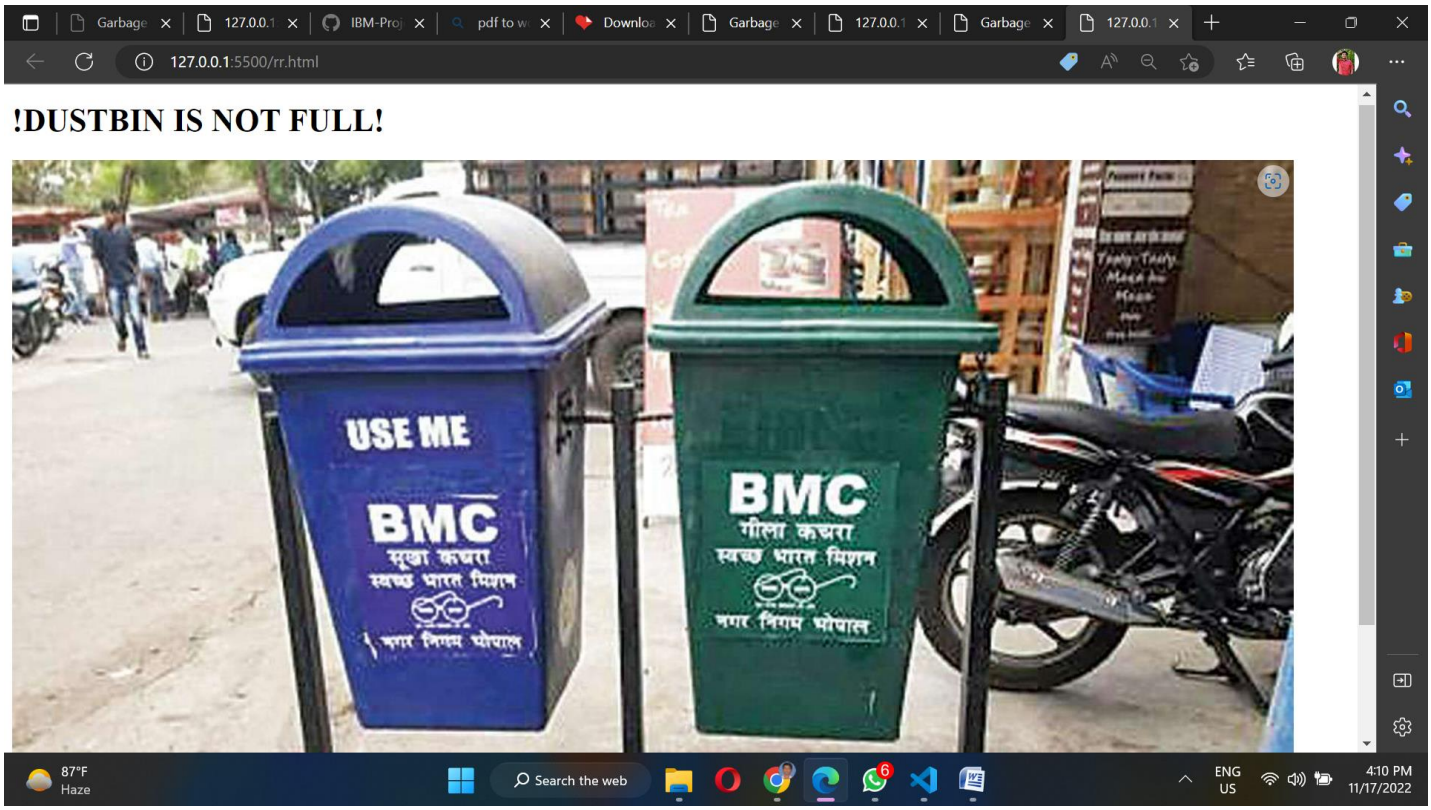
When dustbin is filled:



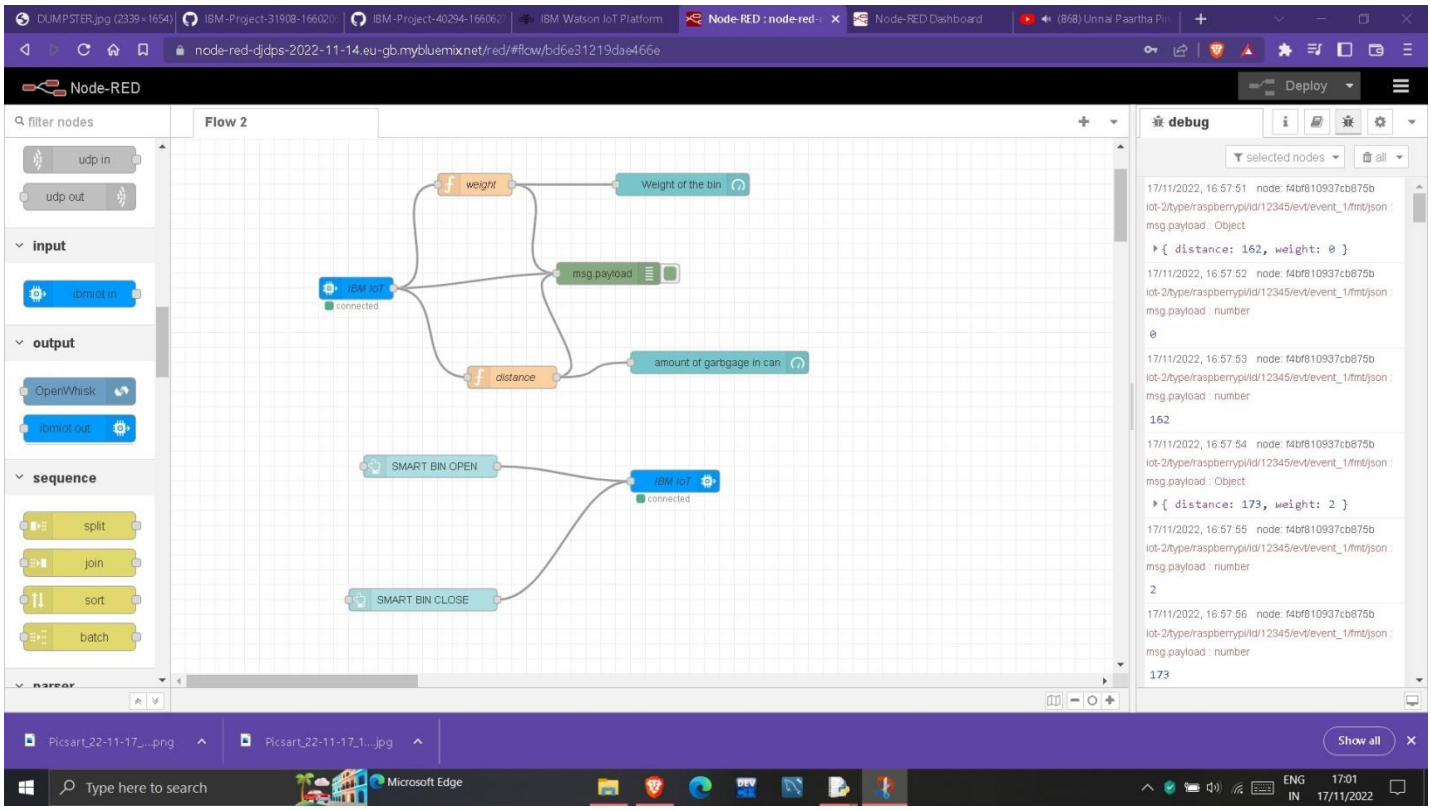
When the smartbin is filled the alert message will be sent to the garbage collector along with the exact location with its co-ordinates .

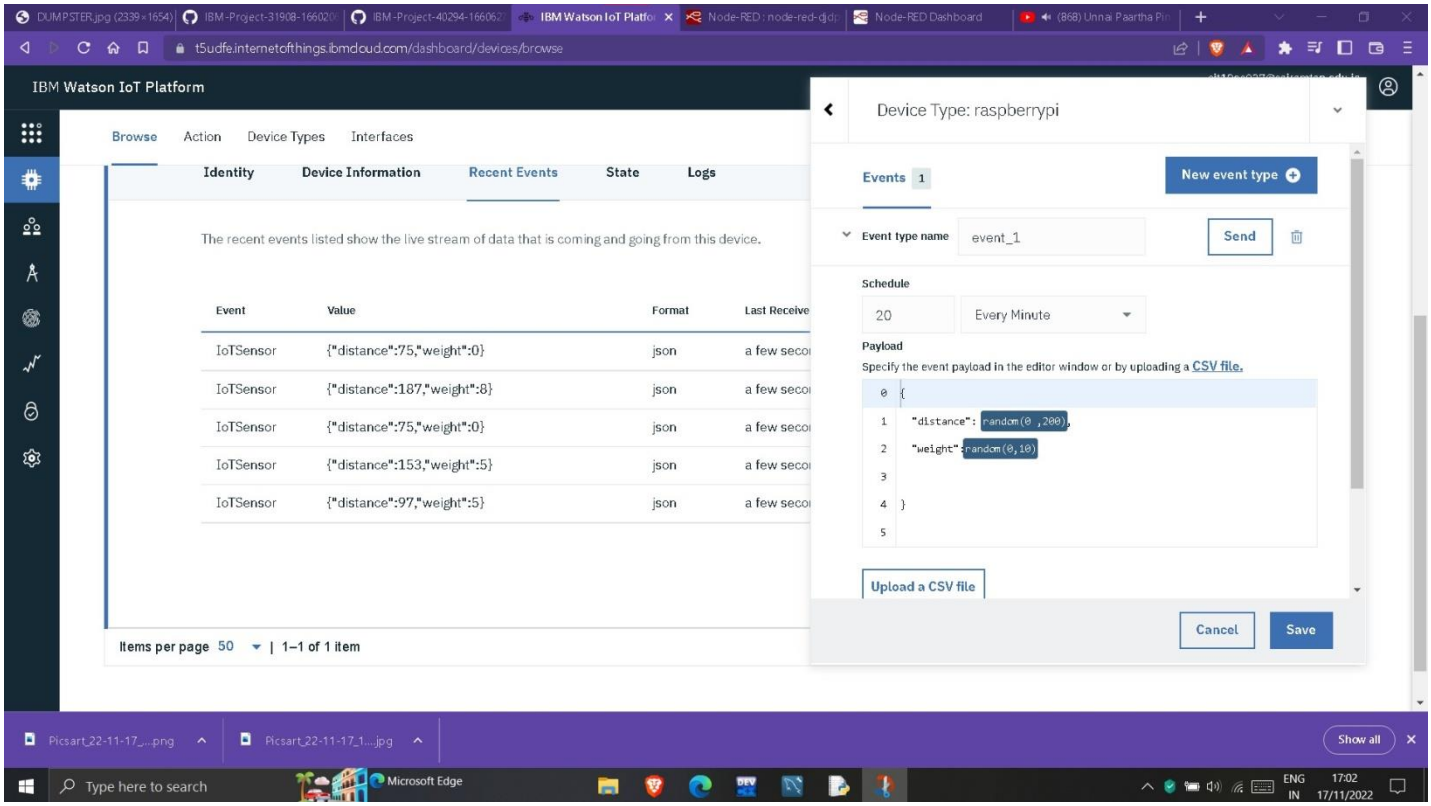
When the garbage is not filled upto 90% the smartbin is ready to collect the garbage.

When dustbin is not filled:



We are sending the data of the garbage can with help of Node-red and iot cloud which composed of the value equal to the weight of the garbage can and the distance of garbage present in the can.




IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
IoTSensor {"distance":75,"weight":0} json
IoTSensor {"distance":187,"weight":8} json
IoTSensor {"distance":75,"weight":0} json
IoTSensor {"distance":153,"weight":5} json
IoTSensor {"distance":97,"weight":5} json
Items per page 50 | 1–1 of 1 item
Device Type: raspberrypi
Events 1
New event type
Event type name event_1
Send
Schedule
20
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"distance": random(0 ,200),
"weight":random(0,10)
}
Upload a CSV file
Cancel
Save
Type here to search
Microsoft Edge
ENG
IN
17:02
17/11/2022