IOT-PHASE 4

Topic:Air Quality Monitoring
Team Members:Abilash R, Pradeep K, Hemachandru M, Raghuram P
Mentor: Sundarraj V

Frontend platform for displays real-time air quality data:

HTML Script:

```
<!DOCTYPE html>
<html>
<head>
  <title>Air Quality Monitoring</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Real-Time Air Quality Data</h1>
  <div id="data-container"></div>

  <script src="script.js"></script>
</body>
</html>
```

CSS:

```
body {
  font-family: Arial, sans-serif;
}
h1 {
  text-align: center;
```

```
}
```

JAVA Script:

```
const dataContainer = document.getElementById('data-container');

// Function to fetch and display real-time air quality data
function fetchAirQualityData() {
  fetch('/api/air-quality')
    .then((response) => response.json())
    .then((data) => {
      // Update the data in your HTML, e.g., append it to the data container
      dataContainer.innerHTML = JSON.stringify(data, null, 2);
    })
    .catch((error) => {
      console.error('Error fetching data: ', error);
    });
}

// Fetch data periodically (e.g., every 5 seconds)
setInterval(fetchAirQualityData, 5000);

// Initial data fetch
fetchAirQualityData();
```

platform for receive and display the air quality data which is sent by the IoT devices:

HTML Script:

```
<!DOCTYPE html>
<html>
<head>
```

```
    <title>Air Quality Monitoring</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <h1>Air Quality Monitoring Dashboard</h1>
    <div id="air-quality-data"></div>
    <script src="script.js"></script>
</body>
</html>
```

CSS:

```
/* styles.css */
body {
    font-family: Arial, sans-serif;
}

h1 {
    text-align: center;
}

#air-quality-data {
    display: flex;
    justify-content: center;
    flex-wrap: wrap;
}
```

JAVA Script:

```
// script.js
const airQualityDataContainer = document.getElementById('air-quality-data');

function displayAirQualityData(data) {
```

```
    // Update the HTML with the received air quality data
    airQualityDataContainer.innerHTML = `
        <div class="card">
            <h2>Location: ${data.location}</h2>
            <p>PM2.5: ${data.pm25} µg/m³</p>
            <p>PM10: ${data.pm10} µg/m³</p>
        </div>
    `;
}

// Replace this with code to connect to a WebSocket server for real-time data
// Example:
// const socket = new WebSocket('ws://your-server-url');

// Listen for WebSocket messages and update the display
socket.addEventListener('message', (event) => {
    const data = JSON.parse(event.data);
    displayAirQualityData(data);
});

// Alternatively, you can use setInterval to periodically fetch data using fetch()
from your backend API.
```