Phase 4 project:

Project Title: SMART WATER FOUNTAIN

College Code: 6208

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SMART WATER FOUNTAIN

The platform to receive and display real-time water fountain data, including water flow rate and malfunction alerts using html , css, javascript

HTML :

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link rel="stylesheet" href="style.css">

    <title>Water Fountain Data</title>

</head>

<body>

    <marquee bgcolor="blue" behavior="alternate" direction="right">

    <h1>Smart Water Fountain</h1>

    </marquee>

    <div id="waterFlow">

        <h2>Water Flow Rate: <span id="flowRate">0 L/min</span></h2>
```

```html
    </div>

    <div id="malfunctionAlert">

        <h2>Malfunction Alert: <span id="alertStatus">No
Alerts</span></h2>

    </div>

    <input type="submit">

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

CSS :

```css
body {

    font-family: Arial, sans-serif;

    text-align: center;

}

h1 {

    color: white;

    padding: 20px;

}


#waterFlow, #malfunctionAlert {

    margin: 20px;
```

```css
    padding: 10px;

    border: 1px solid #ccc;

}

#waterFlow h2, #malfunctionAlert h2 {

    margin: 0;

}

#flowRate, #alertStatus {

    color: #007bff;

}
```

JAVASCRIPT :

```javascript
const flowRateElement = document.getElementById("flowRate");

const alertStatusElement = document.getElementById("alertStatus");

// Simulate real-time data with a function that generates random data

function generateRandomData() {

    const flowRate = (Math.random() * 10).toFixed(2); // Simulated flow rate data

    const isMalfunction = Math.random() > 0.8; // Simulated malfunction alert

  return { flowRate, isMalfunction };

}
```

```javascript
function updateData() {

    const data = generateRandomData();

 // Update the flow rate display

    flowRateElement.textContent = `${data.flowRate} L/min`;

// Update the malfunction alert status

    alertStatusElement.textContent = data.isMalfunction ? "Alert Detected" : "No Alerts";

    if (data.isMalfunction) {

        alertStatusElement.style.color = "red";

    } else {

        alertStatusElement.style.color = "#007bff";

    }

}

// Update the data every 2 seconds (simulated real-time)

setInterval(updateData, 2000);

// You would typically use websockets to receive real-time data from a server.
```

Here basic HTML structure with placeholders for displaying the water flow rate and malfunction alerts. The JavaScript code simulates real-time data updates by generating random data and

updating the HTML elements accordingly. In a real-world scenario, you would replace the simulated data generation with actual data received via websockets from a server that collects data from smart water fountains.