**FLOOD MONITORING AND EARLY WARNING SYSTEM**

**Phase\_4:**

**PROBLEM STATEMENT:**

The IoT based flood monitoring and early warning system aims to collect the real time data of the water levels in the water bodies of various locations and use the information and use those information for analysis and for the early warning system .This project involves the deployment of sensors ,data processing and reporting mechanisms.

**PROJECT IMPLEMENTATION:**

**Code:**

**Index.html:**

<!DOCTYPE html>

<html>

<head>

<link rel="stylesheet" type="text/css" href="style.css">

</head>

<body>

<h1>Flood Monitoring and Early Warning System</h1>

<div id="map"></div>

<div id="warning">

<h2>Current Status:</h2>

<p id="status">No flood alert at the moment</p>

</div>

<script src="script.js"></script>

</body>

</html>

**Style.css**

body {

font-family: Arial, sans-serif;

text-align: center;

}

h1 {

color: #333;

}

#map {

width: 80%;

height: 400px;

margin: 0 auto;

}

#warning {

background-color: #ff6666;

padding: 20px;

border-radius: 10px;

margin-top: 20px;

}

#status {

color: #fff;

}

**Script.js**

import { initializeApp } from "firebase/app";

import { getAnalytics } from "firebase/analytics";

let currentFloodStatus = 0;

var firebaseConfig = {

apiKey: "AIzaSyCLAxyN8n069Civr2LMZmRWxgQPVcEmFjQ",

authDomain: "iot-ibm-669fd.firebaseapp.com",

databaseURL: "https://iot-ibm-669fd-default-rtdb.firebaseio.com",

projectId: "iot-ibm-669fd",

storageBucket: "iot-ibm-669fd.appspot.com",

messagingSenderId: "980279781293",

appId: "1:980279781293:web:e8a9edd13aa071829a2324",

measurementId: "G-XDQQVJZM3Y"

};

// Initialize Firebase

firebase.initializeApp(firebaseConfig);

// Reference to your Firebase Realtime Database

// Function to retrieve and display data

var infoGet = firebase.database().ref('sensor\_data');

infoGet.on("value",function(snapshot){

console.get(snapshot.val());

});

updateFloodStatus(infoGet);

// Function to update the flood status and display warnings

function updateFloodStatus(data) {

currentFloodStatus = data;// Simulated data

const statusElement = document.getElementById("status");

if (currentFloodStatus === 1) {

statusElement.textContent = "Flood alert! Take necessary precautions.\n Water level : 50";

statusElement.style.color = "#ff0000";

} else {

statusElement.textContent = "No flood alert at the moment \n Water level :37";

statusElement.style.color = "#fff";

}

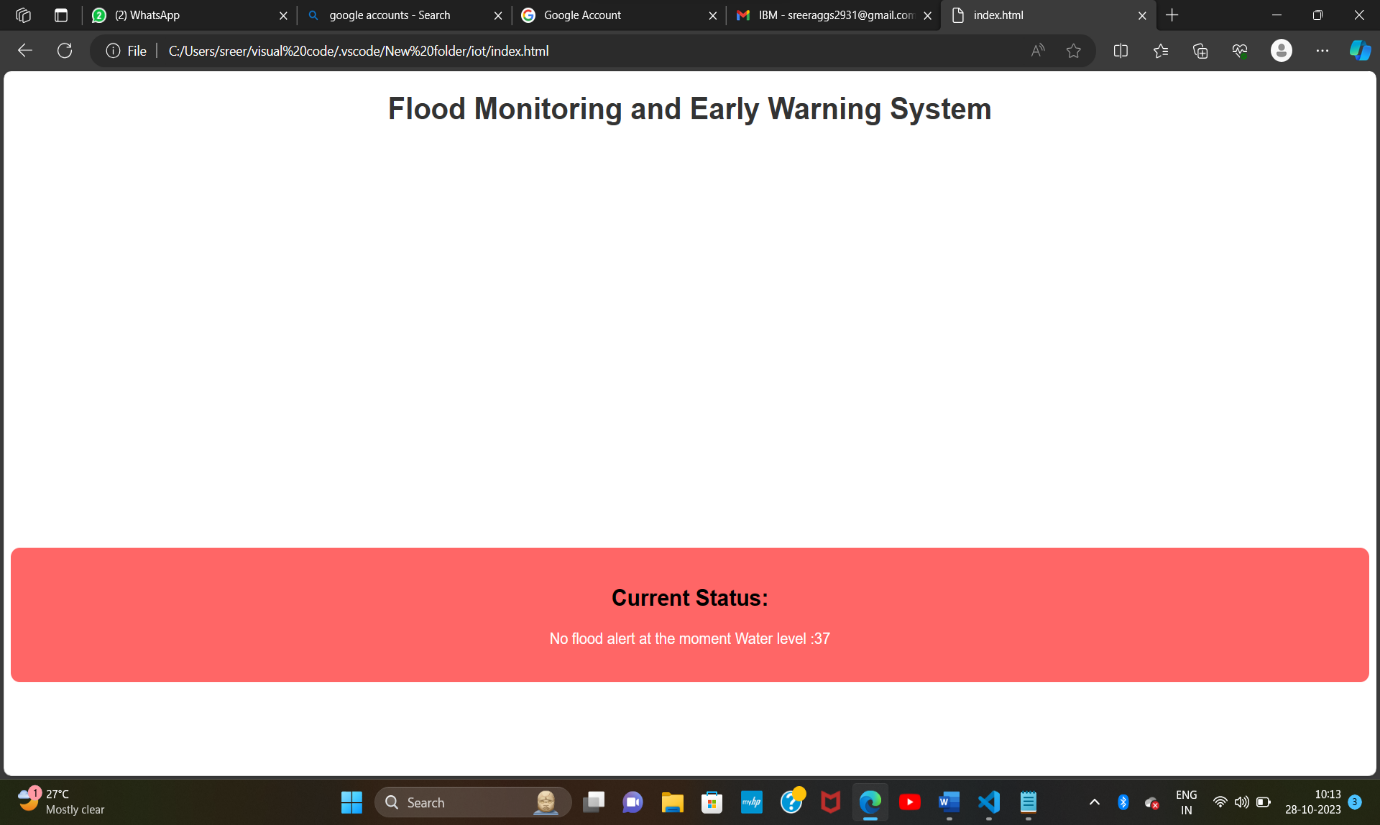
}

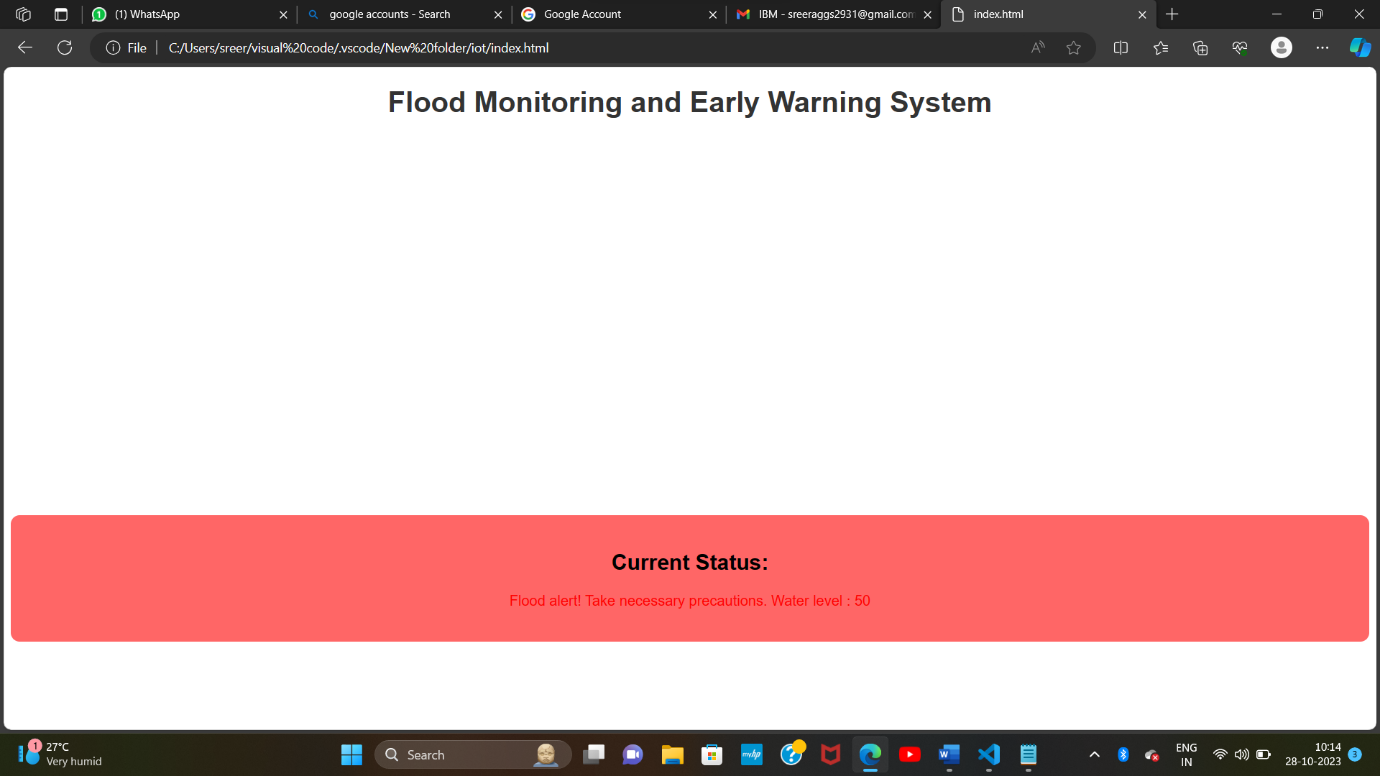
// Simulate data update every 5 seconds

setInterval(updateFloodStatus, 5000);

// Initialize the map (You can use mapping libraries like Leaflet or Google Maps for real maps)

**SAMPLE OUTPUT:**

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