#include <WiFi.h>

#include <HTTPClient.h>

#include <time.h>

const char\* ntpServer = "time.google.com";

const long gmtOffset\_sec = 8 \* 3600; // GMT+8 for Philippines

const int daylightOffset\_sec = 0;

const char\* ssid = "Jangjang";

const char\* password = "jangjang";

const char\* firestoreUrl = "https://firestore.googleapis.com/v1/projects/papel-6bb3f/databases/(default)/documents/sensorData?key=AIzaSyCnrqSkOMq5ekrOoHf2SE\_y7GjDbL8EU1w";

void setup() {

Serial.begin(115200);

WiFi.begin(ssid, password);

Serial.print("Connecting to WiFi...");

while (WiFi.status() != WL\_CONNECTED) {

Serial.print(".");

delay(1000);

}

configTime(gmtOffset\_sec, daylightOffset\_sec, ntpServer);

Serial.println("\nConnected to WiFi!");

}

void loop() {

if (WiFi.status() == WL\_CONNECTED) {

struct tm timeinfo;

if (!getLocalTime(&timeinfo)) {

Serial.println("Failed to obtain time");

return;

}

char timestamp[30];

strftime(timestamp, sizeof(timestamp), "%Y-%m-%dT%H:%M:%S", &timeinfo);

HTTPClient http;

http.begin(firestoreUrl);

http.addHeader("Content-Type", "application/json");

String jsonData = String(R"(

{

"fields": {

"temperature": {"stringValue": "25.5"},

"humidity": {"stringValue": "60"},

"daylight": {"stringValue": "21"},

"timestamp": {"stringValue": ")") + timestamp + R"("}

}

}

)";

int httpResponseCode = http.POST(jsonData);

Serial.print("HTTP Response code: ");

Serial.println(httpResponseCode);

if (httpResponseCode > 0) {

String response = http.getString();

Serial.println("Response: " + response);

} else {

Serial.println("Error: " + http.errorToString(httpResponseCode));

}

http.end();

} else {

Serial.println("WiFi disconnected. Reconnecting...");

WiFi.begin(ssid, password);

}

delay(5000);

}

<!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>Live Sensor Data</title> <script src="https://www.gstatic.com/firebasejs/9.6.10/firebase-app.js"></script> <script src="https://www.gstatic.com/firebasejs/9.6.10/firebase-firestore.js"></script> <style> body { font-family: Arial, sans-serif; text-align: center; background-color: #f4f4f4; margin: 0; padding: 20px; } h2 { color: #333; } .card { background: white; padding: 20px; margin: 20px auto; width: 300px; border-radius: 10px; box-shadow: 0px 4px 8px rgba(0, 0, 0, 0.1); } .value { font-size: 24px; font-weight: bold; color: #007BFF; } </style> </head> <body> <h2> Live Sensor Data Dashboard </h2> <div class="card"> <h3> Temperature</h3> <p class="value" id="temperature">-- °C</p> </div> <div class="card"> <h3> Humidity</h3> <p class="value" id="humidity">-- %</p> </div> <div class="card"> <h3> Light Level</h3> <p class="value" id="light">--</p> </div> <script type="module"> import { initializeApp } from "https://www.gstatic.com/firebasejs/9.6.10/firebase-app.js"; import { getFirestore, collection, query, orderBy, limit, getDocs } from "https://www.gstatic.com/firebasejs/9.6.10/firebase-firestore.js"; const firebaseConfig = { apiKey: "AIzaSyBH7LGvnXaptk4m6KWCirP1aFThFCjmL38", authDomain: "integ-act4.firebaseapp.com", projectId: "integ-act4", storageBucket: "integ-act4.firebasestorage.app", messagingSenderId: "786734756449", appId: "1:786734756449:web:d43264eaa8799f0a187020", measurementId: "G-CZGDZ7YFK4" }; // Initialize Firebase const app = initializeApp(firebaseConfig); const db = getFirestore(app); async function fetchSensorData() { const q = query(collection(db, "act4"), orderBy("timestamp", "desc"), limit(1)); const querySnapshot = await getDocs(q); if (!querySnapshot.empty) { const doc = querySnapshot.docs[0]; const data = doc.data(); console.log("Fetched Data:", data); document.getElementById("temperature").innerText = data.temperature + " °C"; document.getElementById("humidity").innerText = data.humidity + " %"; document.getElementById("light").innerText = data.light\_level; } else { console.log("No sensor data found."); } } setInterval(fetchSensorData, 3000); fetchSensorData(); </script> </body> </html>

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<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Live Sensor Data</title>

<script src="https://www.gstatic.com/firebasejs/9.6.10/firebase-app.js"></script>

<script src="https://www.gstatic.com/firebasejs/9.6.10/firebase-firestore.js"></script>

<style>

body {

font-family: Arial, sans-serif;

text-align: center;

background-color: #f4f4f4;

margin: 0;

padding: 20px;

}

h2 {

color: #333;

}

.card {

background: white;

padding: 20px;

margin: 20px auto;

width: 300px;

border-radius: 10px;

box-shadow: 0px 4px 8px rgba(0, 0, 0, 0.1);

}

.value {

font-size: 24px;

font-weight: bold;

color: #007BFF;

}

</style>

</head>

<body>

<h2> Live Sensor Data Dashboard </h2>

<div class="card">

<h3> Temperature</h3>

<p class="value" id="temperature">-- °C</p>

</div>

<div class="card">

<h3> Humidity</h3>

<p class="value" id="humidity">-- %</p>

</div>

<div class="card">

<h3> Light Level</h3>

<p class="value" id="light">--</p>

</div>

<script type="module">

import { initializeApp } from "https://www.gstatic.com/firebasejs/9.6.10/firebase-app.js";

import { getFirestore, collection, query, orderBy, limit, getDocs } from "https://www.gstatic.com/firebasejs/9.6.10/firebase-firestore.js";

const firebaseConfig = {

apiKey: "AIzaSyBH7LGvnXaptk4m6KWCirP1aFThFCjmL38",

authDomain: "integ-act4.firebaseapp.com",

projectId: "integ-act4",

storageBucket: "integ-act4.firebasestorage.app",

messagingSenderId: "786734756449",

appId: "1:786734756449:web:d43264eaa8799f0a187020",

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// Initialize Firebase

const app = initializeApp(firebaseConfig);

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} else {

console.log("No sensor data found.");

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fetchSensorData();

</script>

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