

# CLOUD INTEGRATED CARGO MANAGEMENT SYSTEM

## Code:

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#include <ESP8266WiFi.h>
#include <Firebase_ESP_Client.h>
#include "addons/TokenHelper.h"
#include "addons/RTDBHelper.h"
#include "DHTesp.h"

#define WIFI_SSID "123456789"
#define WIFI_PASSWORD "123456789"
#define API_KEY "AIzaSyC0BOflLql-CshMoTrCVnvLKdqktzzYxdqc"
#define DATABASE_URL "https://gnits-7819a-default-rtdb.firebaseio.com/"

FirebaseData fbdo;
FirebaseAuth auth;
FirebaseConfig config;
DHTesp dht;

unsigned long sendDataPrevMillis = 0;
bool signupOK = false;
int quality = 0;
String intValue;

void setup(){
    dht.setup(D0, DHTesp::DHT11);
    Serial.begin(115200);
    WiFi.begin(WIFI_SSID, WIFI_PASSWORD);
    Serial.print("Connecting to Wi-Fi");
    while (WiFi.status() != WL_CONNECTED){
        Serial.print(".");
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    delay(300);
}
Serial.println();
Serial.print("Connected with IP: ");
Serial.println(WiFi.localIP());
Serial.println();
config.api_key = API_KEY;
config.database_url = DATABASE_URL;
if (Firebase.signUp(&config, &auth, "", "")){
    Serial.println("ok");
    signupOK = true;
}
else{
    Serial.printf("%s\n", config.signer.signupError.message.c_str());
}
config.token_status_callback = tokenStatusCallback; //see addons/TokenHelper.h
Firebase.begin(&config, &auth);
Firebase.reconnectWiFi(true);
}

void loop(){
    quality = analogRead(A0);
    float humidity = dht.getHumidity();
    float temperature = dht.getTemperature();

    if (Firebase.ready() && signupOK && (millis() - sendDataPrevMillis > 1000 ||
sendDataPrevMillis == 0)){
        sendDataPrevMillis = millis();

        if (Firebase.RTDB.setInt(&fbdo, "mainbucket2/quality", quality)){
            Serial.println("PATH: " + fbdo.dataPath());
            Serial.println("TYPE: " + fbdo.dataType());

```

```
}  
else {  
    Serial.println("Failed REASON: " + fbdo.errorReason());  
}  
delay(100);  
if (Firebase.RTDB.setFloat(&fbdo, "mainbucket2/humidity",humidity)){  
    Serial.println("PATH: " + fbdo.dataPath());  
    Serial.println("TYPE: " + fbdo.dataType());  
}  
else {  
    Serial.println("Failed REASON: " + fbdo.errorReason());  
}  
delay(100);  
if (Firebase.RTDB.setFloat(&fbdo, "mainbucket2/temperature", temperature)){  
    Serial.println("PATH: " + fbdo.dataPath());  
    Serial.println("TYPE: " + fbdo.dataType());  
}  
else {  
    Serial.println("Failed REASON: " + fbdo.errorReason());  
}  
delay(1000);  
  
}  
}
```