RETO 2 – APP + FIREBASE

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```
#include <ArduinoJson.h>
#include <ESP8266WiFi.h>
#include <FirebaseArduino.h>
#define FIREBASE_HOST "nodemcu-4974a.firebaseio.com"
#define FIREBASE_AUTH "pM4xOoLlT0tpIQgCxgE5I2Zh4zRz9gjIBiUaohE3"
#define WIFI_SSID "Tec-IoT"
#define WIFI_PASSWORD "spotless.magnetic.bridge"

#include "DHT_U.h"
#include "DHT.h"
#define dht_dpin 15
#define DHTTYPE DHT11
int sensor = 13;
int disparador = 2;
int entrada=0;
int shock= 14;
int led=5;
long tiempo;
float distancia;


DHT dht(dht_dpin, DHTTYPE);

void setup() {
  Serial.begin(9600);

dht.begin();
pinMode(sensor, INPUT);
pinMode(led, OUTPUT);
```

```
pinMode(disparador, OUTPUT);
pinMode(entrada, INPUT);
pinMode(shock, INPUT);

  WiFi.begin(WIFI_SSID, WIFI_PASSWORD);
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }
  Serial.println("");
  Serial.println("WiFi Conectado!");
  Firebase.begin(FIREBASE_HOST, FIREBASE_AUTH);
Firebase.setString("LED","false");
}


void loop() {

  if(Firebase.getString("LED").equals("true"))
{digitalWrite(led,HIGH);}
else{digitalWrite(led,LOW);
}

  float h= dht.readHumidity();
  if(h!=h){
    h=0;
  }
  else{
    Firebase.setFloat("Humedad", h);
```

```
}
float t= dht.readTemperature();
if(t!=t){
  t=0;
}
else{
   Firebase.setFloat("Temperatura", t);
}
float state = digitalRead(sensor);

Serial.println(h);
Serial.println(t);



digitalWrite(disparador, HIGH);
delayMicroseconds(10);
digitalWrite(disparador, LOW);

tiempo = (pulseIn(entrada,HIGH)/2);
distancia = float(tiempo*0.0343);

float shockVal = digitalRead(shock);




// set value
```

```
  Firebase.setFloat("Movimiento", state);
  Firebase.setFloat("Distancia", distancia);
  Firebase.setFloat("Shock", shockVal );

  // handle error

  if (Firebase.failed()) {
     Serial.print("setting /number failed:");
     Serial.println(Firebase.error());
     return;
  }



  delay(1000);
}
```