RETO 1

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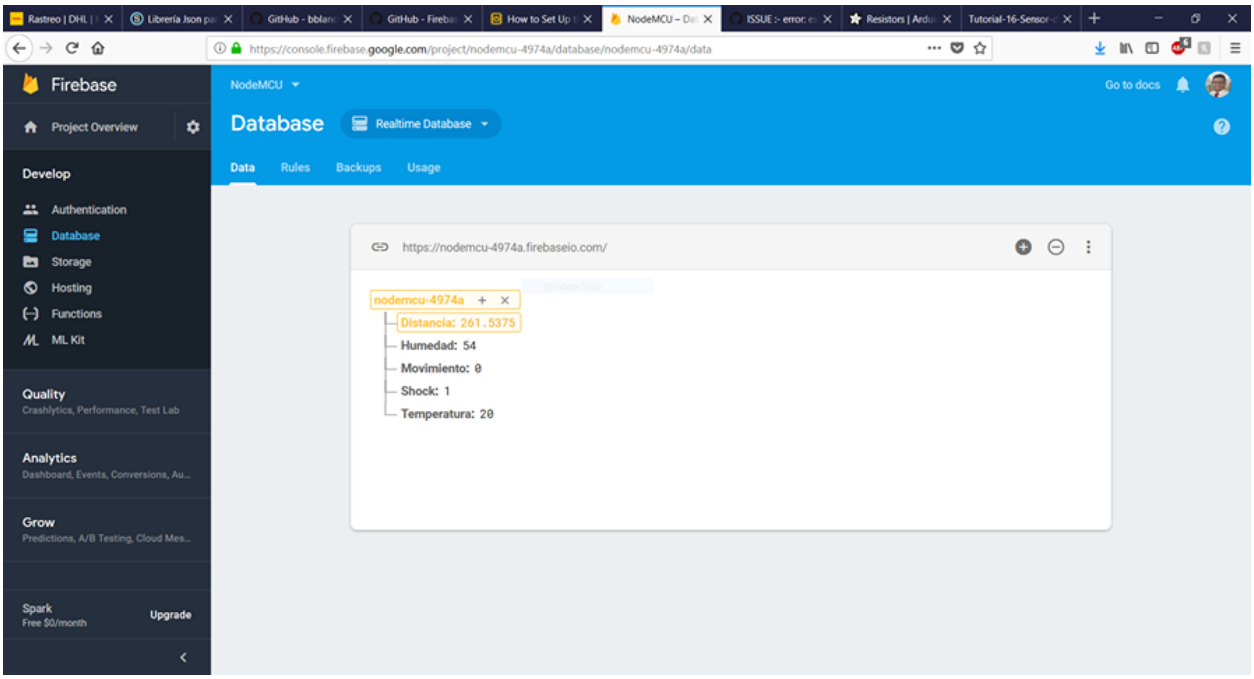
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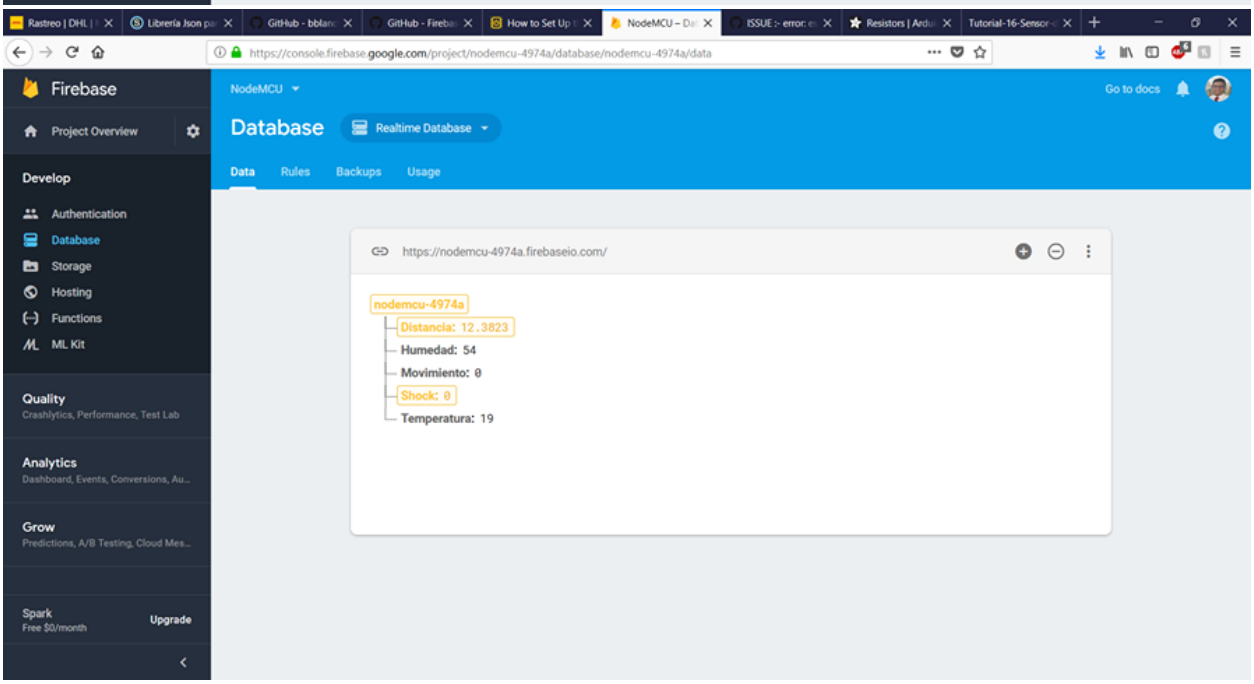
https://nodemcu-4974a.firebaseio.com/
nodemcu-4974a
Distancia: 261.5375
Humedad: 54
Movimiento: 0
Shock: 1
Temperatura: 20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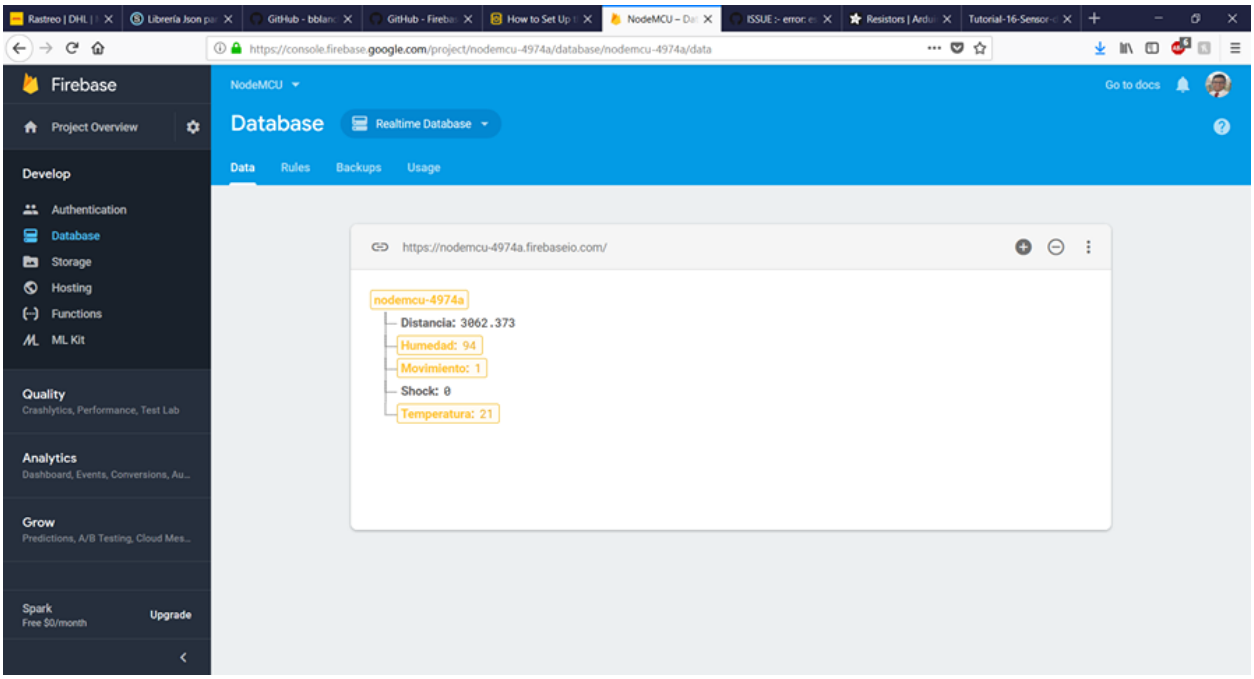
https://nodemcu-4974a.firebaseio.com/
nodemcu-4974a
Distancia: 12.3823
Humedad: 54
Movimiento: 0
Shock: 0
Temperatura: 19


Rastreo | DHL |
Librería Json
GitHub - bblanc
GitHub - Fireba
How to Set Up t
NodeMCU – Da
ISSUE :- error: e
Resistors | Ardu
Tutorial-16-Sensor-
https://console.firebase.google.com/project/nodemcu-4974a/database/nodemcu-4974a/data
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Usage
https://nodemcu-4974a.firebaseio.com/
nodemcu-4974a
Distancia: 3062.373
Humedad: 94
Movimiento: 1
Shock: 0
Temperatura: 21

```
#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
#include <LiquidCrystal_I2C.h>
#include <Wire.h>
LiquidCrystal_I2C lcd(0x3F,20,4);
int led = 12;
int sensor = 13;
int disparador = 2;
int entrada=0;
int shock= 14;

DHT dht(dht_dpin, DHTTYPE);

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

  // connect to wifi.
  WiFi.begin(WIFI_SSID, WIFI_PASSWORD);
  Serial.print("connecting");
```

```
  while (WiFi.status() != WL_CONNECTED) {
    Serial.print(".");
    delay(500);
  }
  Serial.println();
  Serial.print("connected: ");
  Serial.println(WiFi.localIP());

  Firebase.begin(FIREBASE_HOST, FIREBASE_AUTH);



dht.begin();
Serial.begin(9600);
Wire.begin(D2,D1);
lcd.begin();
lcd.backlight();
lcd.clear();
lcd.home();
pinMode(sensor, INPUT);
pinMode(led, OUTPUT);
pinMode(disparador, OUTPUT);
pinMode(entrada, INPUT);
pinMode(shock, INPUT);
}

int n = 0;

void loop() {
  lcd.clear();
```

```
long tiempo;
float distancia;
float h= dht.readHumidity();
float t= dht.readTemperature();
long state = digitalRead(sensor);

lcd.setCursor(0,0);
lcd.print("Hum:");
lcd.print(h);

lcd.setCursor(10,0);
lcd.print("Temp: ");
lcd.print(t);

if (state == HIGH){
  digitalWrite(led, HIGH);
  lcd.setCursor(0,1);
  lcd.print("Movimiento");
}
else{
  digitalWrite(led, LOW);
  lcd.setCursor(0,1);
  lcd.print("NO Movimiento");
}

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

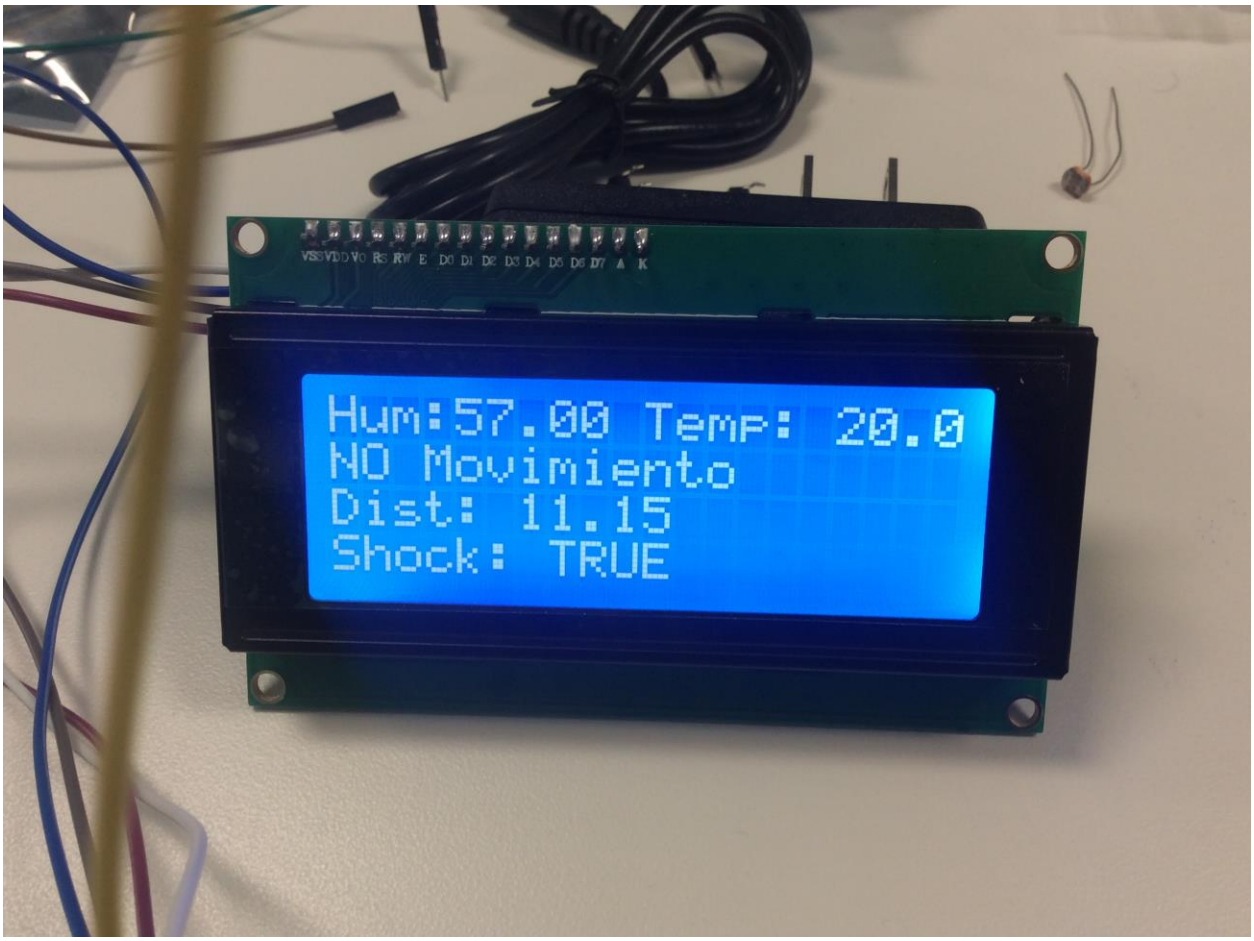
```
tiempo = (pulseIn(entrada,HIGH)/2);
distancia = float(tiempo*0.0343);
lcd.setCursor(0,2);
lcd.print("Dist: ");
lcd.print(distancia);

int shockVal = digitalRead(shock);
if(shockVal==HIGH){
  lcd.setCursor(0,3);
  lcd.print("Shock: TRUE");
}
else{
  lcd.setCursor(0,3);
  lcd.print("Shock: FALSE");
}

// set value
Firebase.setFloat("Humedad", h);
Firebase.setFloat("Temperatura", t);
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);
}
```


VSS VDD Vo RS RW E D0 D1 D2 D3 D4 D5 D6 D7 A K
Hum:57.00 Temp: 20.0
NO Movimiento
Dist: 11.15
Shock: TRUE


VSS VDD VO RS RW E D0 D1 D2 D3 D4 D5 D6 D7 A K
Hum:57.00 Temp: 20.0
NO Movimiento
Dist: 3044.74
Shock: FALSE