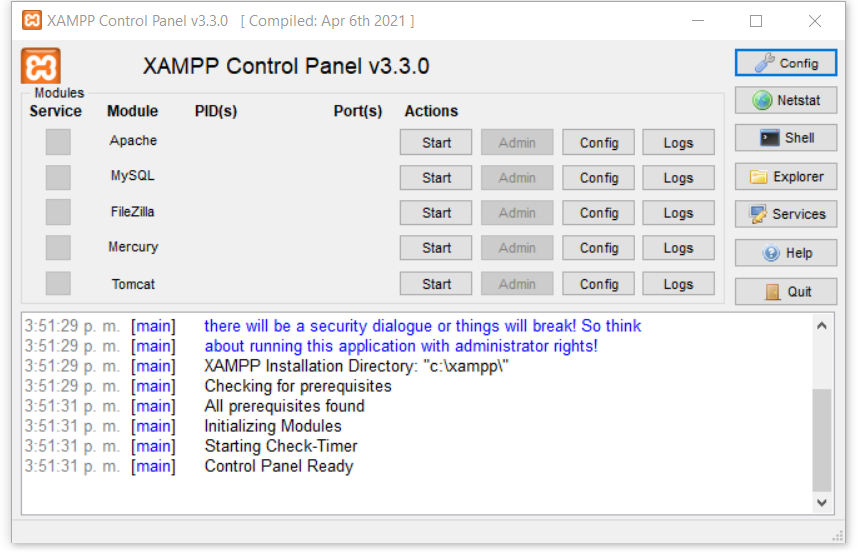
Taller 7. Servidor IoT-MySQL

Diego Iván Perea Montealegre (2185751) [diego.perea@uao.edu.co](mailto:diego.perea@uao.edu.co)

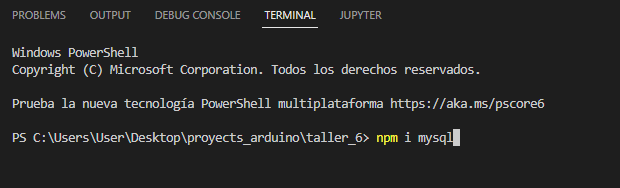
Facultad de Ingeniería, Universidad Autónoma de Occidente

Cali, Valle del Cauca

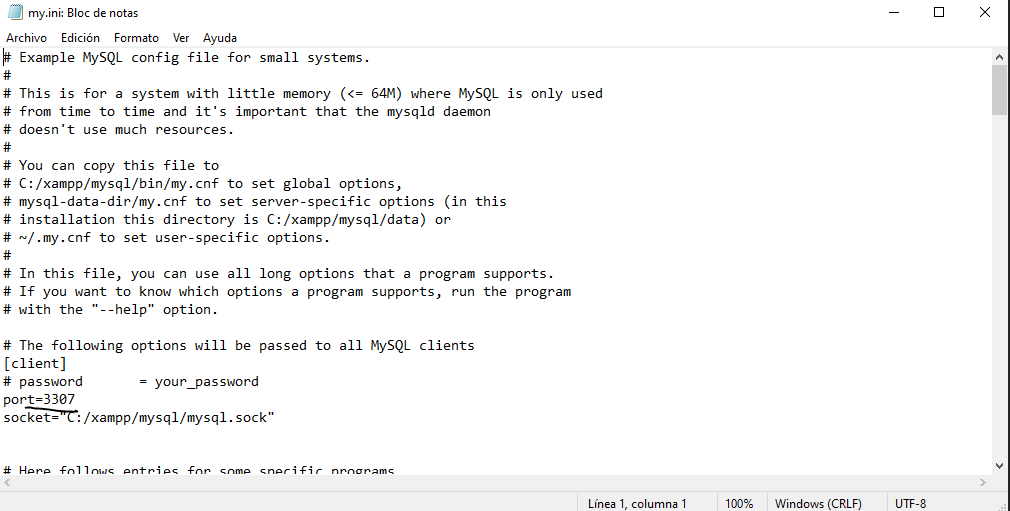
INSTALACIÓN DEL AMBIENTE DE TRABAJO:



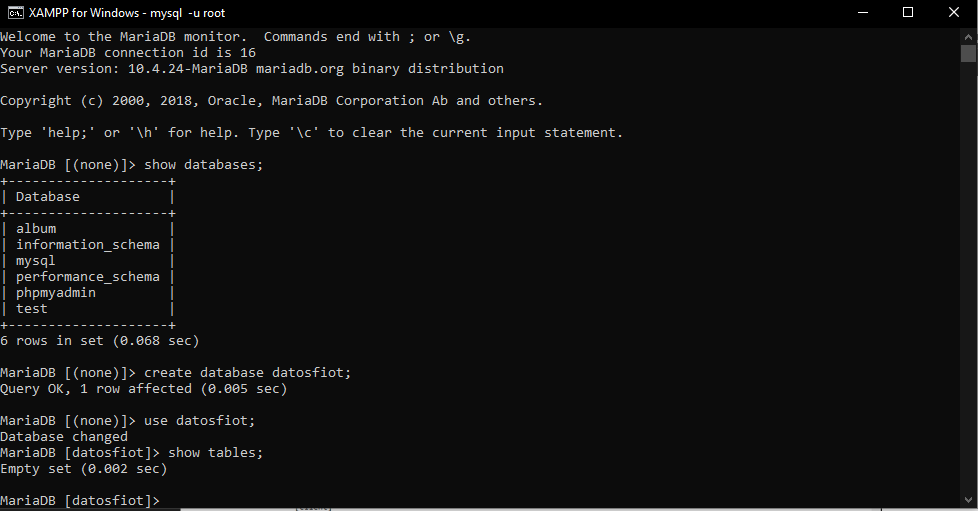
Instalación de las librerías necesarias:



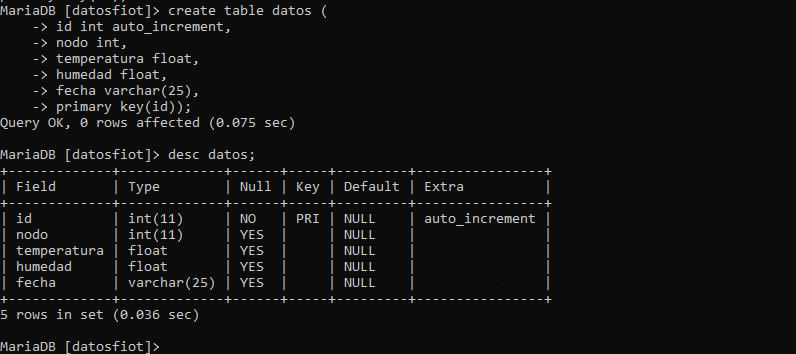
Si hay un error de puesto cambiarlo , darle en config



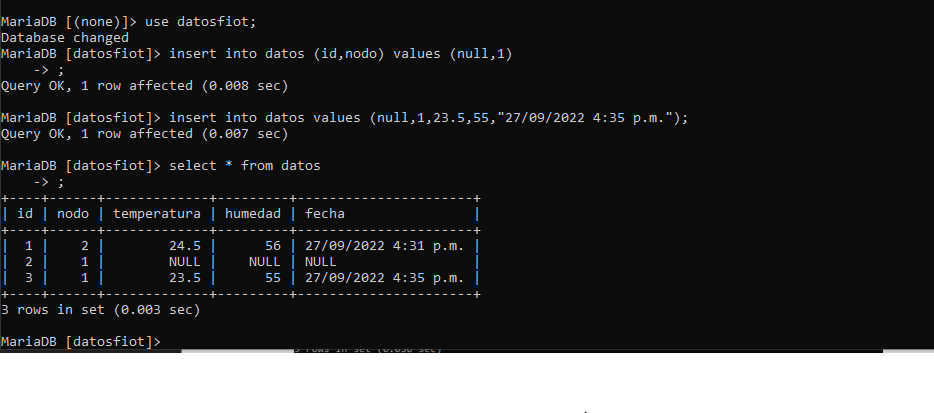
Conxion con mysql y creación de base de datos en mysql



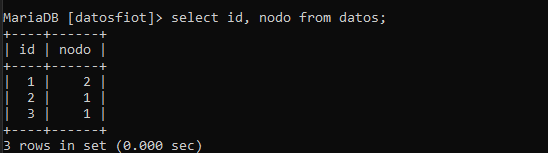
Creación de la tabla y de categorías



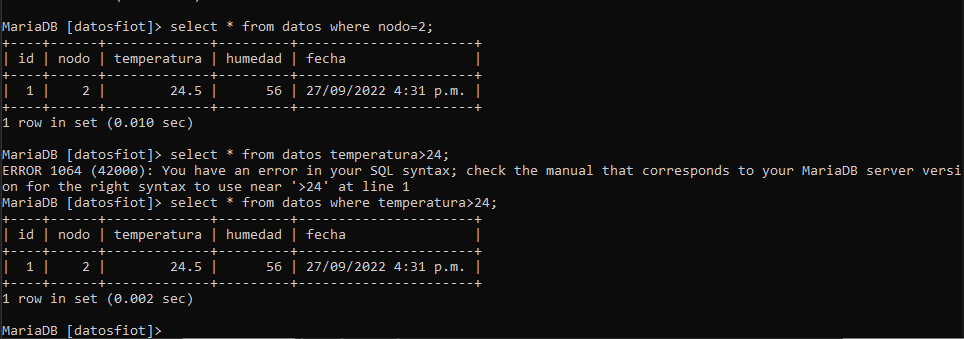
Modificar en la base datosvalores



Para solo ver las columnas que se requieren visualizar

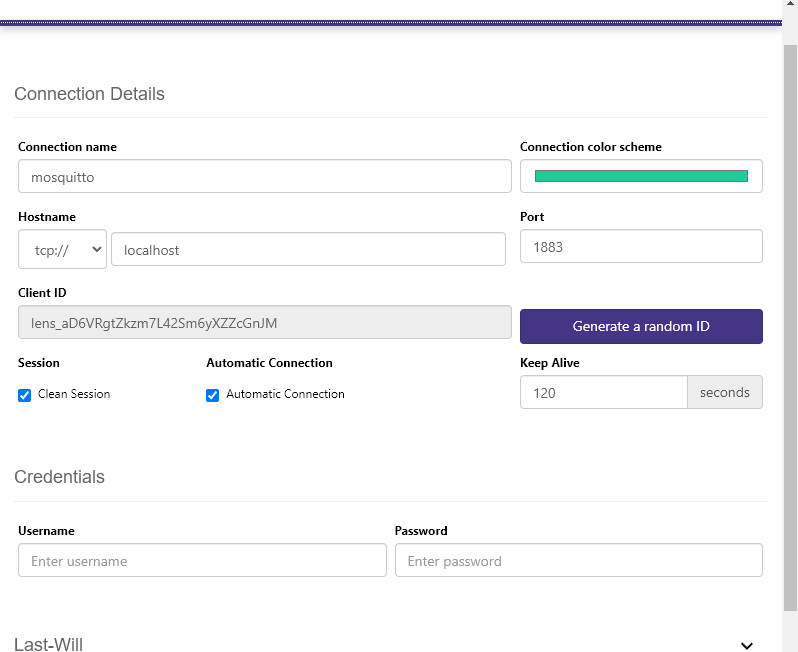


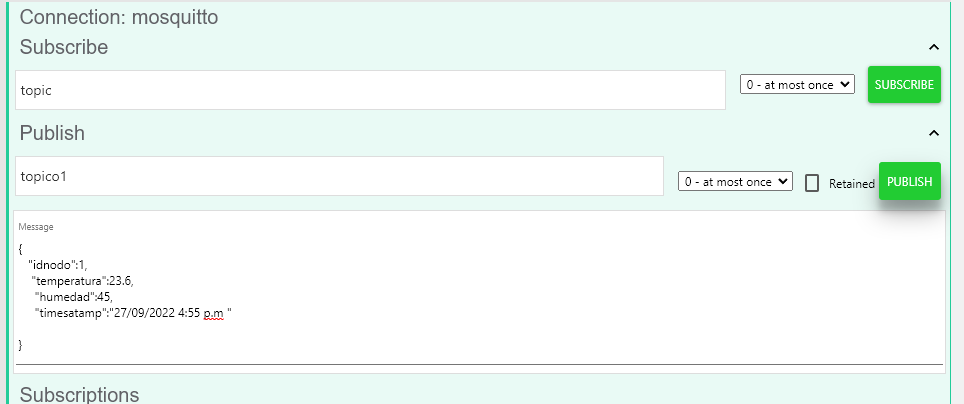
Para filtrar elementos

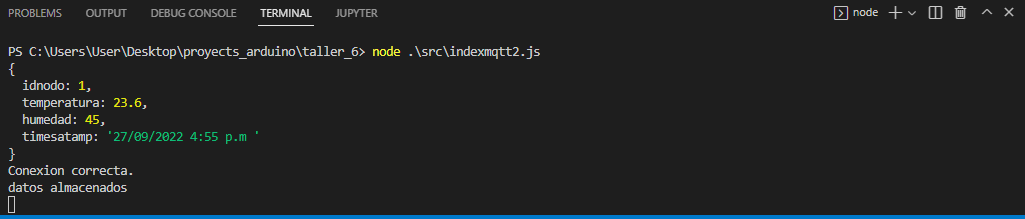


Ahora en el esp32

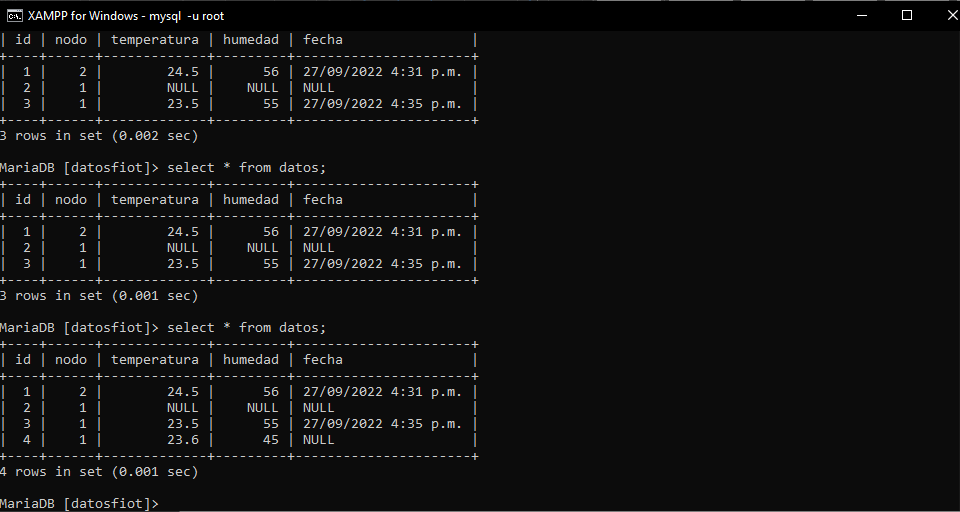
En la carpeta creada



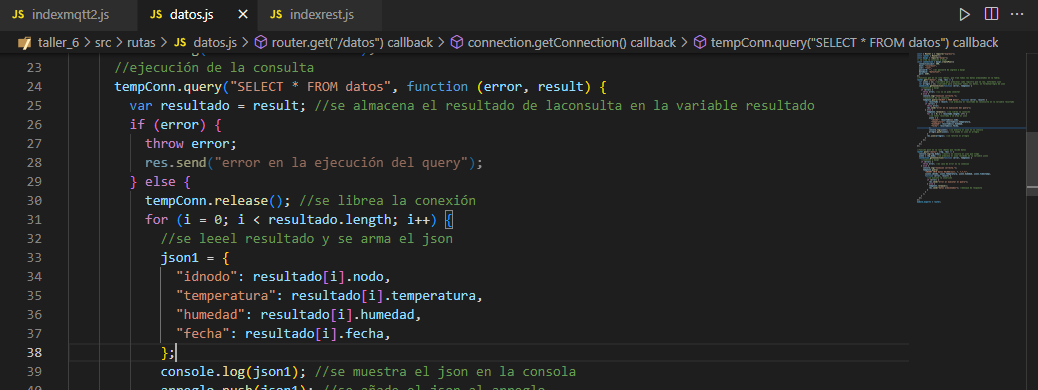




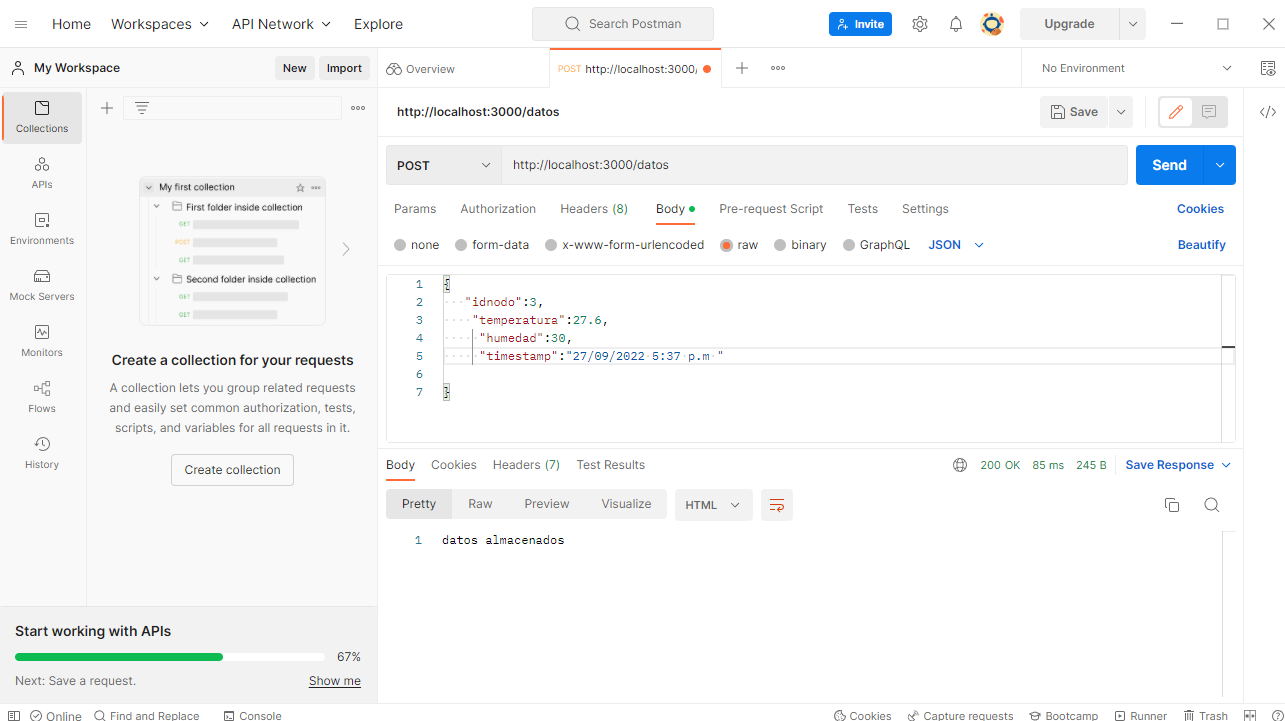
Ahora se visualiza el cambio en base de datos creada “datosfiot”

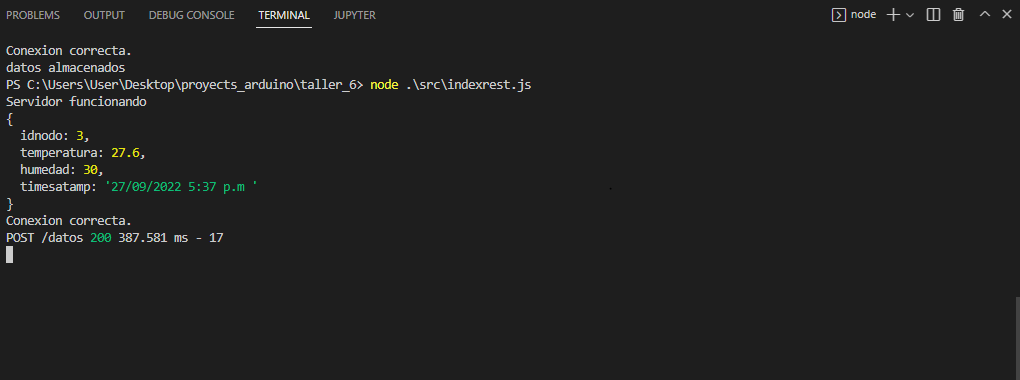


Con rest

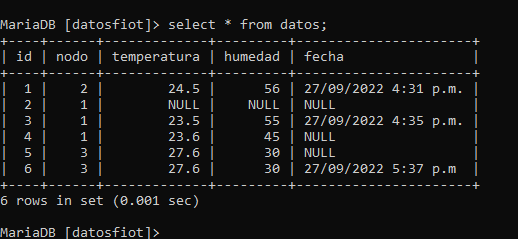


Usando postman

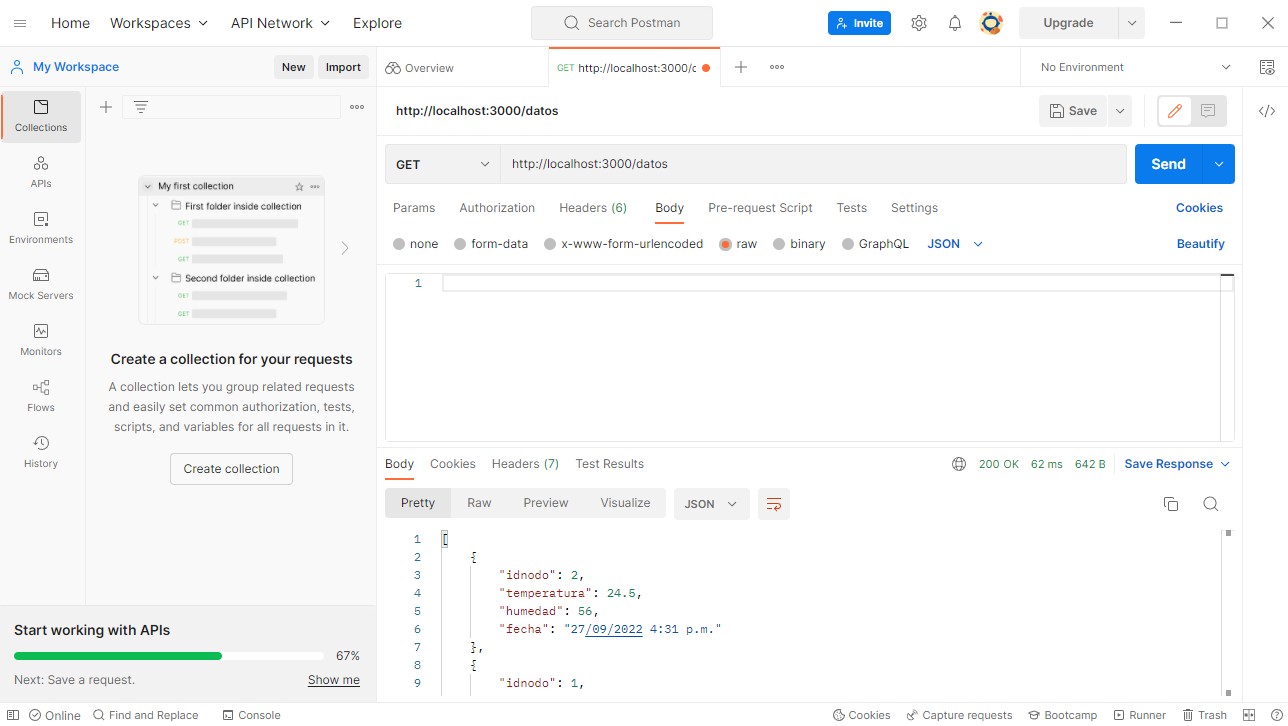


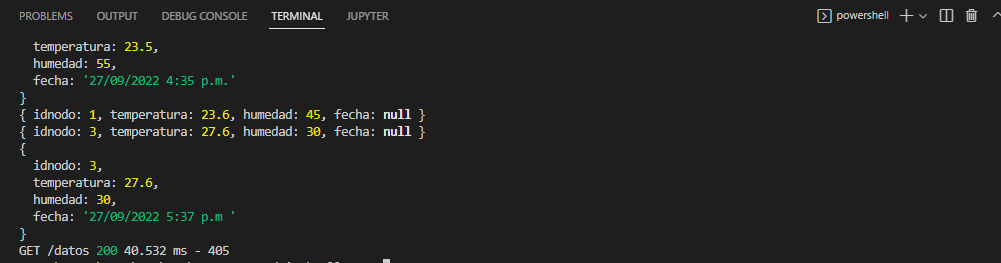


Ahora se visualiza en la basa de datos

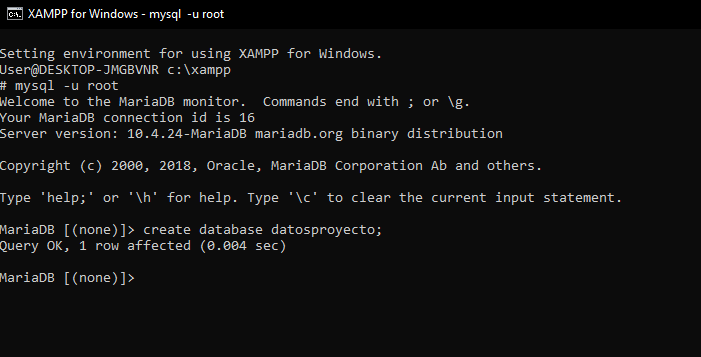


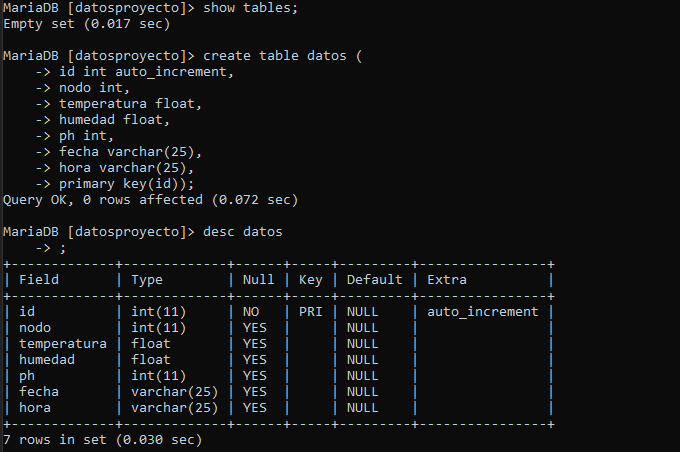
Ahora usando postman con GET



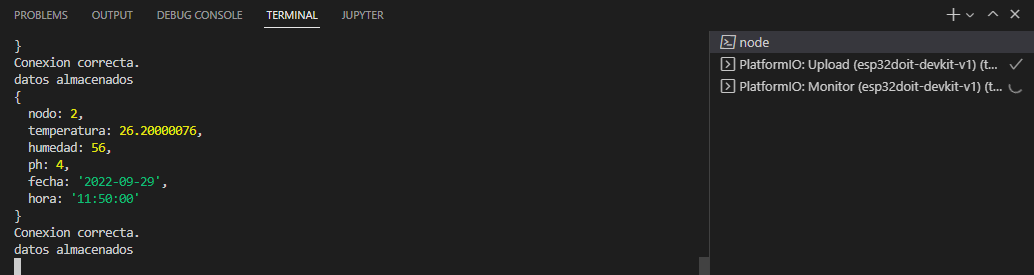


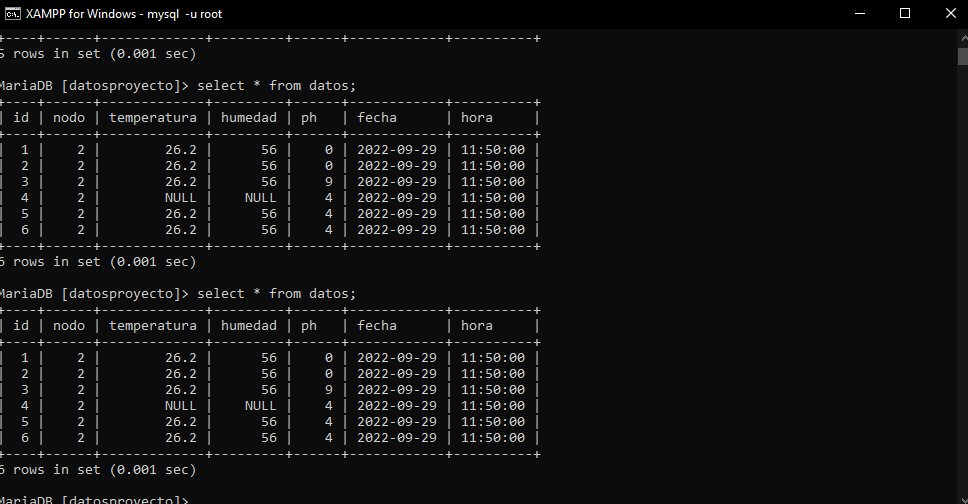
PARA EL PROYECTO------------------------------------

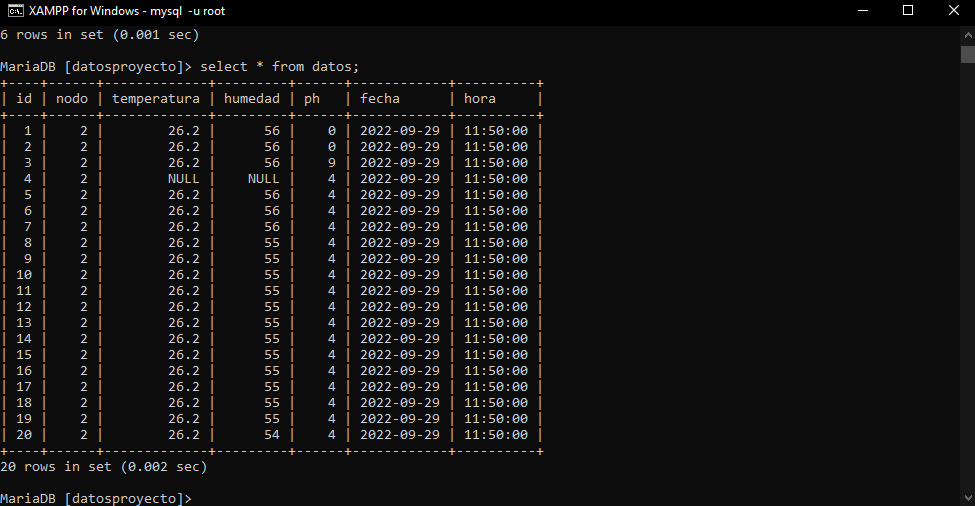






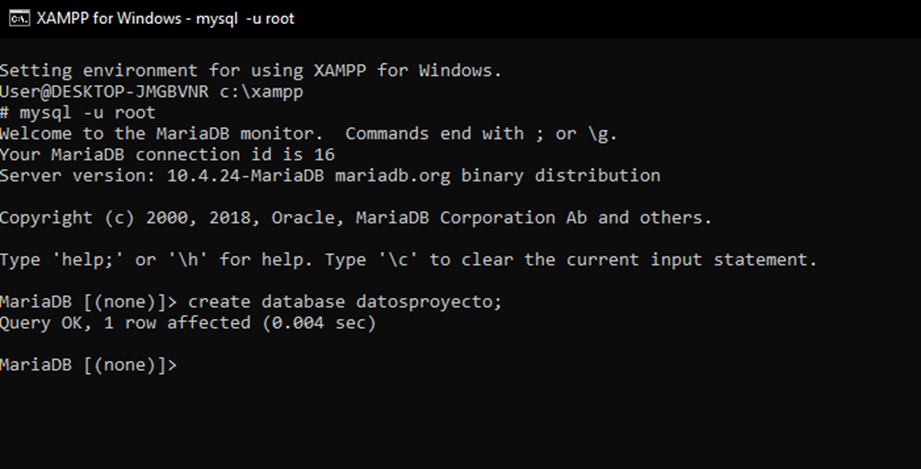


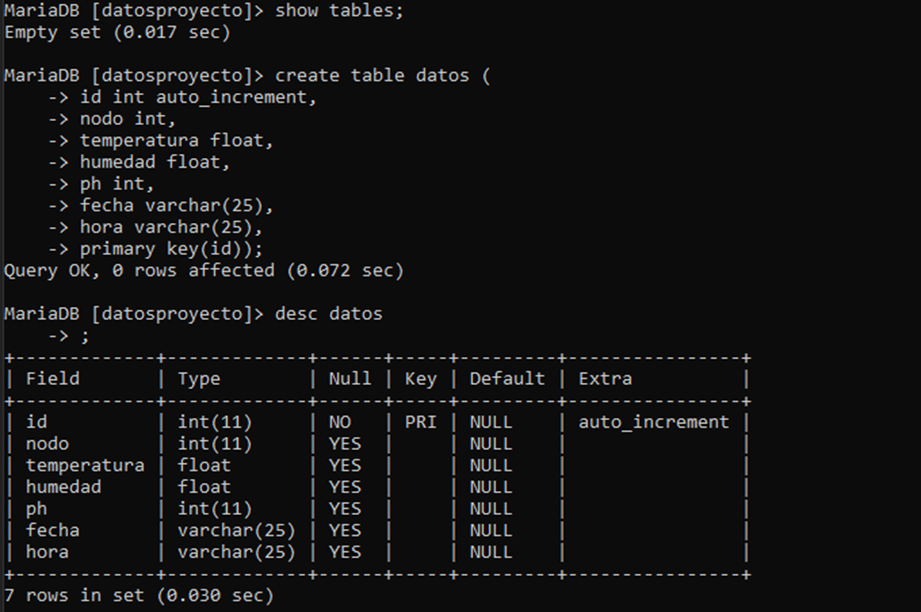




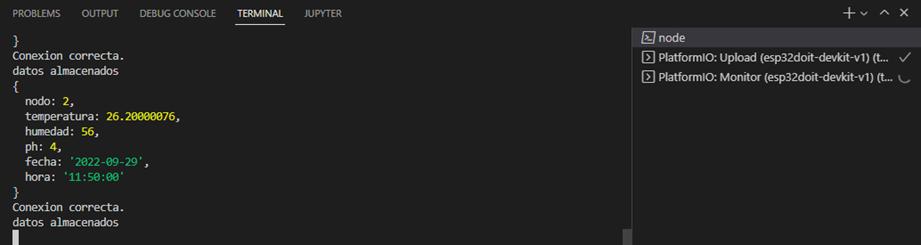
Ahora con el esp32

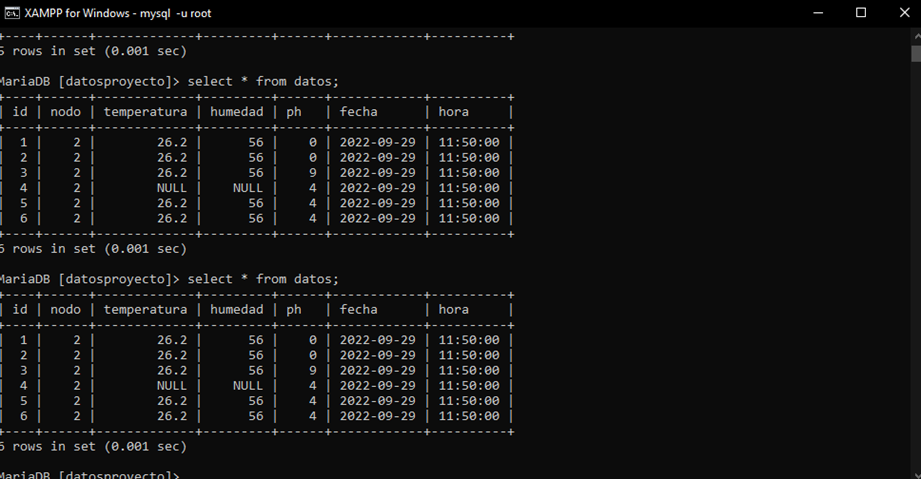
Utilizando mqqt o mosquitto

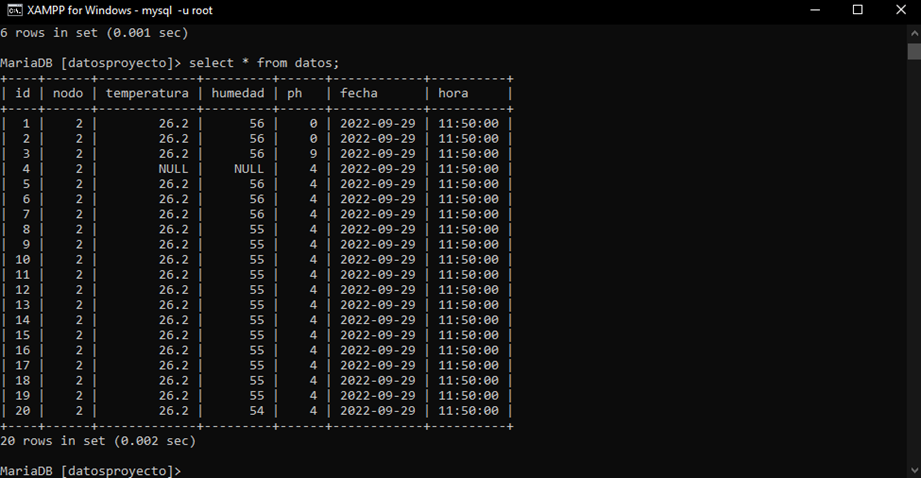




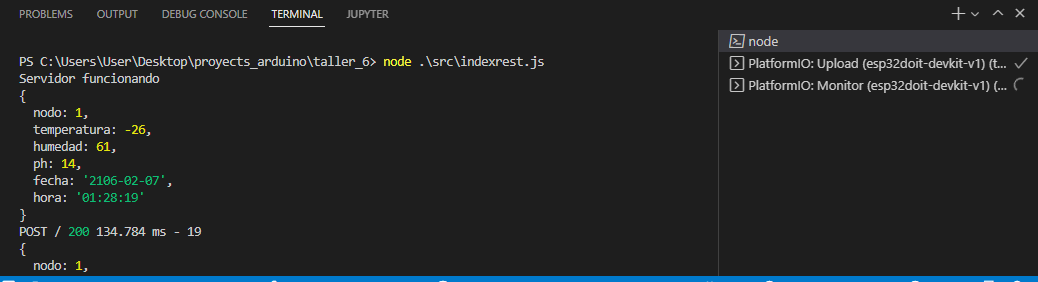


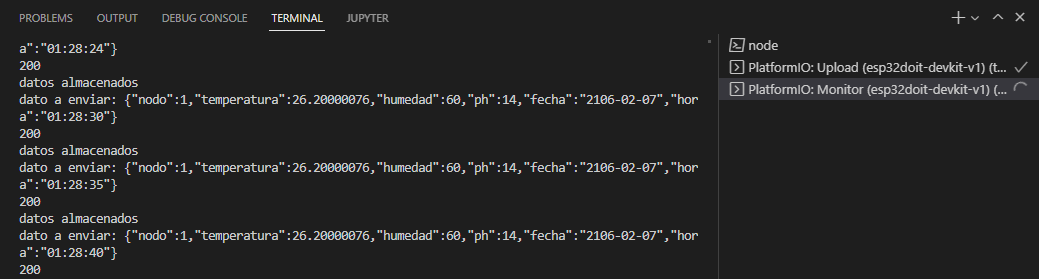




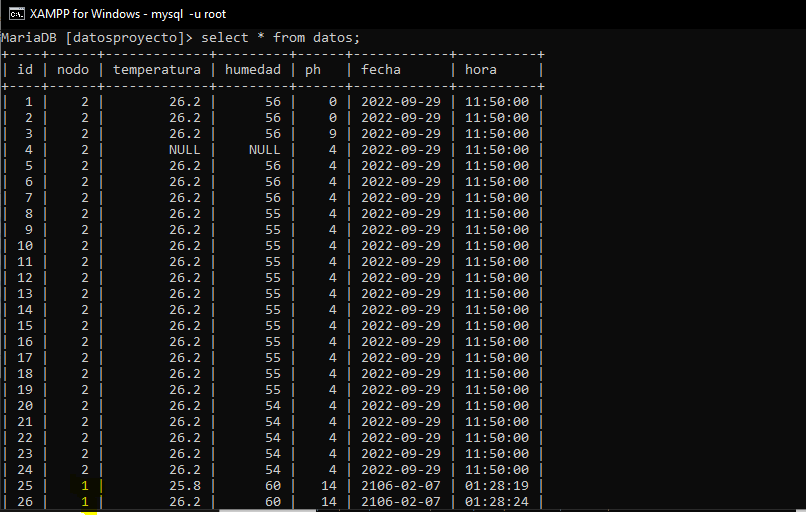


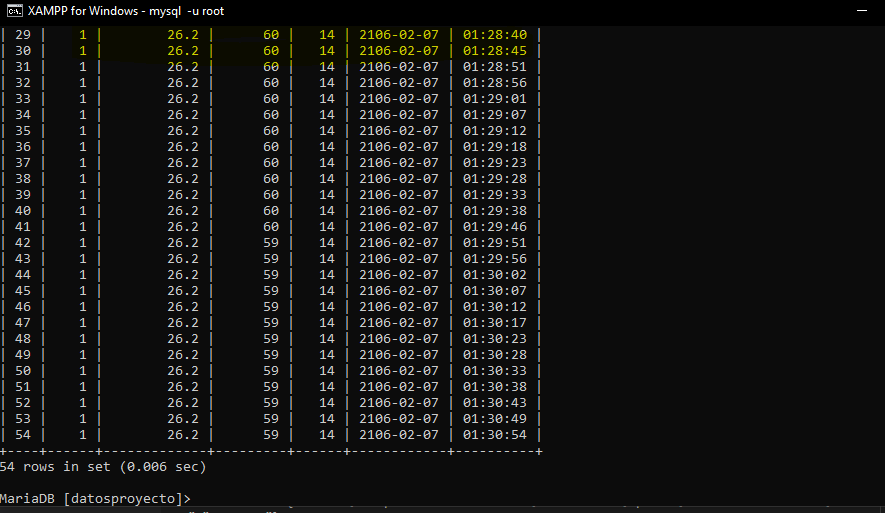
Ahora con metodo REST





Con el nodo 1 significa que fue enviado con rest y nodo 2 con mqtt o mosquito





Codigo:

#include <Arduino.h>

#include <ArduinoJson.h>

#include <HTTPClient.h>

//LIBRERIAS PARA DHT11 (TEMPERATURA Y HUMEDAD)

#include <Adafruit\_Sensor.h>

#include <DHT.h>

//LIBRERIAS PARA FECHA Y HORA

#include <WiFi.h>

//DEFINICION DE PINES DHT11

#define DHTPIN 14 // 4 = PIN D4

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

//potenciometro ph

const int portPin=34;

int valorPh=0;

const char\* ssid = "mi\_wifi";//name wifi

const char\* password = "diego\_Dios"; // clave de wifi

void setup\_wifi() {

delay(10);

// We start by connecting to a WiFi network

Serial.println();

Serial.print("Connecting to ");

Serial.println(ssid);

WiFi.begin(ssid, password);

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

delay(500);

Serial.print(".");

}

Serial.println("");

Serial.println("WiFi connected");

Serial.println("IP address: ");

Serial.println(WiFi.localIP());

}

void setup() {

Serial.begin(9600); //Serial connection

setup\_wifi(); //WiFi connection

delay(1500);

}

void loop() {

//temperatura y humedad

float h= dht.readHumidity();

float t =dht.readTemperature();

//potenciometro ph

valorPh=analogRead(portPin)/292.5;

//----------------------

String variable;

int nodo\_numero = 1;

DynamicJsonDocument doc(1024); //creacion del json

doc["nodo"] = nodo\_numero;

doc["temperatura"] = t;

doc["humedad"] = h;

doc["ph"]=valorPh;

doc["fecha"] = "lunes";

doc["hora"] = "3:00 pm";

serializeJson(doc, variable);

Serial.println("dato a enviar: "+ variable);

HTTPClient http; //Declare object of class HTTPClient

WiFiClient client;

//Specify request destination

//http.begin(client,"URL DEL SERVIDOR");

//http.begin(client,"http://192.\*\*\*\*:3000/"); //para mosquito o mqtt

http.begin(client,"http://192.\*\*\*\*:3000/datos");// para rest mysql

// http.begin(client,"http://192.\*\*\*\*:3000/datosm");// mongo

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

int httpCode = http.POST(variable); //Send the request

String payload = http.getString(); //Get the response payload

Serial.println(httpCode); //Print HTTP return code

Serial.println(payload); //Print request response payload

http.end(); //Close connection

delay(5000); //Send a request every 5 seconds

}