#include <ESP8266WiFi.h>

#iclude <WiFiClient.h>

#include <ThingSpeak.h>

#include "DHT.h"

#define DHTPIN D2

#define DHTTYPE DHT11

DHT dht (DHTPIN, DHTTYPE);

// defines pins numbers

const int trigPin = 12; //D6

const int echoPin = 14; //D5

// defines variables

long duration;

int distance;

float temperature;

int humidity;

String command;

String data="";

void callback(char\* topic, byte\* payload, unsigned int payloadLength);

// CHANGE TO YOUR WIFI CREDENTIALS

const char\* ssid = "AndroidAP27FC";

const char\* password = "afmk4398";

// CHANGE TO YOUR DEVICE CREDENTIALS AS PER IN Things Speak

unsigned long channelid=1031965;

const char\* myWriteAPIKey="JWYWWP8FQIVDGGDI

";

void setup()

{

Serial.begin(115200);

pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output

pinMode(echoPin, INPUT); // Sets the echoPin as an Input

pinMode(7,INPUT);

dht.begin();

Serial.println("Connecting to");

WiFi.begin(ssid,pass);

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

{

delay(500);

Serial.print(".");

}

Serial.print(" ");

Serial.print("WiFi Connected ");

ThingsSpeak.begin(client);

}

void loop()

{

// Clears the trigPin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

// Sets the trigPin on HIGH state for 10 micro seconds

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

// Reads the echoPin, returns the sound wave travel time in microseconds

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance= duration\*0.034/2;

// Prints the distance on the Serial Monitor

Serial.print("Distance: ");

Serial.println(distance);

int soilmoisture = analogRead(A0);

// print out the value you read:

Serial.println(soilmoisture);

humidity = dht.readHumidity();

Serial.println(humidity);

temperature = dht.readTemperature();

Serial.println(temperature);

float phvalue=digitalRead(7);

Serial.println(phvalue);

ThingSpeak.write fieldchannelid,1,soilmoisture,myWriteAPIKey);

ThingSpeak.write fieldchannelid,2,humidity,myWriteAPIKey);

ThingSpeak.write fieldchannelid,3,temperature,myWriteAPIKey);

ThingSpeak.write fieldchannelid,4,phvalue,myWriteAPIKey);

ThingSpeak.write fieldchannelid,5,distance,myWriteAPIKey);

delay(60000);

}