

IOT WORKSHOP

Day-4

ELECTRONIC COMMUNICATION & ENGINEERING[ECE]

ASSOCIATED BY :- MAKE SKILLED



Team Members:-

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From:ECE-A…….

Team Name:SMART CREATORS

**ACTIVITY – 19**

->Check the condition of soil moisture sensor and implement the graph in THINGSPEAK.COM App

COMPONENTS REQUIRED:-

ESP32

SOIL MOISTURE WITH FISH SENSOR

FEMALE TO FEMALE CONNECTORS

USB CABLE

SOFTWARE COMPONENT:-

THINGSPEAK.COM

CONNECTIONS:-

* **Do pins to the ESP32 34th pin.**
* **Ground pin to the ESP32 ground pin.**
* **VCC to the ESP32 to vin(v5)**

PROGRAM:-

#include<WiFi.h>

#include<ThingSpeak.h>

int soil=34;

int threshold=4095;

const char\* ssid="Buddiii";

const char\* password="6309846308";

const int channelid=2672313;

const char\* apikey="UMS5NQ4NVUSZAJY7";

WiFiClient client

void setup() {

pinMode (soil,INPUT);

Serial.begin (9600);

WiFi.mode(WIFI\_STA);

WiFi.begin(ssid,password);

Serial.println("WiFi Connecting");

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

delay(500);

Serial.println(".");

}

Serial.println("WiFi Connected");

ThingSpeak.begin(client);

}

void loop() {

int g = analogRead(soil);

Serial.println(g);

if(g<threshold){

Serial.println("Moisture detected");

}

else {

Serial.println("No moisture detected");

}

ThingSpeak.setField(1,g);

int status = ThingSpeak.writeFields(channelid,apikey);

if(status==200){

Serial.println("data uploaded");

}

else{

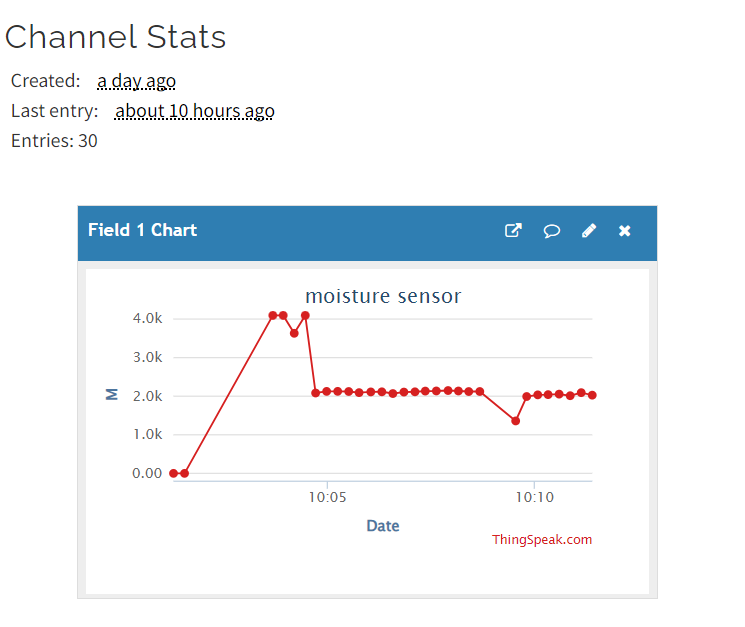
Serial.println("data failure");

}

}

OUTPUT:-

* First open browser search THINGSPEAK.COM.
* Click login and CREATE NEW ID.
* Enter your details and tap continue.
* Go to your inbox for your mail.
* Click the link in the email was sent you.
* Click Continue.
* Then your profile was verified.
* Go back and add your mail ID.
* Create your password and sign in.
* Tap new channel and create new channel.
* Enter details and save channel.
* Then click private view because all are seen the graph representation.
* In our activity graph representation given below.



**ACTIVITY – 20**

->READING GAS SENSOR VALUES & CONDITION DISPLAYING THE SERIAL MONITOR AND CHECK THE GRAPH IN BLYNK IOT APP.

COMPONENTS REQUIRED:-

* ESP32
* USB CABLE
* GAS SENSOR
* FEMALE TO FEMALE WIRES

SOFTWARE COMPONENTS:-

BLYNK IOT

CONNECTIONS:-

* **Do pins to the esp32 35th pin.**
* **Ground pin to the esp32 ground pin.**
* **Vcc to the esp32 to vin(v5).**

PROGRAM:-

#define BLYNK\_TEMPLATE\_ID "TMPL3qi40NbOa"

#define BLYNK\_TEMPLATE\_NAME "gas"

#defineBLYNK\_AUTH\_TOKEN"ear Q\_AdQUFmucUHR5dl-9wewzn4n-rUX"

#include<WiFi.h>

#include<BlynkSimpleEsp32.h>

int gas = 35;

int threshold = 50;

const char\* ssid="Buddiii";

const char\* password="6309846308";

char auth[] = BLYNK\_AUTH\_TOKEN;

void setup() {

pinMode(gas,INPUT);

Serial.begin(9600);

WiFi.mode(WIFI\_STA);

WiFi.begin(ssid,password);

Serial.println("WiFi connecting");

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

delay(500);

Serial.println(".");

}

Serial.println("WiFi connected");

Blynk.begin(auth, ssid, password);

}

void loop() {

int a = analogRead(gas);

Blynk.virtualWrite(V0,a);

Serial.println(a);

if(a>threshold){

Serial.println("Harful gas detected");

}

else{

Serial.println("No gas detected");

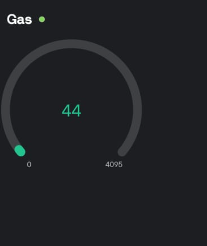
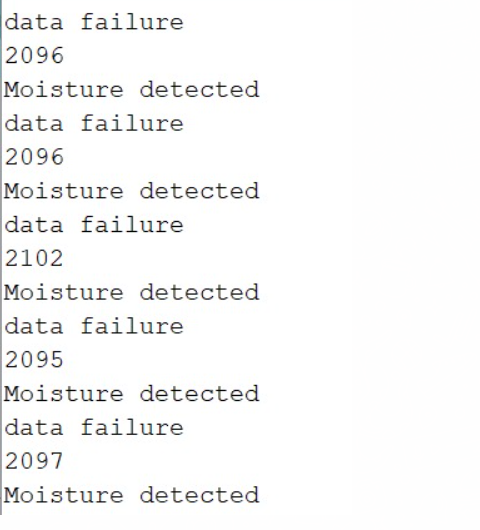
}

Blynk.run();

}

Output:-

* Download Blynk.iot
* Sign in
* Create gauge to monitor gas values.

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