MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
(AUTONOMOUS)

Accredited by "NBA" & " NAAC A" Grade | Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada
Pulladigunta(V), Vatticherukuru(M), Guntur(Dt), A.P.

IOT WORKSHOP

Day-4

ELECTRONIC COMMUNICATION & ENGINEERING[ECE]

ASSOCIATED BY :- **MAKE SKILLED**

MAKESKILLED
Innovations | Hackathons | Startups

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);
```

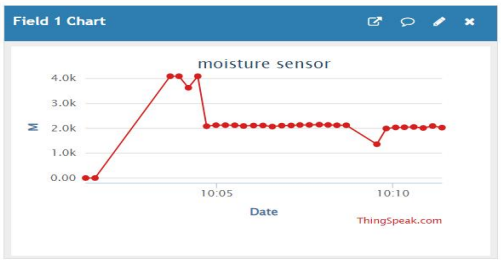
```
  if(status==200){
    Serial.println("data uploaded");
  }
  else{
    Serial.println("data failure");
  }
}
```

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.

Channel Stats

Created: a day ago
Last entry: about 10 hours ago
Entries: 30



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_AdQUFmucUHR5dI-9wewzn4n-rUX"


#include<WiFi.h>

#include<BlynkSimpleEsp32.h>

int gas = 35;

int threshold = 50;
```

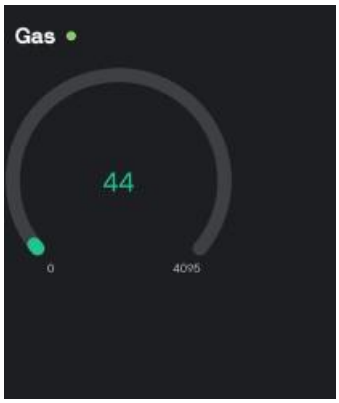
```
const char* ssid="Buddiii";
const char* password="6309846308";
char auth[] = BLYNK_AUTH_TOKEN;

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.

```
data failure
2096
Moisture detected
data failure
2096
Moisture detected
data failure
2102
Moisture detected
data failure
2095
Moisture detected
data failure
2097
Moisture detected
```




Thank You...