PROJECT DEVELOPMENT PHASE
SPRINT-2

Date	13 November 2022
Team ID	PNT2022TMID49939
Project Name	Smart farmer- IoT based smart farming application.

Code:

```
 #include <ESP8266WiFi.h>
 #include <ESP8266HTTPClient.h>
 #include <Adafruit_ADS1015.h>
 WiFiClient client;
 String thingSpeakAddress= "http://api.thingspeak.com/update?";
 String writeAPIKey;
 String tsfield1Name;
 String request_string;
 HTTPClient http;
 Adafruit_ADS1115 ads;
 void setup()
 {
 Serial.begin(115200);
 delay(3000);
 WiFi.disconnect();
 Serial.println("START");
 WiFi.begin("DESKTOP","asdfghjkl");
 // Wifi ("ID","Password") while ((!(WiFi.status() == WL_CONNECTED)))
{
 delay(300);
 Serial.println("...");
 }
 Serial.println("I AM CONNECTED");
 Serial.println("Hello!");
 Serial.println("Getting single-ended readings from AIN0..3");
 Serial.println("ADC Range: +/- 6.144V (1 bit = 3mV/ADS1015,
0.1875mV/ADS1115)");
 ads.begin();
 }
void loop()
 {
 int16_t adc0, adc1, adc2, adc3; Serial.println(" ");
 adc0 = ads.readADC_SingleEnded(0);
 adc0 = adc0 / 25; adc1 = ads.readADC_SingleEnded(1);
 adc1 = adc1 / 25; adc2 = ads.readADC_SingleEnded(2);
 adc2 = adc2 / 25; adc3 = ads.readADC_SingleEnded(3);
 adc3 = adc3 / 25;
 Serial.print("SOIL MOISTURE in persent 1% : ");
```

```
 Serial.println(adc0);
 Serial.print("SOIL MOISTURE in persent 2% : ");
 Serial.println(adc1);
 Serial.print("SOIL MOISTURE in persent 3% : ");
 Serial.println(adc2);
 Serial.print("SOIL MOISTURE in persent 4% : ");
 Serial.println(adc3);
 Serial.println(" ");
 If (client.connect("api.thingspeak.com",80))
 {
 request_string = thingSpeakAddress;
 request_string += "key=";
 request_string += "2YGO2FHN3XI3GFE7";
 request_string += "&";
 request_string += "field1";
 request_string += "=";
 request_string += adc0;
 http.begin(request_string);
 http.GET();
 http.end();
 }
 delay(10);
 if(client.connect("api.thingspeak.com",80))
 {
 request_string = thingSpeakAddress;
 request_string += "key=";
 request_string += "2YGO2FHN3XI3GFE7";
 request_string += "&";
 request_string += "field2";
 request_string += "=";
 request_string += adc1;
 http.begin(request_string);
 http.GET();
 http.end();
}
 delay(10);
 if (client.connect("api.thingspeak.com",80))
 {
 request_string = thingSpeakAddress;
 request_string += "key=";
 request_string += "2YGO2FHN3XI3GFE7";
 request_string += "&";
 request_string += "field3";
 request_string += "=";
 request_string += adc2;
 http.begin(request_string);
 http.GET(); http.end();
 }
```

```
delay(10);
if (client.connect("api.thingspeak.com",80))
{
request_string = thingSpeakAddress;
request_string += "key=";
request_string += "2YGO2FHN3XI3GFE7";
request_string += "&";
request_string += "field4";
request_string += "=";
request_string += adc3;
http.begin(request_string);
http.GET();
http.end();
}
delay(10);
}
```