MAJOR PROJECT
IOTandROBOTICS

Submitted by,

SARALA S

IR10B1

PROJECT QUESTION:

To Design a Fire Alarm Project where they have to use a combination of sensors like, Fire sensor, temperature sensor and gas/smoke sensor and then find a threshold value when you detect a fire and set that value to trigger a tweet when fire is detected.

Note: Participants can use any Hardware and/or Cloud platform of their choice.

CODE (ARDUINO IDE)

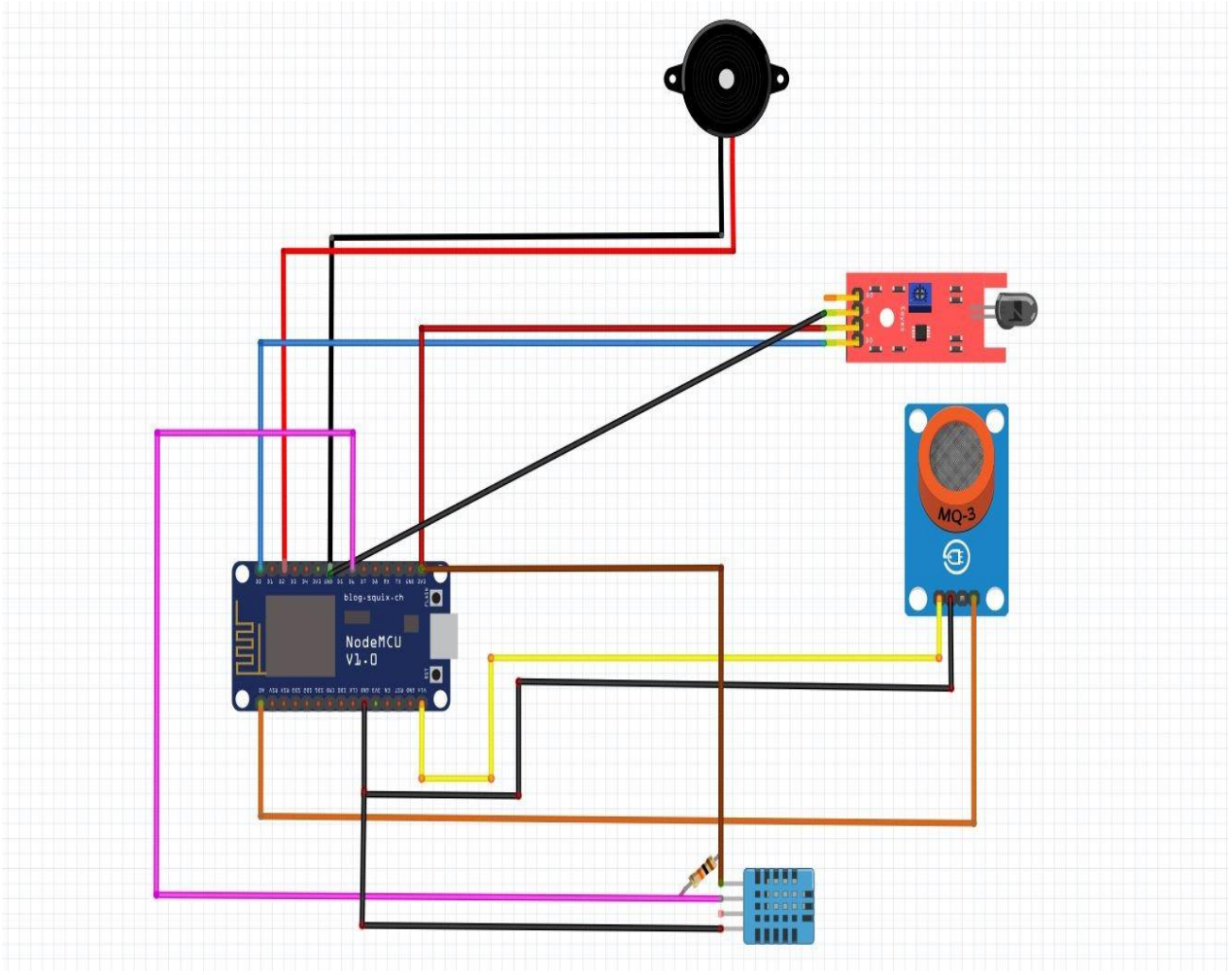
```
#include <DHT.h>
 #include <ESP8266WiFi.h>
 #include <WiFiClient.h>
 #include <ThingSpeak.h>
 #define DHTPIN D6
 #define DHTTYPE DHT11   DHT
dht(DHTPIN, DHTTYPE);
 int smoke;  const int flame = D0;
const int buzz = D2;   const char* ssid
```

```
= "GNXS-46665";   const char*
password = "123456780";   WiFiClient
client;
 unsigned long myChannelNumber = 1255530;   const
char * myWriteAPIKey = "ZQVO62SRG1M24S";
 uint8_t temperature;
void setup()
 {
  pinMode(flame,INPUT);
pinMode(buzz,OUTPUT);
Serial.begin(115200);
dht.begin();    delay(10);
  Serial.println();
  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(WiFi.localIP());
  ThingSpeak.begin(client);
```

```
}
 void loop()
{
  smoke=analogRead(A0);
  Serial.print("smoke value is:");
  Serial.print(smoke);
  ThingSpeak.writeField(myChannelNumber, 1, smoke,
myWriteAPIKey);
  int flme = digitalRead(flame);
  Serial.print("Flame value is:");
  Serial.print(flme);
  ThingSpeak.writeField(myChannelNumber, 2, flme, myWriteAPIKey);
temperature = dht.readTemperature();
 Serial.print("Temperature Value is :");
 Serial.print(temperature);
Serial.println("C");
ThingSpeak.writeField(myChannelNumber, 3,
temperature, myWriteAPIKey);

 if((smoke>300 && flme==0) || (smoke>300 && temperature>35.00) ||
(flme==0 && temperature>35.00) || (smoke>300 && temperature>35.00
&& flme==0))
 {
   ThingSpeak.writeField(myChannelNumber, 4,1, myWriteAPIKey);
   digitalWrite(buzz,HIGH);
 }
 else
 {
```

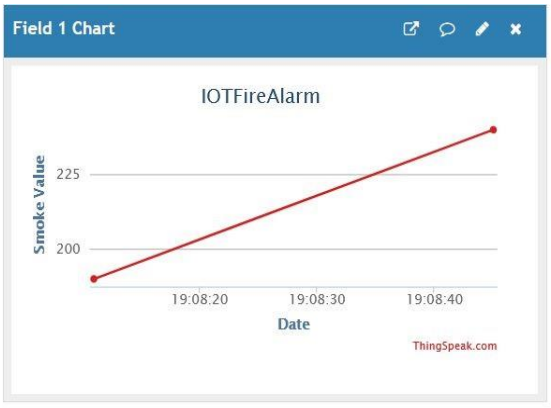
```
    ThingSpeak.writeField(myChannelNumber, 4,0, myWriteAPIKey);
digitalWrite(buzz,LOW);
  }
  delay(13000);
 }
```

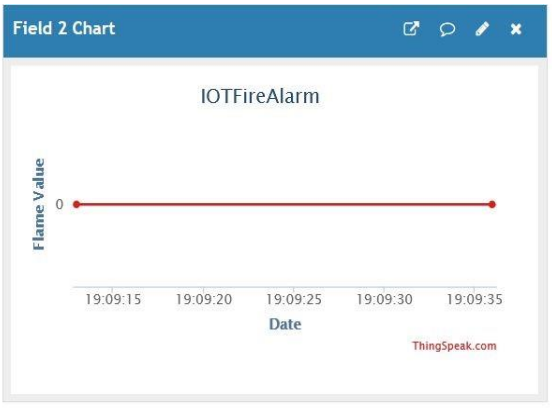
CIRCUIT DIAGRAM(FRITZING)

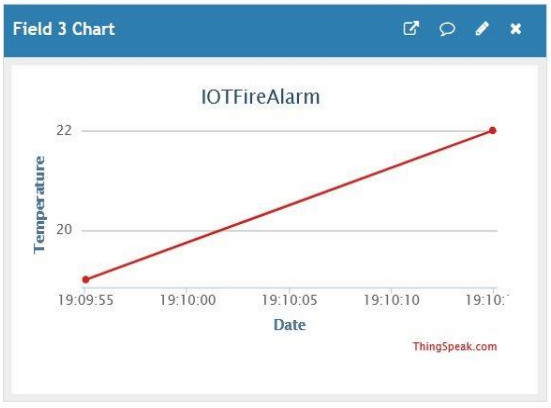


THINGSPEAK

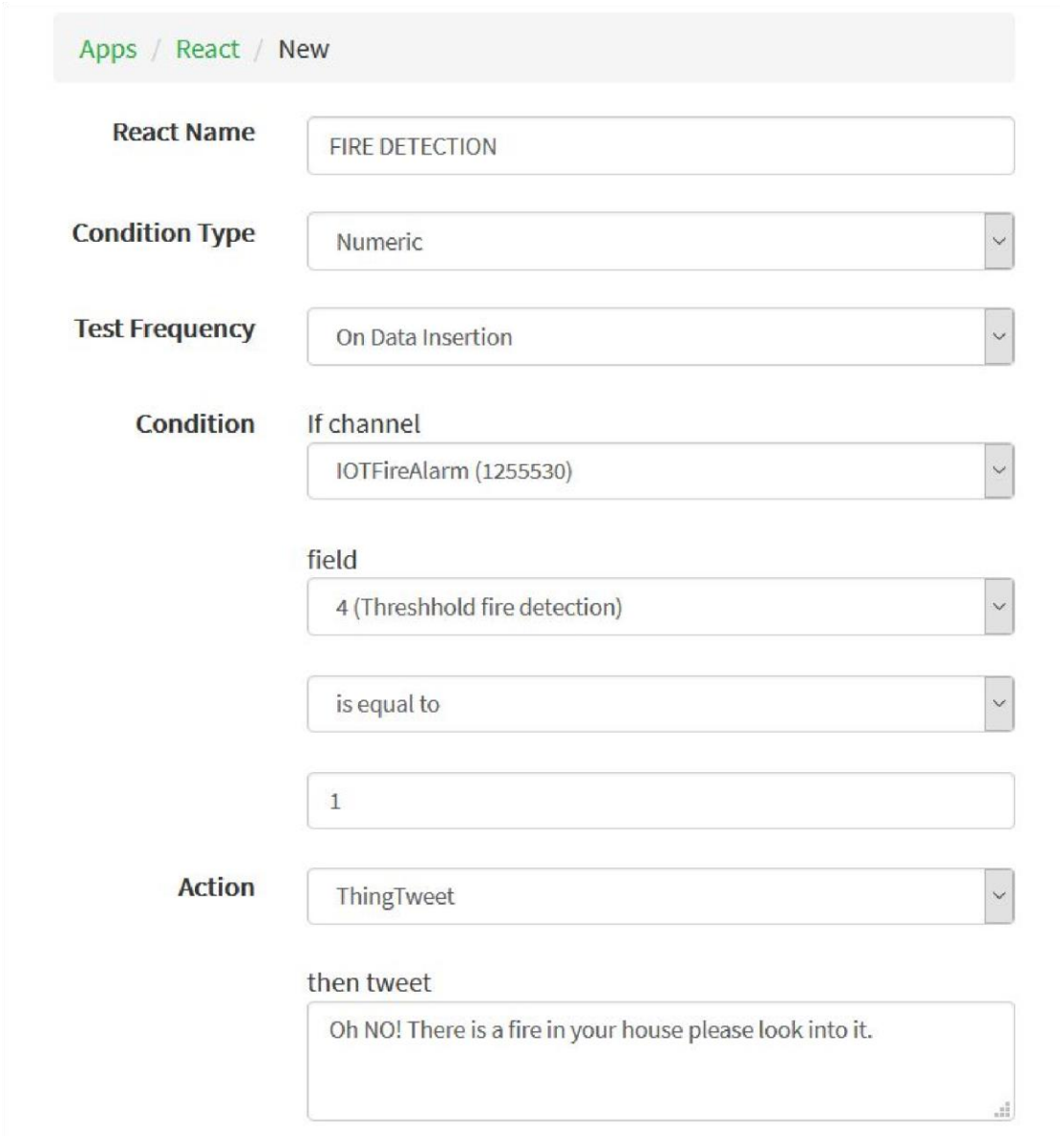
Step 1: Making of 4 Fields

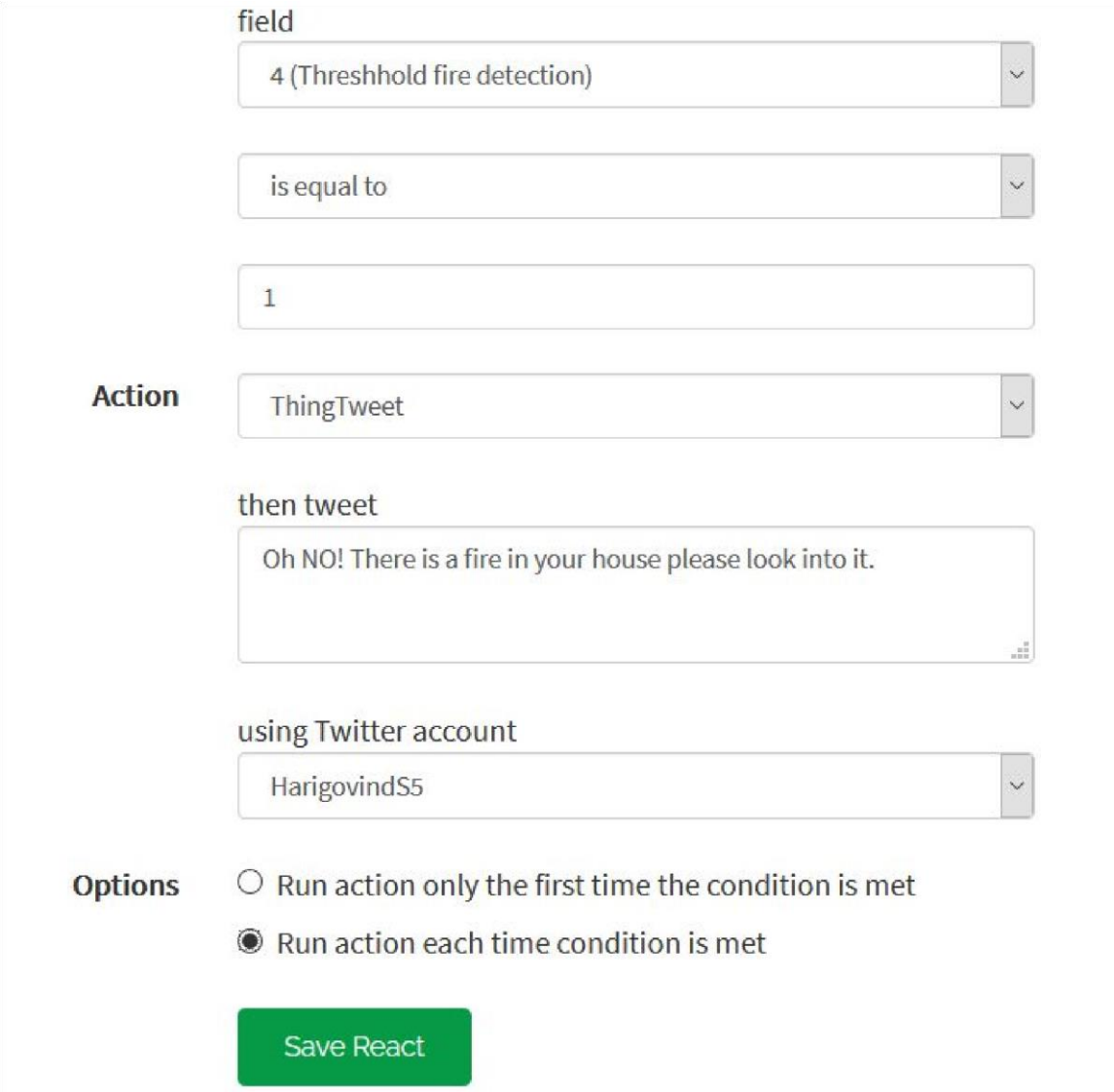






Step 2: Setting up React to send a tweet (ThingSpeak)




field
4 (Threshhold fire detection)
is equal to
1
Action
ThingTweet
then tweet
Oh NO! There is a fire in your house please look into it.
using Twitter account
HarigovindS5
Options
Run action only the first time the condition is met
Run action each time condition is met
Save React

RESULT


Harigovind S @HarigovindS5 · 7s
Oh NO! There is a fire in your house please look into it.