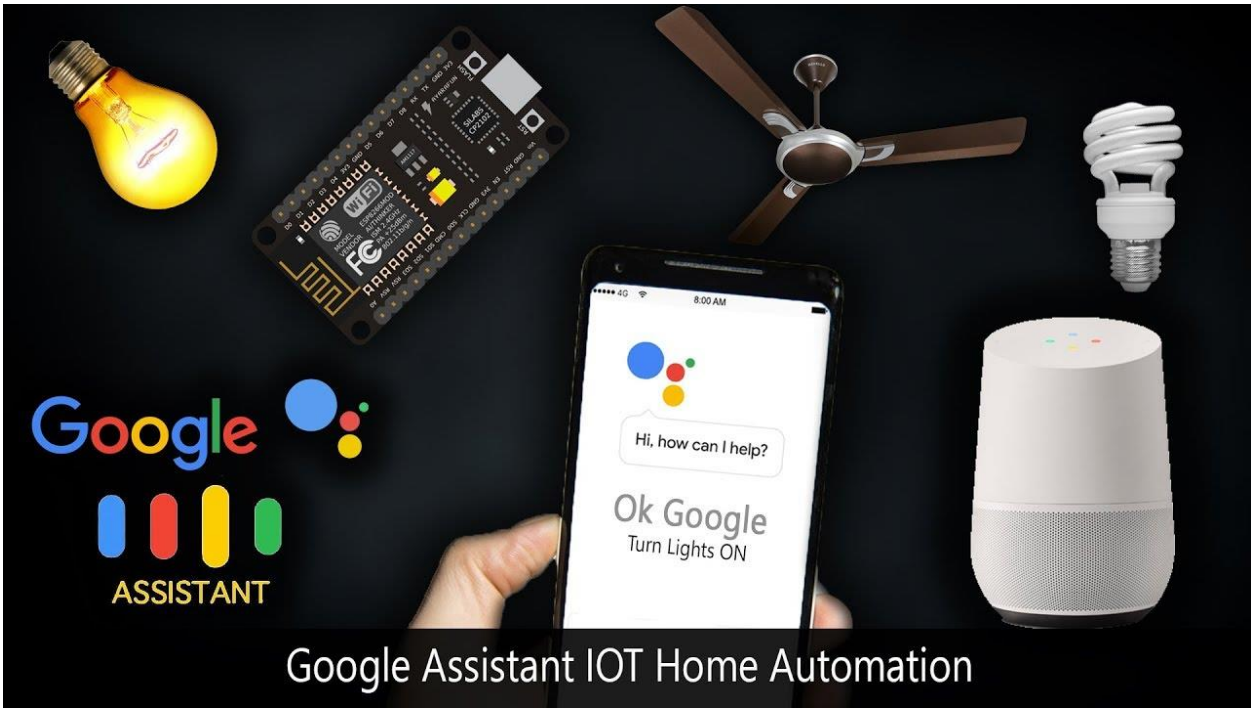
MAJOR PROJECT

IoT Controlled Smart Home



USING ARDUINO UNO, GOOGLE ASSISTANT,THINGSPEAK

- KASI VISWANATHAN S(IOT/ROBOTICS-MAY BATCH 1 ,Group IOT05B1)

Description:

This project first uses Google assistant to trigger a web request which will update a field in Thingspeak cloud . Then this data is read from the Thingspeak cloud using Arduino to control the appliances in your home from anywhere in the world.

To turn on the lights we have to say, ***Turn on the lights*** or ***Lights on*** using Google assistant .

To turn off the lights we have to say, ***Turn off the lights*** or ***Lights off*** using Google assistant ***.***

Required Components and Softwares:

1. Arduino UNO with cable

2. Esp8266(Wi-fi module)

3. 5v one channel relay

4. 220V bulb along with bulb holder

5. Jumper wires

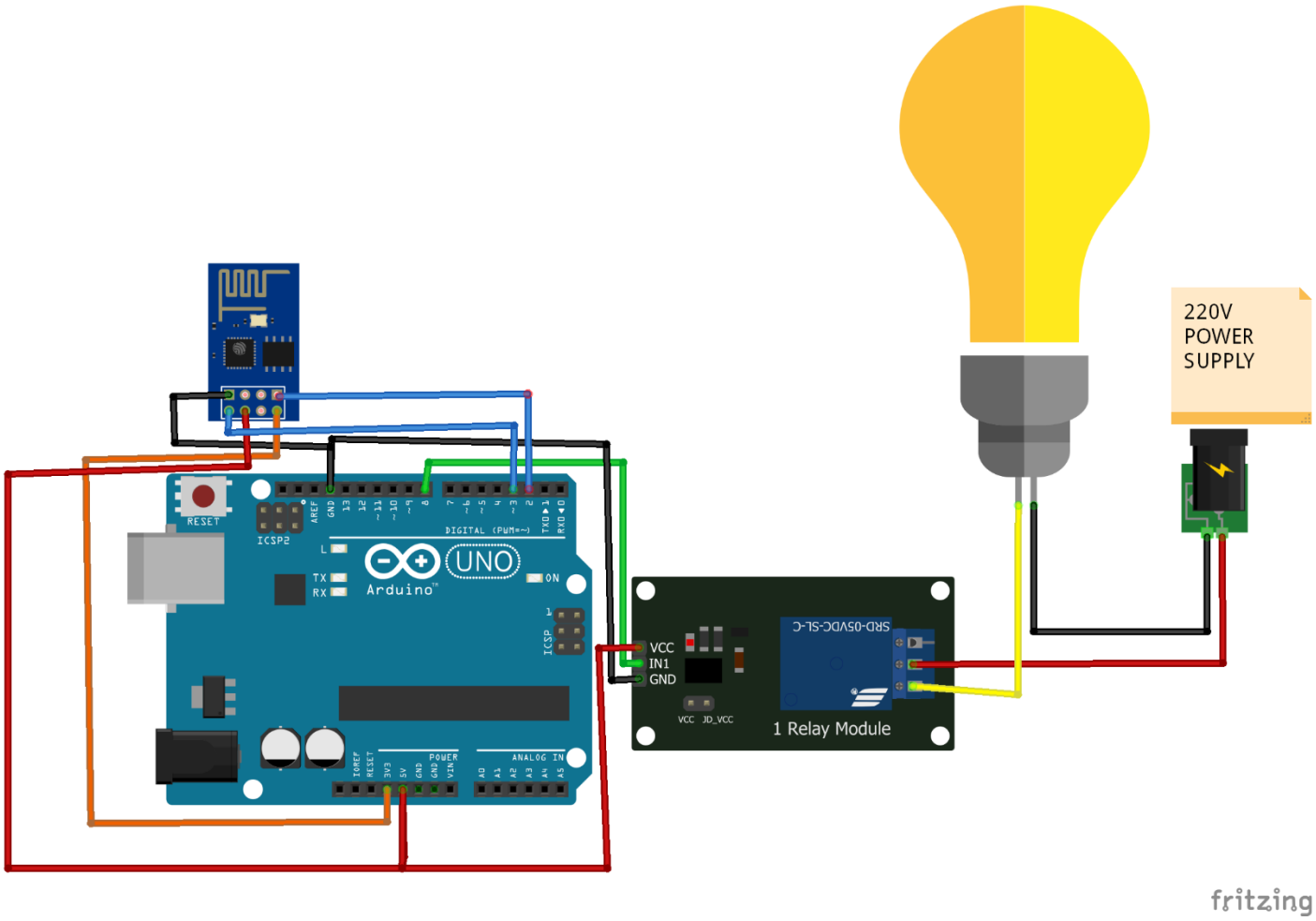
6.Google assistant

7.Thingspeak channel

8.IFTTT applets

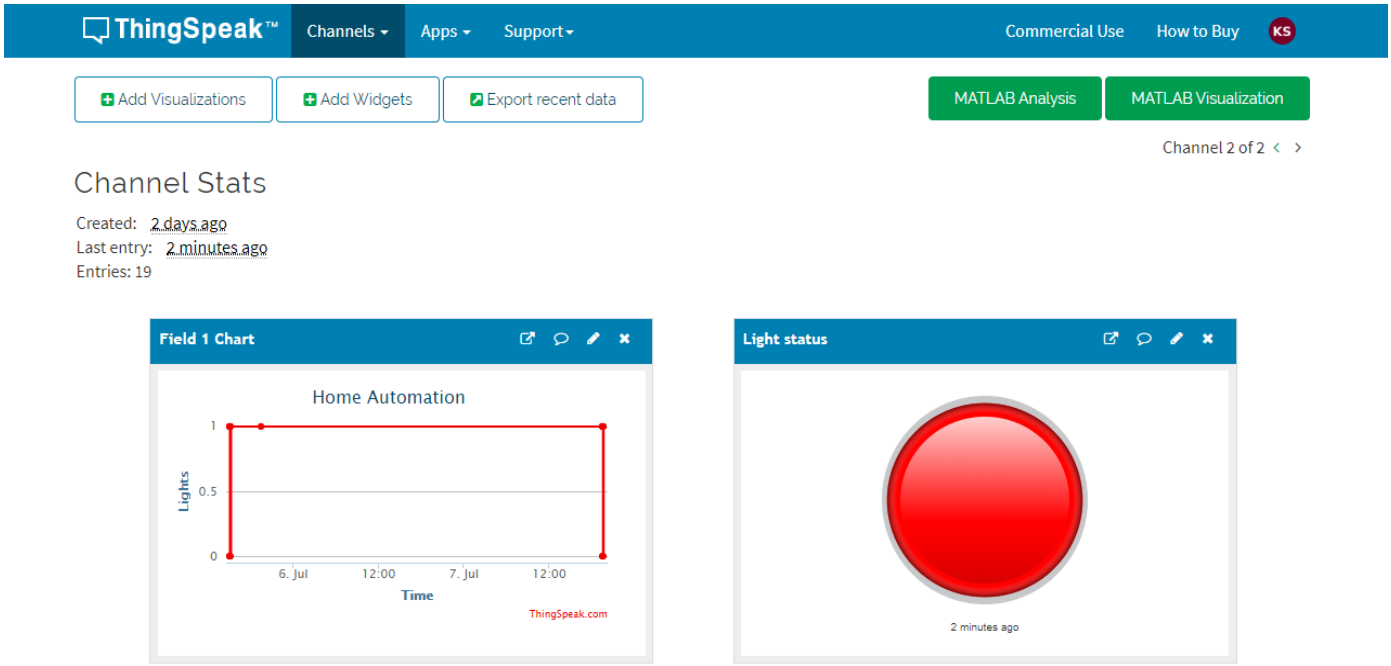
Circuit Diagram:

-Designed using Fritzing



Thingspeak Channel:

A channel named ‘home automation’ is created with field1 set as ‘light’.



IFTTT applets:

Source code:

```
#include <SoftwareSerial.h>
#define relay 8//Initializing relay pin
String Wifi_name="OPPO A5S";
String Password="Ka$i2002";
String getdata,data_recd;
int light_status=0;
SoftwareSerial esp(3,2);
void setup() {
  esp.begin(9600);
  pinMode(relay,OUTPUT);
  //Executing AT commands to setup connection
  esp.println("AT+RST");
  esp.println("AT+CWMODE=1");
  esp.println("AT+CWJAP=\""+Wifi_name+"\",\""+Password+"\"");
  while(!esp.find("OK"))
  {
//Waiting for connection
  }
  Serial.println("Connection Successful");
```

```
}

void loop() {
 getdata="GET
/channels/1094231/fields/1.json?api_key=G5RS7J0GJHXQJ94G&results
=1";
 esp.println("AT+CIPMUX=0");
 esp.println("AT+CIPSTART=\"TCP\",\"api.thingspeak.com\",80");
 esp.println("AT+CIPSEND="+String(getdata.length()));
 esp.find(">");
 esp.println(getdata);//Requesting data from Thingspeak cloud
 while(esp.available()==0)
 {  //Waiting for data to receive
 }
data_recd=esp.readStringUntil("\n");
 light_status=int(data_recd[data_recd.length()-5]);
 if(light_status==1)
 {digitalWrite(relay,HIGH);
 Serial.println("LIGHTS ON");}
 else
 {digitalWrite(relay,LOW);
 Serial.println("LIGHTS OFF"); }
```

```
esp.println(“AT+CIPCLOSE=0”);
delay(500); }
```