

```

String ssid  = "Simulator Wifi"; // SSID to connect to
String password = "";
String host   = "api.thingspeak.com";
const int httpPort = 80;
String url    = "/update?api_key=6YDIQZLVKXPQN7GL&field1=";

int setupESP8266(void) {
    // Start our ESP8266 Serial Communication
    Serial.begin(115200); // Serial connection over USB to computer
    Serial.println("AT"); // Serial connection on Tx / Rx port to ESP8266
    delay(10);           // Wait a little for the ESP to respond
    if (!Serial.find("OK")) return 1;

    // Connect to 123D Circuits Simulator Wifi
    Serial.println("AT+CWLAP=\"" + ssid + "\",\"" + password + "\"");
    delay(10);           // Wait a little for the ESP to respond
    if (!Serial.find("OK")) return 2;

    // Open TCP connection to the host:
    Serial.println("AT+CIPSTART=\"TCP\",\"" + host + "\",\" + httpPort);
    delay(50);           // Wait a little for the ESP to respond
    if (!Serial.find("OK")) return 3;

    return 0;
}

#include<LiquidCrystal.h>
LiquidCrystal lcd(12,11,5,4,3,2);

#include<Servo.h>;
Servo servo;

```

```
int air;

int motor=7;

int buzz=6;

int sprinkler=10;

int led=8;

int sensor=9;

int temp;

int pir;

float mois;

byte degree[8]={

    B00110,

    B01001,

    B01001,

    B00110,

    B00000,

    B00000

};


void setup(){

    lcd.begin(16,2);

    setupESP8266();

    Serial.begin(9600);

    pinMode(sensor,INPUT);

    pinMode(A0,INPUT);

    pinMode(A1,INPUT);

    pinMode(A2,INPUT);

    pinMode(buzz,OUTPUT);

    pinMode(sprinkler,OUTPUT);

    pinMode(motor,OUTPUT);

    pinMode(led,OUTPUT);
```

```
}
```

```
void senddata(void) {  
    int temp = map(analogRead(A0),20,358,-40,125);  
    // Construct our HTTP call  
    String httpPacket = "GET " + url + String(temp) + " HTTP/1.1\r\nHost: " + host + "\r\n\r\n";  
    int length = httpPacket.length();  
  
    // Send our message length  
    Serial.print("AT+CIPSEND=");  
    Serial.println(length);  
    delay(10); // Wait a little for the ESP to respond if (!Serial.find(">")) return -1;  
  
    // Send our http request  
    Serial.print(httpPacket);  
    delay(10); // Wait a little for the ESP to respond  
    if (!Serial.find("SEND OK\r\n")) return;  
}
```

```
void loop() {  
    senddata();  
    delay(20);  
    air=map(analogRead(A1),0,358,0,125);  
    temp=map(analogRead(A0),20,358,-40,125);  
    mois=map(analogRead(A2),0,5,0,1);  
  
    if(mois<0.5)  
    {  
        digitalWrite(motor,HIGH);  
    }
```

```

    lcd.setCursor(0,1);
    lcd.print("low moisture, Motor on");
    delay(10);
}
else if(temp>=75)
{
    digitalWrite(sprinkler,HIGH);
    digitalWrite(led,HIGH);
    delay(10);
}
else
{
    digitalWrite(sprinkler,LOW);
    digitalWrite(led,LOW);
    digitalWrite(motor,LOW);
}
}
pir=digitalRead(sensor);
if(pir==1)
{
    digitalWrite(buzz,HIGH);
}
else if(pir==0)
{
    digitalWrite(buzz,LOW);
}
}
//Temperature:
lcd.createChar(0,degree);
lcd.clear();
lcd.print("Temp:");
lcd.print(temp);
lcd.write(byte(0));

```

```
lcd.print("C");  
if(mois<0.5)  
{  
    lcd.setCursor(0,1);  
    lcd.print("low moisture, Motor on");  
}  
else if(temp>=75)  
{  
    lcd.setCursor(0,1);  
    lcd.print("FIRE! EVACUATE!!");  
}  
delay(1000);  
//Air Quality:  
lcd.clear();  
lcd.print("AirQ:");  
lcd.print(air);  
lcd.print("ppm");  
lcd.setCursor(0,1);  
//Door  
if(pir==1)  
{  
    lcd.print("Intruder");  
}  
}
```

