



CODE:-

```
#include <LiquidCrystal.h>

String ssid = "Simulator Wifi"; // SSID to connect to
String password = ""; // Our virtual wifi has no password
String host = "api.thingspeak.com"; // Open Weather Map API
const int httpPort = 80;
String url = "/update?api_key=ST0Y8FVZ65MZRTec&field1=";
float Temperature=0;
const int motor = 7;
const int LedRed=9 ;
const int LedGreen = 8;
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
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+CWJAP=\"" + 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;
}

void anydata(void) {

int value = map(analogRead(A0),20,358,-40,125);

Temperature = value * 500.0 / 1023.0;

// Construct our HTTP call

String httpPacket = "GET " + url + String(Temperature) + " 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 setup() {

  setupESP8266();

  Serial.begin(9600);

  lcd.begin(16, 2);

```

```
lcd.print("Automated Plant");  
lcd.setCursor(0,1);  
lcd.print("Watering System!");  
pinMode(motor, OUTPUT);  
pinMode(LedRed, OUTPUT);  
pinMode(LedGreen, OUTPUT);  
delay(2000);  
lcd.clear();  
lcd.print("Temp= ");  
    lcd.setCursor(0,1);  
lcd.print("WaterPump= ");  
}  
void loop() {  
    anydata();  
    lcd.setCursor(6,0);  
    lcd.print(Temperature);  
    lcd.setCursor(11,1);  
    if (Temperature > 30){  
        digitalWrite(motor, HIGH);  
        digitalWrite(LedRed, HIGH);  
        digitalWrite(LedGreen, LOW);  
        lcd.print("ON ");  
    }  
    else {  
        digitalWrite(motor, LOW);  
        digitalWrite(LedRed, LOW);  
        digitalWrite(LedGreen, HIGH);  
        lcd.print("OFF");  
    }  
    delay(1000);  
}
```