

Sri Lanka Institute of Information Technology



Lab Submission
<Worksheet No.9>

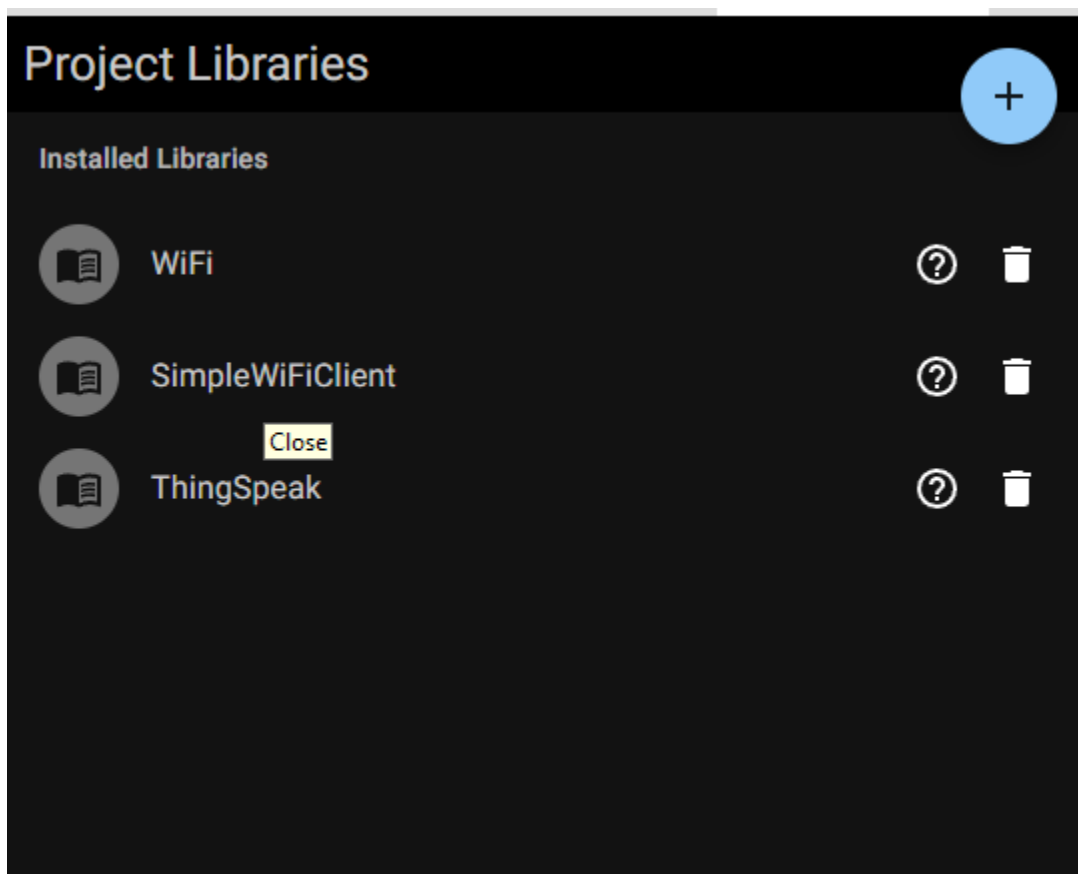
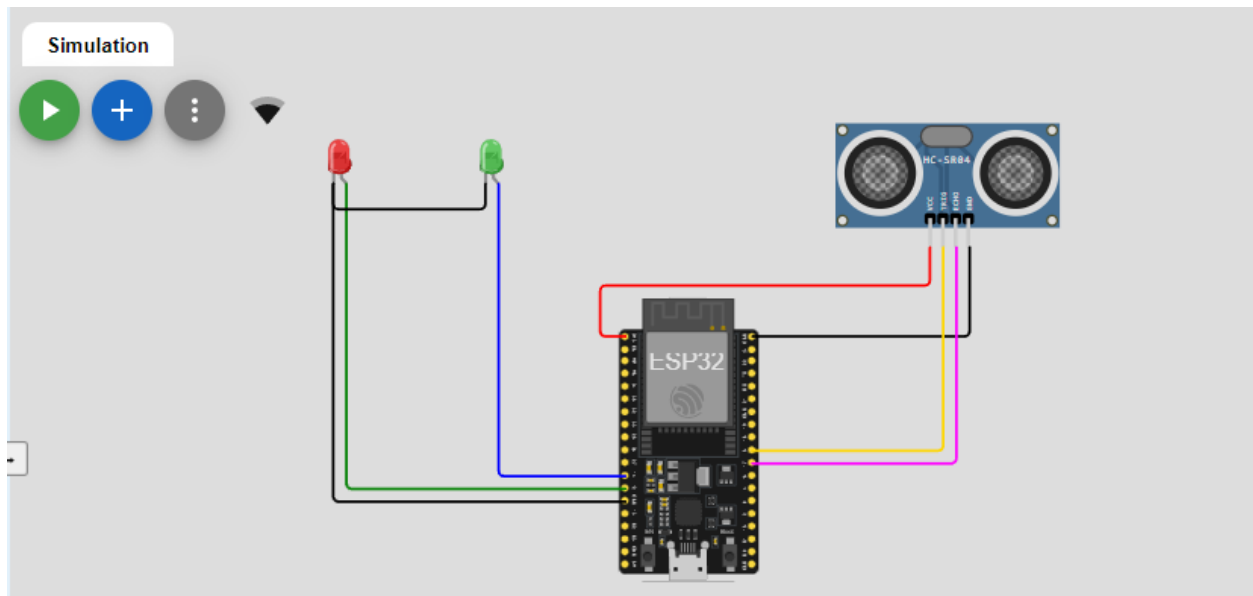
<IT24102555>

<Weerathunga B.A>

Fundamentals of Computing | IT1140

B.Sc. (Hons) in Information Technology

1.



sketch.ino • diagram.json • libraries.txt • Library Manager ▼

```
1  #include <WiFi.h>
2  #include <WiFiClient.h>
3  #include "ThingSpeak.h"
4  #define Low_LED_Pin 12
5  #define High_LED_Pin 14
6  #define PIN_TRIG 5
7  #define PIN_ECHO 17
8  const char* WIFI_NAME = "Wokwi-GUEST";
9  const char* WIFI_PASSWORD = "";
10 const int myChannelNumber =2692602 ;
11 const char* myApiKey = "GZUYT43YN36AXMQA";
12 const char* server = "api.thingspeak.com";
13 WiFiClient client;
14 void setup() {
15   Serial.begin(115200);
16   pinMode(Low_LED_Pin, OUTPUT);
17   pinMode(High_LED_Pin, OUTPUT);
18   pinMode(PIN_TRIG, OUTPUT);
19   pinMode(PIN_ECHO, INPUT);
20   WiFi.begin(WIFI_NAME, WIFI_PASSWORD);
21   ThingSpeak.begin(client);
22 }
23 void loop() {
24   digitalWrite(PIN_TRIG, HIGH);
25   delayMicroseconds(10);
26   digitalWrite(PIN_TRIG, LOW);
27   int duration = pulseIn(PIN_ECHO, HIGH);
28   int distance = duration / 58;
29   Serial.print("Distance in CM: ");
```

sketch.ino • diagram.json • libraries.txt • Library Manager ▼

```
20  WiFi.begin(WIFI_NAME, WIFI_PASSWORD);
21  ThingSpeak.begin(client);
22  }
23  void loop() {
24    digitalWrite(PIN_TRIG, HIGH);
25    delayMicroseconds(10);
26    digitalWrite(PIN_TRIG, LOW);
27    int duration = pulseIn(PIN_ECHO, HIGH);
28    int distance = duration / 58;
29    Serial.print("Distance in CM: ");
30    Serial.println(distance);
31    ThingSpeak.setField(1,distance);
32    ThingSpeak.writeFields(myChannelNumber,myApiKey);
33    if (distance < 20) {
34      digitalWrite(High_LED_Pin, HIGH);
35      digitalWrite(Low_LED_Pin, LOW);
36    }
37    else if (distance >300){
38      digitalWrite(Low_LED_Pin, HIGH);
39      digitalWrite(High_LED_Pin, LOW);
40    }
41    else{
42      digitalWrite(High_LED_Pin, LOW);
43      digitalWrite(Low_LED_Pin, LOW);
44    }
45    delay(1000);
46  }
```

lab09

Channel ID: 2692602

Author: mwa0000035495625

Access: Private

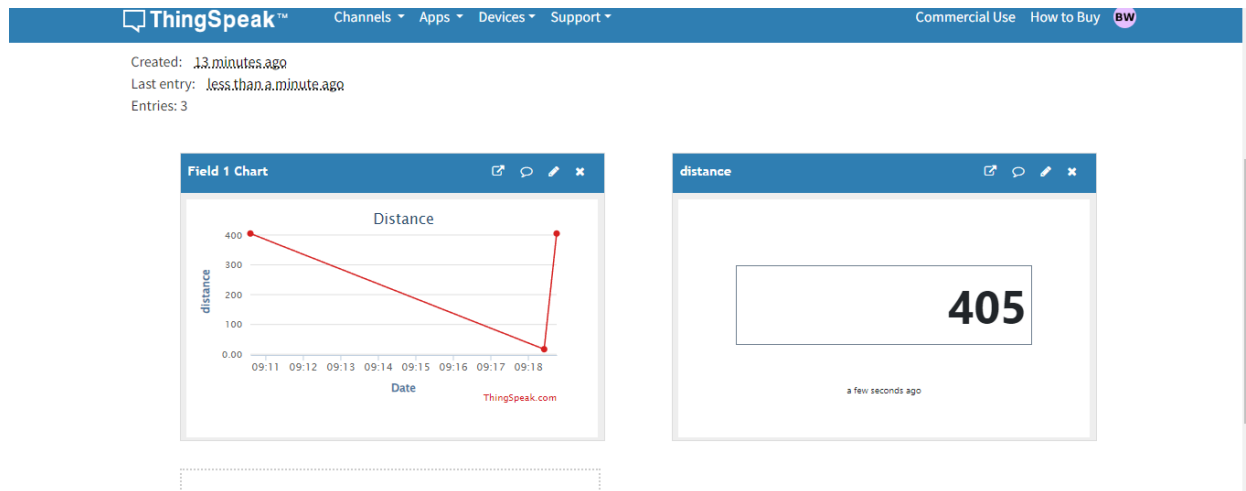
[Private View](#)[Public View](#)[Channel Settings](#)[Sharing](#)[API Keys](#)

Write API Key

Key

GZUYT43YN36AXMQA

Generate New Write API Key



Simulation

00:08.645 34%

```

load:0x40078000,len:11456
ho 0 tail 12 room 4
load:0x40080400,len:2972
entry 0x400805dc
Distance in CM: 405
Distance in CM: 405
Distance in CM: 405

```

Simulation

00:22.302 51%

```

Distance in CM: 405
Distance in CM: 405
Distance in CM: 405
Distance in CM: 405
Distance in CM: 405
Distance in CM: 17
Distance in CM: 17

```