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**IOT Lab 06: IOT platform with ESP 8266.**

**Roll No. BE051**

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**Code for Blynk App:**

#include <ESP8266WiFi.h>

#define BLYNK\_PRINT Serial

#include <BlynkSimpleEsp8266.h>

#include <Servo.h>

Servo myservo;

int servo\_position = 0;

char auth[] = "ee2d64a1ace94119a31d5d5ff3a79bc0";

char ssid[] = "indra007";

char pass[] = "indra007";

#define ledPin D7

#define pirPin D1

int pirValue;

void setup()

{

Serial.begin(115200);

delay(10);

Blynk.begin(auth, ssid, pass);

pinMode(ledPin, OUTPUT);

pinMode(pirPin, INPUT);

digitalWrite(ledPin, LOW);

myservo.attach(D2);

}

void loop()

{

getPirValue();

Blynk.run();

}

void getPirValue(void)

{

pirValue = digitalRead(pirPin);

if (pirValue)

{

Serial.println("==> Motion detected");

Blynk.notify("T==> Motion detected");

digitalWrite(ledPin, pirValue);

for (servo\_position = 0; servo\_position <= 180; servo\_position += 1)

{

myservo.write(servo\_position);

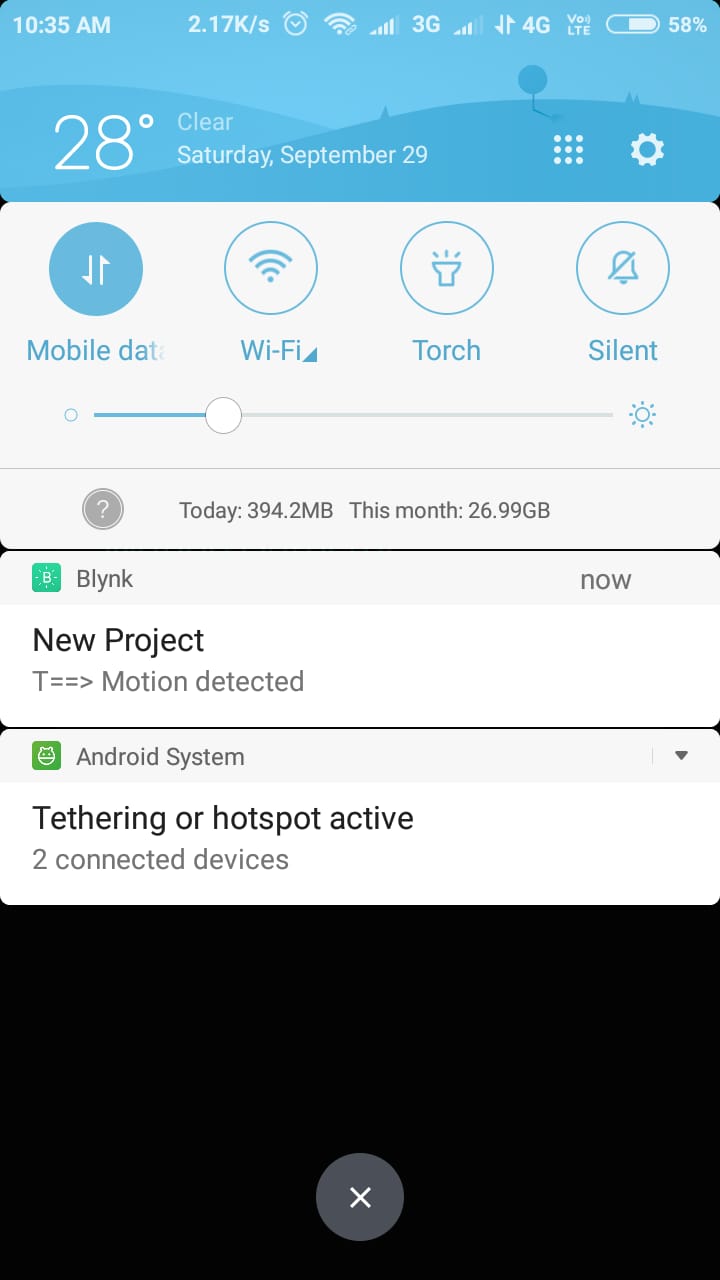
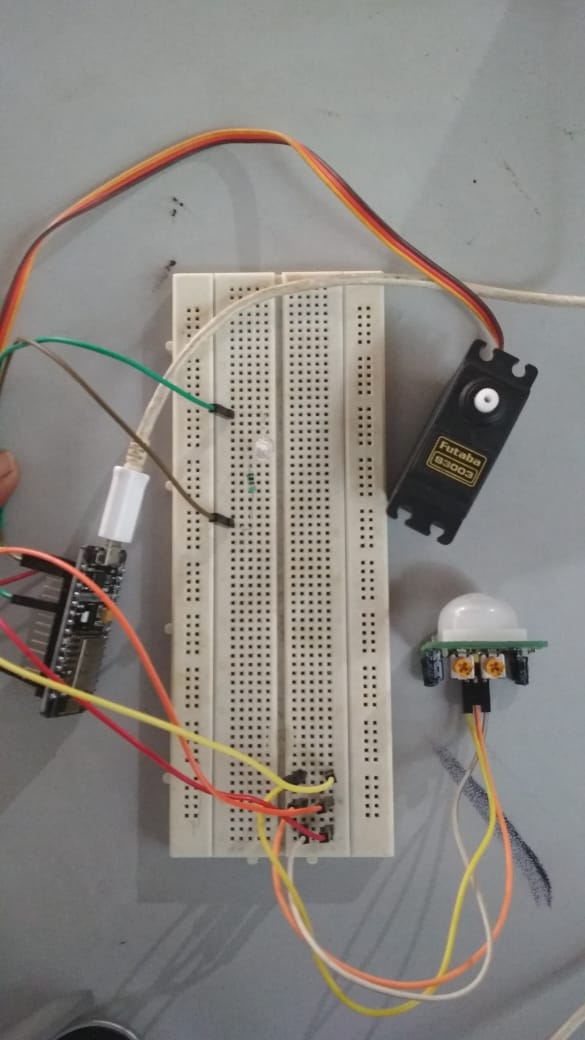
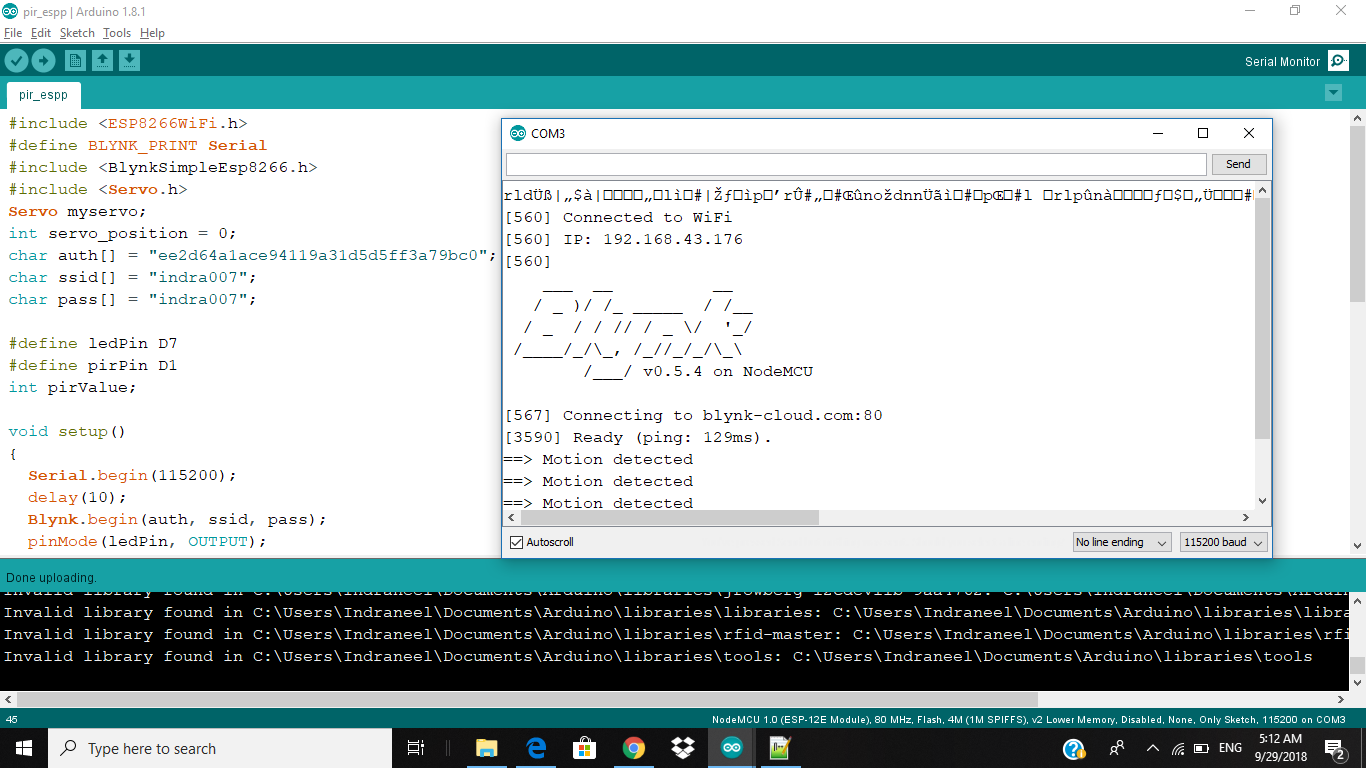
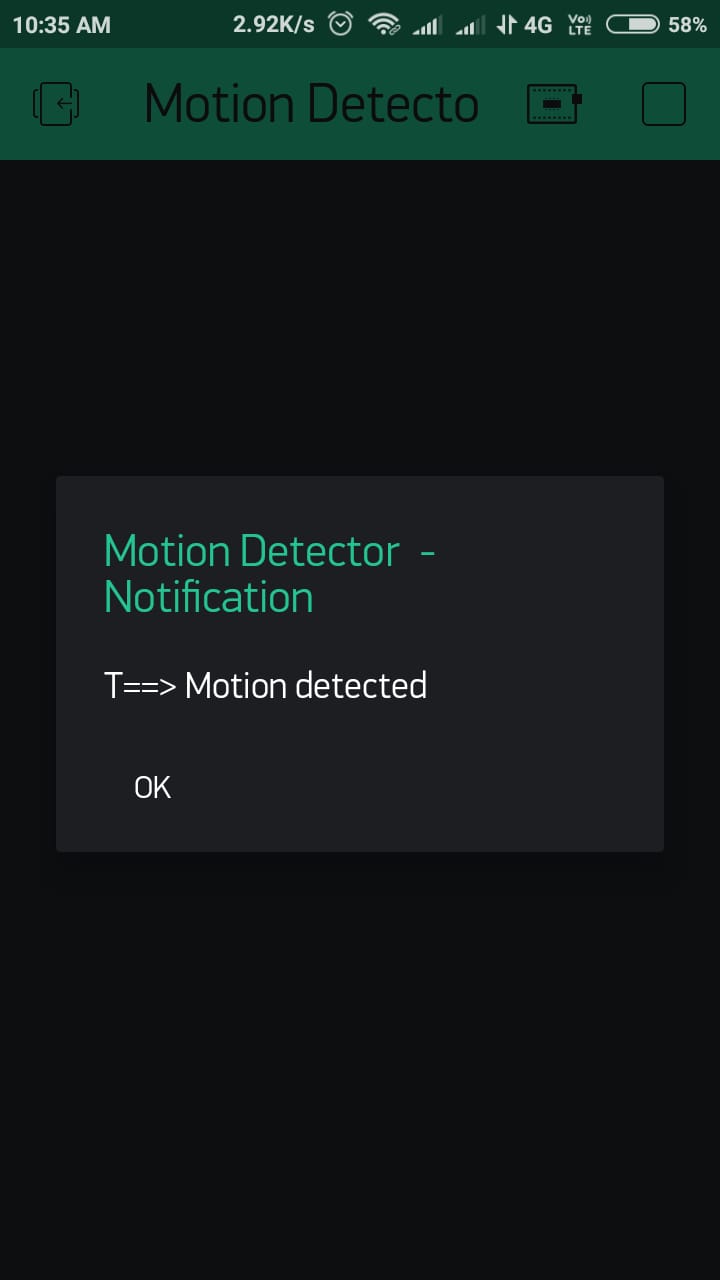
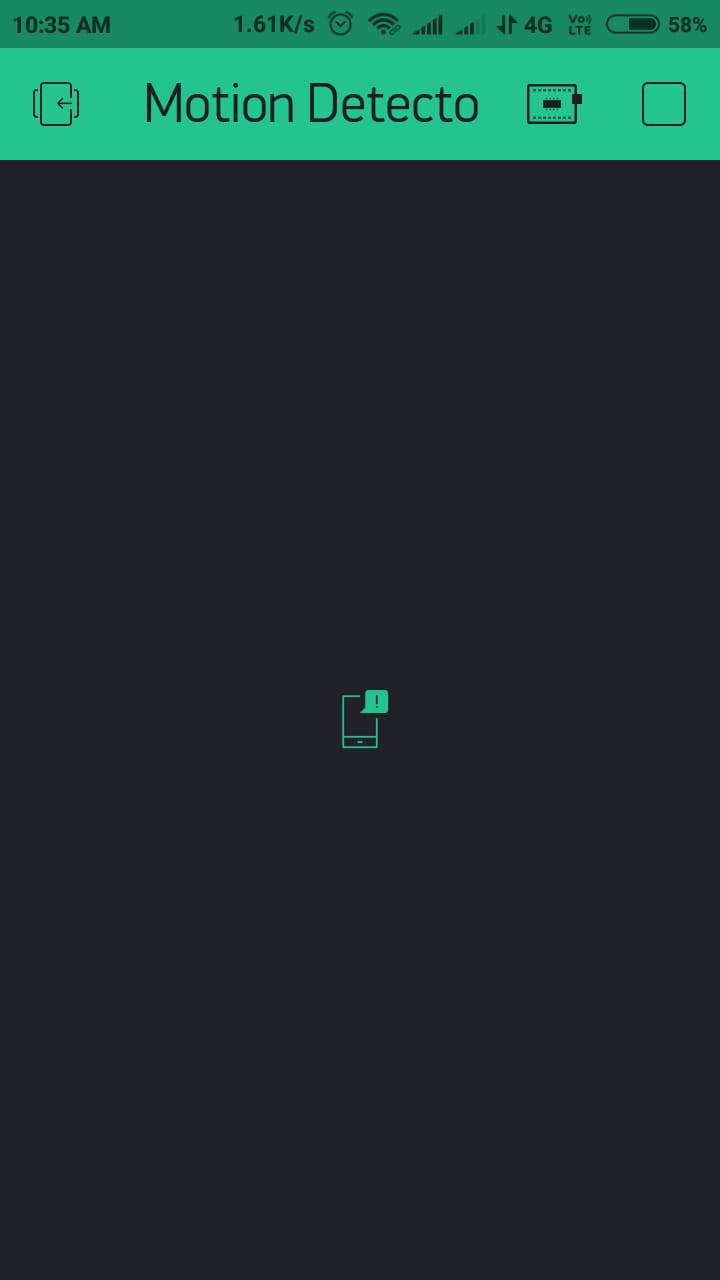
delay(15);

}

}

}

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**Screenshots and Photograph:**   

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**Code for Thingspeak:**

#include <DHT.h>

#include <ESP8266WiFi.h>

String apiKey = "IUPB592RGAXFE6FG";

const char \*ssid = "indra007";

const char \*pass = "indra007";

const char\* server = "api.thingspeak.com";

#define DHTPIN 0

DHT dht(DHTPIN, DHT11);

WiFiClient client;

void setup()

{

Serial.begin(115200);

delay(10);

dht.begin();

Serial.println("Connecting to ");

Serial.println(ssid);

WiFi.begin(ssid, pass);

while (WiFi.status() != WL\_CONNECTED)

{

delay(500);

Serial.print(".");

}

Serial.println("");

Serial.println("WiFi connected");

}

void loop()

{

float h = dht.readHumidity();

float t = dht.readTemperature();

if (isnan(h) || isnan(t))

{

Serial.println("Failed to read from DHT sensor!");

return;

}

if (client.connect(server, 80))

{

String postStr = apiKey;

postStr += "&field1=";

postStr += String(t);

postStr += "&field2=";

postStr += String(h);

postStr += "\r\n\r\n";

client.print("POST /update HTTP/1.1\n");

client.print("Host: api.thingspeak.com\n");

client.print("Connection: close\n");

client.print("X-THINGSPEAKAPIKEY: " + apiKey + "\n");

client.print("Content-Type: application/x-www-form-urlencoded\n");

client.print("Content-Length: ");

client.print(postStr.length());

client.print("\n\n");

client.print(postStr);

Serial.print("Temperature: ");

Serial.print(t);

Serial.print(" degrees Celcius, Humidity: ");

Serial.print(h);

Serial.println("%. Send to Thingspeak.");

}

client.stop();

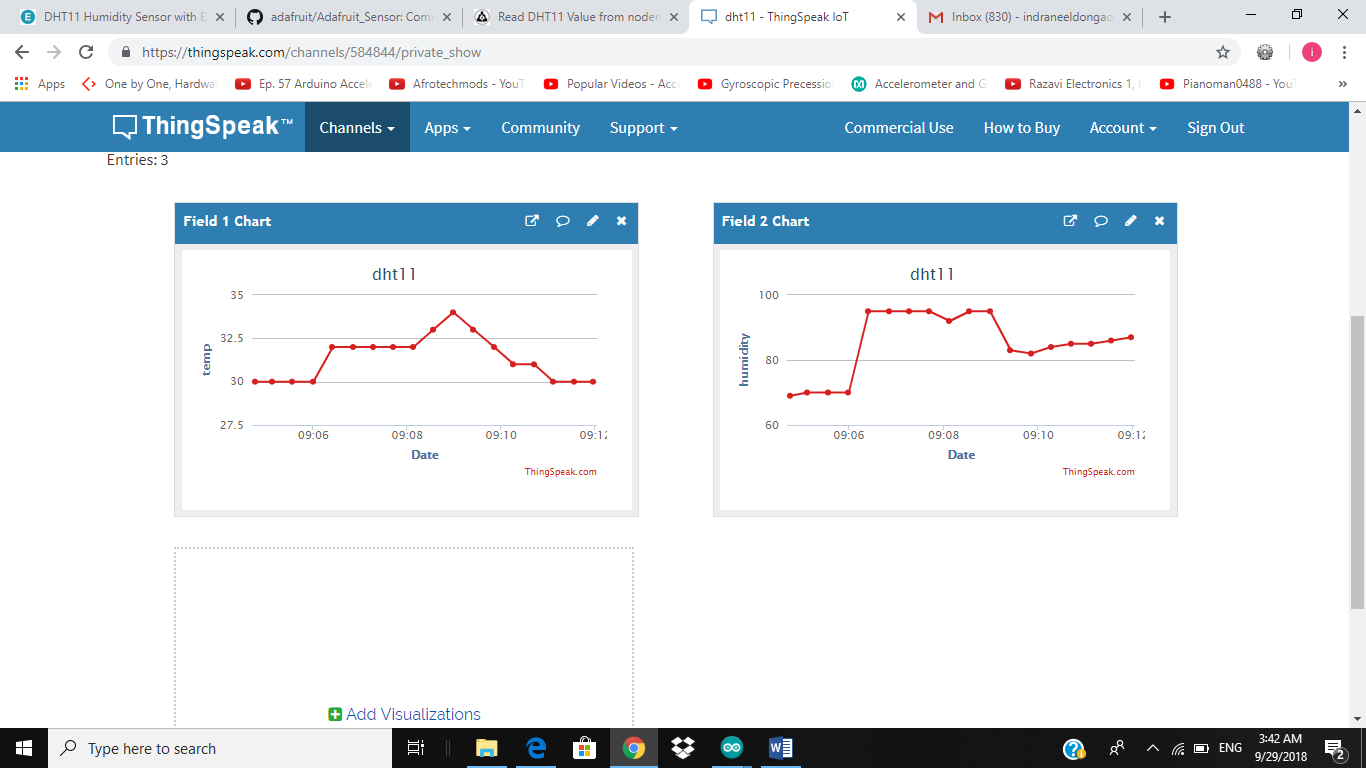
Serial.println("Waiting...");

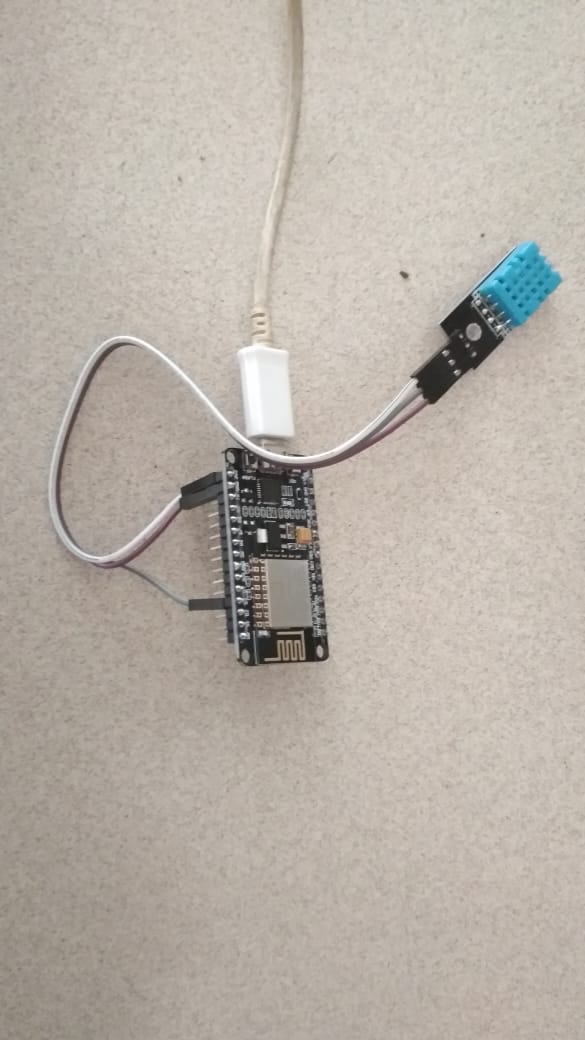
delay(10000);

}­­

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**Photographs and screenshots:**

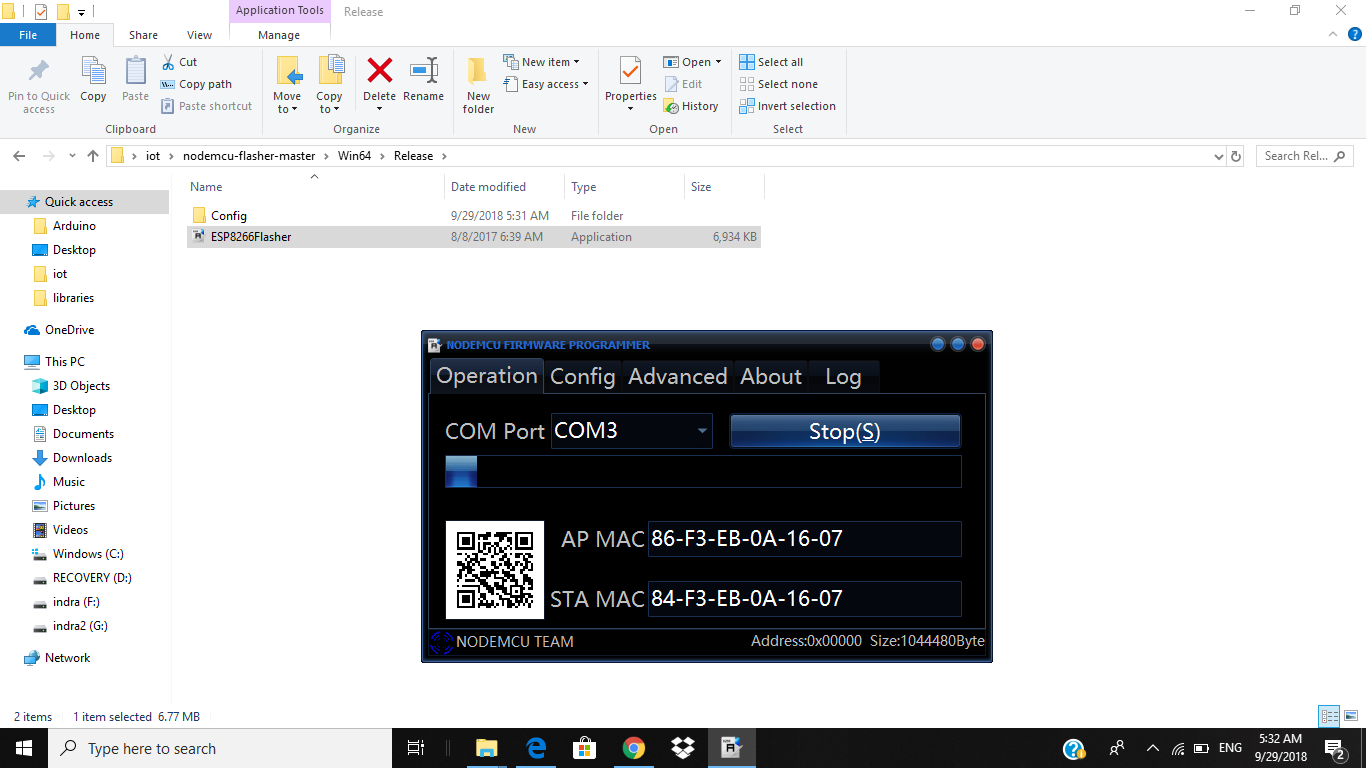


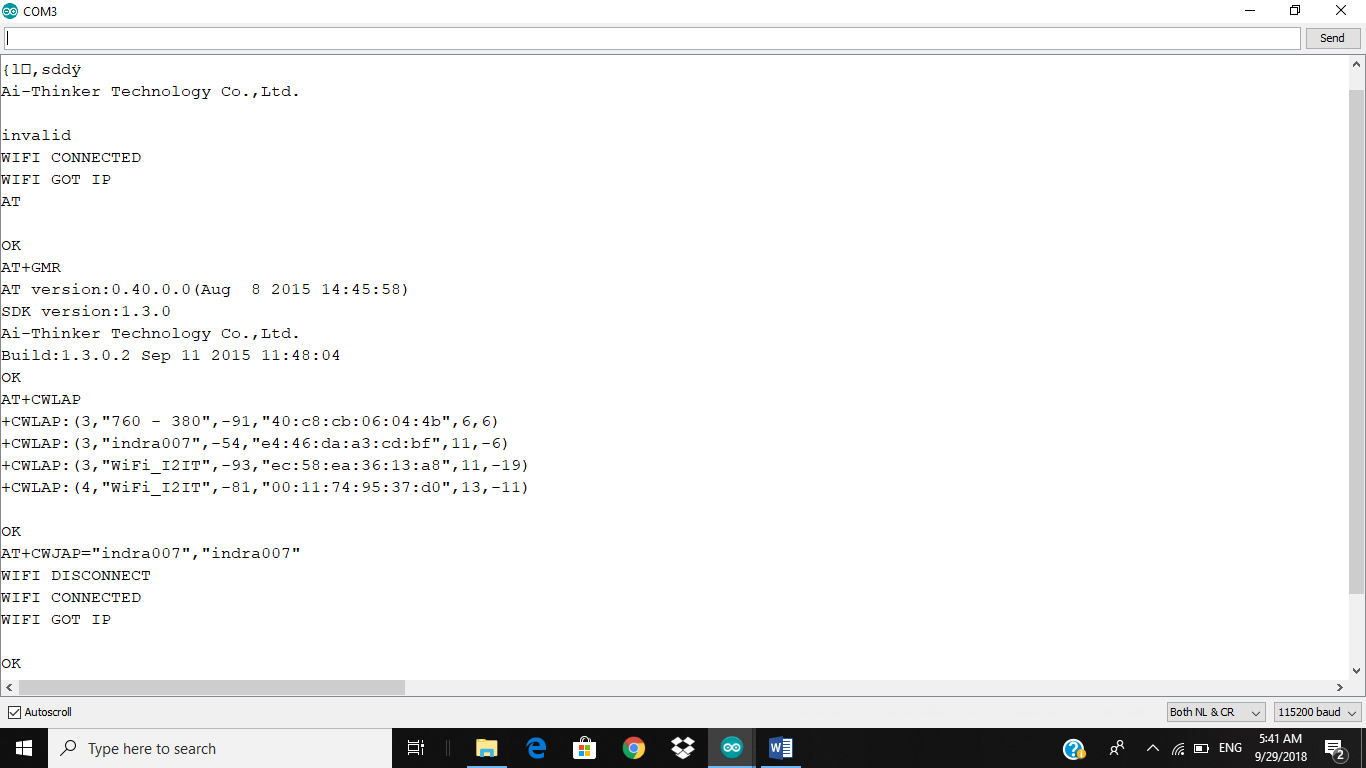


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**AT Commands:**

**Flasher Tool:**





Ai-Thinker Technology Co.,Ltd.

ready

AT

OK

AT+GMR

AT version:0.40.0.0(Aug  8 2015 14:45:58)

SDK version:1.3.0

Ai-Thinker Technology Co.,Ltd.

Build:1.3.0.2 Sep 11 2015 11:48:04

OK

AT+CWLAP

+CWLAP:(3,"solesurvivor",-63,"e4:46:da:bb:e0:47",1,16)

+CWLAP:(0,"AI-THINKER\_813DDC",-54,"86:f3:eb:81:3d:dc",1,13)

+CWLAP:(0,"BIZZ TAMANNA",-89,"78:d3:8d:d5:3c:d0",1,11)

+CWLAP:(0,"BIZZ TAMANNA",-89,"78:d3:8d:ec:2c:aa",1,-14)

+CWLAP:(0,"BIZZ TAMANNA",-92,"78:d3:8d:d5:32:64",1,3)

+CWLAP:(3,"WiFi\_I2IT",-92,"ec:58:ea:35:33:f8",1,10)

+CWLAP:(0,"BIZZ TAMANNA",-89,"78:d3:8d:d5:3d:84",6,3)

+CWLAP:(3,"Le Bhikari Le!",-58,"c0:ee:fb:55:ad:52",6,6)

+CWLAP:(0,"BIZZ TAMANNA",-91,"78:d3:8d:d5:3d:70",6,0)

+CWLAP:(0,"BIZZ TAMANNA",-90,"78:d3:8d:d5:32:08",6,6)

+CWLAP:(3,"indra007",-47,"e4:46:da:a3:cd:bf",11,16)

+CWLAP:(0,"BIZZ TAMANNA",-91,"78:d3:8d:d5:3d:5c",11,6)

+CWLAP:(3,"WiFi\_I2IT",-83,"ec:58:ea:36:13:a8",11,3)

+CWLAP:(3,"WiFi\_I2IT",-89,"ec:58:ea:36:16:08",11,6)

OK

AT+CWJAP="indra007","indra007"

WIFI CONNECTED

WIFI GOT IP

OK

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delay(15);

}

}

}

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**Screenshots and Photograph:** 