Project 16:

Send Notifications to Your Phone From an WeMos

1. Introduction

how to send notifications to your phone from your Wemos when programing with Arduino IDE.

This can be very useful if you want the device to notify when a sensor is triggered (Soil moisture sensor, Temperature sensor) or certain criteria for a sensor is met (e.g. dropped below a certain temperature).

I'm going to show you two ways to do this, using Telegram messenger and IFTTT. Both of these methods are completely free to use.

COMPONENTS:-

1.WEMOS

2.PUSH BOUTTON

3.RESISTER

APPLICATIONS: -

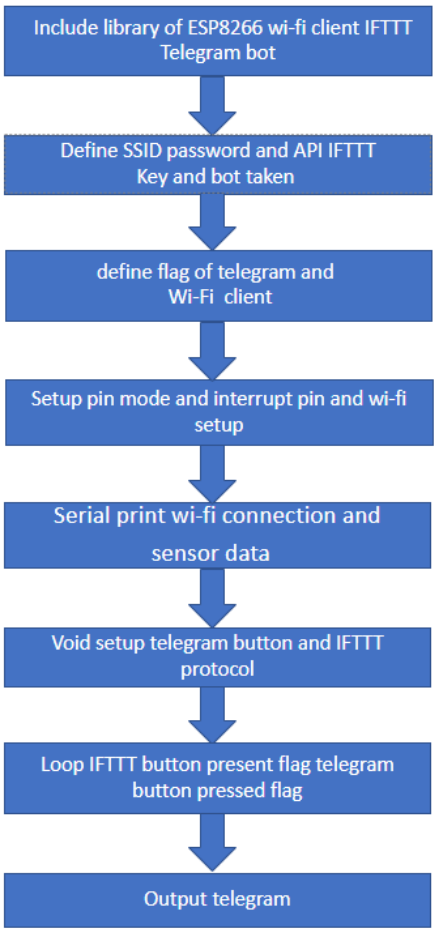
1. Install and run the app on the target device.

2. Make sure the app is in the background on the device.
1. Open the Notifications composer and select new notification.
2. Enter the message text.
3. Select Send test message.

OBJECTIVES: -

Provide enough information: The purpose behind a notification is to inform about an event and encourage him to take action. But, for that, he needs enough information. So, make sure that your notification has enough information to help him understand the purpose of notification and what needs to be done.

FLOW CHART :-



PROGRAMMING: -

```
#include <UniversalTelegramBot.h>
#include <IFTTTMaker.h>

#include <ESP8266WiFi.h>
#include <WiFiClientSecure.h>

//------- WiFi Settings -------
char ssid[] = "xxx";       // your network SSID (name)
```

```
char password[] = "yyyy";  // your network key


#define TELEGRAM_BUTTON_PIN D5
#define IFTTT_BUTTON_PIN D6



// ------- IFTTT Maker config --------
#define KEY "zzzzzzzzzzzzzzzzzzzzzz"  // Get it from this page https://ifttt.com/services/maker/settings
#define EVENT_NAME "button_pressed" // Name of your event name, set when you are creating the applet


// ------- Telegram config --------
#define BOT_TOKEN "XXXXXXXXX:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  // your Bot Token (Get from Botfather)
#define CHAT_ID "-128380507" // Chat ID of where you want the message to go (You can use MyIdBot to get the chat ID)


// SSL client needed for both libraries
WiFiClientSecure client;


IFTTTMaker ifttt(KEY, client);
UniversalTelegramBot bot(BOT_TOKEN, client);


String ipAddress = "";
```

```
volatile bool telegramButtonPressedFlag = false;
volatile bool iftttButtonPressedFlag = false;

void setup() {

  Serial.begin(115200);

  // Initlaze the buttons
  pinMode(TELEGRAM_BUTTON_PIN, INPUT);
  pinMode(IFTTT_BUTTON_PIN, INPUT);

  // NOTE:
  // It is important to use interupts when making network calls in your sketch
  // if you just checked the status of te button in the loop you might
  // miss the button press.
  attachInterrupt(TELEGRAM_BUTTON_PIN, telegramButtonPressed, RISING);
  attachInterrupt(IFTTT_BUTTON_PIN, iftttButtonPressed, RISING);

  // Set WiFi to station mode and disconnect from an AP if it was Previously
  // connected
  WiFi.mode(WIFI_STA);
  WiFi.disconnect();
  delay(100);
```

```
  // Attempt to connect to Wifi network:
  Serial.print("Connecting Wifi: ");
  Serial.println(ssid);
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED) {
    Serial.print(".");
    delay(500);
  }
  Serial.println("");
  Serial.println("WiFi connected");
  Serial.println("IP address: ");
  IPAddress ip = WiFi.localIP();
  Serial.println(ip);

  ipAddress = ip.toString();

}

void telegramButtonPressed() {
  Serial.println("telegramButtonPressed");
  int button = digitalRead(TELEGRAM_BUTTON_PIN);
  if(button == HIGH)
  {
    telegramButtonPressedFlag = true;
```

```
  }
  return;
}


void iftttButtonPressed() {
  Serial.println("iftttButtonPressed");
  int button = digitalRead(IFTTT_BUTTON_PIN);
  if(button == HIGH)
  {
    iftttButtonPressedFlag = true;
  }
  return;
}

void triggerIftttEvent() {
  if(ifttt.triggerEvent(EVENT_NAME, ssid, ipAddress)){
    Serial.println("IFTTT Successfully sent");
  }
  iftttButtonPressedFlag = false;
}

void sendTelegramMessage() {
  String message = "SSID:  ";
  message.concat(ssid);
```

```
  message.concat("\n");
  message.concat("IP: ");
  message.concat(ipAddress);
  message.concat("\n");
  if(bot.sendMessage(CHAT_ID, message, "Markdown")){
    Serial.println("TELEGRAM Successfully sent");
  }
  telegramButtonPressedFlag = false;
}

void loop() {
  if ( iftttButtonPressedFlag ) {
    triggerIftttEvent();
  }

  if ( telegramButtonPressedFlag ) {
    sendTelegramMessage();
  }
```

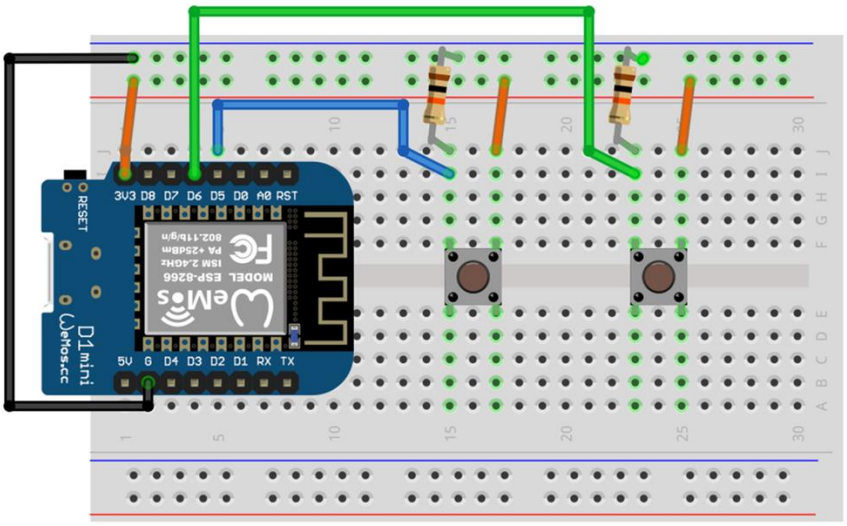
HARDWARE CONNECTION: -

1.connect button 1 button 2 and wemos

2.connect pin 5v to D6

3.Connect GND to GND

CIRCUIT DIAGRAM: -


3V3 D8 D7 D6 D5 D0 A0 RST
RESET
MODEL ESP-8266
ISM 2.4GHz
PA +25dBm
802.11b/g/n
D1 mini
5V G D4 D3 D2 D1 RX TX

fritzing