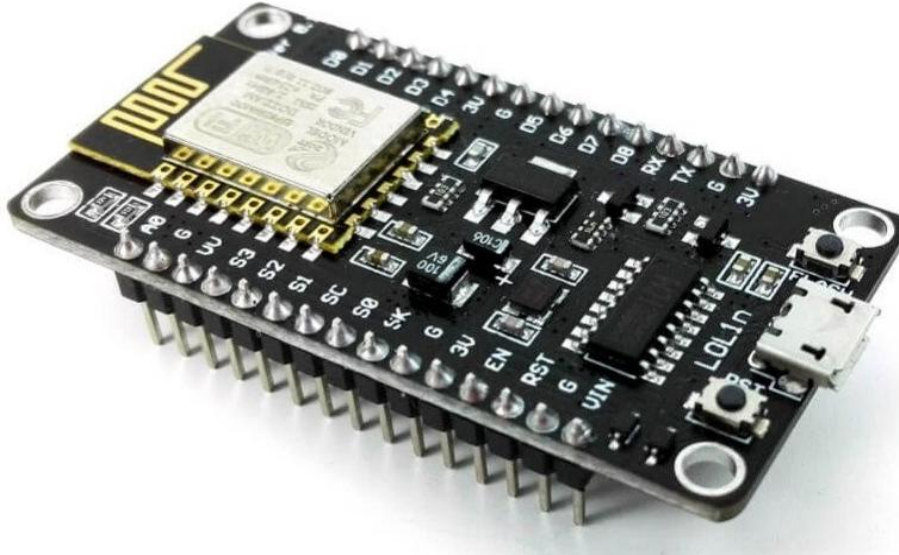


NODEMCU Lolin Lua IoT ESP8266 Wifi Controller Board V3 with CH340



Introduction:

NODEMCU Lolin Lua IoT ESP8266 Wifi Controller Board V3 with CH340 is the new NodeMCU V3 is a fast leading edge low cost WiFi technology. Modern high level mature LUA based technology. It is an integrated unit with all available resources on board. It is super simple to complement your existing Arduino projects or any development board that has I/O pins available.

Modern Internet development tools such as Node.js can take advantage the NodeMCU with the built-in API to put your idea on the fast track immediately. NodeMCU is built based on the mature ESP8266 technology to take advantage the abundant resources available on the web.

NodeMCU has ESP-12 based serial WiFi integrated on board to provide GPIO, PWM, ADC, I2C and 1-WIRE resources at your finger tips , built-in USB-TTL serial with super reliable industrial strength CH340 for superior stability on all supported platforms.

Components:

- NODEMCU Lolin Lua IoT ESP8266 Wifi Controller Board V3 with CH340
- 1K Ohm Resistor
- Several Jump Wires
- USB Cable

Objective:

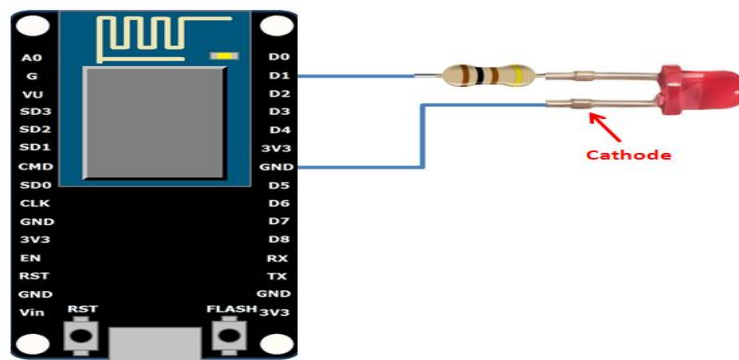
Control LED using wifi.

Procedure:

Step 1: Build a circuit.

The connection between the NODEMCU and LED:

NODEMCU Lolin Lua IoT ESP8266 Wifi Controller Board V3 with CH340	LED
GND	NEGATIVE (-)
D1	POSITIVE (+)



Step 2: Insert the sample programming provided below by copy and paste it into Arduino IDE.

```
#include <ESP8266WiFi.h>

const char* ssid = "Synacorp-2.4G";
const char* password = "*****";

int ledPin = 16; // GPIO5---D1 of NodeMCU
WiFiServer server(80);

void setup() {
  Serial.begin(115200);
  delay(10);

  pinMode(ledPin, OUTPUT);
  digitalWrite(ledPin, LOW);

  // Connect to WiFi network
  Serial.println();
  Serial.println();
  Serial.print("Connecting to ");
  Serial.println(ssid);

  WiFi.begin(ssid, password);

  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }
  Serial.println("");
  Serial.println("WiFi connected");

  // Start the server
  server.begin();
  Serial.println("Server started");

  // Print the IP address
  Serial.print("BEE!!!! ");
  Serial.print("Use this URL to connect: ");
  Serial.print("http://");
  Serial.print(WiFi.localIP());
  Serial.println("/");
```

```
}  
  
void loop() {  
  // Check if a client has connected  
  WiFiClient client = server.available();  
  if (!client) {  
    return;  
  }  
  
  // Wait until the client sends some data  
  Serial.println("new client");  
  while(!client.available()){  
    delay(1);  
  }  
  
  // Read the first line of the request  
  String request = client.readStringUntil('\r');  
  Serial.println(request);  
  client.flush();  
  
  // Match the request  
  
  int value = LOW;  
  if (request.indexOf("/LED=ON") != -1) {  
    digitalWrite(ledPin, HIGH);  
    value = HIGH;  
  }  
  if (request.indexOf("/LED=OFF") != -1) {  
    digitalWrite(ledPin, LOW);  
    value = LOW;  
  }  
  
  // Set ledPin according to the request  
  digitalWrite(ledPin, value);  
  
  // Return the response  
  client.println("HTTP/1.1 200 OK");  
  client.println("Content-Type: text/html");  
  client.println(""); // do not forget this one  
  client.println("<!DOCTYPE HTML>");  
  client.println("<html>");
```

