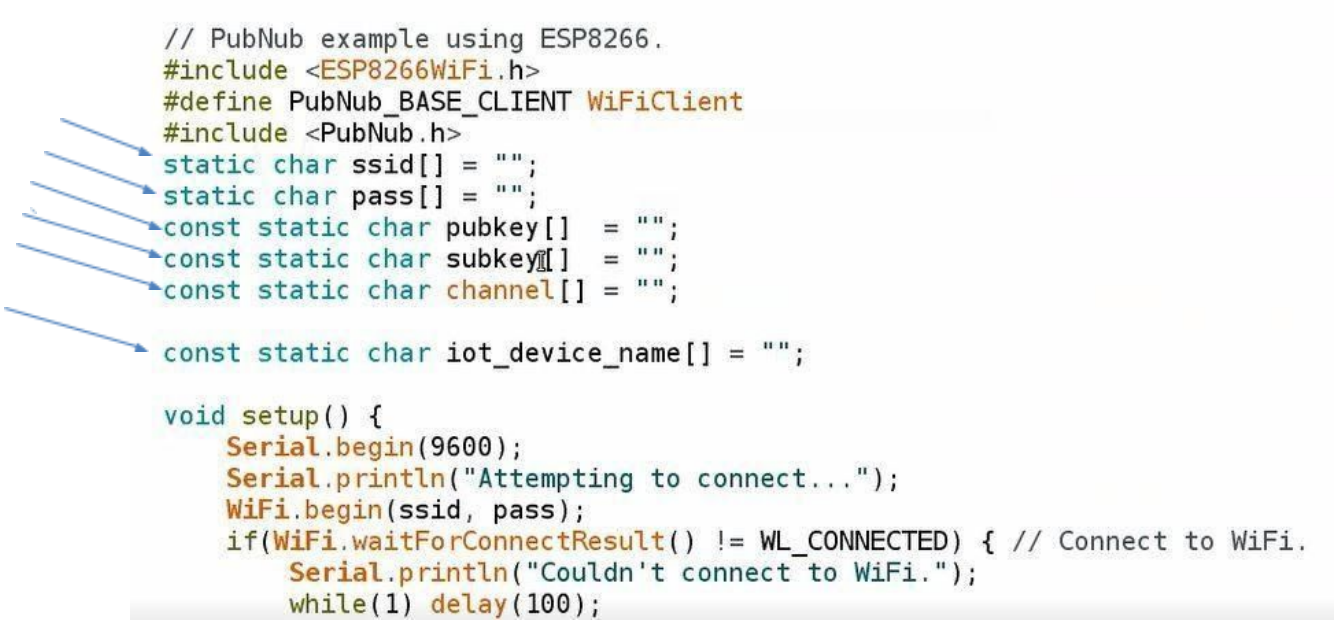
Setup required for controlling Home Appliances

Step1: **Download the Arduino IOT folder. Here.**

Step2: **Open the nodemcu.ino file in nodemcu folder.**

Step3: **Fill the following required fields(Required).**

1. **ssid of wifi**
2. **password of wifi**
3. **pubkey**
4. **subkey**
5. **channel name**
6. **iot_device_name.**



```
// PubNub example using ESP8266.
#include <ESP8266WiFi.h>
#define PubNub_BASE_CLIENT WiFiClient
#include <PubNub.h>
static char ssid[] = "";
static char pass[] = "";
const static char pubkey[]  = "";
const static char subkey[]  = "";
const static char channel[] = "";

const static char iot_device_name[] = "";

void setup() {
    Serial.begin(9600);
    Serial.println("Attempting to connect...");
    WiFi.begin(ssid, pass);
    if(WiFi.waitForConnectResult() != WL_CONNECTED) { // Connect to WiFi.
        Serial.println("Couldn't connect to WiFi.");
        while(1) delay(100);
```

Step4:- **Setup the Arduino IDE by File -> Preferences, and add the following url to *"Additional Board Manager URLs"* section.**

http://arduino.esp8266.com/stable/package_esp8266com_index.json

and click ok.

***Step5*:- Now add the NodeMCU board to Arduino IDE by navigating Tools -> Boards -> Board Manager. Search for "esp8266" and install the board.**

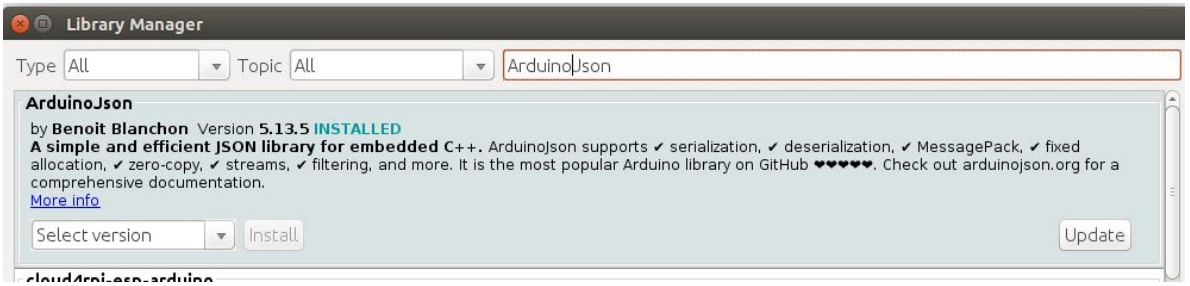
Step6*:- After installing the board Select the board and Port to upload the Sketch by Tools -> Port and Tools -> Board and select the board as *"NodeMCU 1.0 (ESP-12EModule)"

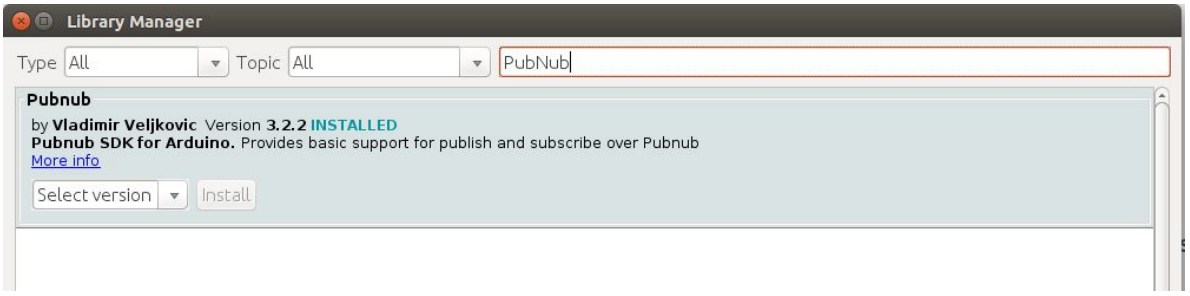
***Step7:*- Go to sketch include library manage library and download the following libraries:**

a) *PubNub Library (3.2.2)*

b) *ArduinoJson (5.13.5)*

Once this is done. The Installed tab should look something like this.





Note:-

Be very specific in downloading the exact versions mentioned above.

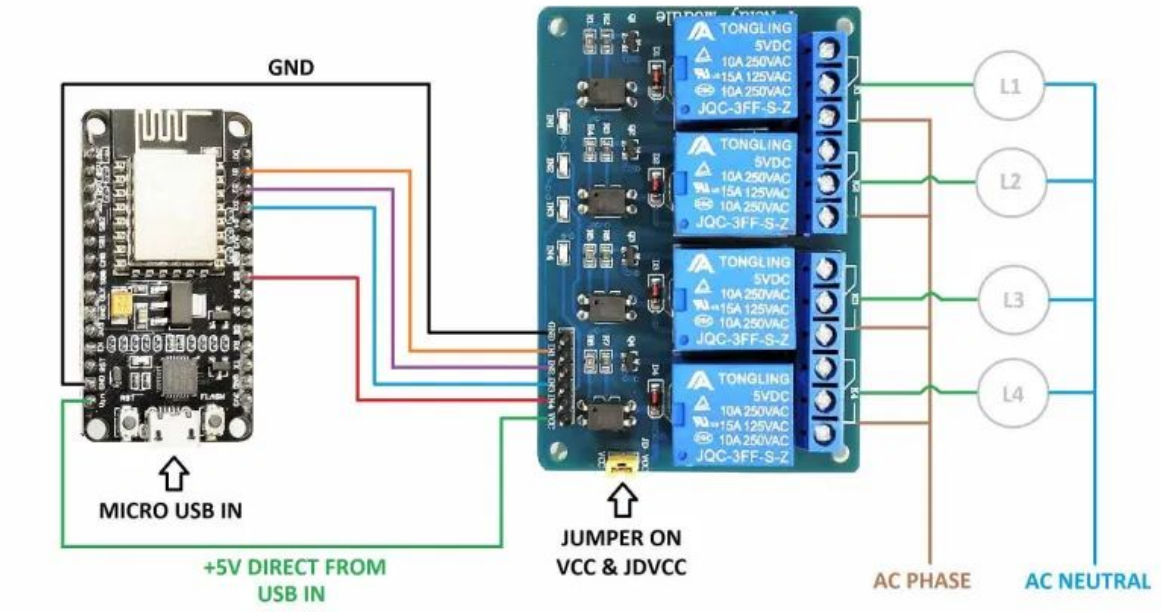
Now you are Done.

To upload the Sketch, Do the necessary changes in code if you want, as described in the code instruction, but don't do any edit which you don't understand as it may affect the working of device.

NOTE:-

Currently the code is configured to use with Relay Modules, and that require *High Voltage Pulse* to turn off and *Low voltage Pulse* to turn on, So if you connect any other device it may behave in reverse order of switching on and off.

The sample Circuit Diagram is given Below for reference:-



Note:-

It's strongly recommended to power the relay module with an external power supply rather than providing all power from NodeMCU as it's current rating is very low and usually operate on 3.3V while the relay demands 5V, It may lead to fluctuation of light thereby damaging the appliance or module.