



**FORMULIR USULAN PENGABDIAN KEPADA MASYARAKAT
(ABDIMAS)
NO. 46 /XI/Internal/LP2M/2024**

1. Judul PKM : Dasar-dasar IoT
2. Nama Mitra Program
 - a. PKM (1) : Sekolah Developer Indonesia (KODEIN)
 - b. PKM (2) : -
3. Ketua Tim Pengusul
 - a. Nama : Wawan Sismadi, S.Kom, M.Kom
 - b. NIDN : 0316087708
 - c. Golongan/Jabatan : -
 - d. Program Studi : Informatika
 - e. Bidang Keahlian : IoT, Pemrograman Web
 - f. Telp/surel : 087885073237/wawansismadi@ipwija.ac.id
4. Anggota Tim Pengusul
 - a. Jumlah Anggota : Dosen 1 orang,
 - b. Nama Anggota I/bidang keahlian : -
 - c. Nama Anggota II/bidang keahlian : -
 - d. Jumlah mahasiswa yang terlibat : - orang
 - e. Nama Mahasiswa/wi : -
 - f. Nama Mahasiswa/wi : -
 - g. Telp/surel : -
5. Lokasi Kegiatan : Harvest City, Jl. Orchid Raya A
 - a. Tanggal/Bln/Th : 9 November 2024 dan 23 November 2024
 - b. Wilayah : Setu
 - c. Kab/Kota/Propinsi : Bekasi/Jawa Barat
 - d. PIC Mitra : Cakap Bagus Tulodo
 - e. Telp/surel : 081779105229
6. Luaran yang dihasilkan : Smart Home
7. Jangka waktu pelaksanaan : 2 Pekan
8. Jenis Kegiatan : Workshop
9. Tingkat wilayah : Local
10. Dana : 500.000
11. Sumber Dana : Pribadi

Jakarta, 04/11/2024

(Wawan Sismadi, S.Kom, M.Kom)

Menyetujui,

(R. Fajar Darmanto, S.E.,M.M.)



UNIVERSITAS IPWIJA

SK Kemendikbudristek RI No. 627/E/O/2022

Jl. H. Baping No.17 Kel. Susukan, Kec. Ciracas
Jakarta Timur. 13750 Telp. 021-22819921

E-mail : contact@ipwija.ac.id <https://ipwija.ac.id>

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SURAT TUGAS PENGABDIAN KEPADA MASYARAKAT

No: 191/IPWIJA.LP2M/PkM-00/2024

Berdasarkan Surat Edaran Pengabdian Kepada Masyarakat (PKM) Semester Ganjil 2024/2025 No.142/IPWIJA.LP2M/PkM-00/2024 tanggal 2 September 2024 dan surat permohonan dari Sekolah Developer Indonesia (KODEIN) No.003/SPm/KSCH/XI/2024 tanggal 5 November 2024 perihal permohonan Narasumber, Pendamping dan Pemberi Materi, dengan ini Kepala LP2M Universitas IPWIJA menugaskan:

Wawan Sismadi, S.Kom., M.Kom. (NIDN: 0316087708)

Untuk menjadi Narasumber dalam kegiatan yang akan dilaksanakan pada:

Hari / tanggal : 9 November 2024 dan 23 November 2024

Waktu : 08.00 – 11.00 WIB

Tempat : Sekolah Developer Indonesia Harvest City, Jl. Orchid Raya
A, Setu, Kab.Bekasi

Tema : “Dasar-dasar IOT .”

Setelah pelaksanaan kegiatan Dosen yang ditugaskan diwajibkan membuat Laporan Pelaksanaan Kegiatan kepada pemberi tugas (LP2M Universitas IPWIJA). Mohon bantuan penanggungjawab kegiatan membantu menyediakan berkas yang diperlukan untuk pembuatan laporan pelaksanaan kegiatan.

Demikian Surat Tugas ini disampaikan untuk dapat dilaksanakan dengan penuh tanggung jawab.

Jakarta, 7 November 2024




Dr. Ir. Titing Widyastuti, M.M.

Kepala LP2M Universitas IPWIJA



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SK Kemendikbudristek RI No. 627/E/O/2022

Jl. H. Baping No.17 Kel. Susukan, Kec. Ciracas

Jakarta Timur. 13740 Telp. 021-22819921

E-mail : contact@ipwija.ac.id <https://ipwija.ac.id>

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PENGESAHAN
LAPORAN PENGABDIAN KEPADA MASYARAKAT DOSEN
UNIVERSITAS IPWIJA
No.205/IPWIJA.LP2M/PkM-00/2024

1. Nama Kegiatan : Workshop IoT KodeIn
2. Jenis Kegiatan : Insidental
3. Tema : Dasar-dasar IoT
4. Mitra : Sekolah Developer Indonesia (KODEIN)
5. Cakupan wilayah : Lokal
6. Narasumber/Pendamping :
 - a. Ketua : Wawan Sismadi, S.Kom, M.Kom
NIDN: 0316087708
 - b. Anggota 1 : -
NIDN:-
 - c. Anggota 2 : -
NIDN:-
 - d. Anggota 3 : -
NIDN:-
7. Waktu Pelaksanaan : Semester Ganjil TA 2024/2025
8. Jangka Waktu Penugasan : 0 tahun / 0 Semester (untuk terjadwal)
9. Lokasi : Sekolah Developer Indonesia (KODEIN),
Harvest City, Jl. Orchid Raya A, Bekasi
Jawa Barat
10. Dana :
 - a. Jumlah : Rp. 500.000 (Lima Ratus Ribu Rupiah)
 - b. Sumber : Dana (dana mandiri)
11. Hasil Kegiatan : produk Smart Home

Jakarta, 25 November 2024

Menyetujui dan Mengesahkan



Dr. Ir. Titing Widvastuti, MM.
Kepala LP2M Universitas IPWIJA

Bekasi, 05 November 2024

Nomor : 003/SPm/KSCH/XI/2024
Perihal : Permohonan NarasumberKepada Yth,
Bapak Wawan Sismadi, S.Kom., M.Kom.
di Tempat

Sehubungan dengan kegiatan *Kodein Club* yang bertujuan meningkatkan kemampuan santri di bidang IT, maka bersama ini Sekolah Developer Indonesia (KODEIN) mengajukan permohonan kepada:

Nama : Wawan Sismadi, S.Kom., M.Kom.

Untuk menjadi Narasumber Sosialisasi dan Pelatihan yang akan diadakan pada:

Hari/Tanggal : 9 & 23 November 2024

Waktu : 08.00-11.00

Tempat : Sekolah Developer Indonesia

Agenda : Dasar-dasar IOT

Atas perhatian dan kesediaan Bapak, kami ucapkan terimakasih

Kepala Bidang IT
Sekolah Developer Indonesia**Cakap Bagus Tulodo, S.T.**

NIP. -

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Nomor : 004/SKet/KSCH/XI/2024
Perihal : Ucapan Terimakasih Narasumber

Bekasi, 23 November 2024

Kepada Yth,
Bapak Wawan Sismadi, S.Kom., M.Kom.
di Tempat

Sehubungan dengan telah dilaksanakan kegiatan *Kodein Club* yang bertujuan meningkatkan kemampuan santri di bidang IT, maka bersama ini Sekolah Developer Indonesia (KODEIN) mengucapkan terima kasih kepada:

Bapak Wawan Sismadi, S.Kom., M.Kom.

Atas kesediaan menjadi Narasumber Sosialisasi dan Pelatihan yang akan diadakan pada:

Hari/Tanggal : 9 & 23 November 2024
Waktu : 08.00-11.00
Tempat : Sekolah Developer Indonesia
Agenda : Dasar-dasar IOT

Atas perhatian dan kesediaan Bapak, kami ucapkan terimakasih

Ketua KODEIN
Sekolah Developer Indonesia



Muhammad Faruqie, B.A., MIRKH.
NIP. -



**Kampus
Merdeka**
INDONESIA JAYA



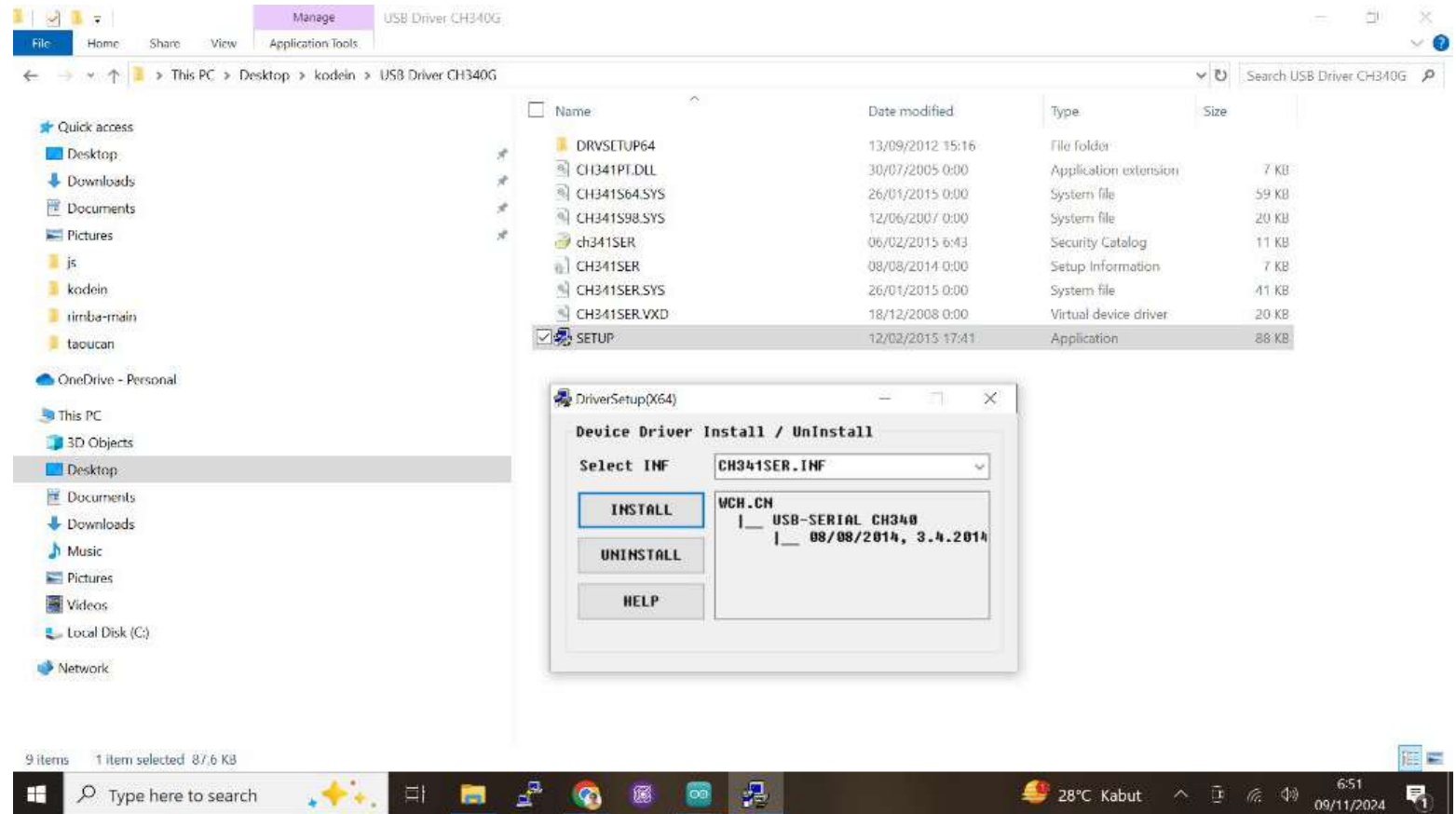
ESP8266

IoT

Instalasi

1. install driver CH340G
2. Install Arduino IDE 2.1.1 Update ke 2.3.3
3. instal library esp8266

Instalasi Driver CH340G



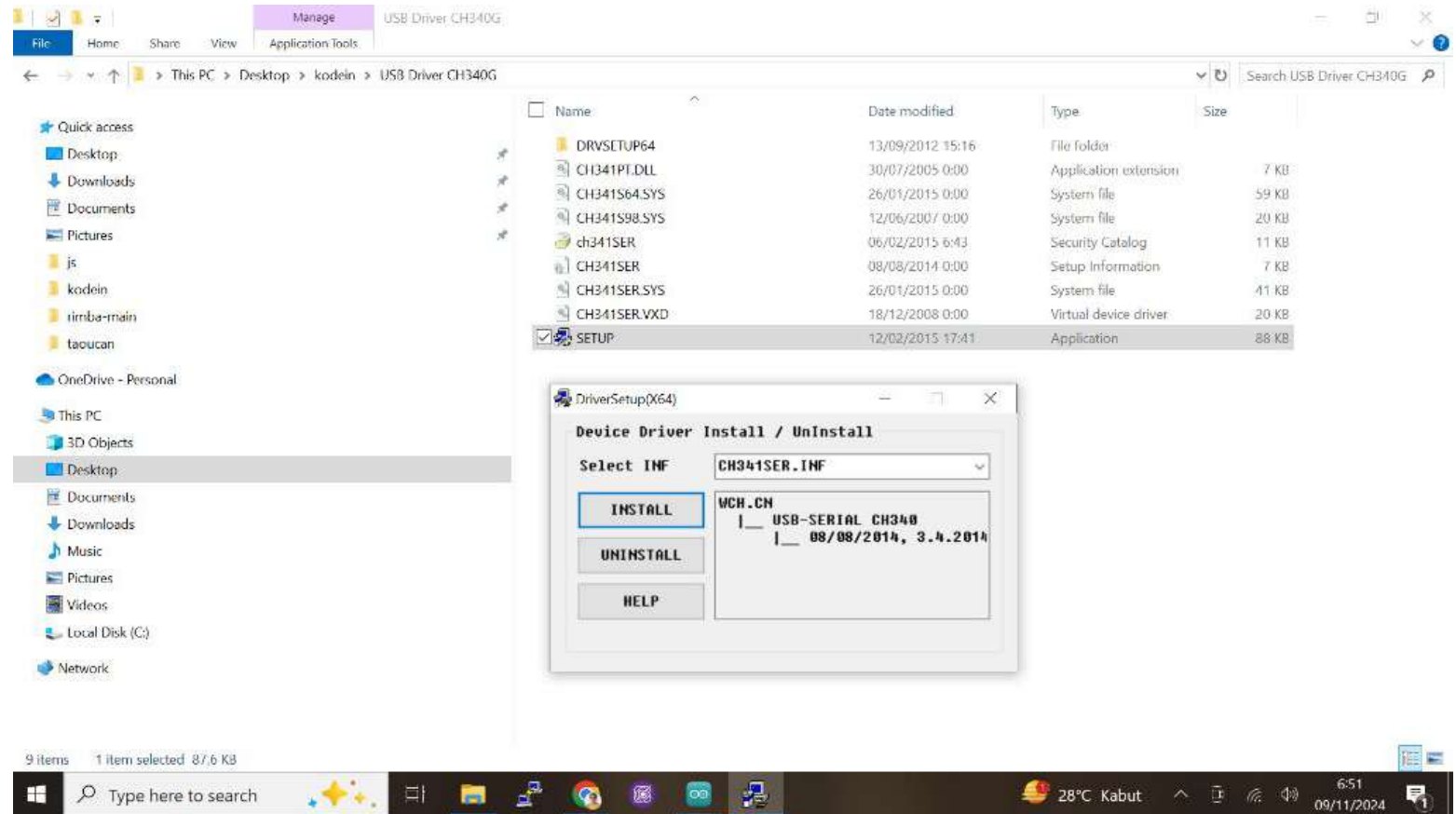
The screenshot shows a Windows File Explorer window titled "USB Driver CH340G" with the following file list:

Name	Date modified	Type	Size
DRVSETUP64	13/09/2012 15:16	File folder	
CH341PT.DLL	30/07/2005 0:00	Application extension	7 KB
CH341S64.SYS	26/01/2015 0:00	System file	59 KB
CH341S98.SYS	12/06/2007 0:00	System file	20 KB
ch341SER	06/02/2015 6:43	Security Catalog	11 KB
CH341SER	08/08/2014 0:00	Setup Information	7 KB
CH341SER.SYS	26/01/2015 0:00	System file	41 KB
CH341SER.VXD	18/12/2008 0:00	Virtual device driver	20 KB
SETUP	12/02/2015 17:41	Application	88 KB

The "SETUP" file is selected. A dialog box titled "DriverSetup(X64)" is open, showing the "Device Driver Install / UnInstall" window. The "Select INF" dropdown is set to "CH341SER.INF". The "INSTALL" button is highlighted. The dialog box also displays the following information:

```
WCH.CN
|_ USB-SERIAL CH340
|_ 08/08/2014, 3.4.2014
```

Instalasi Arduino IDE



The screenshot shows a Windows File Explorer window titled "USB Driver CH340G" with the following table of files:

Name	Date modified	Type	Size
DRVSETUP64	13/09/2012 15:16	File folder	
CH341PT.DLL	30/07/2005 0:00	Application extension	7 KB
CH341S64.SYS	26/01/2015 0:00	System file	59 KB
CH341S98.SYS	12/06/2007 0:00	System file	20 KB
ch341SER	06/02/2015 6:43	Security Catalog	11 KB
CH341SER	08/08/2014 0:00	Setup Information	7 KB
CH341SER.SYS	26/01/2015 0:00	System file	41 KB
CH341SER.VXD	18/12/2008 0:00	Virtual device driver	20 KB
SETUP	12/02/2015 17:41	Application	88 KB

The "SETUP" file is selected. A "Device Driver Install / UnInstall" dialog box is open, showing the following information:

Device Driver Install / UnInstall

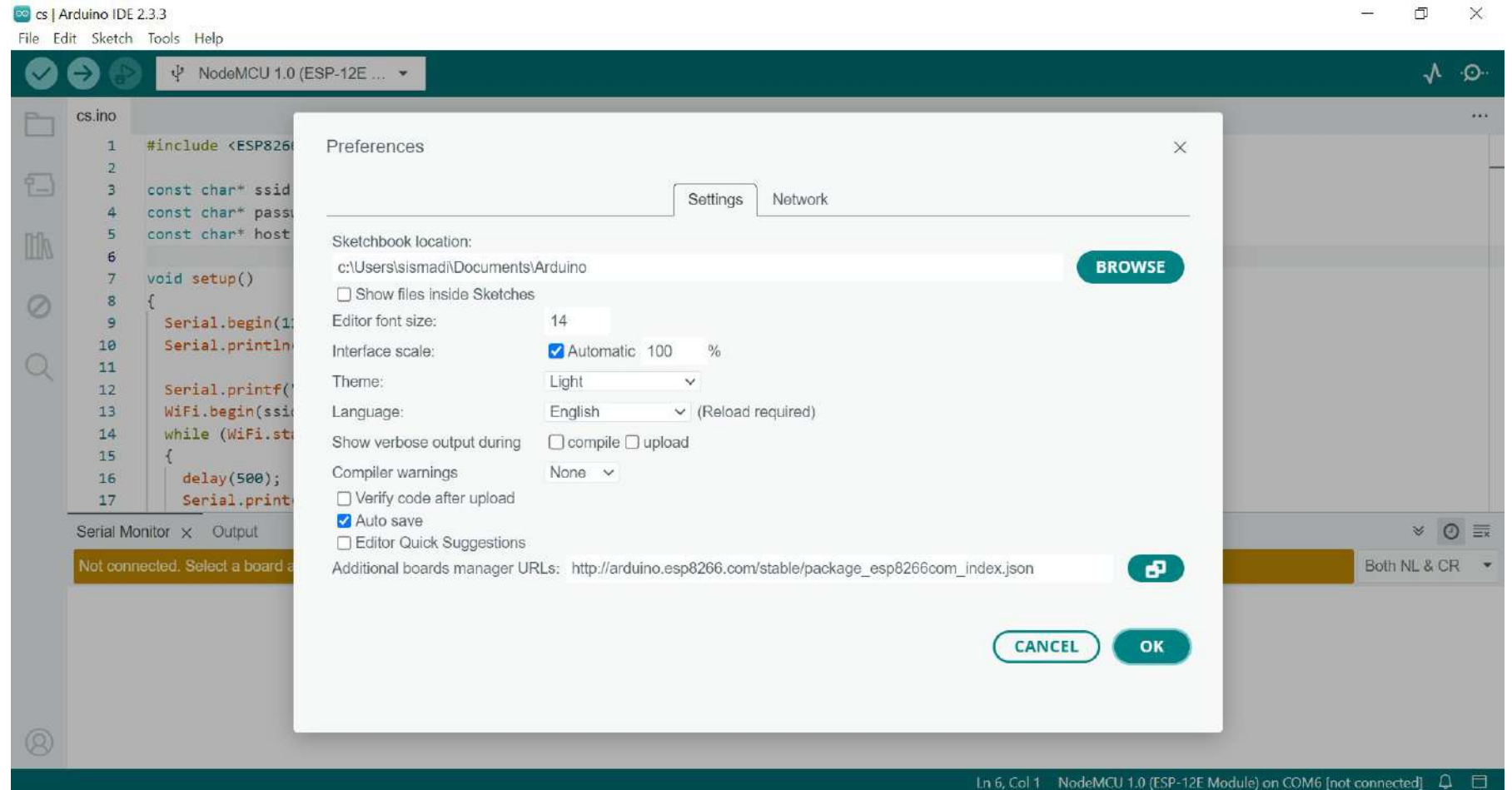
Select INF: CH341SER.INF

WCH.CN
| USB-SERIAL CH340
| 08/08/2014, 3.4.2014

Buttons: INSTALL, UNINSTALL, HELP

Taskbar: 9 items, 1 item selected, 87,6 KB. Search: Type here to search. System tray: 28°C Kabut, 6:51, 09/11/2024.

Instalasi ESP8266 library



cs | Arduino IDE 2.3.3
File Edit Sketch Tools Help

NodeMCU 1.0 (ESP-12E ...)

```
cs.ino
1 #include <ESP8266>
2
3 const char* ssid
4 const char* pass
5 const char* host
6
7 void setup()
8 {
9   Serial.begin(115200);
10  Serial.println("Hello World!");
11
12  Serial.printf("IP: %s\n", host);
13  WiFi.begin(ssid, pass);
14  while (WiFi.status() != WL_CONNECTED) {
15    delay(500);
16    Serial.print(".");
17  }
```

Serial Monitor x Output
Not connected. Select a board and port.

Both NL & CR

Ln 6, Col 1 NodeMCU 1.0 (ESP-12E Module) on COM6 [not connected]

Preferences

Settings Network

Sketchbook location:
c:\Users\sismadi\Documents\Arduino **BROWSE**

Show files inside Sketches

Editor font size: 14

Interface scale: Automatic 100 %

Theme: Light

Language: English (Reload required)

Show verbose output during compile upload

Compiler warnings: None

Verify code after upload

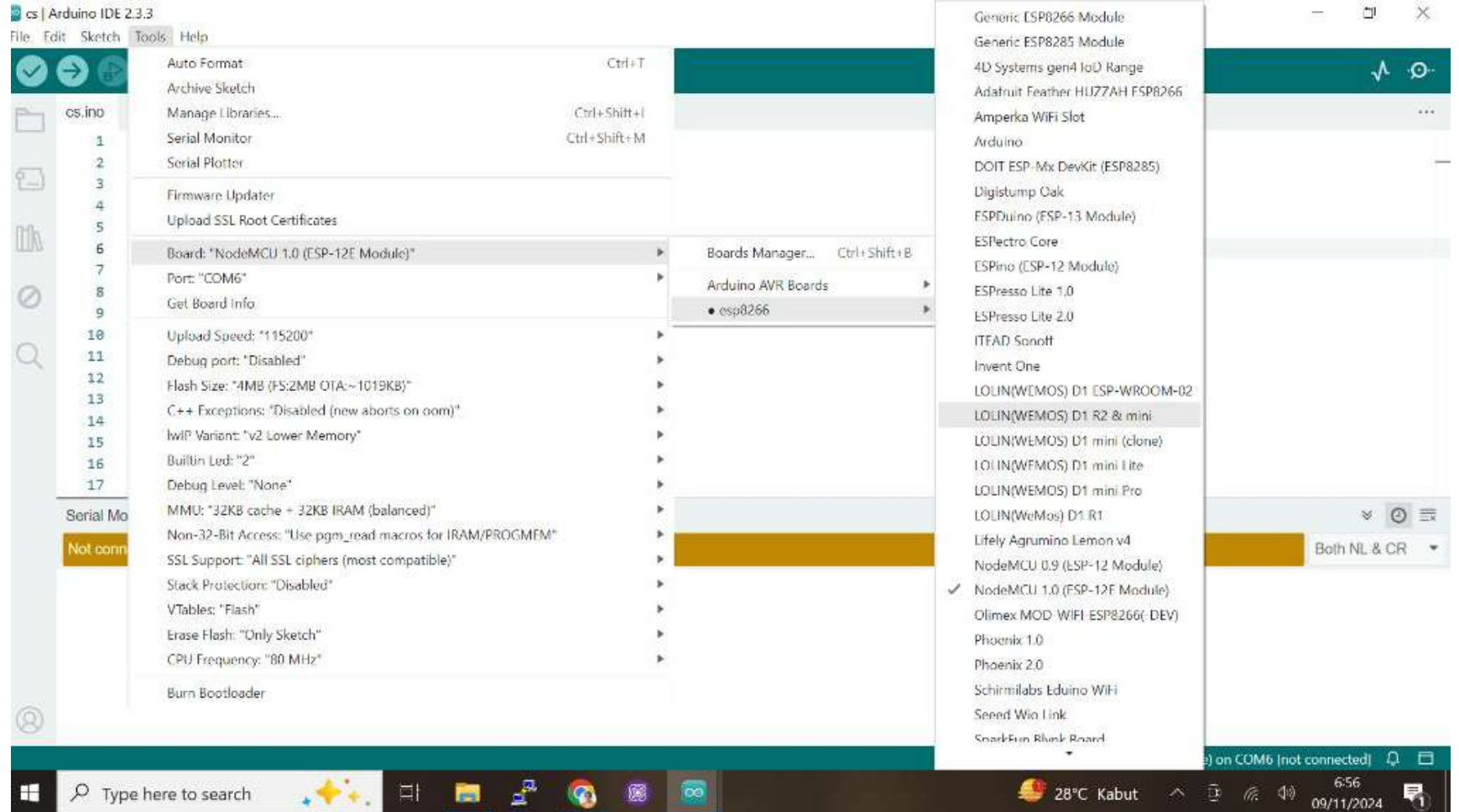
Auto save

Editor Quick Suggestions

Additional boards manager URLs: http://arduino.esp8266.com/stable/package_esp8266com_index.json **BROWSE**

CANCEL **OK**

Board ESP8266



The screenshot shows the Arduino IDE 2.3.3 interface. The 'Tools' menu is open, and the 'Board' option is selected, which has opened the 'Boards Manager' window. In the 'Boards Manager' window, the 'esp8266' board is selected under the 'Arduino AVR Boards' category. The main editor area shows a sketch named 'cs.ino' with 17 lines of code. The status bar at the bottom indicates the board is 'on COM6 [not connected]'. The Windows taskbar at the bottom shows the system tray with the date '09/11/2024' and time '6:56'.

cs | Arduino IDE 2.3.3
File Edit Sketch Tools Help

Auto Format Ctrl+T
Archive Sketch
Manage Libraries... Ctrl+Shift+I
Serial Monitor Ctrl+Shift+M
Serial Plotter
Firmware Updater
Upload SSL Root Certificates
Board: "NodeMCU 1.0 (ESP-12E Module)" Boards Manager... Ctrl+Shift+B
Port: "COM6" Arduino AVR Boards
Get Board Info esp8266
Upload Speed: "115200"
Debug port: "Disabled"
Flash Size: "4MB (FS:2MB OTA:~1019KB)"
C++ Exceptions: "Disabled (new aborts on oom)"
WiFi Variant: "v2 Lower Memory"
Built-in Led: "2"
Debug Level: "None"
MMU: "32KB cache + 32KB IRAM (balanced)"
Non-32-Bit Access: "Use pgm_read macros for IRAM/PROGMEM"
SSL Support: "All SSL ciphers (most compatible)"
Stack Protection: "Disabled"
VTables: "Flash"
Erase Flash: "Only Sketch"
CPU Frequency: "80 MHz"
Burn Bootloader

cs.ino
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

Serial Mo
Not conn

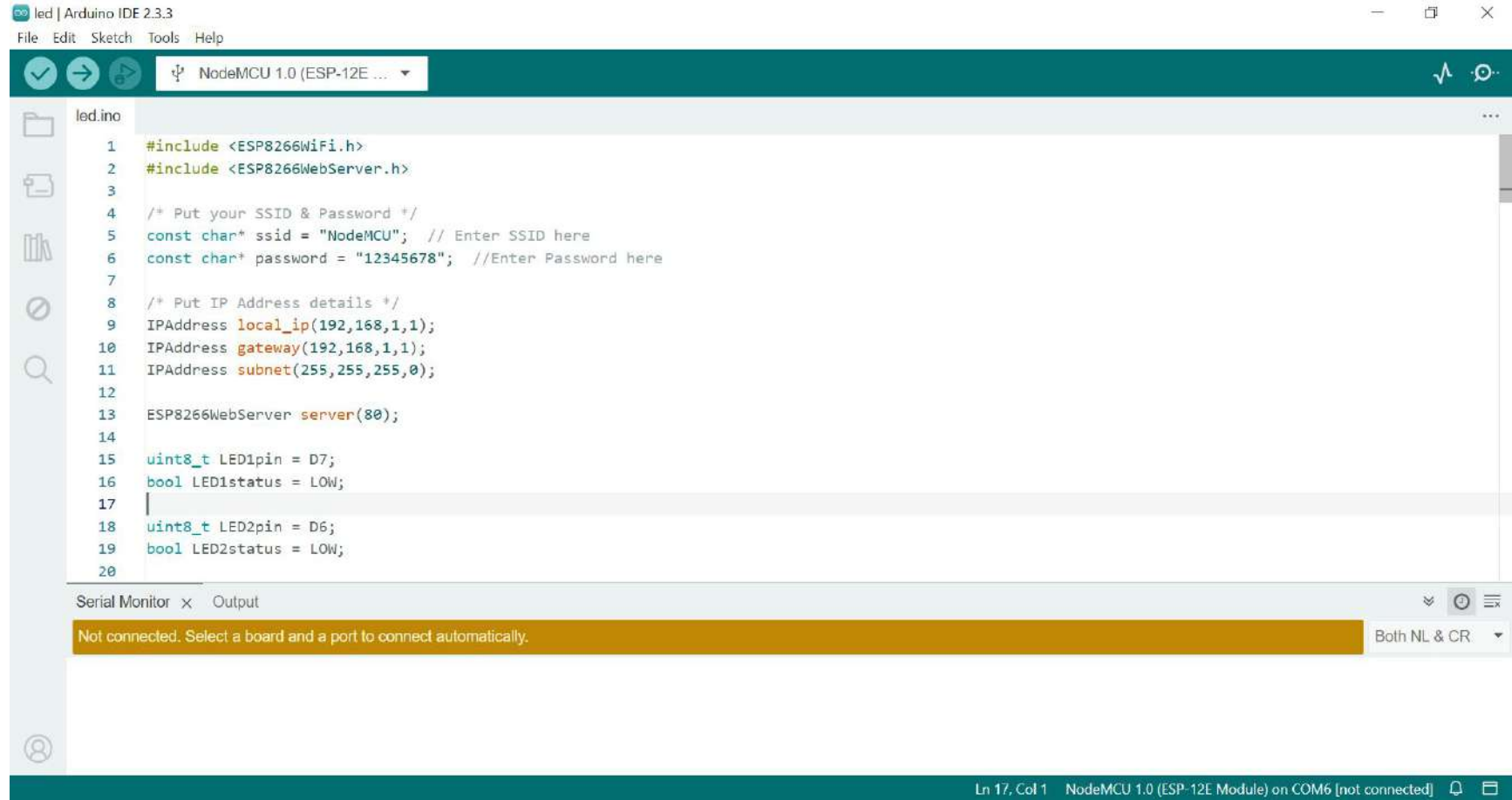
Generic ESP8266 Module
Generic ESP8285 Module
4D Systems gen4 IoT Range
Adafruit Feather HUZZAH ESP8266
Amperka WiFi Slot
Arduino
DOIT ESP-Mx DevKit (ESP8285)
Digistump Oak
FSPduino (FSP-13 Module)
ESPetro Core
ESPino (ESP-12 Module)
ESPRESSO Lite 1.0
ESPRESSO Lite 2.0
ITFAD Sonoff
Invent One
LOLIN(WEMOS) D1 ESP-WROOM-02
LOLIN(WEMOS) D1 R2 & mini
LOLIN(WEMOS) D1 mini (clone)
LOLIN(WEMOS) D1 mini Lite
LOLIN(WEMOS) D1 mini Pro
LOLIN(Wemos) D1 R1
Lifely Agrumino Lemon v4
NodeMCU 0.9 (ESP-12 Module)
NodeMCU 1.0 (ESP-12F Module)
Olimex MOD_WIFI_ESP8266(DEV)
Phoenix 1.0
Phoenix 2.0
Schirmilabs Eduino WiFi
Seed Wio Link
SparkFun Blue Board

Both NL & CR

on COM6 [not connected]

Type here to search
28°C Kabut
6:56
09/11/2024

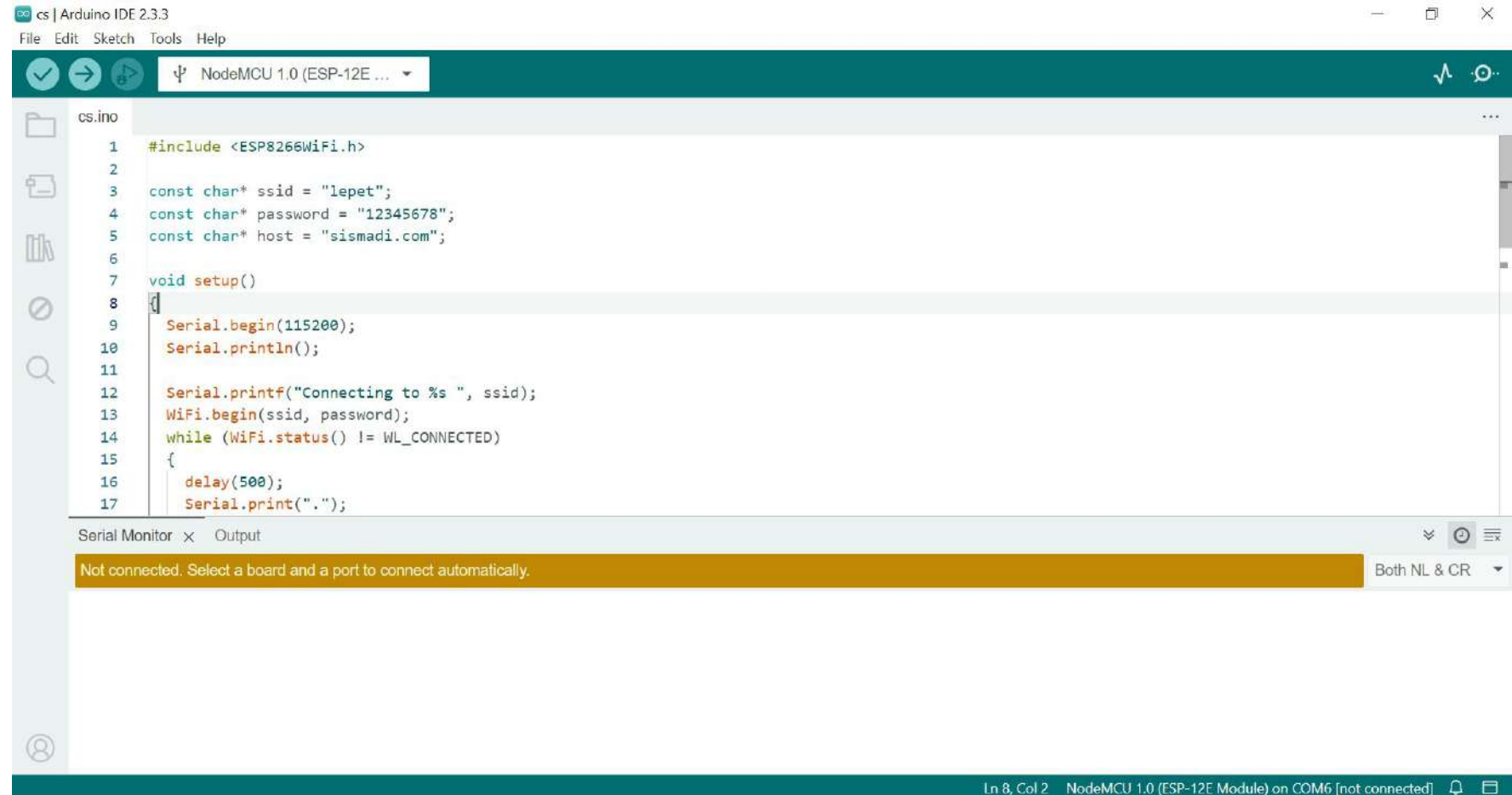
Web Server



```
led | Arduino IDE 2.3.3
File Edit Sketch Tools Help
NodeMCU 1.0 (ESP-12E ...)
led.ino
1 #include <ESP8266WiFi.h>
2 #include <ESP8266WebServer.h>
3
4 /* Put your SSID & Password */
5 const char* ssid = "NodeMCU"; // Enter SSID here
6 const char* password = "12345678"; //Enter Password here
7
8 /* Put IP Address details */
9 IPAddress local_ip(192,168,1,1);
10 IPAddress gateway(192,168,1,1);
11 IPAddress subnet(255,255,255,0);
12
13 ESP8266WebServer server(80);
14
15 uint8_t LED1pin = D7;
16 bool LED1status = LOW;
17
18 uint8_t LED2pin = D6;
19 bool LED2status = LOW;
20

Serial Monitor x Output
Not connected. Select a board and a port to connect automatically.
Both NL & CR
Ln 17, Col 1 NodeMCU 1.0 (ESP-12E Module) on COM6 [not connected]
```

Web Client

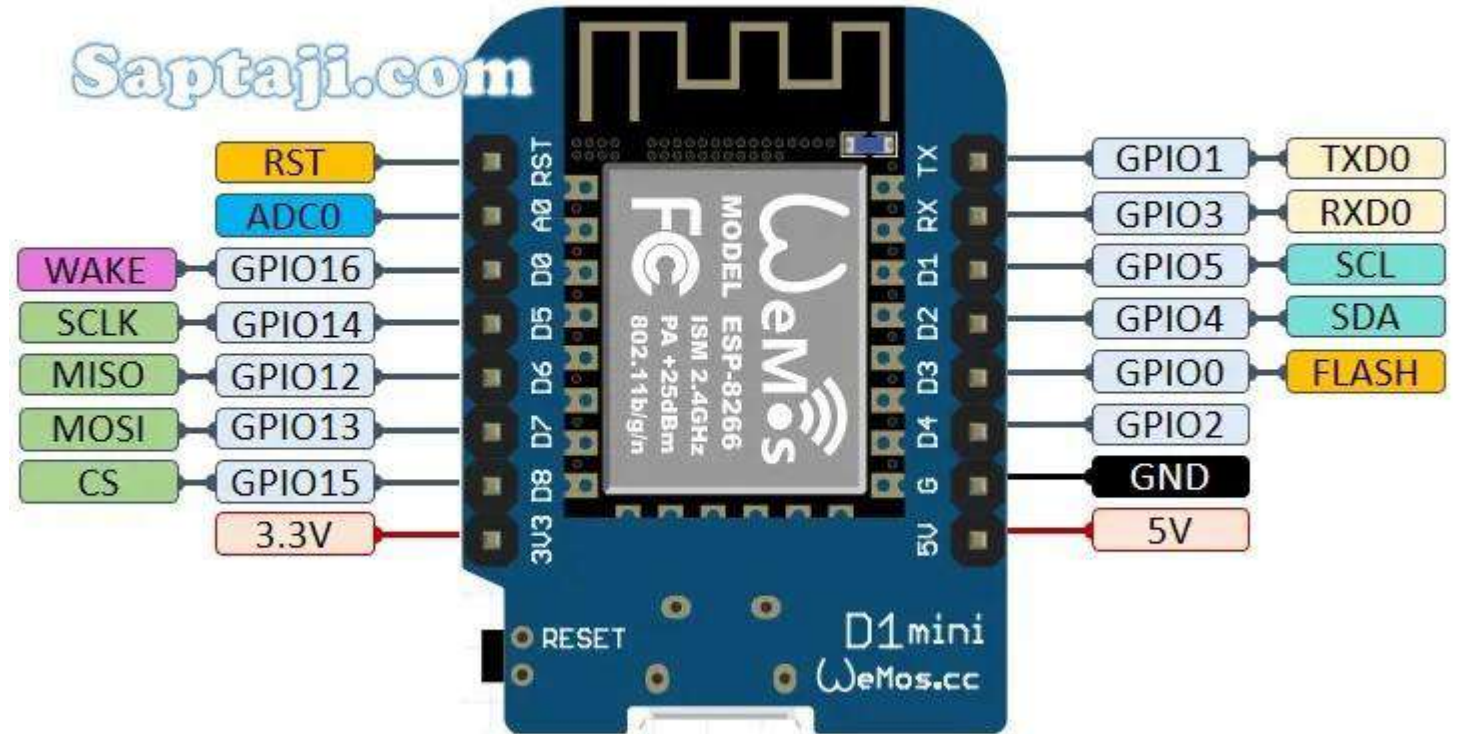


The screenshot shows the Arduino IDE 2.3.3 interface. The main editor displays a sketch named 'cs.ino' with the following code:

```
1 #include <ESP8266WiFi.h>
2
3 const char* ssid = "lepet";
4 const char* password = "12345678";
5 const char* host = "sismadi.com";
6
7 void setup()
8 {
9   Serial.begin(115200);
10  Serial.println();
11
12  Serial.printf("Connecting to %s ", ssid);
13  WiFi.begin(ssid, password);
14  while (WiFi.status() != WL_CONNECTED)
15  {
16    delay(500);
17    Serial.print(".");
```

The Serial Monitor window at the bottom shows the message: "Not connected. Select a board and a port to connect automatically." The status bar at the bottom indicates "Ln 8, Col 2 NodeMCU 1.0 (ESP-12E Module) on COM6 [not connected]".

Wemos D1 Mini



Relay

