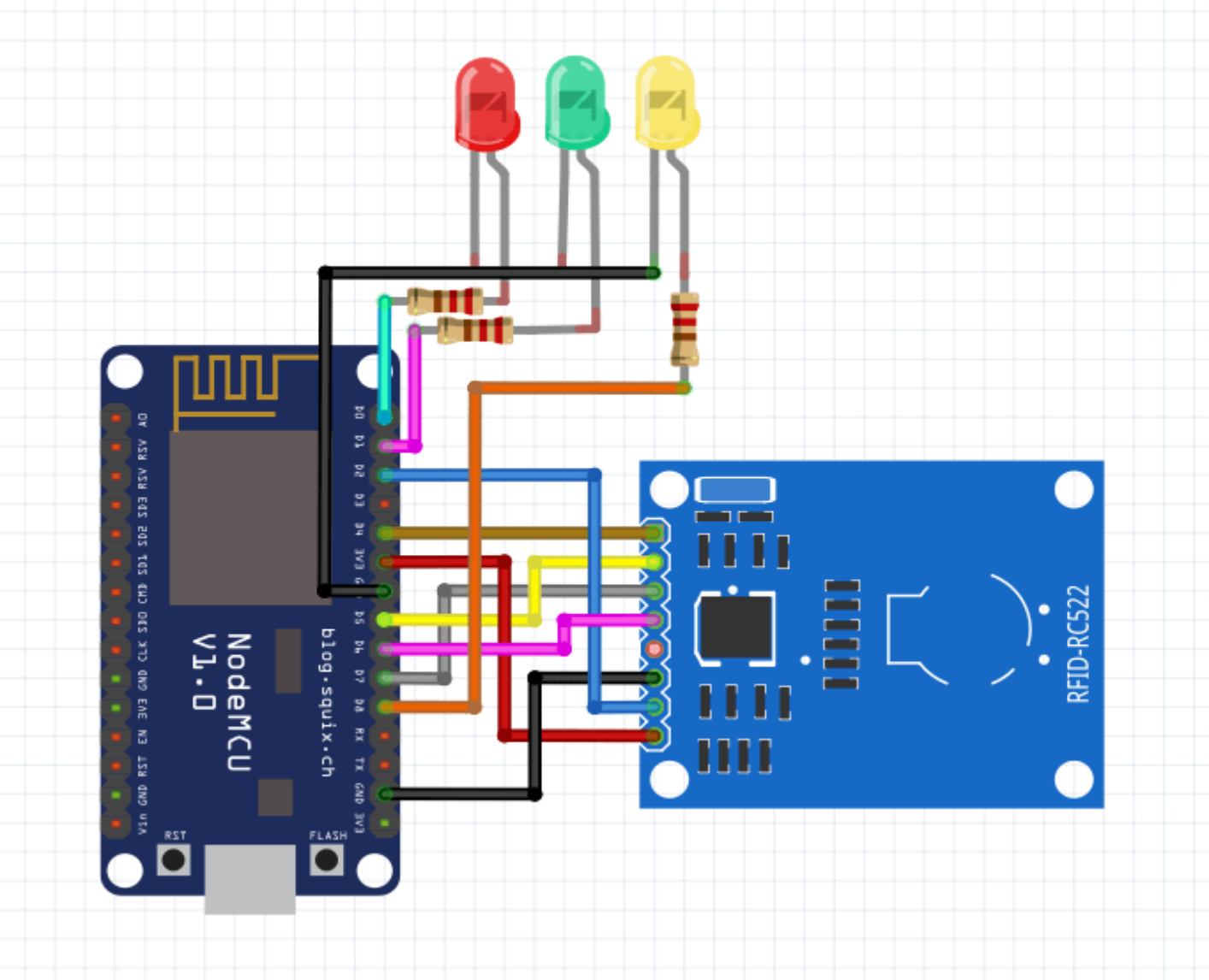
CONNECTING RFID SCANNER TO PHP USING NODEMCU WIFI MODULE



Author: **Andres P. Jario**

Facebook Page: https://web.facebook.com/SourceCodePH2020/

YouTube Channel: https://www.youtube.com/c/SourceCodePHOnce/

Requirements

- NodeMcu Wifi Module or cellphone hotspot
- RFID-RC522
- Arduino RFID Library for MFRC522 (SPI)
- Arduino IDE
- Arduino Core for NodeMCU ESP-12E Using Arduino Boards Manager
- Led Lights
- 220 Ohm to 1000 ohm resistor
- Jumper Wires
- XAMPP

After preparing the requirements, connect your RFID RC522 to your NodeMcu. Follow the diagram below:

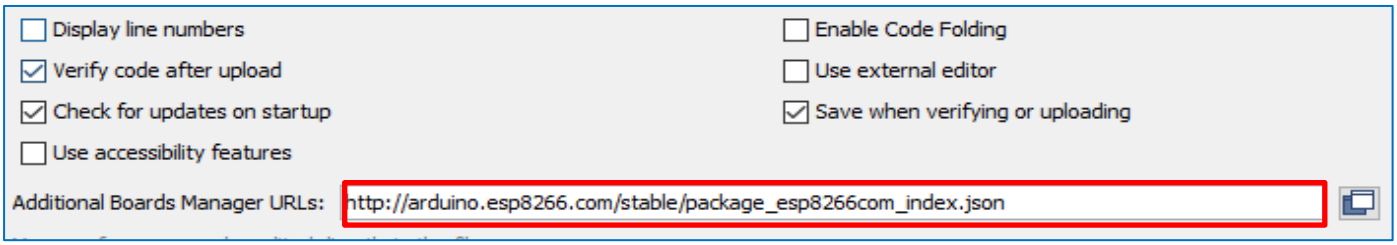
RFID	NodeMcu
3.3V	3.3V
RST	D2
GND	GND
MISO (Master-in, Slave out.)	D6
MOSI (Master Out Slave In)	D7
SCK (Serial Clock)	D5
SDA (Serial Data)	D4

- Yellow light will serve as an indicator that we have successfully connected to wifi or HotSpot.
- Green indicates that the request to the server has been sent successfully.
- Red light indicates that our HTTP request failed / our server did not return "success".

Led Pin	NodeMcu
Led w/ 220ohm Resistor (Red)	D0
Led w/ 220ohm Resistor (Green)	D1
Led w/ 220ohm Resistor (Yellow)	D8

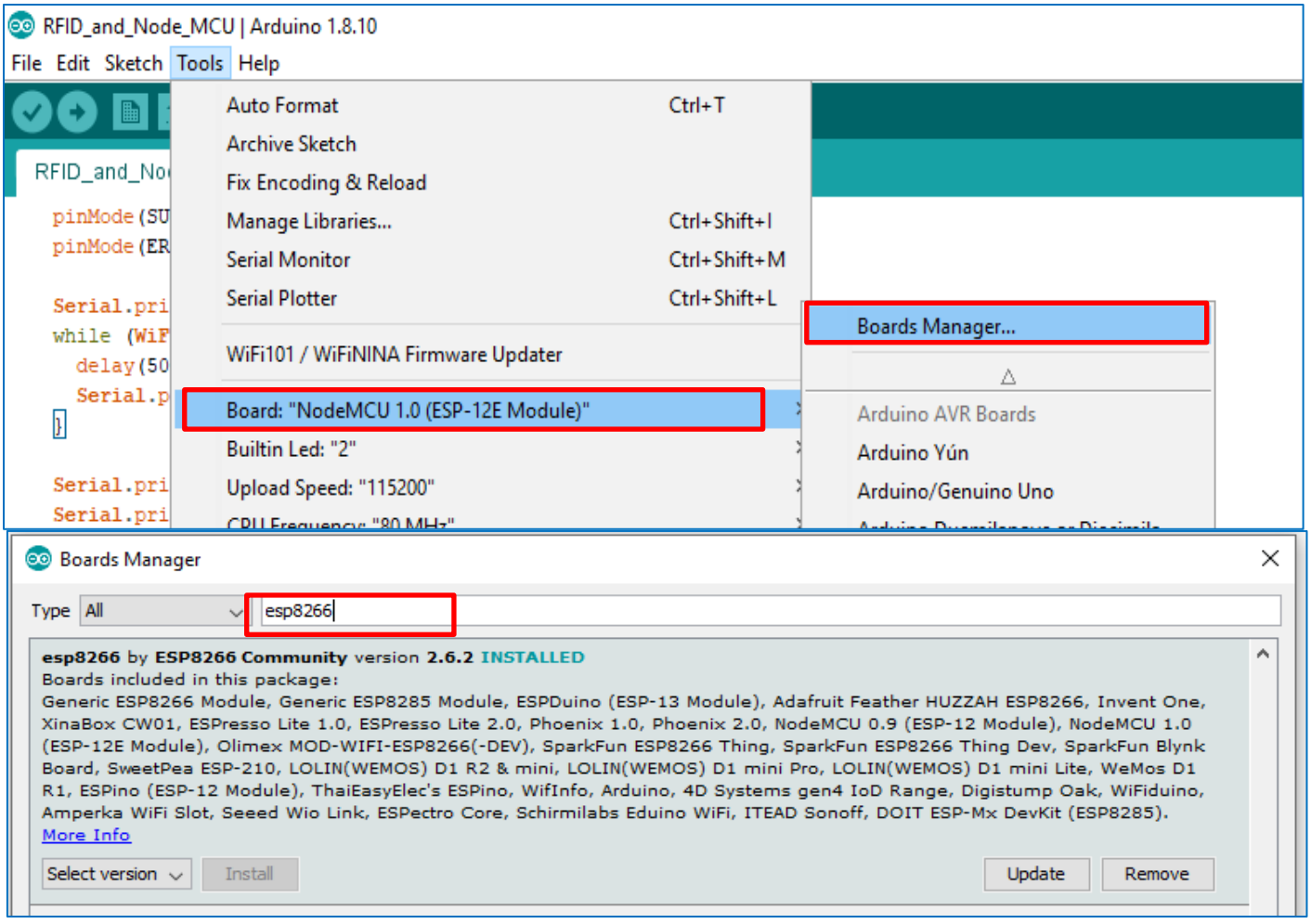
1. Setting up Arduino and adding RFID Library

- We need to add **esp8266** to our Arduino IDE. Open up your IDE then go to "**File** -> **Preferences**" or simply hit "Ctrl + comma"



Paste http://arduino.esp8266.com/stable/package_esp8266com_index.json in additional board manager URLs.

2. Go to "Tools -> Board -> Boards Manager" search and install **esp8266**

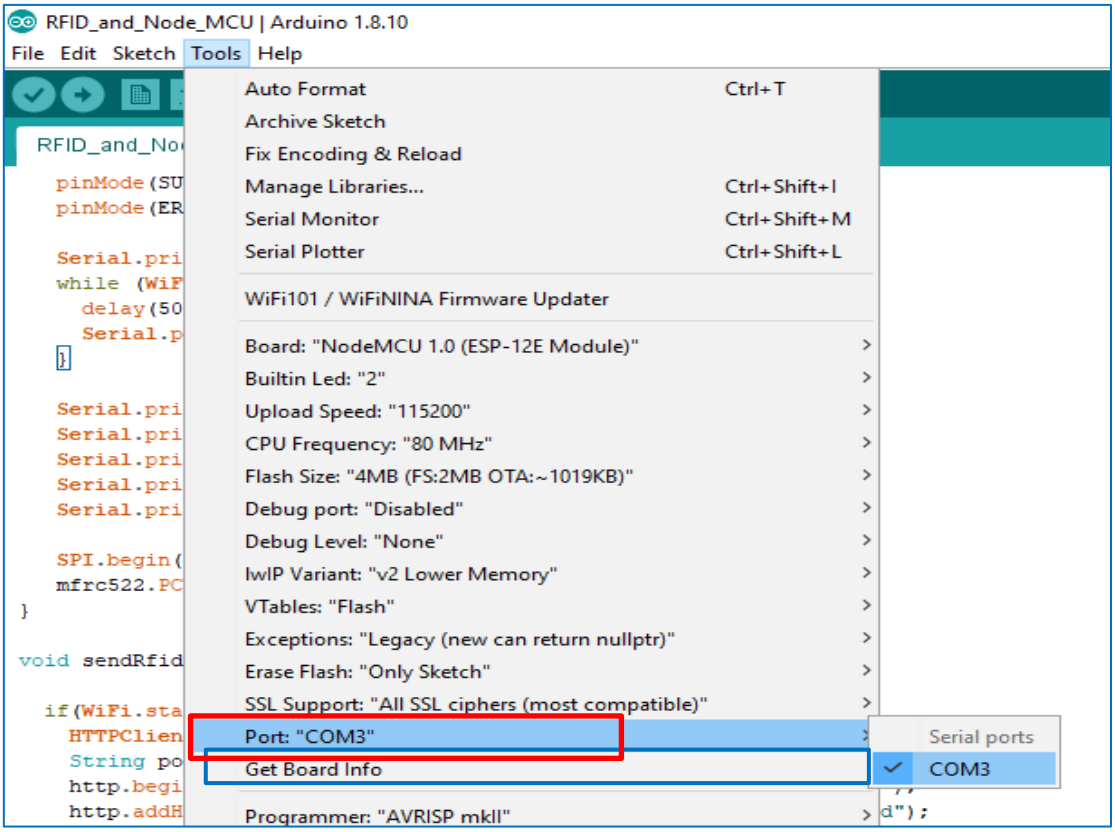


Close and restart your Arduino IDE

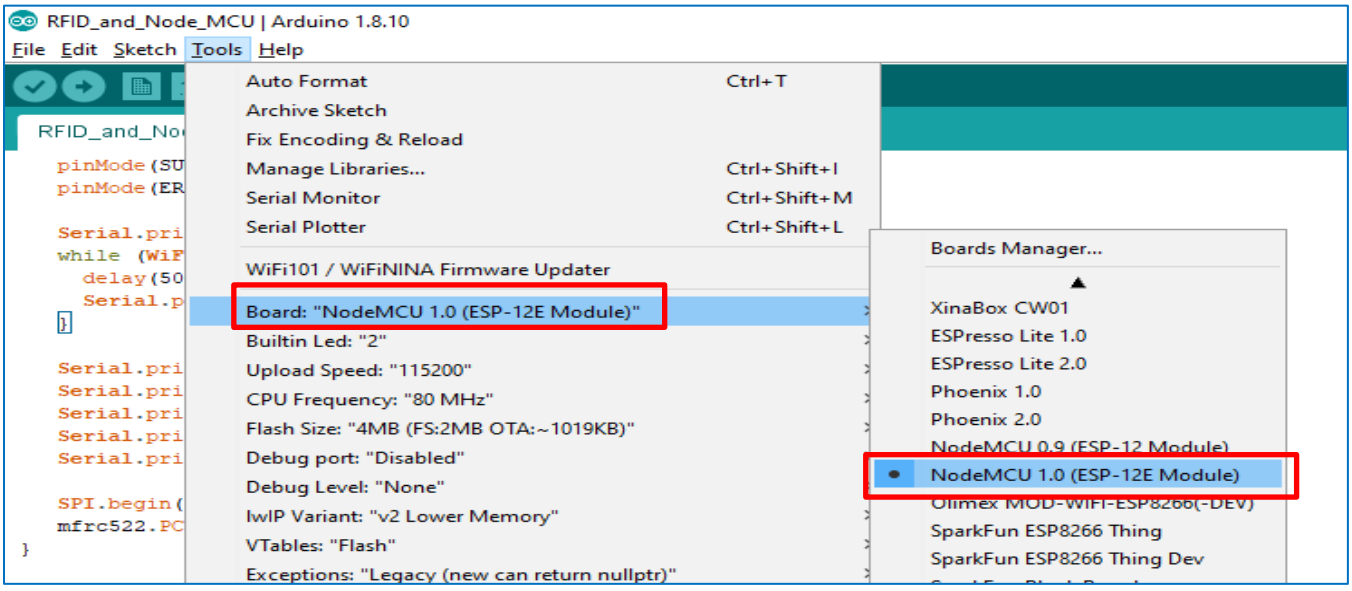
Plug in your NodeMcu to your computer. You will notice that your RFID scanner will light up and wait until connected!

3. Selecting Port and Board

Go to Tools -> Port and select the COM Port of your NodeMCU. If you are not sure what port your of your NodeMcu is plugged in, go to Device Manager -> Ports (COM & LPT)



4. Now select NodeMcu 1.0 (ESP-12E Module) by clicking Tools -> Board. Scroll down.



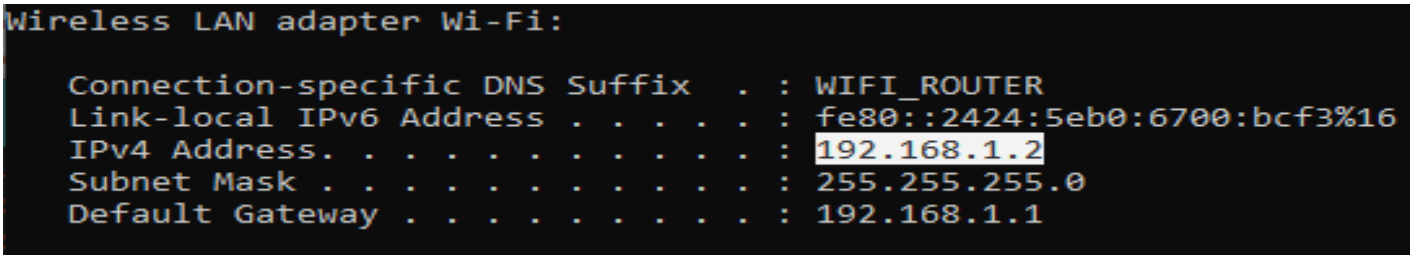
Restart your Arduino IDE

Modifying the Codes

Open up the codes attached in Arduino IDE. Change the following lines of code. Since our RFID Scanner will be wireless, we need a way to transmit the data to our web server. Our NodeMcu will automatically connect to your wifi or mobile hotspot.


```
const char *ssid = "HINDI-KO-ALAM"; //WIFI NAME OR HOTSPOT
const char *password = "Rnl+UTBl"; //WIFI PASSWORD POR MOBILE HOTSPOT PASSWORD
```

The URL must be changed to where you deployed our PHP codes. I run XAMPP on my computer. I inputted my LAN IP address.




```
if(WiFi.status() == WL_CONNECTED) {
  HTTPClient http;
  String postData = "cardid=" + String(cardid) + "&action=insertRecord";
  http.begin("http://192.168.1.2/RFIDandPHP/process.php");
  http.addHeader("Content-Type", "application/x-www-form-urlencoded");
```

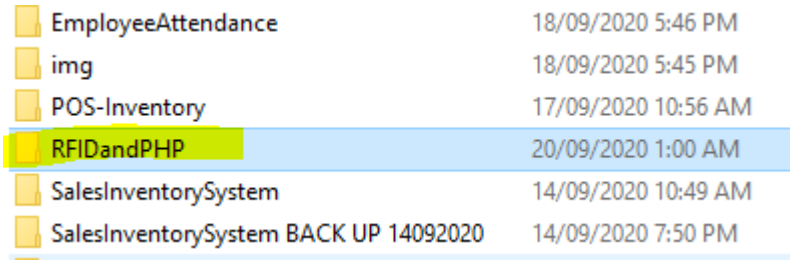
After modifying the codes, plugin your NodeMCU, and on Arduino ID, click the upload button.

SourceCodePH: Please use this user manual as your reference. This is not for sale.

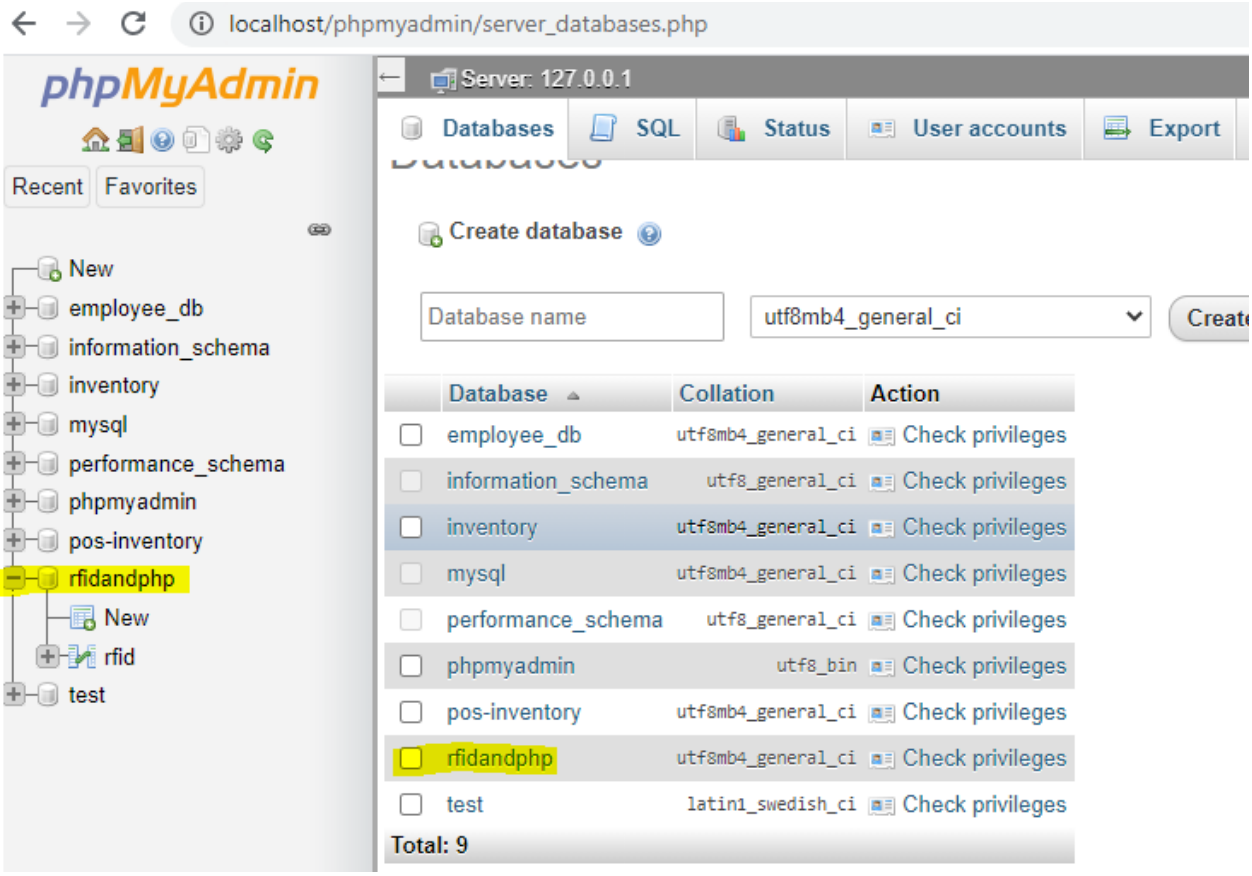
XAMPP setup:

1. Download and Extract the zip file: **RFIDandPHP.zip**

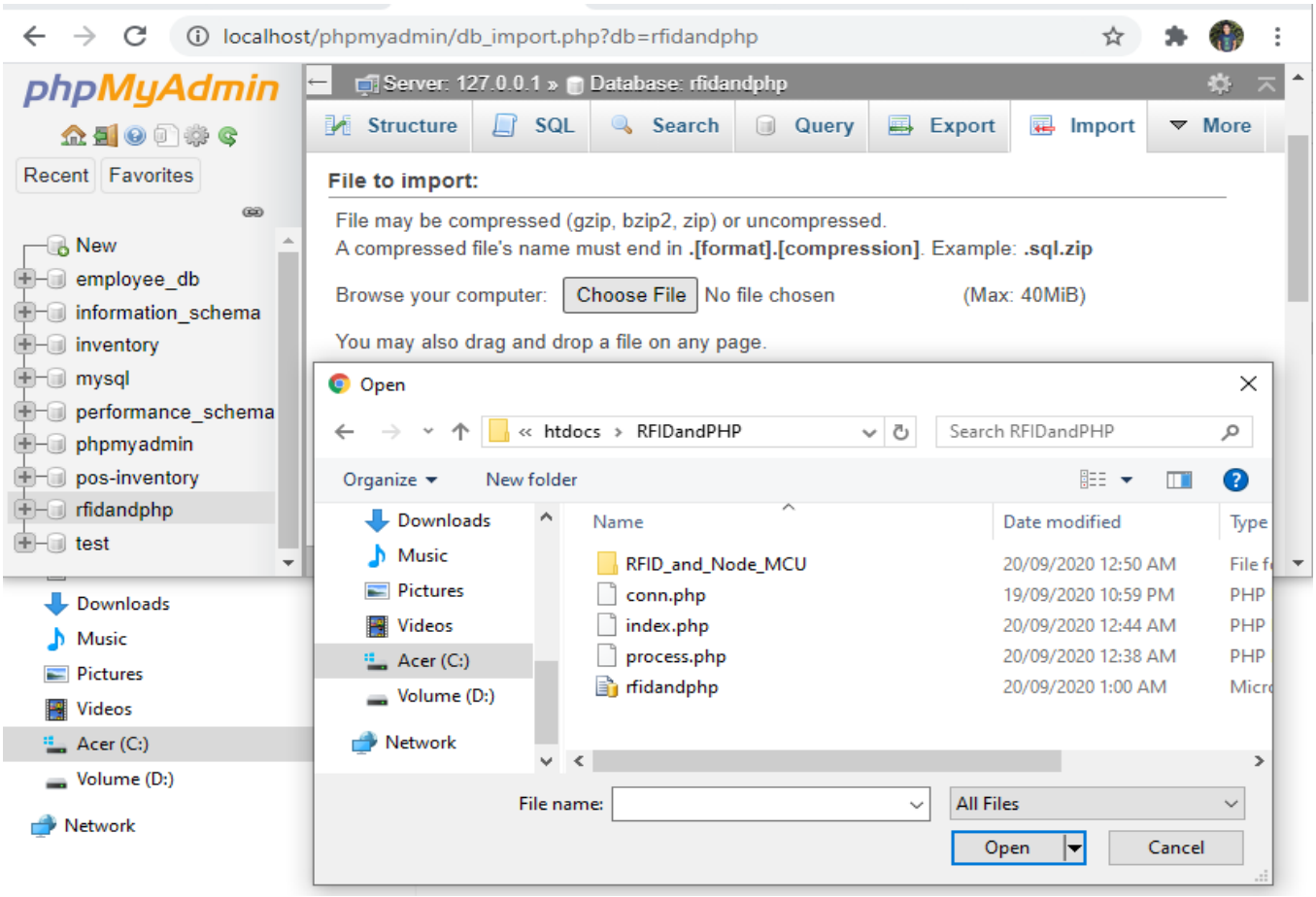
2. Put the folder name inside to this path: C:\xampp\htdocs



3.Open http://localhost/phpmyadmin/ and create database name: "**rfidandphp"**



4. Open C:\xampp\htdocs**RFIDandPHP** and import the database **rfidandphp.sql**



5. and last, open the folder in browser type: **http://localhost/RFIDandPHP/**

Output:

All Records

ID	CARD ID	DATE AND TIME
1	232790	September 20, 2020, 12:29 am
2	232790	September 20, 2020, 12:55 am

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