Internet of things Lab Internal

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a) Conduct an experiment with 2 LEDs. When the 1st LED is ON the 2nd should be OFF and vice versa.(serial monitor).

b) Write down the installation steps of arduino IDE.

Aim: To implements the 2 LEDs ON and OFF. By using the Wifi Server if the 1st LED is ON and the another LED should be OFF vice versa.

Device Description:

NodeMCU is a cheap wifi chip released by ESP2866. Node MCU is more advantagous than raspberry pi. NodeMCU contains GPIO(GP input output). All the D pins are used for input for extra components.
RSV are reserved pins. A0 is used to connect the A0 of drivers that contain A0. Since Node MCU only allows 3.3V to pass through, only the half of Node MCU must be used for items such Ultrasonic device.

ESP8266WiFi.h is required for doing all Wi-Fi related functionalities such as connection, AP, etc.WiFiClient.h this file is required to send request to web browser.ESP8266WebServer.h it handlesall HTTP protocols.

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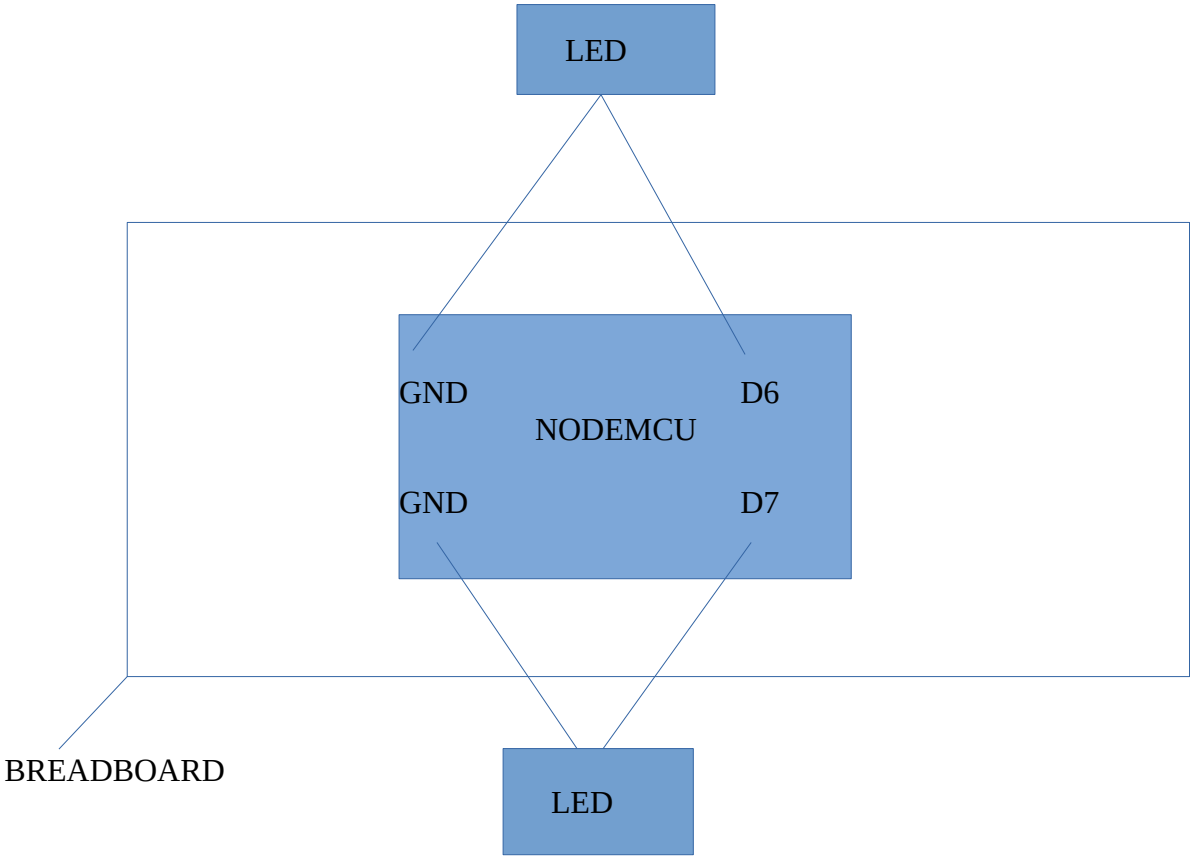
Circuit Diagram:



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CODE:

```
void setup()
{
Serial.begin(115200);
pinMode(13, OUTPUT);
pinMode(12, OUTPUT);
}

void loop()
{
digitalWrite(12,LOW);
digitalWrite(13,HIGH);
delay(1000);
Serial.println("led on");
digitalWrite(13,LOW);
digitalWrite(12,HIGH);
delay(1000);
Serial.println("led off");
}
```

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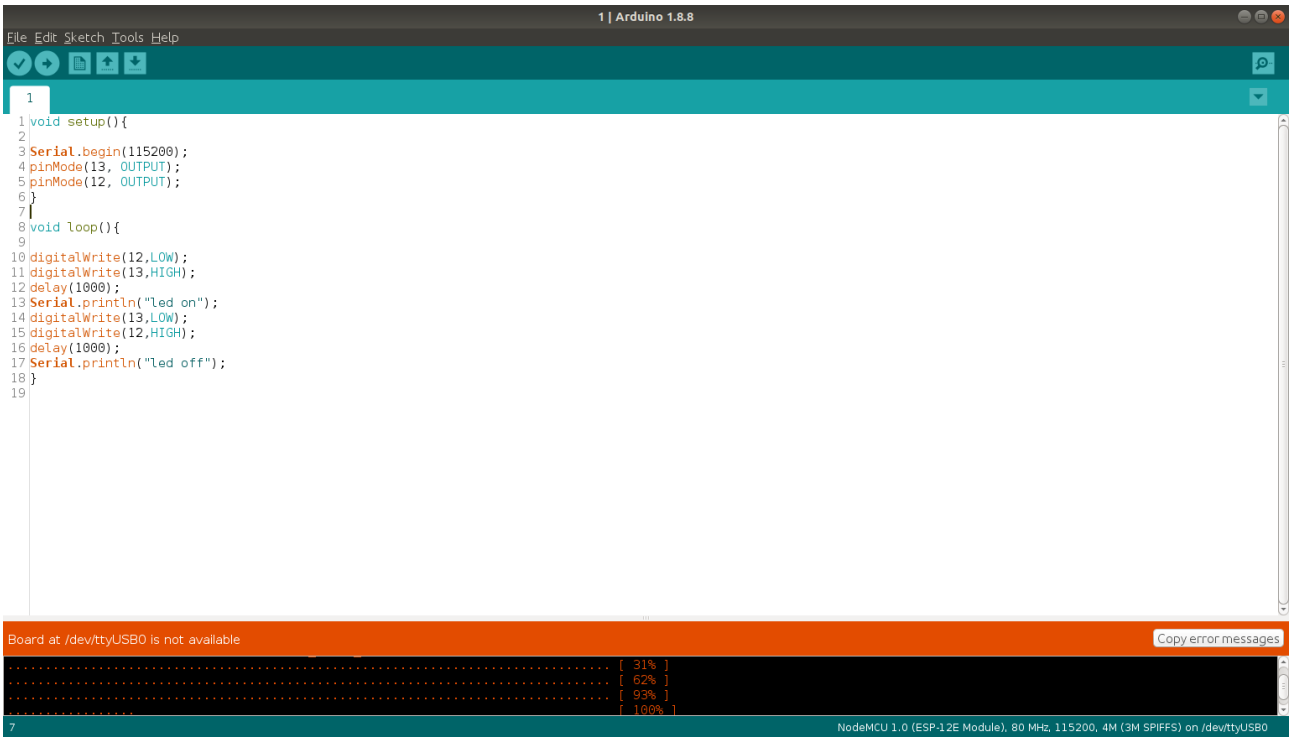
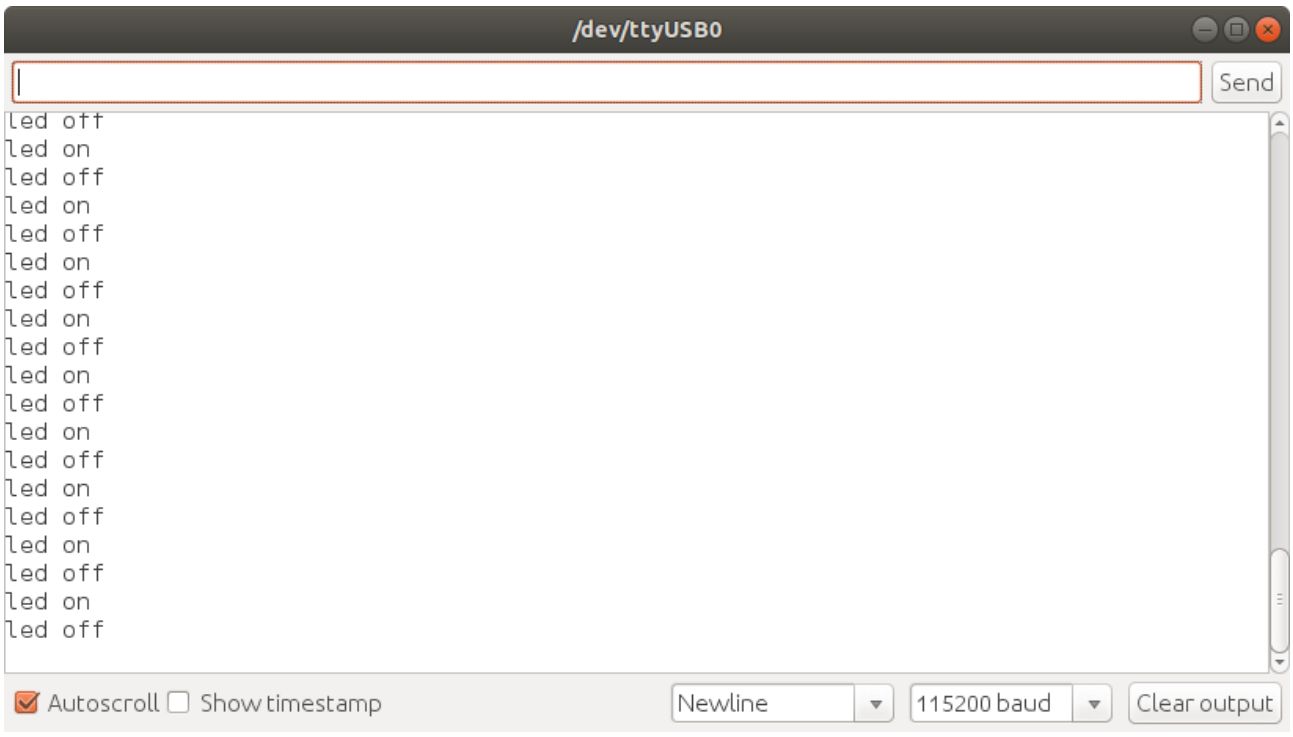
OUTPUT:





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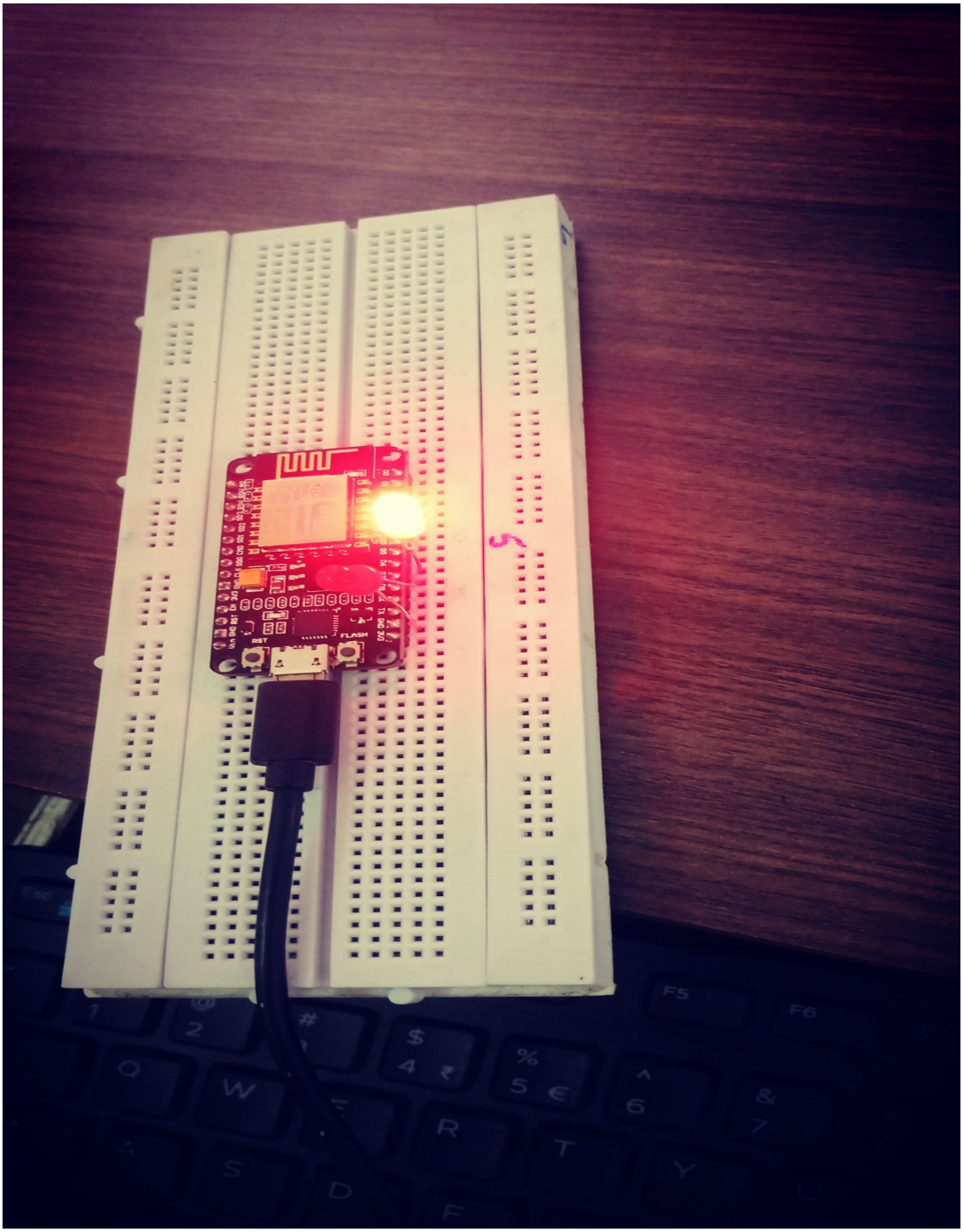

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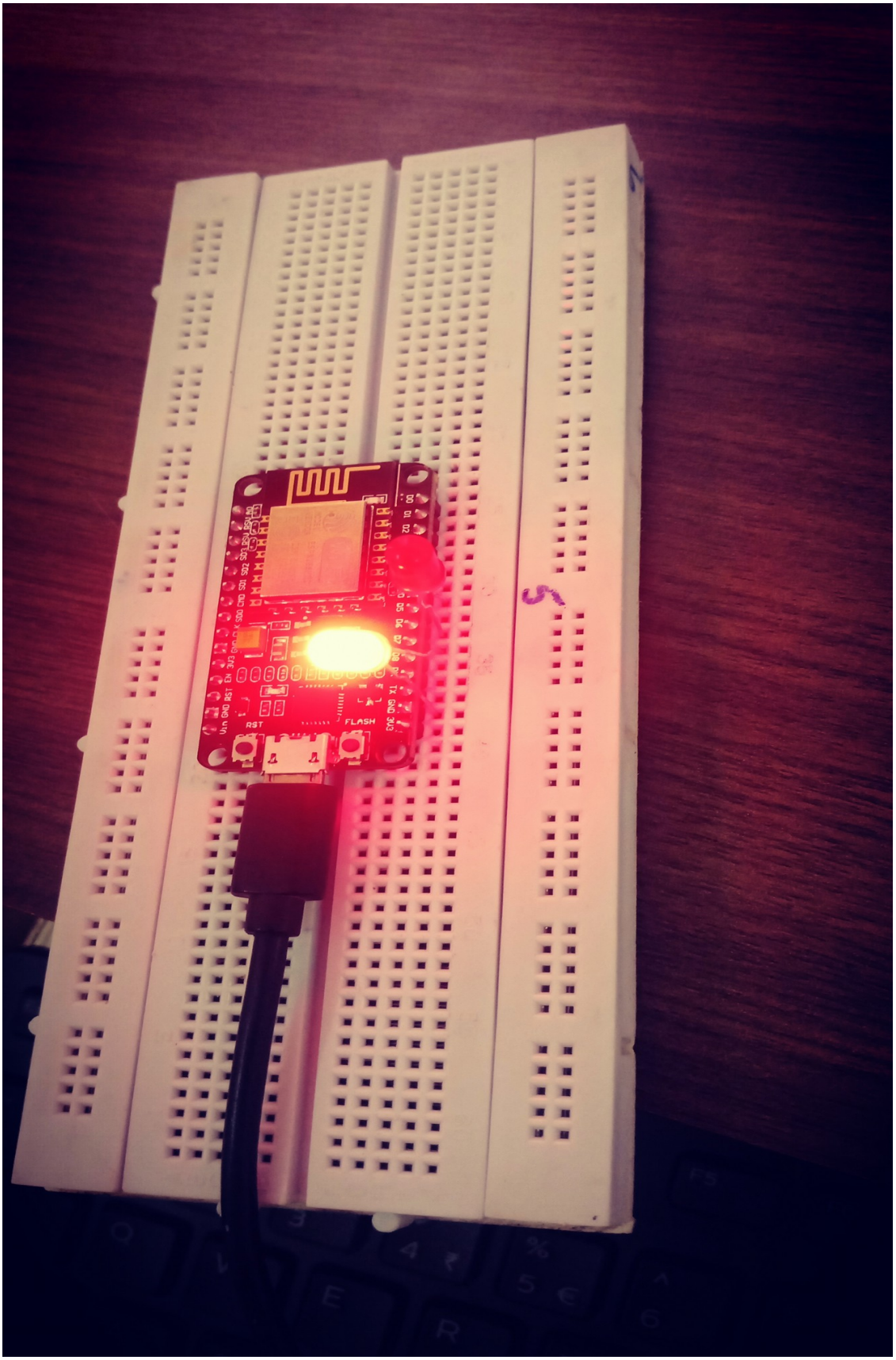

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B)Installation steps for Arduino.

- Go to Arduino.com
- Download the Arduino Application
- Unzip the Arduino Zip folder
- Install the Application.
- Open Preferences in the Application
- Search for URL
- Go to board manager
- Install the esp8266 module in the board manager.

AFTTER PERFORMING ALL THE STEPS FOR INSTALLING ARDUINO.