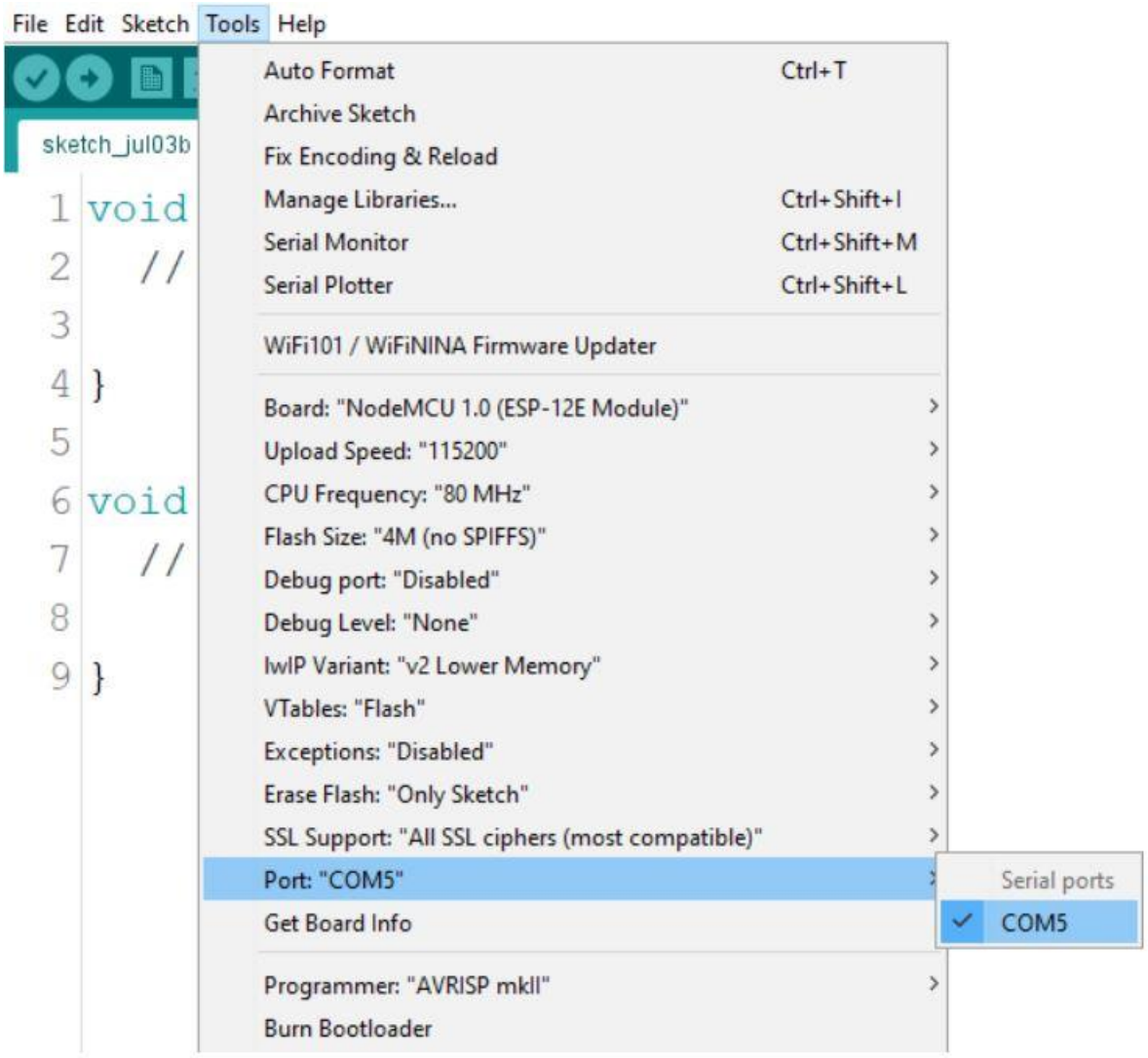
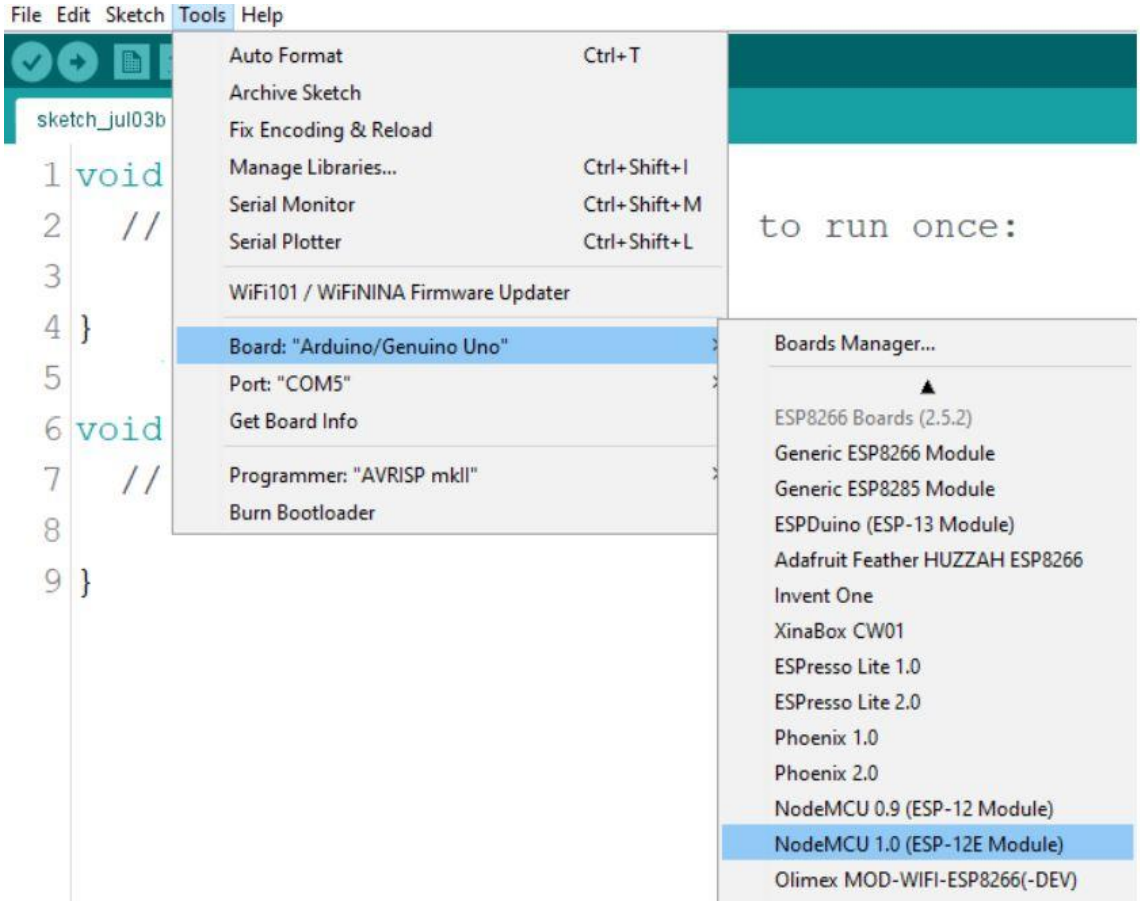
Practical – 8

Aim: Getting started with NodeMCU, add ESP8266 in the Arduino IDE. GPIO Interfacing and programming

- Step by step process of how to use and integrate ESP8266 in Arduino IDE with screenshots.




File Edit Sketch Tools Help
sketch_jul03b
1 void
2 //
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6 void
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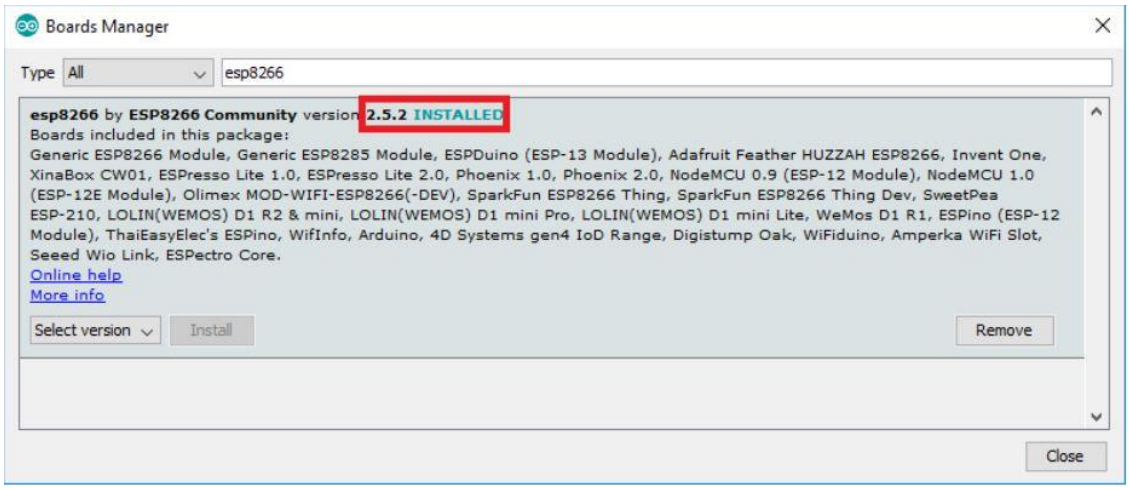
9 }
to run once:
Auto Format Ctrl+T
Archive Sketch
Fix Encoding & Reload
Manage Libraries... Ctrl+Shift+I
Serial Monitor Ctrl+Shift+M
Serial Plotter Ctrl+Shift+L
WiFi101 / WiFiNINA Firmware Updater
Board: "Arduino/Genuino Uno"
Port: "COM5"
Get Board Info
Programmer: "AVRISP mkII"
Burn Bootloader
Boards Manager...
ESP8266 Boards (2.5.2)
Generic ESP8266 Module
Generic ESP8285 Module
ESPDuino (ESP-13 Module)
Adafruit Feather HUZZAH ESP8266
Invent One
XinaBox CW01
ESPresso Lite 1.0
ESPresso Lite 2.0
Phoenix 1.0
Phoenix 2.0
NodeMCU 0.9 (ESP-12 Module)
NodeMCU 1.0 (ESP-12E Module)
Olimex MOD-WIFI-ESP8266(-DEV)


Boards Manager
Type All esp8266
esp8266 by ESP8266 Community version 2.5.2 INSTALLED
Boards included in this package:
Generic ESP8266 Module, Generic ESP8285 Module, ESPDuino (ESP-13 Module), Adafruit Feather HUZZAH ESP8266, Invent One, XinaBox CW01, ESPresso Lite 1.0, ESPresso Lite 2.0, Phoenix 1.0, Phoenix 2.0, NodeMCU 0.9 (ESP-12 Module), NodeMCU 1.0 (ESP-12E Module), Olimex MOD-WIFI-ESP8266(-DEV), SparkFun ESP8266 Thing, SparkFun ESP8266 Thing Dev, SweetPea ESP-210, LOLIN(WEMOS) D1 R2 & mini, LOLIN(WEMOS) D1 mini Pro, LOLIN(WEMOS) D1 mini Lite, WeMos D1 R1, ESPino (ESP-12 Module), ThaiEasyElec's ESPino, WifInfo, Arduino, 4D Systems gen4 IoD Range, Digistump Oak, WiFiduino, Amperka WiFi Slot, Seeed Wio Link, ESPectro Core.
Online help
More info
Select version
Install
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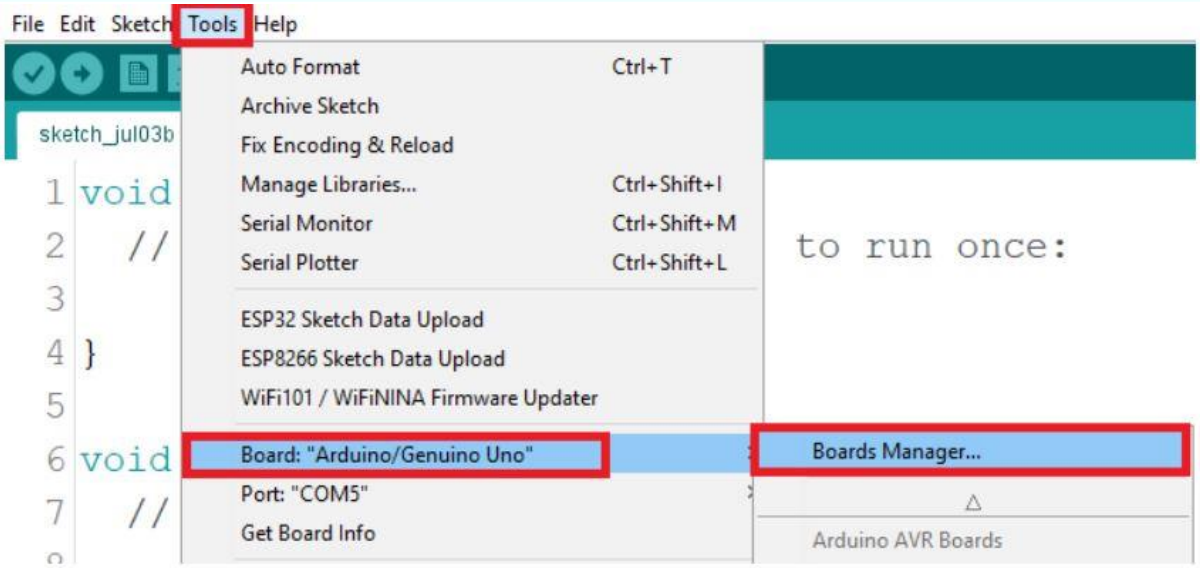
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Port: "COM5"
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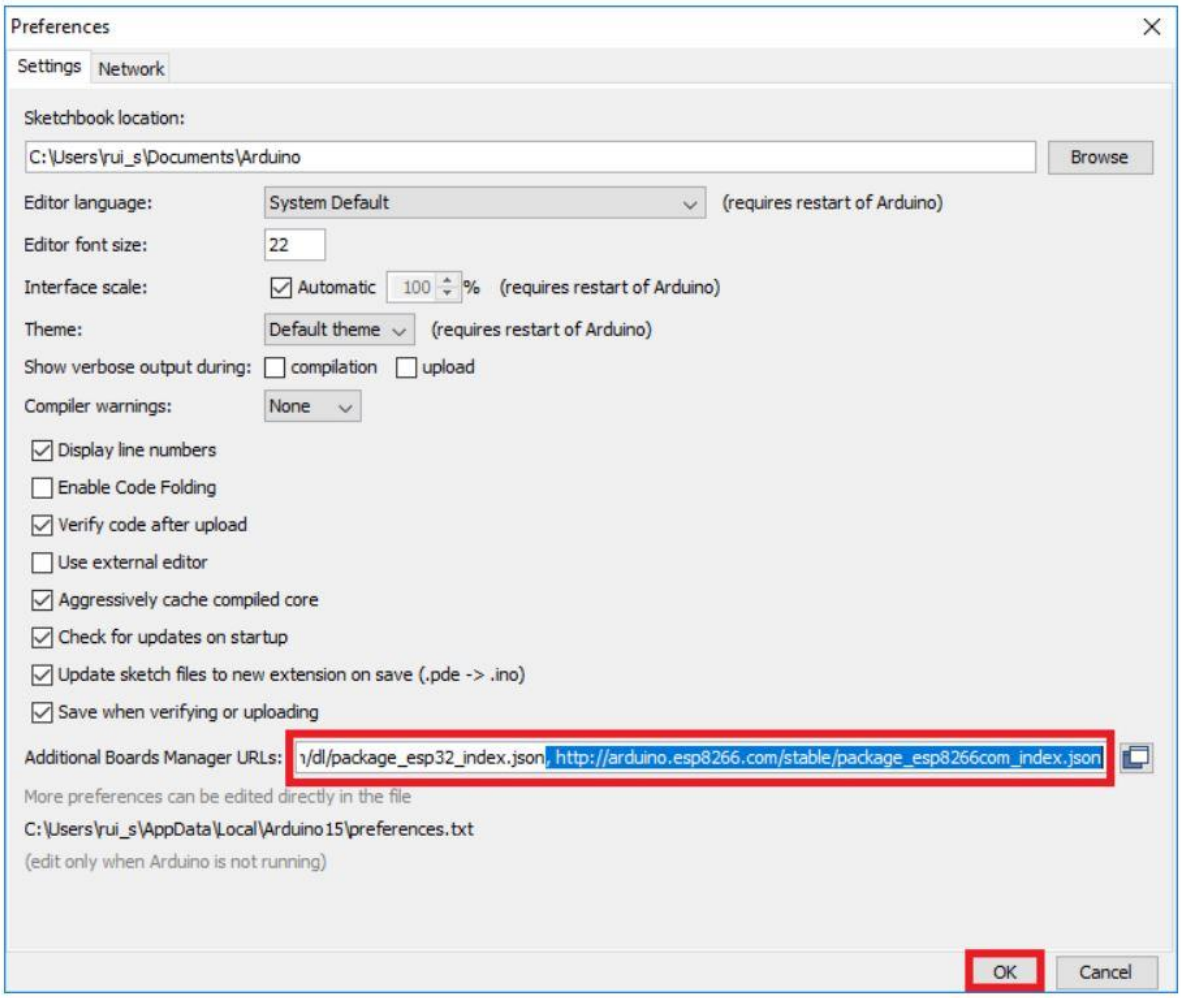
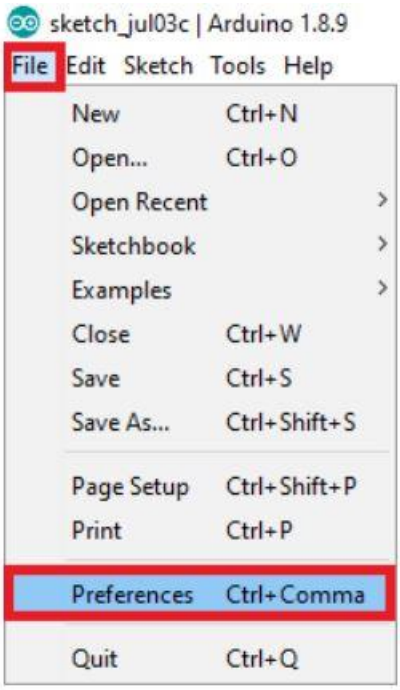
Arduino AVR Boards





Programming & Interfacing of LED with ESP8266(NodeMCU)

Code:

```
int pin = 2;

void setup() {
  // initialize GPIO 2 as an output.
  pinMode(pin, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(pin, HIGH);   // turn the LED on (HIGH is the voltage level)
  delay(1000);               // wait for a second
  digitalWrite(pin, LOW);    // turn the LED off by making the voltage LOW
  delay(1000);               // wait for a second
}
```

Output: