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LEZIONE 2

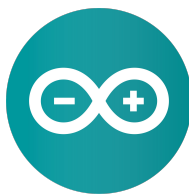


CORSO ARDUINO AVANZATO 2020

Docente: **DANIELE CORTE**



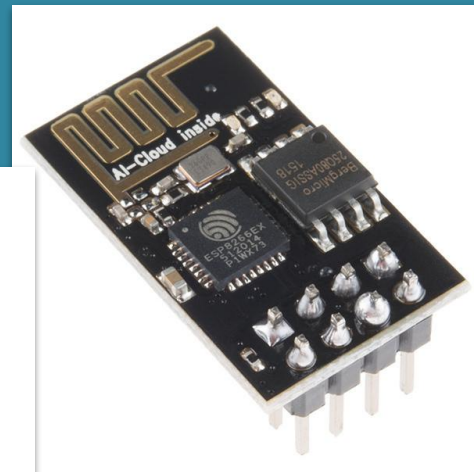
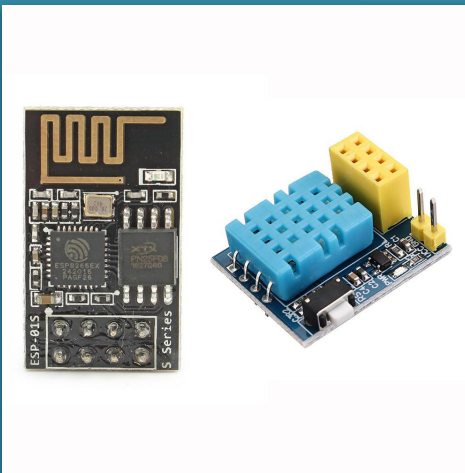
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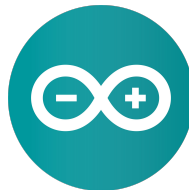
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INTRODUZIONE A ESP8266

ESP8266 è un chip a basso costo prodotto dalla Expressif Systems di Shangai



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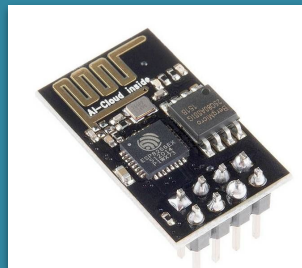


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DIFFERENZE:

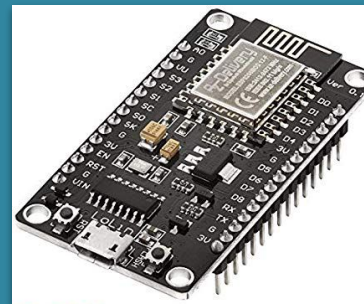
ESP-01

- Processore: 80MHz
- 32 KiB RAM
- 80KiB user datas
- 2 GpiO



ESP-12E

- Processore: 320MHz
- 128KiB RAM
- 512KiB user datas
- 16 GpiO
- SPI
- I2C



ALIMENTAZIONE 3.3V!!!!

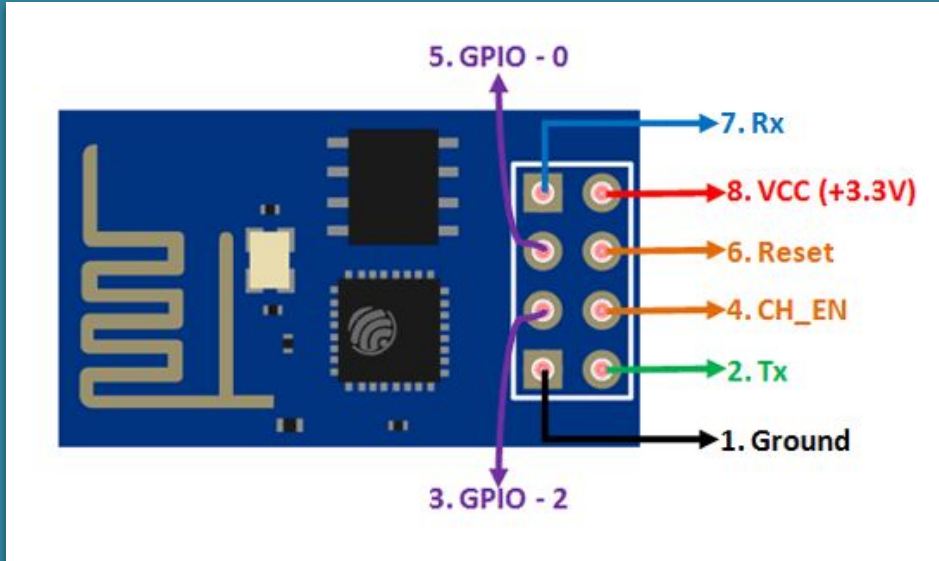


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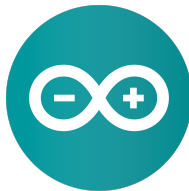


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ESP-01 PINOUT:

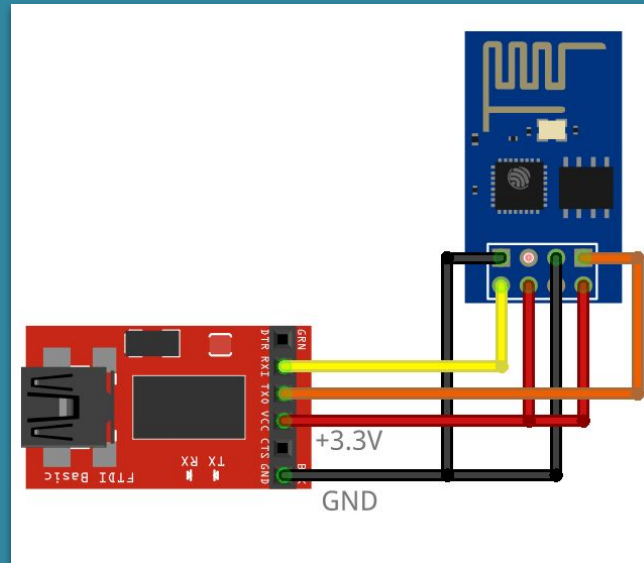


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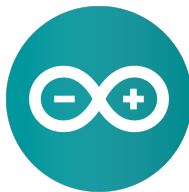
ESP-01 MODALITÀ PROGRAMMAZIONE



ESP12-E HA IL
PROGRAMMATORE
INTEGRATO

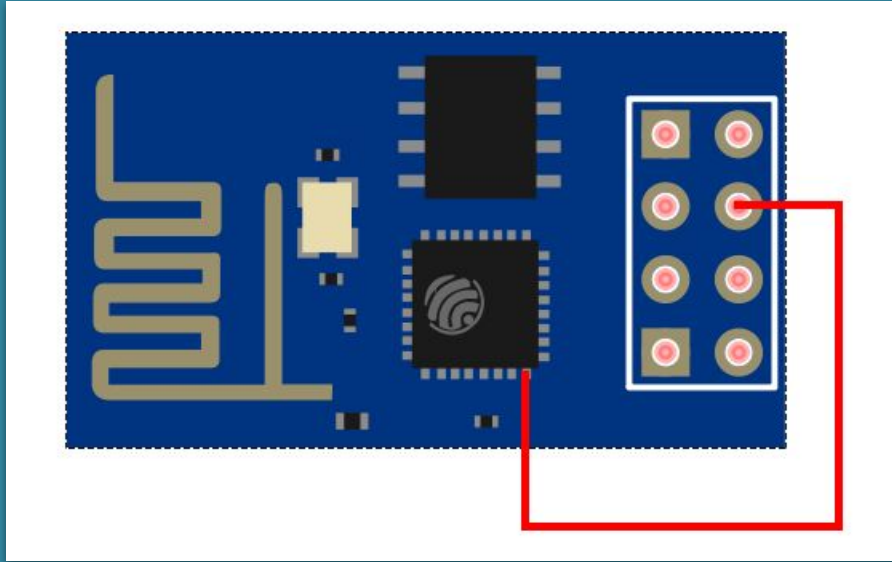


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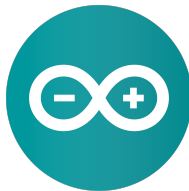
ESP-01 MODALITÀ DEEPSLEEP



```
ESP.deepSleep(60 * 1000000);
```

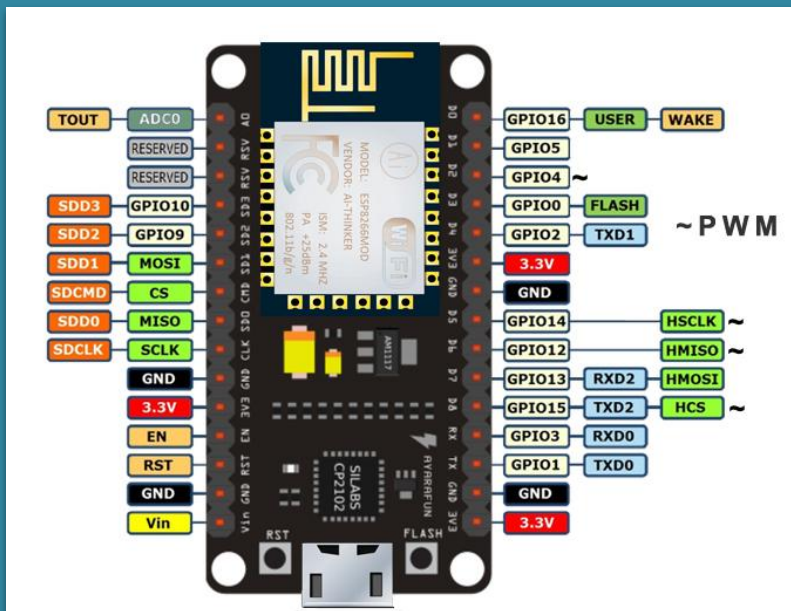


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ESP12-E PINOUT



ALIMENTANDO DA USB
HA UN REGOLATORE
CHE ABBASSA
AUTOMATICAMENTE A
3.3v



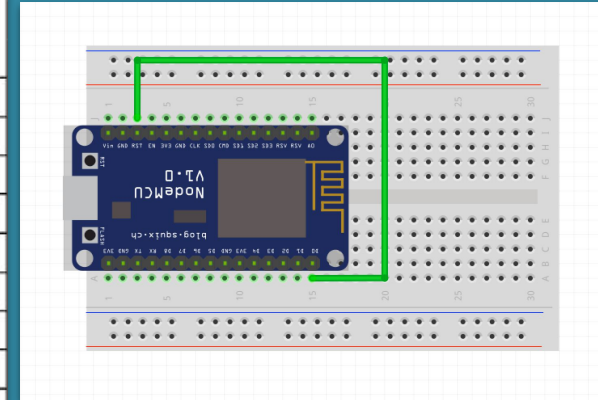
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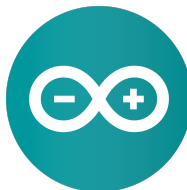
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ESP-12E MODALITÀ DEEPSLEEP

Power mode	Description	Power consumption
Active (RF working)	Wi-Fi Tx packet 14 dBm ~ 19.5 dBm	Please refer to Table 10 for details.
	Wi-Fi / BT Tx packet 0 dBm	
	Wi-Fi / BT Rx and listening	
Modem-sleep	The CPU is powered on.	Max speed 240 MHz: 30 mA ~ 50 mA
		Normal speed 80 MHz: 20 mA ~ 25 mA
		Slow speed 2 MHz: 2 mA ~ 4 mA
Light-sleep	-	0.8 mA
Deep-sleep	The ULP co-processor is powered on.	150 μ A
	ULP sensor-monitored pattern	100 μ A @1% duty
	RTC timer + RTC memory	10 μ A
Hibernation	RTC timer only	5 μ A
Power off	CHIP_PU is set to low level, the chip is powered off	0.1 μ A

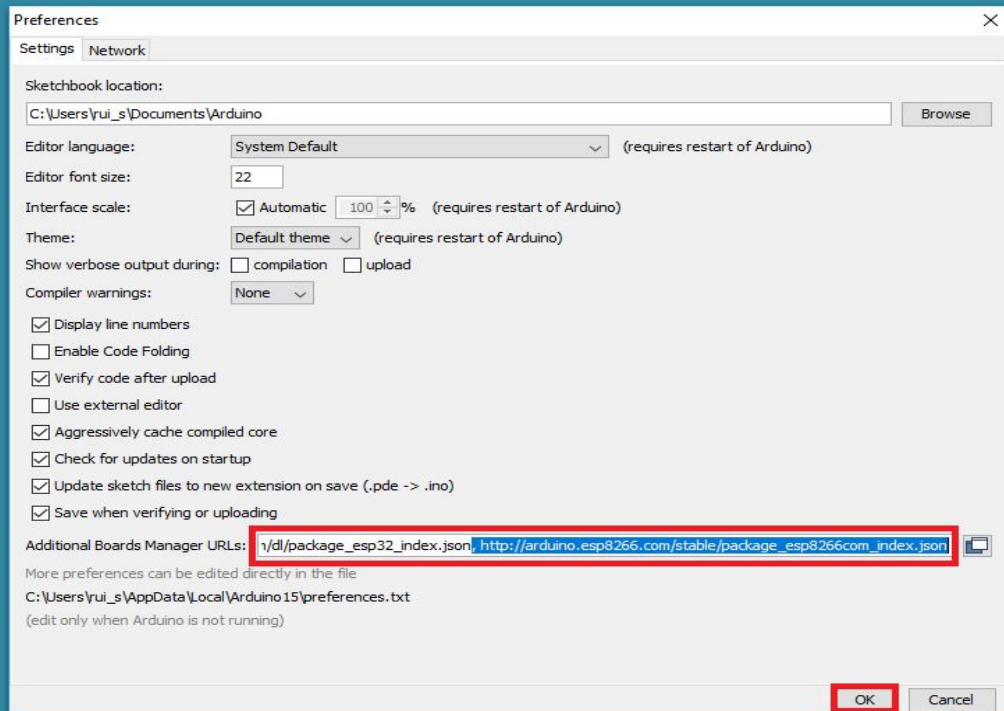
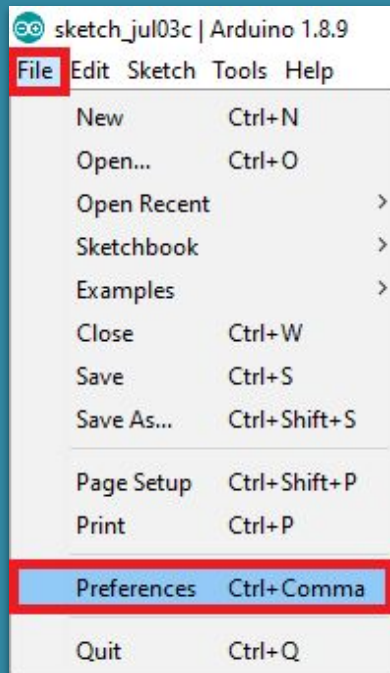


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INSTALLAZIONE IDE:



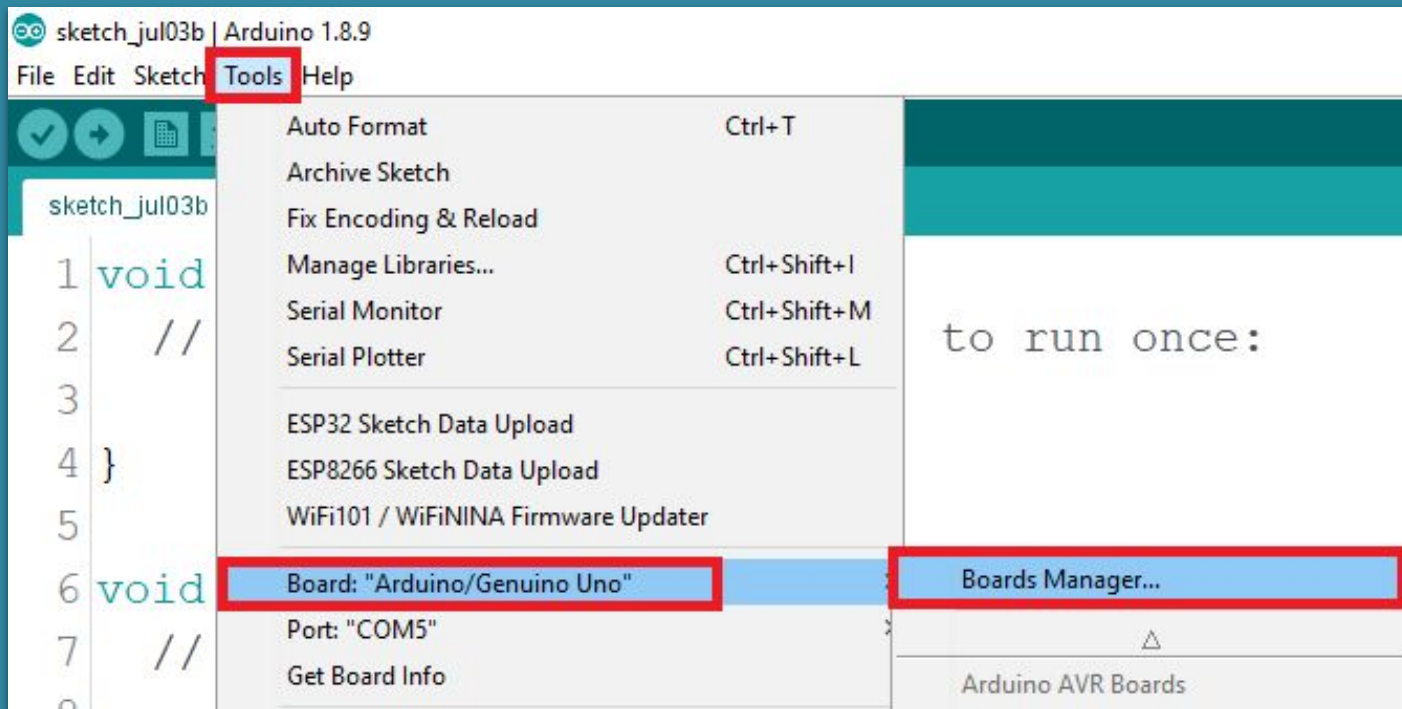
http://arduino.esp8266.com/stable/package_esp8266com_index.json



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INSTALLAZIONE IDE:



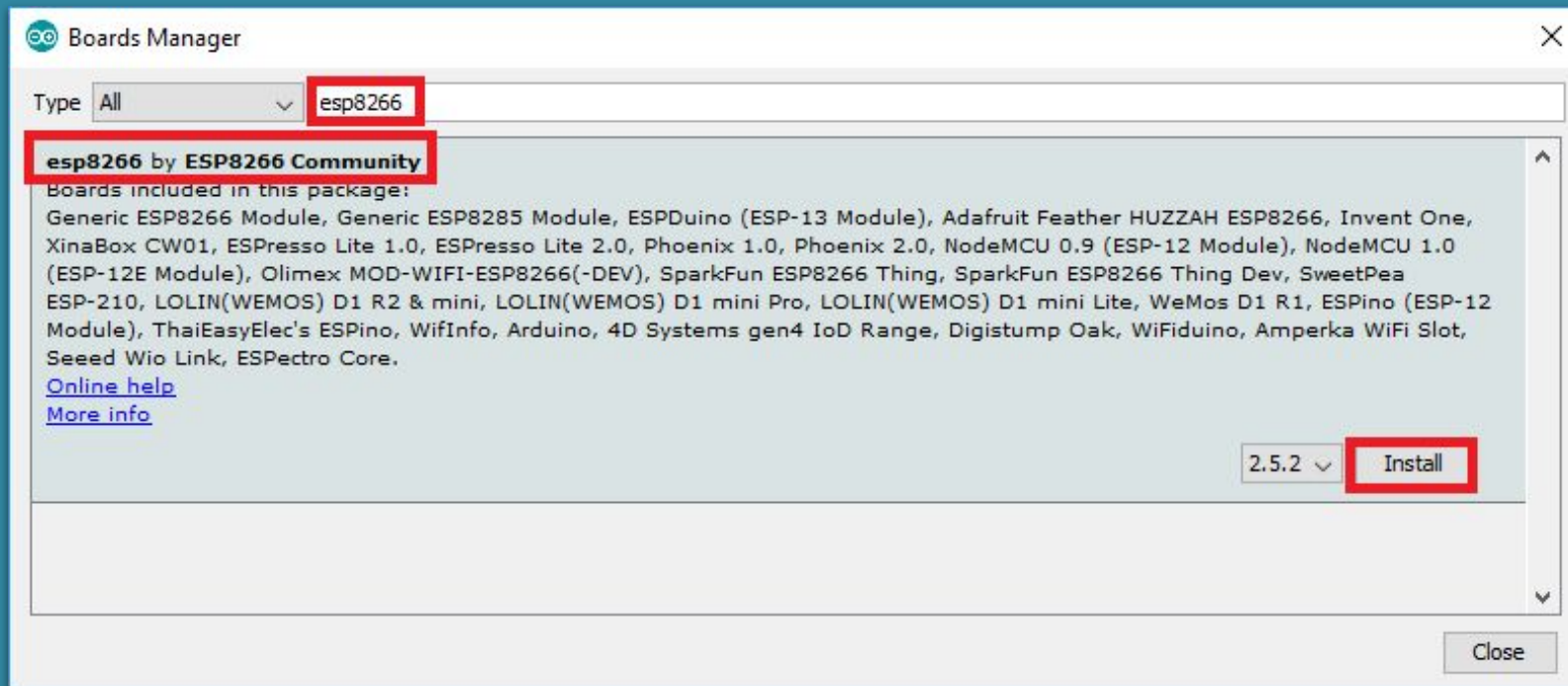
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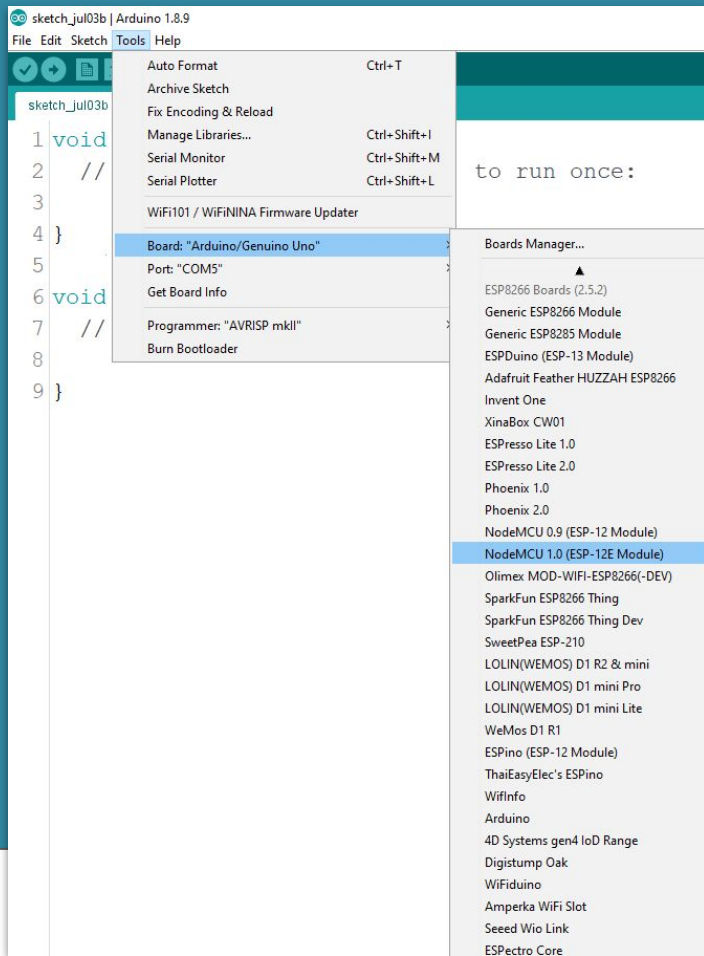


INSTALLAZIONE IDE:



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Se su Linux da problemi provare i seguenti comandi:

sudo chmod a+rw /dev/ttyACM0

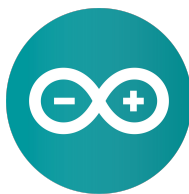
In alternativa:

sudo usermod -a -G dialout \$USER

Fare logout e se ancora non va

sudo usermod -a -G uucp \$USER

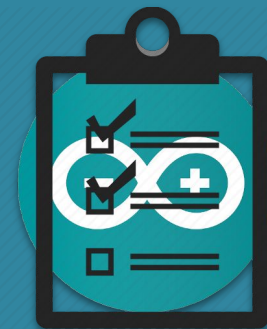
Se ancora non va chiedere a **LUGanega** :)



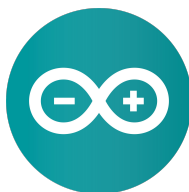
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TEST:

COLLEGARE UN SENSORE O UN LED ALL'ESP12-E,
PROGRAMMARLO E PROVARE A CARICARE LO SKETCH PER
VEDERE CHE TUTTO FUNZIONI CORRETTAMENTE



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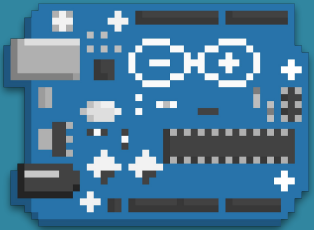


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DOMANDE?

GRAZIE PER L'ATTENZIONE!

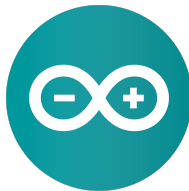
CI VEDIAMO SABATO PROSSIMO 29/02
h 15:00



CIAO A TUTTI :)



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