Guide#raspiSerie_00_HI_PI

Hello Pi!!! - 00 # raspiSerie

1-Install arduino in Raspian:

```
sudo apt-get update
sudo apt-get install arduino
sudo usermod -a -G tty pi
sudo usermod -a -G dialout pi
```

2-Finding the Serial Port:

```
ls /dev/tty*
```

3-Talking in serial:
Open the Arduino IDE:

```
void setup() {
    Serial.begin(9600);
  }
void loop() {
    for (byte n = 0; n < 255; n++) {
      Serial.write(n);
      delay(50);
  }
}
```

4- Digital Output:

```
root@raspberrypi:/home/pi# echo 25 > /sys/class/gpio/export

root@raspberrypi:/home/pi# cd /sys/class/gpio/gpio25

root@raspberrypi:/sys/class/gpio/gpio25# ls
active_low direction edge power subsystem uevent value

root@raspberrypi:/sys/class/gpio/gpio25# echo out > direction

root@raspberrypi:/sys/class/gpio/gpio25# echo 1 > value

root@raspberrypi:/sys/class/gpio/gpio25# echo 0 > value
```

5- Digital Input: Reading a Button:

```
root@raspberrypi:/sys/class/gpio/gpio25# echo 24 > /sys/class/gpio/export

root@raspberrypi:/sys/class/gpio/gpio25# cd /sys/class/gpio/gpio24

root@raspberrypi:/sys/class/gpio/gpio24# echo in > direction

root@raspberrypi:/sys/class/gpio/gpio24# cat value
```

6- Installing and Testing GPIO in Python and Blinking an LED with Python:

```
pi@raspberrypi ~ $ sudo python
try importing the module:
>>> import RPi.GPIO as GPIO
If you don’t get an error, you’re all set.

import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)
GPIO.setup(25, GPIO.OUT)
while True:
  GPIO.output(25, GPIO.HIGH)
  time.sleep(1)
  GPIO.output(25, GPIO.LOW)
  time.sleep(1)
```