

```
COM3 - PuTTY

Raspbian GNU/Linux 8 raspberrypi ttyAMA0

raspberrypi login: pi
Password:
Last login: Thu Mar 31 23:51:01 UTC 2016 on tty1
Linux raspberrypi 4.1.19+ #858 Tue Mar 15 15:52:03 GMT 2016 armv6l

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
pi@raspberrypi:~$ █
```





DHCP Client Table - Google Chrome
192.168.1.1/setup.cgi?next_file=DHCPClientTable.htm

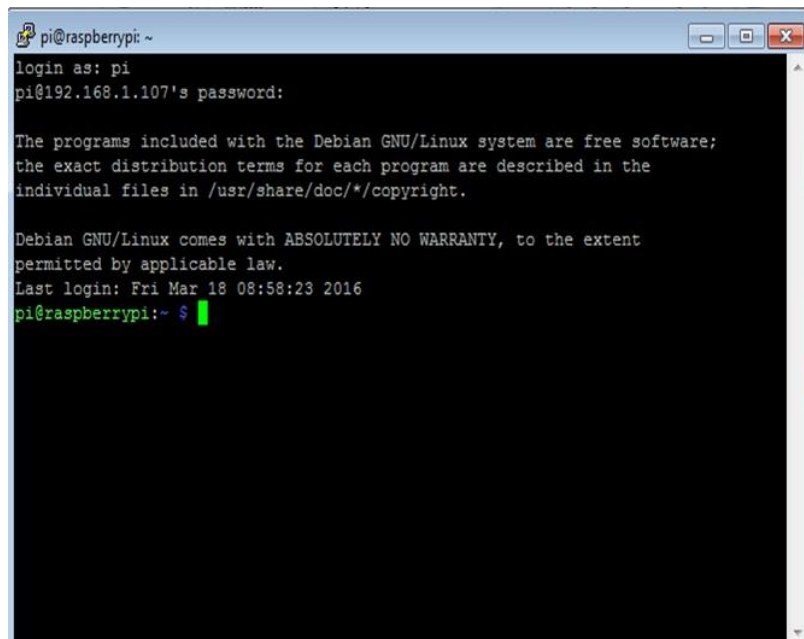
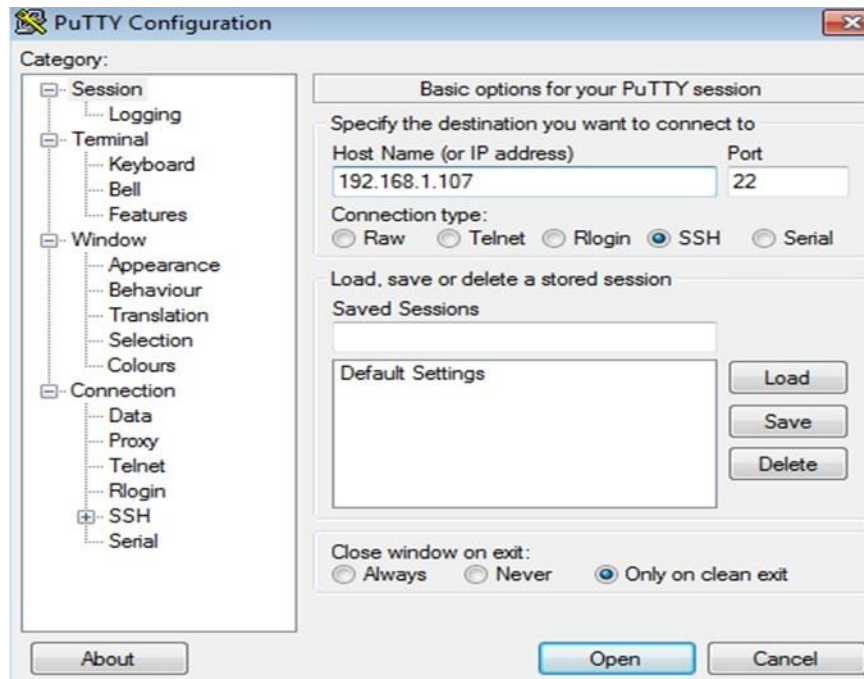
LINKSYS[®] by Cisco

DHCP Client Table

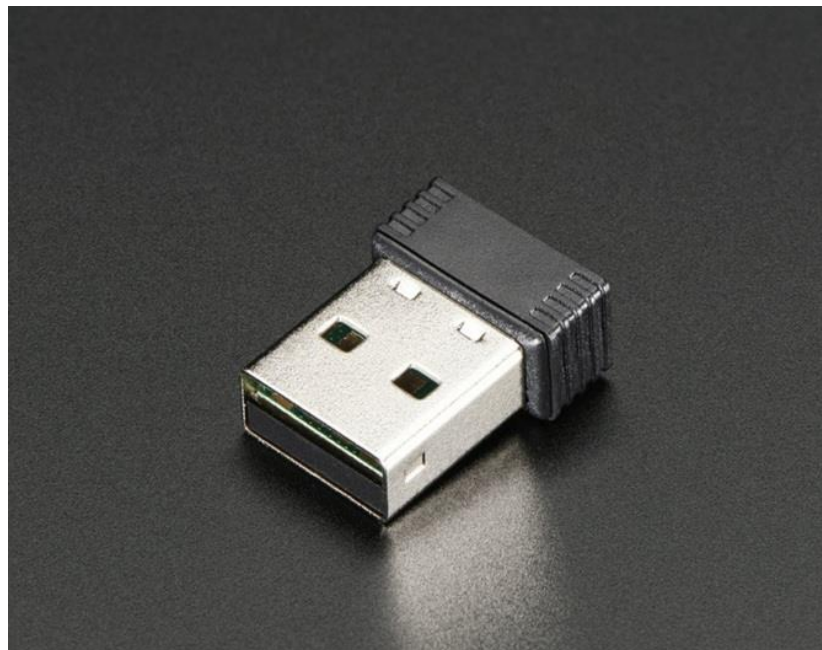
DHCP Server IP Address: 192.168.1.1 Refresh

Client Host Name	IP Address	MAC Address	Expires	Delete
android-444b2b6d85f51aab	192.168.1.102	98:6C:F5:3E:36:50	74623	<input type="checkbox"/>
Unknown	192.168.1.103	EC:F0:0E:40:32:C3	76987	<input type="checkbox"/>
PC-HP	192.168.1.104	BC:77:37:7E:58:01	85677	<input type="checkbox"/>
android-aae2a7156a9dc0e5	192.168.1.105	94:35:0A:4C:D8:18	47670	<input type="checkbox"/>
ESP_012A56	192.168.1.106	5C:CF:7F:01:2A:56	85730	<input type="checkbox"/>
raspberrypi	192.168.1.107	00:50:B6:03:A1:A9	86289	<input type="checkbox"/>

Close




```
pi@raspberrypi: ~  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Fri Mar 18 08:58:23 2016  
pi@raspberrypi:~$ sudo ifconfig -a  
eth0      Link encap:Ethernet  HWaddr 00:50:b6:03:a1:a9  
          inet addr:192.168.1.107  Bcast:192.168.1.255  Mask:255.255.255.0  
          inet6 addr: fe80::12d8:67ba:43b1:e7b2/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:161 errors:0 dropped:3 overruns:0 frame:0  
          TX packets:155 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:14930 (14.5 KiB)  TX bytes:22275 (21.7 KiB)  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:65536  Metric:1  
          RX packets:200 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:200 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:0  
          RX bytes:16656 (16.2 KiB)  TX bytes:16656 (16.2 KiB)  
  
pi@raspberrypi:~$
```



```
pi@raspberrypi: ~  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Fri Mar 18 08:58:23 2016  
pi@raspberrypi:~$ sudo ifconfig -a  
eth0      Link encap:Ethernet  HWaddr 00:50:b6:03:a1:a9  
          inet addr:192.168.1.107  Bcast:192.168.1.255  Mask:255.255.255.0  
          inet6 addr: fe80::12d8:67ba:43b1:e7b2/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:161 errors:0 dropped:3 overruns:0 frame:0  
          TX packets:155 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:14930 (14.5 KiB)  TX bytes:22275 (21.7 KiB)  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:65536  Metric:1  
          RX packets:200 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:200 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:0  
          RX bytes:16656 (16.2 KiB)  TX bytes:16656 (16.2 KiB)  
  
pi@raspberrypi:~$ sudo apt-get install wireless-tools  
Reading package lists... 56%
```

```
pi@raspberrypi: ~  
          inet addr:192.168.1.107  Bcast:192.168.1.255  Mask:255.255.255.0  
          inet6 addr: fe80::12d8:67ba:43b1:e7b2/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:161 errors:0 dropped:3 overruns:0 frame:0  
          TX packets:155 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:14930 (14.5 KiB)  TX bytes:22275 (21.7 KiB)  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:65536  Metric:1  
          RX packets:200 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:200 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:0  
          RX bytes:16656 (16.2 KiB)  TX bytes:16656 (16.2 KiB)  
  
pi@raspberrypi:~$ sudo apt-get install wireless-tools  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
wireless-tools is already the newest version.  
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.  
pi@raspberrypi:~$
```

```
pi@raspberrypi: ~
login as: pi
pi@192.168.1.107's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Mar 31 05:01:39 2016
pi@raspberrypi:~ $ sudo nano /etc/network/interfaces
GNU nano 2.2.6      File: /etc/network/interfaces

interfaces(5) file used by ifup(8) and ifdown(8)

# Please note that this file is written to be used with dhcpcd
# For static IP, consult /etc/dhcpcd.conf and 'man dhcpcd.conf'

# Include files from /etc/network/interfaces.d:
source-directory /etc/network/interfaces.d

auto lo
iface lo inet loopback
```

```
pi@raspberrypi: ~
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Mar 31 05:17:46 2016
pi@raspberrypi:~ $ ifconfig
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:72 errors:0 dropped:0 overruns:0 frame:0
          TX packets:72 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:6288 (6.1 KiB)  TX bytes:6288 (6.1 KiB)

wlan0     Link encap:Ethernet  HWaddr 40:a5:ef:0c:b2:75
          inet addr:192.168.1.108  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: fe80::3370:754c:ae3e:d106/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:103 errors:0 dropped:15 overruns:0 frame:0
          TX packets:105 errors:0 dropped:1 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:14942 (14.5 KiB)  TX bytes:19069 (18.6 KiB)

pi@raspberrypi:~ $
```

DHCP Client Table - Google Chrome
 192.168.1.1/setup.cgi?next_file=DHCPClientTable.htm

LINKSYS® by Cisco

DHCP Client Table

DHCP Client Table
 DHCP Server IP Address: 192.168.1.1 Refresh

Client Host Name	IP Address	MAC Address	Expires	Delete
android-444b2b6d85f51aab	192.168.1.102	98:6C:F5:3E:36:50	71934	<input type="checkbox"/>
Unknown	192.168.1.103	EC:F0:0E:40:32:C3	74298	<input type="checkbox"/>
PC-HP	192.168.1.104	BC:77:37:7E:58:01	82988	<input type="checkbox"/>
android-aae2a7156a9dc0e5	192.168.1.105	94:35:0A:4C:D8:18	44981	<input type="checkbox"/>
ESP_012A56	192.168.1.106	5C:CF:7F:01:2A:56	83041	<input type="checkbox"/>
raspberrypi	192.168.1.107	00:50:B6:03:A1:A9	85331	<input type="checkbox"/>
raspberrypi	192.168.1.108	40:A5:EF:0C:B2:75	86205	<input type="checkbox"/>

Close

Conectado actualmente a:

- linksys**
Acceso a Internet
- Red no identificada**
Sin acceso a la red

Conexión de red inalámbrica

linksys 2 **Conectado**

Desconectar

INFINIT Nombre: linksys 2
 MEGA Intensidad de la señal: Excelente
 INFINIT Tipo de seguridad: WPA-PSK
 IA3312 Tipo de radio: 802.11n
 SSID: linksys

```
Administrador: C:\Windows\System32\cmd.exe
Respuesta desde 192.168.1.108: bytes=32 tiempo=127ms TTL=64
Respuesta desde 192.168.1.108: bytes=32 tiempo=50ms TTL=64
Respuesta desde 192.168.1.108: bytes=32 tiempo=71ms TTL=64

Estadísticas de ping para 192.168.1.108:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
    (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 50ms, Máximo = 127ms, Media = 88ms

C:\Windows\system32>ping 192.168.1.108

Haciendo ping a 192.168.1.108 con 32 bytes de datos:
Respuesta desde 192.168.1.108: bytes=32 tiempo=1661ms TTL=64
Respuesta desde 192.168.1.108: bytes=32 tiempo=8ms TTL=64
Respuesta desde 192.168.1.108: bytes=32 tiempo=5ms TTL=64
Respuesta desde 192.168.1.108: bytes=32 tiempo=5ms TTL=64

Estadísticas de ping para 192.168.1.108:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
    (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 5ms, Máximo = 1661ms, Media = 419ms

C:\Windows\system32>
```

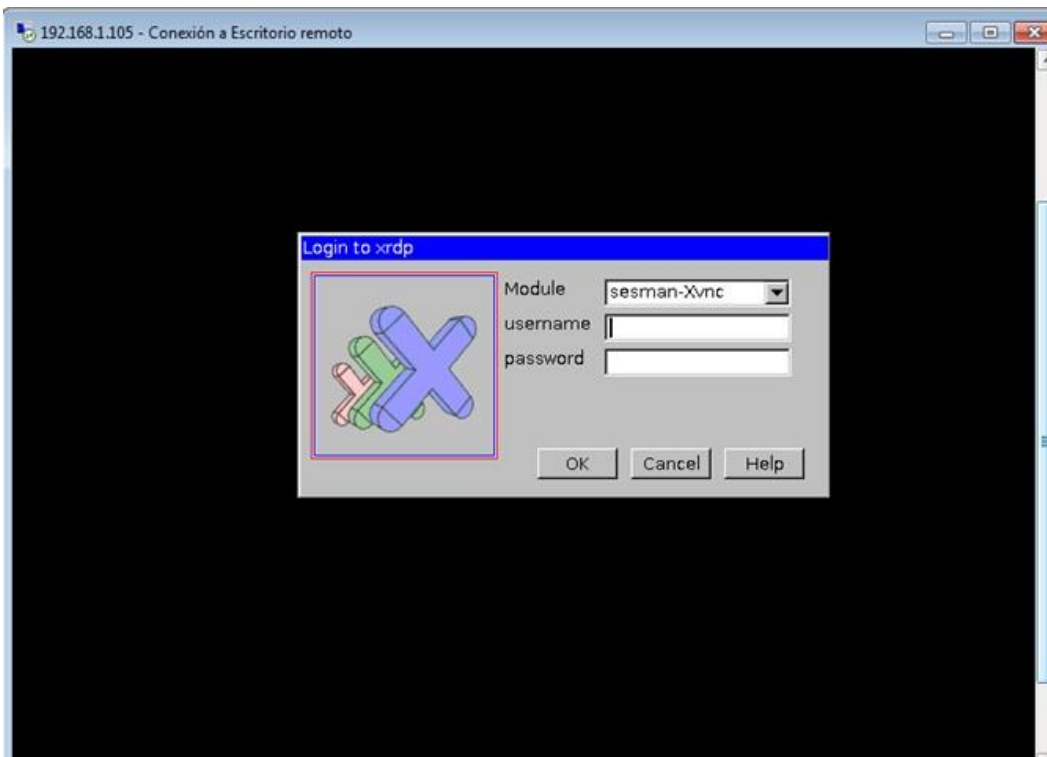
```
pi@raspberrypi: ~
TX packets:72 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:6288 (6.1 KiB) TX bytes:6288 (6.1 KiB)

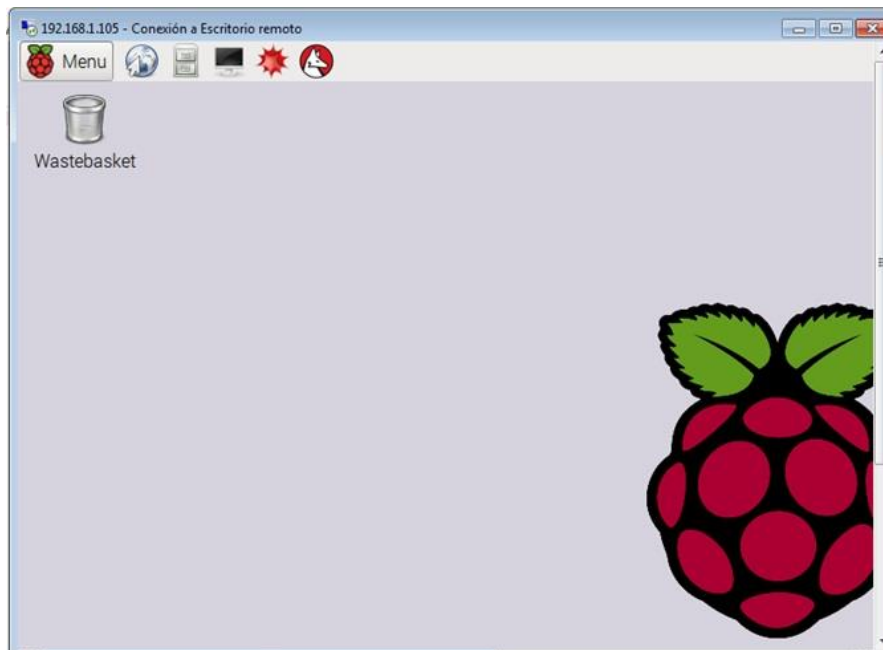
wlan0    Link encap:Ethernet HWaddr 40:a5:ef:0c:b2:75
         inet addr:192.168.1.108 Bcast:192.168.1.255 Mask:255.255.255.0
         inet6 addr: fe80::3370:754c:ae3e:d106/64 Scope:Link
         UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
         RX packets:334 errors:0 dropped:21 overruns:0 frame:0
         TX packets:173 errors:0 dropped:1 overruns:0 carrier:0
         collisions:0 txqueuelen:1000
         RX bytes:41257 (40.2 KiB) TX bytes:27878 (27.2 KiB)

pi@raspberrypi:~$ sudo apt-get update
Get:1 http://mirrordirector.raspbian.org jessie InRelease [15.0 kB]
Get:2 http://archive.raspberrypi.org jessie InRelease [13.2 kB]
Get:3 http://mirrordirector.raspbian.org jessie/main armhf Packages [8,963 kB]
Get:4 http://archive.raspberrypi.org jessie/main armhf Packages [144 kB]
Get:5 http://archive.raspberrypi.org jessie/ui armhf Packages [8,311 B]
Ign http://archive.raspberrypi.org jessie/main Translation-en_GB
Ign http://archive.raspberrypi.org jessie/main Translation-en
Ign http://archive.raspberrypi.org jessie/ui Translation-en_GB
Ign http://archive.raspberrypi.org jessie/ui Translation-en
90% [3 Packages 8,018 kB/8,963 kB 89%] 678 kB/s 1s
```

```
pi@raspberrypi: ~
Get:1 http://mirrordirector.raspbian.org jessie InRelease [15.0 kB]
Get:2 http://archive.raspberrypi.org jessie InRelease [13.2 kB]
Get:3 http://mirrordirector.raspbian.org jessie/main armhf Packages [8,963 kB]
Get:4 http://archive.raspberrypi.org jessie/main armhf Packages [144 kB]
Get:5 http://archive.raspberrypi.org jessie/ui armhf Packages [8,311 B]
Ign http://archive.raspberrypi.org jessie/main Translation-en_GB
Ign http://archive.raspberrypi.org jessie/main Translation-en
Ign http://archive.raspberrypi.org jessie/ui Translation-en_GB
Ign http://archive.raspberrypi.org jessie/ui Translation-en
Get:6 http://mirrordirector.raspbian.org jessie/contrib armhf Packages [37.5 kB]
Get:7 http://mirrordirector.raspbian.org jessie/non-free armhf Packages [70.3 kB]
]
Get:8 http://mirrordirector.raspbian.org jessie/rpi armhf Packages [1,356 B]
Ign http://mirrordirector.raspbian.org jessie/contrib Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/contrib Translation-en
Ign http://mirrordirector.raspbian.org jessie/main Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/main Translation-en
Ign http://mirrordirector.raspbian.org jessie/non-free Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/non-free Translation-en
Ign http://mirrordirector.raspbian.org jessie/rpi Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/rpi Translation-en
Fetched 9,252 kB in 32s (285 kB/s)
Reading package lists... Done
pi@raspberrypi:~ $
```

```
pi@raspberrypi: ~
Ign http://mirrordirector.raspbian.org jessie/contrib Translation-en
Ign http://mirrordirector.raspbian.org jessie/main Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/main Translation-en
Ign http://mirrordirector.raspbian.org jessie/non-free Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/non-free Translation-en
Ign http://mirrordirector.raspbian.org jessie/rpi Translation-en_GB
Ign http://mirrordirector.raspbian.org jessie/rpi Translation-en
Fetched 9,252 kB in 32s (285 kB/s)
Reading package lists... Done
pi@raspberrypi:~ $ sudo apt-get install xrdp
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  vnc4server x11-apps x11-session-utils xbase-clients xbitmaps xfonts-base
Suggested packages:
  vnc-java mesa-utils x11-xfs-utils
The following NEW packages will be installed:
  vnc4server x11-apps x11-session-utils xbase-clients xbitmaps xfonts-base
  xrdp
0 upgraded, 7 newly installed, 0 to remove and 20 not upgraded.
Need to get 8,468 kB of archives.
After this operation, 17.1 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```





← → 192.168.1.105

Aplicaciones More About the ESP! Otros marcadores

Placeholder page

The owner of this web site has not put up any web pages yet. Please come back later.

You should replace this page with your own web pages as soon as possible.

Unless you changed its configuration, your new server is configured as follows:

- Configuration files can be found in `/etc/lighttpd`. Please read `/etc/lighttpd/conf-available/README` file.
- The DocumentRoot, which is the directory under which all your HTML files should exist, is set to `/var/www`.
- CGI scripts are looked for in `/usr/lib/cgi-bin`, which is where Debian packages will place their scripts. You can enable cgi module by using command `"lighty-enable-mod cgi"`.
- Log files are placed in `/var/log/lighttpd`, and will be rotated weekly. The frequency of rotation can be easily changed by editing `/etc/logrotate.d/lighttpd`.
- The default directory index is `index.html`, meaning that requests for a directory `/foo/bar/` will give the contents of the file `/var/www/foo/bar/index.html` if it exists (assuming that `/var/www` is your DocumentRoot).
- You can enable user directories by using command `"lighty-enable-mod userdir"`

About this page

This is a placeholder page installed by the Debian release of the **Lighttpd server package**.

This computer has installed the Debian GNU/Linux operating system, but it has nothing to do with the Debian Project. Please do not contact the Debian Project about it.

If you find a bug in this Lighttpd package, or in Lighttpd itself, please file a bug report on it. Instructions on doing this, and the list of known bugs of this package, can be found in the **Debian Bug Tracking System**.


```

pi@raspberrypi: /var/www/html
GNU nano 2.2.6 File: phpinfo.php
?php
    phpinfo();
?>

[ Read 4 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell


```

192.168.1.105/phpinfo.php

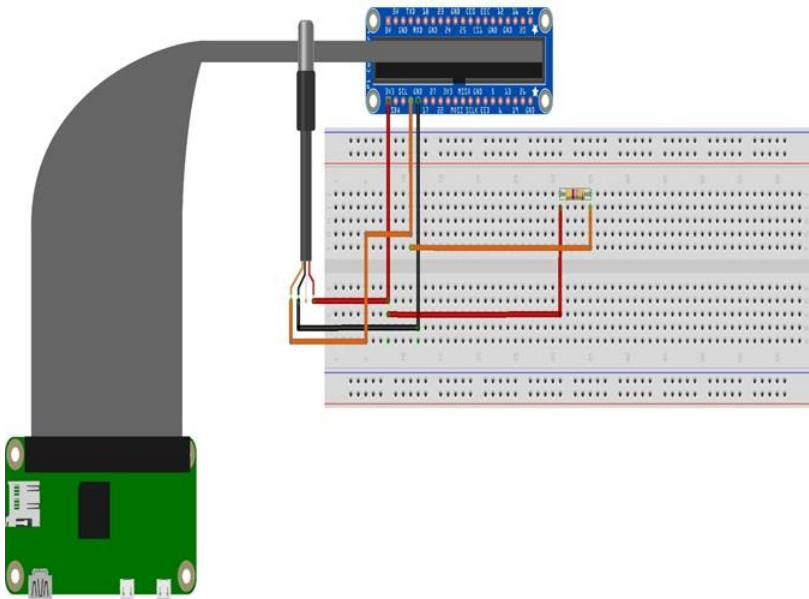
PHP Version 5.6.19-0+deb8u1

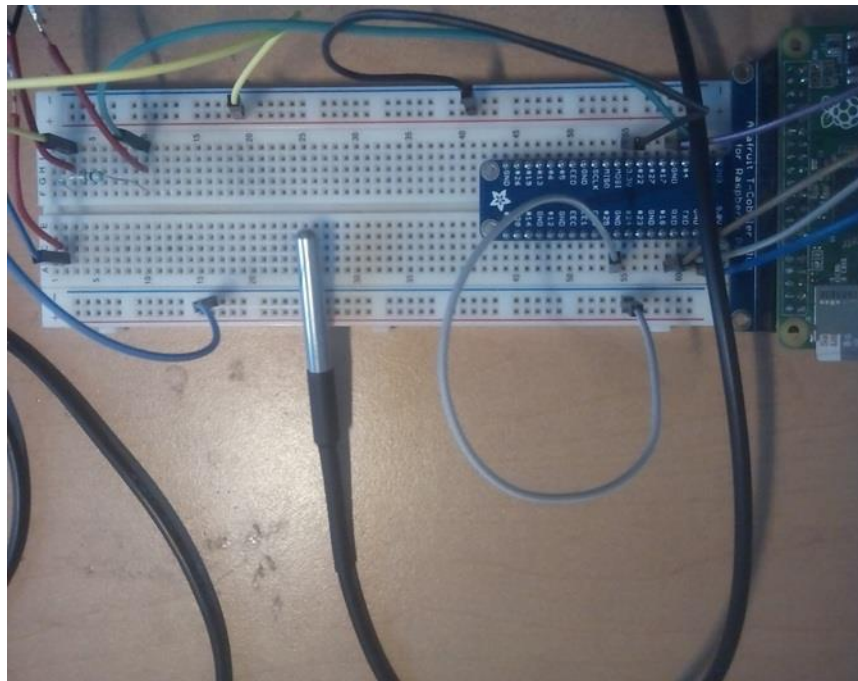
System	Linux raspberrypi 4.1.19+ #658 Tue Mar 15 15:52:00 GMT 2016 armv6l
Build Date	Apr 2 2016 21:08:21
Server API	CGI/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php5/cgi
Loaded Configuration File	/etc/php5/cgi/php.ini
Scan this dir for additional .ini files	/etc/php5/cgi/conf.d
Additional .ini files parsed	/etc/php5/cgi/conf.d/05-apache.ini, /etc/php5/cgi/conf.d/10-pdo.ini, /etc/php5/cgi/conf.d/20-xml.ini, /etc/php5/cgi/conf.d/20-readline.ini
PHP API	20131106
PHP Extension	20131226
Zend Extension	220131226
Zend Extension Build	APC20131226/NTS
PHP Extension Build	APC20131226/NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	disabled
Zend Memory Manager	enabled
Zend Multibyte Support	provided by mbstring
IPv6 Support	enabled
OpenTrace Support	enabled
Registered PHP Streams	ftp, ftps, compress.zlib, compress.bzip2, php, file, glob, data, http, ftp, odbc, zip
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, ssl3, tls, tls1.0, tls1.1, tls1.2
Registered Stream Filters	zlib* zlib*, convert.convert*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.iconv*, consumed, dechunk

This program makes use of the Zend Scripting Language Engine:
 Zend Engine v2.6.0, Copyright (c) 1998-2016 Zend Technologies
 with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2016, by Zend Technologies



Chapter 2: Connecting Things to the Raspberry Pi Zero





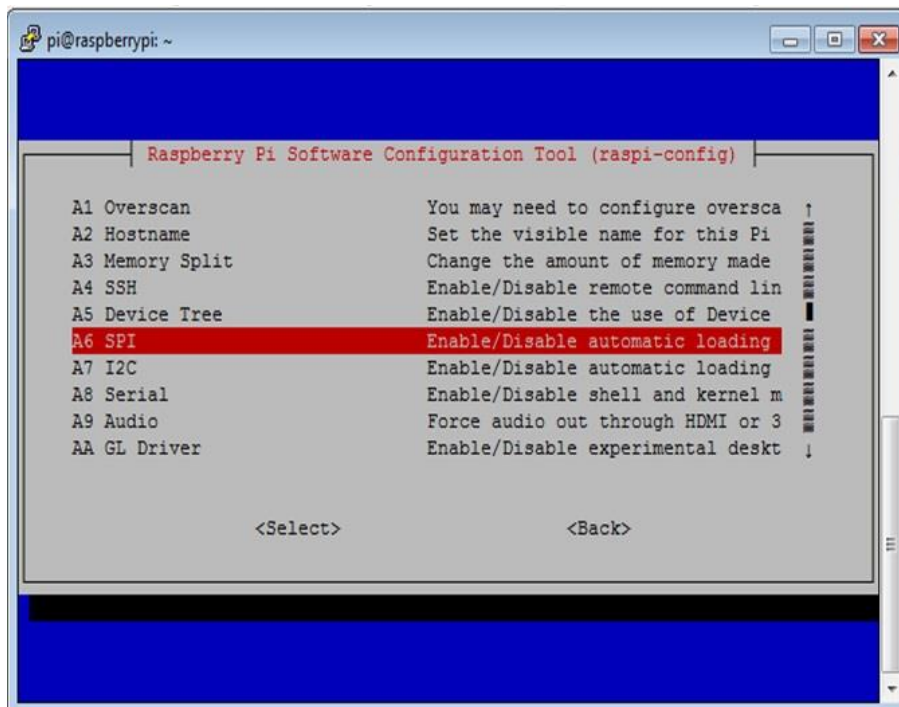
```
COM3 - PuTTY
pi@raspberrypi:~$ cd /sys/bus/w1/devices
pi@raspberrypi:/sys/bus/w1/devices$ ls
28-0414647006ff w1_bus_master1
pi@raspberrypi:/sys/bus/w1/devices$ cd 28-0414647006ff
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
08 02 55 00 7f ff 0c 10 a5 : crc=a5 YES
08 02 55 00 7f ff 0c 10 a5 t=32500
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
0c 02 55 00 7f ff 0c 10 b0 : crc=b0 YES
0c 02 55 00 7f ff 0c 10 b0 t=32750
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
08 02 55 00 7f ff 0c 10 a5 : crc=a5 YES
08 02 55 00 7f ff 0c 10 a5 t=32500
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
ca 01 55 00 7f ff 0c 10 bf : crc=bf YES
ca 01 55 00 7f ff 0c 10 bf t=28625
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
d9 01 55 00 7f ff 0c 10 2e : crc=2e YES
d9 01 55 00 7f ff 0c 10 2e t=29562
pi@raspberrypi:/sys/bus/w1/devices/28-0414647006ff$ cat w1_slave
06 02 55 00 7f ff 0c 10 1c : crc=1c YES
06 02 55 00 7f ff 0c 10 1c t=32375
```

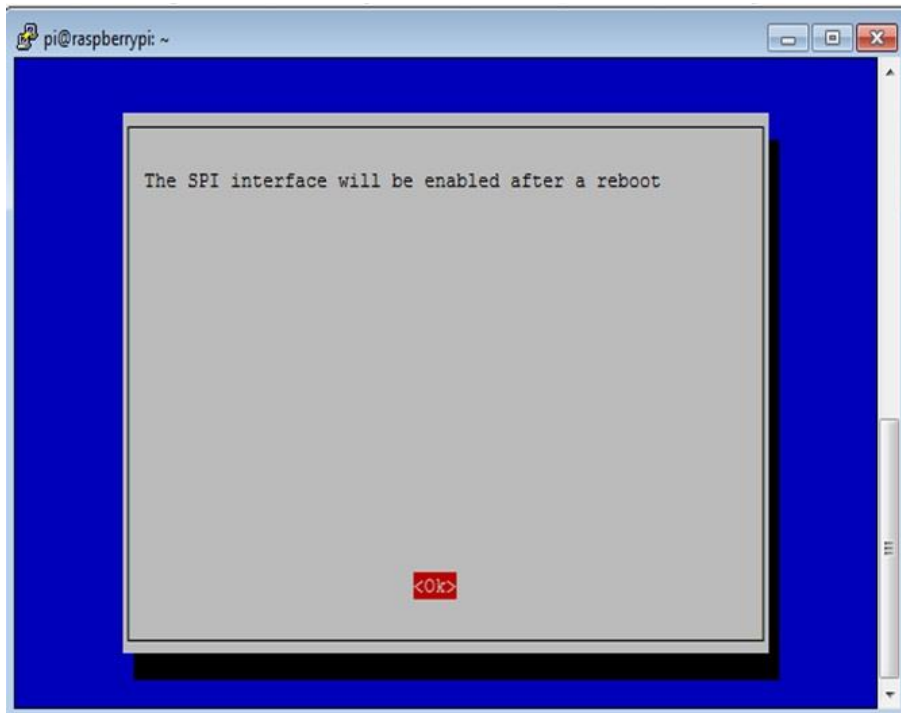
```
COM3 - PuTTY
(30.125, 86.225)
(30.125, 86.225)
(30.125, 86.225)
(30.062, 86.1116)
(30.0, 86.0)
(30.0, 86.0)
(29.937, 85.8866)
(29.875, 85.775)
(29.812, 85.66159999999999)
(29.75, 85.55)
(29.812, 85.66159999999999)
(29.937, 85.8866)
(30.187, 86.3366)
(30.375, 86.675)
(30.562, 87.0116)
(30.812, 87.4616)
(31.062, 87.91159999999999)
(31.25, 88.25)
(31.5, 88.7)
(31.687, 89.03659999999999)
(31.875, 89.375)
(32.062, 89.7116)
(32.312, 90.16159999999999)
```

```
pi@raspberrypi: ~
Raspberry Pi Software Configuration Tool (raspi-config)

1 Expand Filesystem           Ensures that all of the SD card s
2 Change User Password        Change password for the default u
3 Boot Options                 Choose whether to boot into a des
4 Wait for Network at Boot    Choose whether to wait for networ
5 Internationalisation Options Set up language and regional sett
6 Enable Camera               Enable this Pi to work with the R
7 Add to Rastrack             Add this Pi to the online Raspber
8 Overclock                   Configure overclocking for your P
9 Advanced Options            Configure advanced settings
0 About raspi-config          Information about this configurat

<Select>                       <Finish>
```



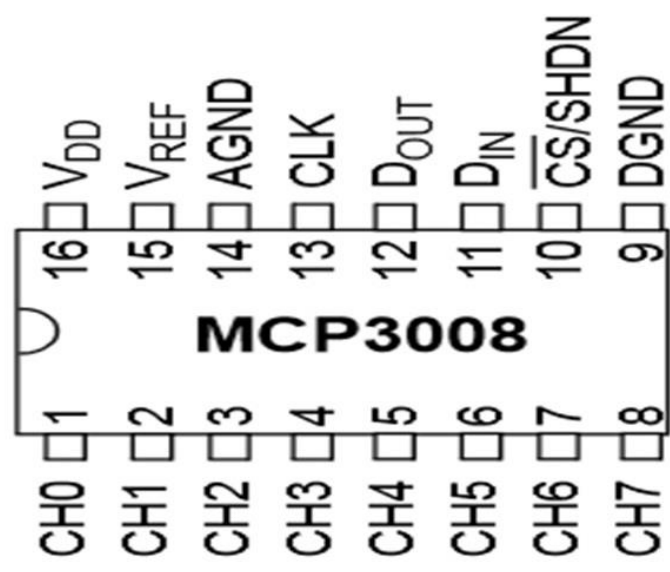


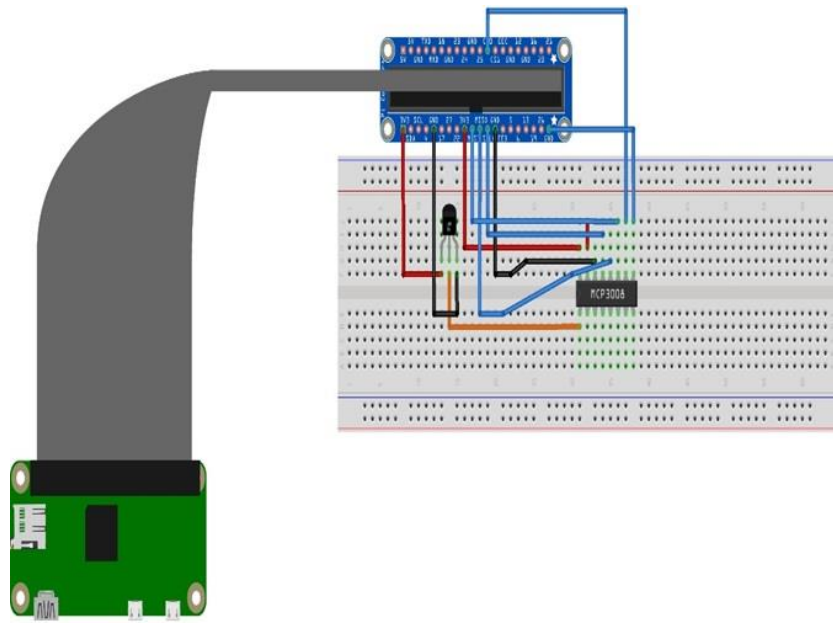
Raspberry Pi GPIO Header A+, B+, Zero, Pi2

Pin#	NAME		NAME	Pin#
01	3.3v DC Power		DC Power 5v	02
03	GPIO02 (SDA1 , I ² C)		DC Power 5v	04
05	GPIO03 (SCL1 , I ² C)		Ground	06
07	GPIO04 (GPIO_GCLK)		(TXD0) GPIO14	08
09	Ground		(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)		(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)		Ground	14
15	GPIO22 (GPIO_GEN3)		(GPIO_GEN4) GPIO23	16
17	3.3v DC Power		(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)		Ground	20
21	GPIO09 (SPI_MISO)		(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)		(SPI_CE0_N) GPIO08	24
25	Ground		(SPI_CE1_N) GPIO07	26
27	ID_SD (I ² C ID EEPROM)		(I ² C ID EEPROM) ID_SC	28
29	GPIO05		Ground	30
31	GPIO06		GPIO12	32
33	GPIO13		Ground	34
35	GPIO19		GPIO16	36
37	GPIO26		GPIO20	38
39	Ground		GPIO21	40

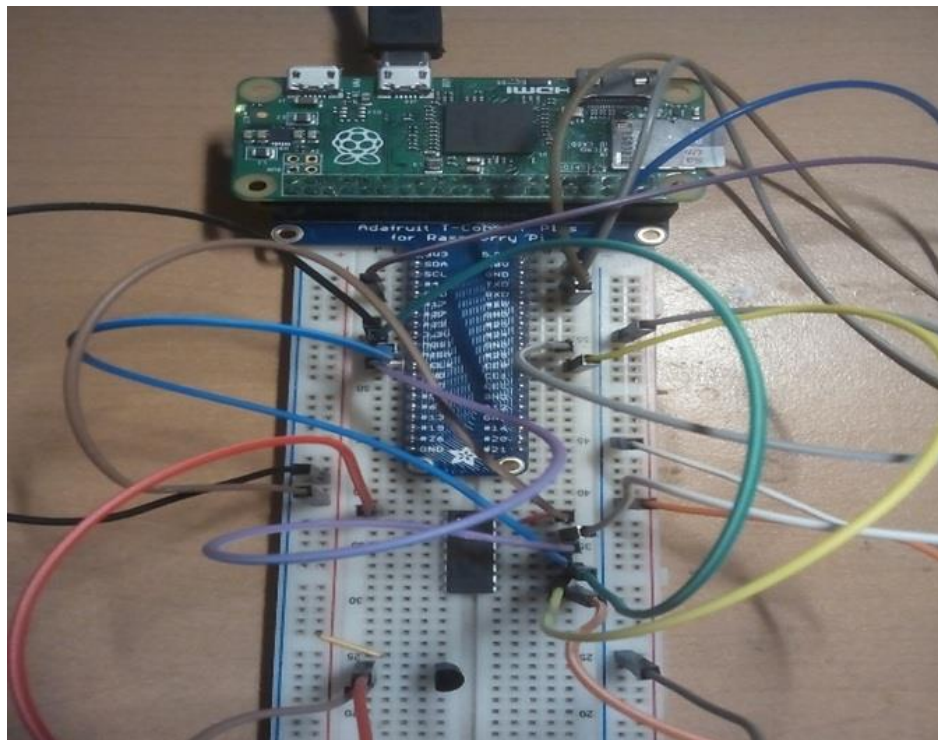
Rev. 1.5
09/02/2016

www.element14.com/RaspberryPi





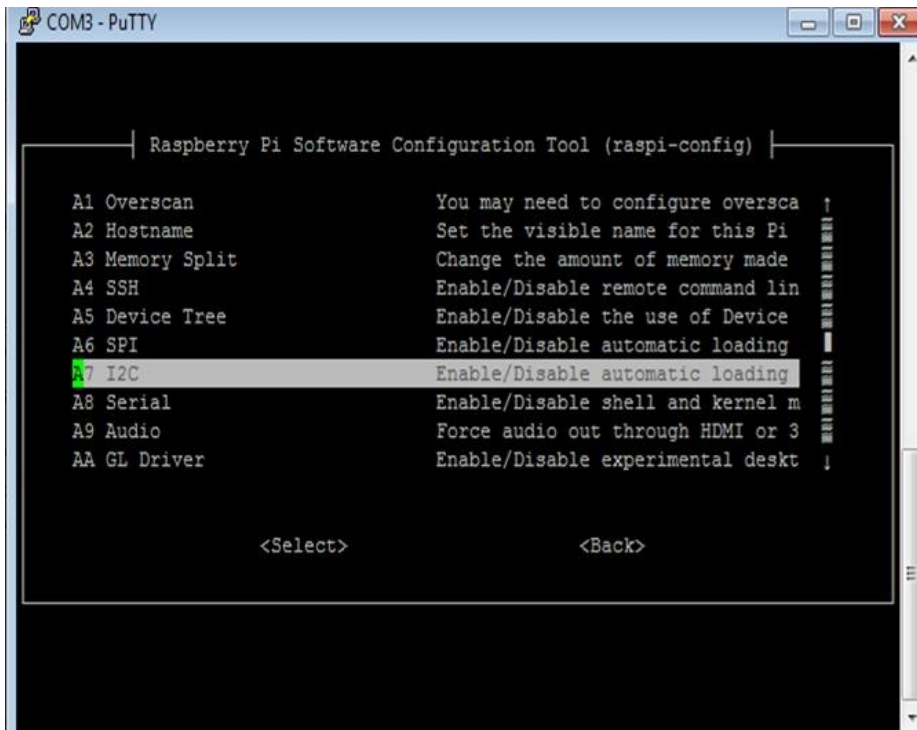
fritzing



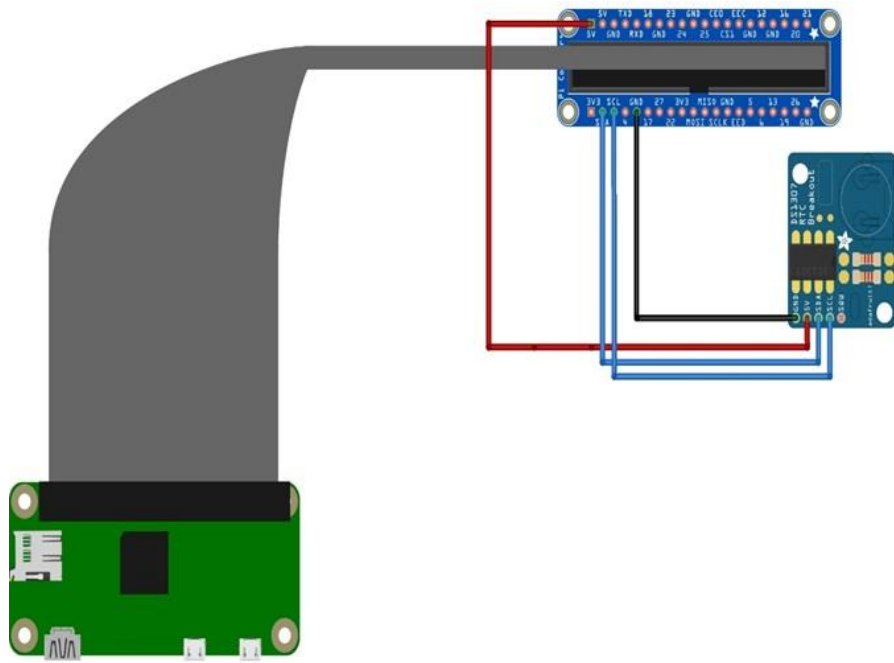

```
pi@raspberrypi: ~
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
-----
Temperatura : 78 (0.25V) 24.96 Grados C
-----
Temperatura : 77 (0.25V) 24.64 Grados C
```

```
COM3 - PuTTY
-----| Raspberry Pi Software Configuration Tool (raspi-config) |-----
1 Expand Filesystem           Ensures that all of the SD card s
2 Change User Password        Change password for the default u
3 Boot Options                 Choose whether to boot into a des
4 Wait for Network at Boot    Choose whether to wait for networ
5 Internationalisation Options Set up language and regional sett
6 Enable Camera                Enable this Pi to work with the R
7 Add to Rastrack              Add this Pi to the online Raspber
8 Overclock                    Configure overclocking for your P
9 Advanced Options             Configure advanced settings
0 About raspi-config           Information about this configurat

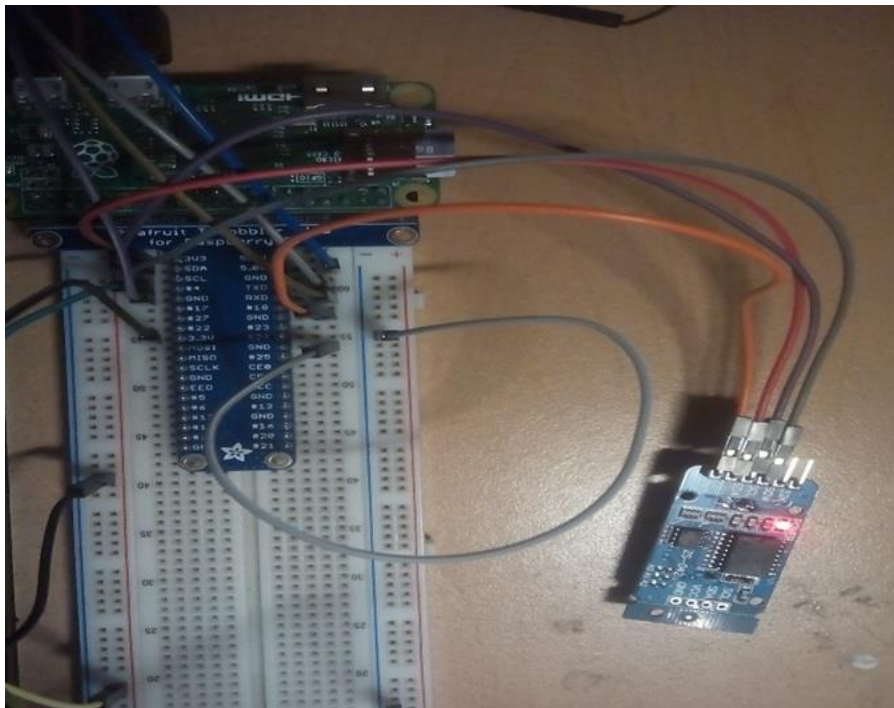
                                <Select>                                <Finish>
```







fritzing



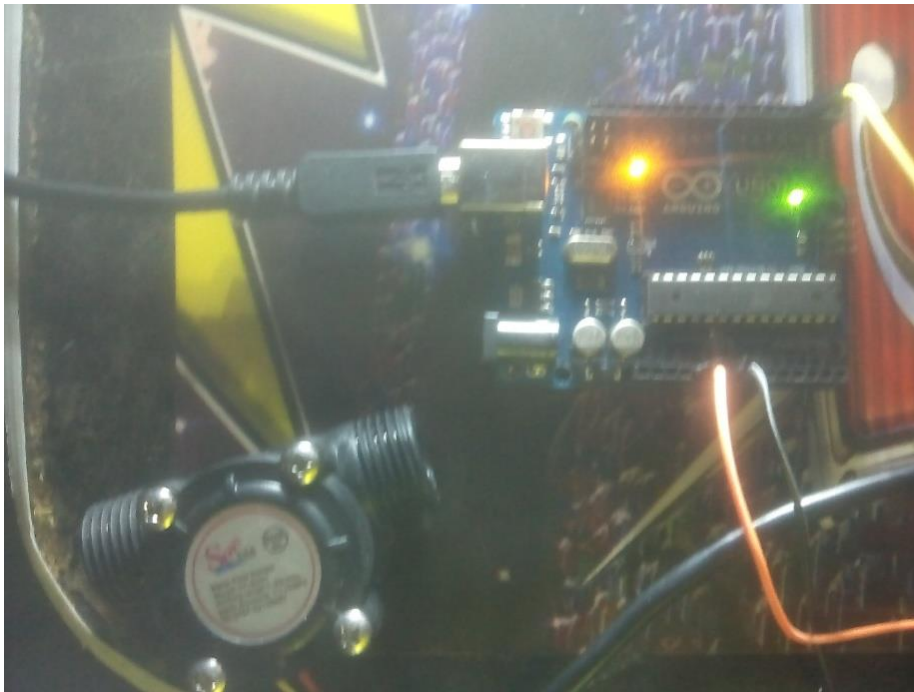
```
pi@raspberrypi:~$ sudo i2cdetect -y 1
    0 1 2 3 4 5 6 7 8 9 a b c d e f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  57  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  UU  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
pi@raspberrypi:~$
```

```
pi@raspberrypi:~$ sudo i2cdetect -y 1
    0 1 2 3 4 5 6 7 8 9 a b c d e f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  57  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  68  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
pi@raspberrypi:~$
```

```
pi@raspberrypi:~ $ date
Mon 18 Apr 20:36:18 CDT 2016
pi@raspberrypi:~ $
```

```
pi@raspberrypi:~ $ date; sudo hwclock -r
Mon 18 Apr 20:42:35 CDT 2016
Mon 18 Apr 2016 20:42:37 CDT -0.749899 seconds
pi@raspberrypi:~ $
```

Chapter 3: Connecting Sensors - Measure the Real Things



COM31 (Arduino/Genuino Uno)

```
Pulses per second: 20  
Pulses per second: 22  
Pulses per second: 14  
Pulses per second: 16  
Pulses per second: 19  
Pulses per second: 20  
Pulses per second: 20  
Pulses per second: 20  
Pulses per second: 19  
Pulses per second: 21  
Pulses per second: 21  
Pulses per second: 22  
Pulses per second: 21  
Pulses per second: 23  
Pulses per second: 19
```

Autoscroll Ambos NL & CR 9600 baudo

Detailed description: This is a screenshot of a serial monitor window titled 'COM31 (Arduino/Genuino Uno)'. The window contains a list of 15 lines of text, each representing a pulse frequency measurement. The values range from 14 to 23 pulses per second. At the bottom of the window, there are three controls: a checked 'Autoscroll' checkbox, a dropdown menu set to 'Ambos NL & CR', and another dropdown menu set to '9600 baudo'. An 'Enviar' button is located in the top right corner of the text area.

COM31 (Arduino/Genuino Uno)

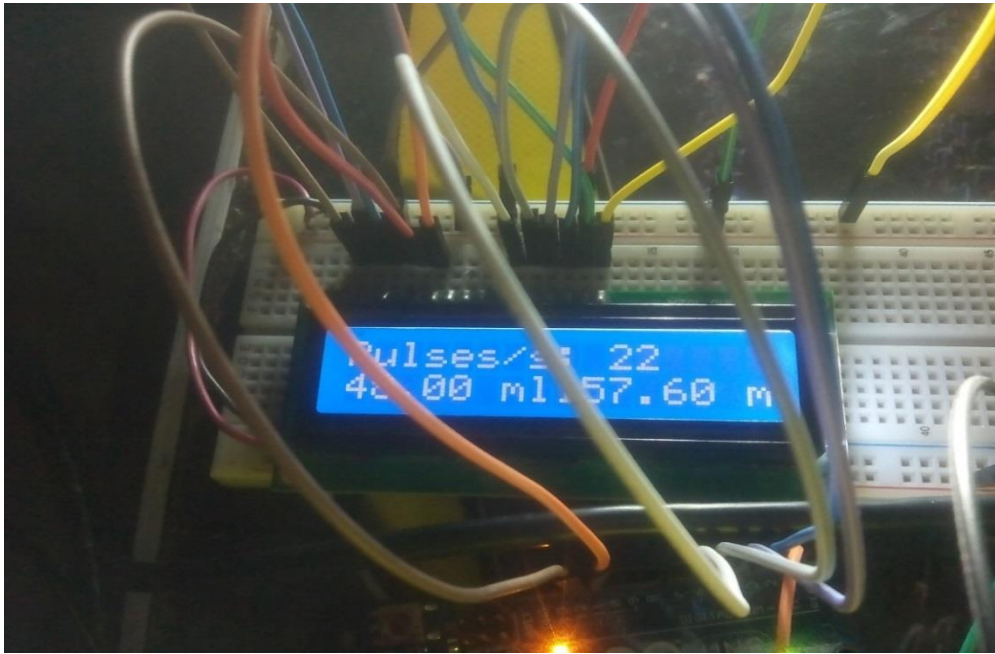
```
Water flow rate: 51 milliliters per second  
Pulses per second: 22  
Water flow rate: 48 milliliters per second  
Pulses per second: 22  
Water flow rate: 48 milliliters per second  
Pulses per second: 21  
Water flow rate: 46 milliliters per second  
Pulses per second: 22  
Water flow rate: 48 milliliters per second  
Pulses per second: 22  
Water flow rate: 48 milliliters per second  
Pulses per second: 22  
Water flow rate: 48 milliliters per second  
Pulses per second: 22
```

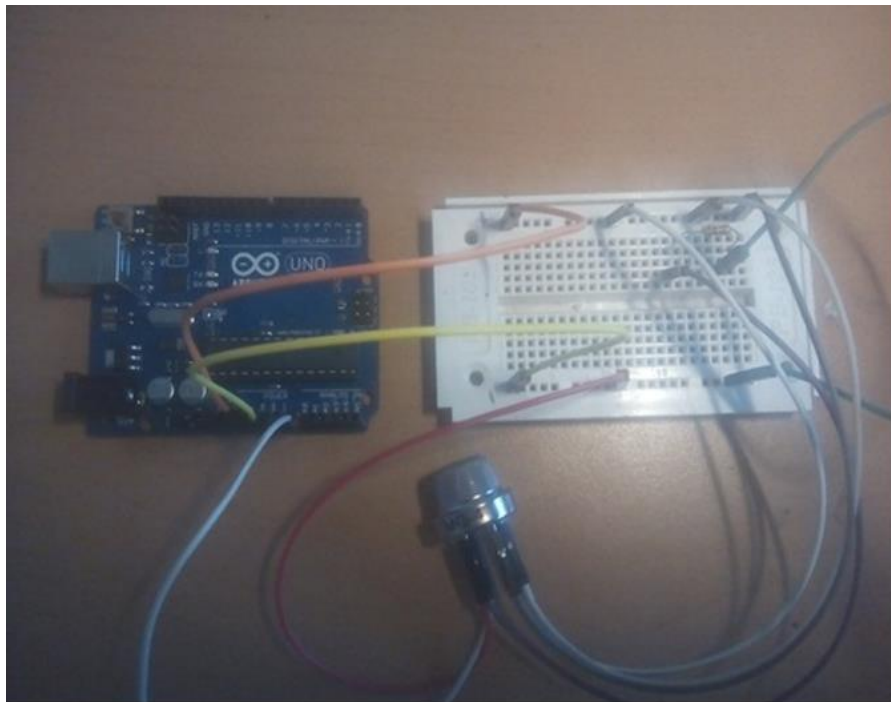
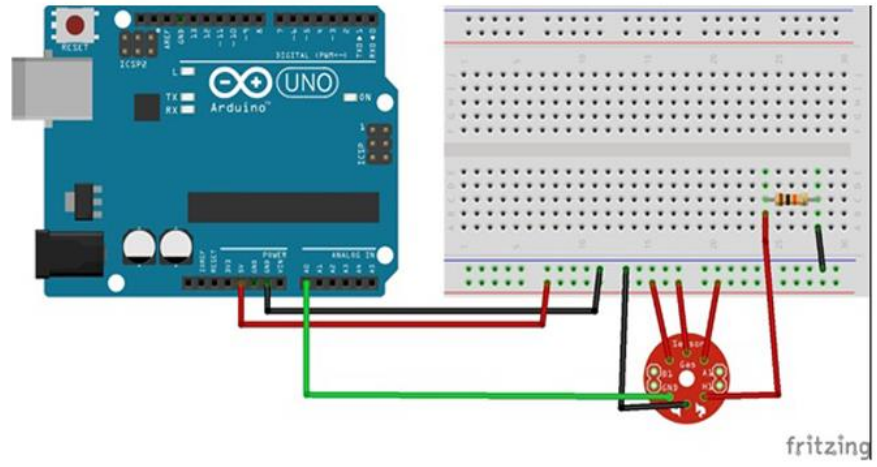
Autoscroll Ambos NL & CR 9600 baudo

Detailed description: This is a screenshot of a serial monitor window titled 'COM31 (Arduino/Genuino Uno)'. The window contains 14 lines of text, alternating between water flow rate and pulse frequency measurements. The flow rates are 51, 48, 48, 46, 48, 48, 48, and 48 milliliters per second. The pulse frequencies are 22, 22, 21, 22, 22, 22, 22, and 22 pulses per second. At the bottom of the window, there are three controls: a checked 'Autoscroll' checkbox, a dropdown menu set to 'Ambos NL & CR', and another dropdown menu set to '9600 baudo'. An 'Enviar' button is located in the top right corner of the text area.


```
COMB1 (Arduino/Genuino Uno)
Pulses per second: 20
Water flow rate: 44.00 milliliters per second
Volume: 235.20 milliliters
Pulses per second: 21
Water flow rate: 46.00 milliliters per second
Volume: 239.80 milliliters
Pulses per second: 21
Water flow rate: 46.00 milliliters per second
Volume: 244.40 milliliters
Pulses per second: 21
Water flow rate: 46.00 milliliters per second
Volume: 249.00 milliliters
Pulses per second: 22
Water flow rate: 48.00 milliliters per second
Volume: 253.80 milliliters
Autoscroll Ambos NL & CR 9600 baudo
```



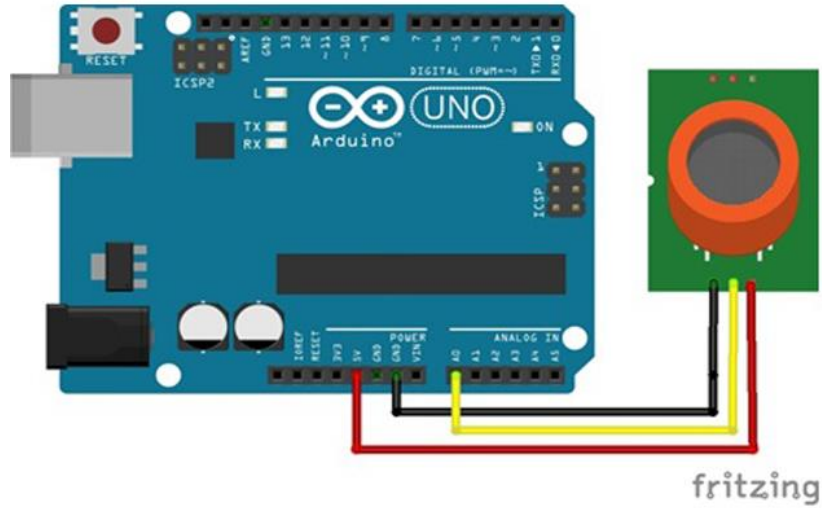




```
COM31 (Arduino/Genuino Uno)
Concentration of gas= 67
Concentration of gas= 67
Concentration of gas= 67
Concentration of gas= 707
Concentration of gas= 789
Concentration of gas= 823
Concentration of gas= 835
Concentration of gas= 843
Concentration of gas= 837
Concentration of gas= 836
Concentration of gas= 839
Concentration of gas= 835
Concentration of gas= 839
Concentration of gas= 839
Concentration of gas= 839
```

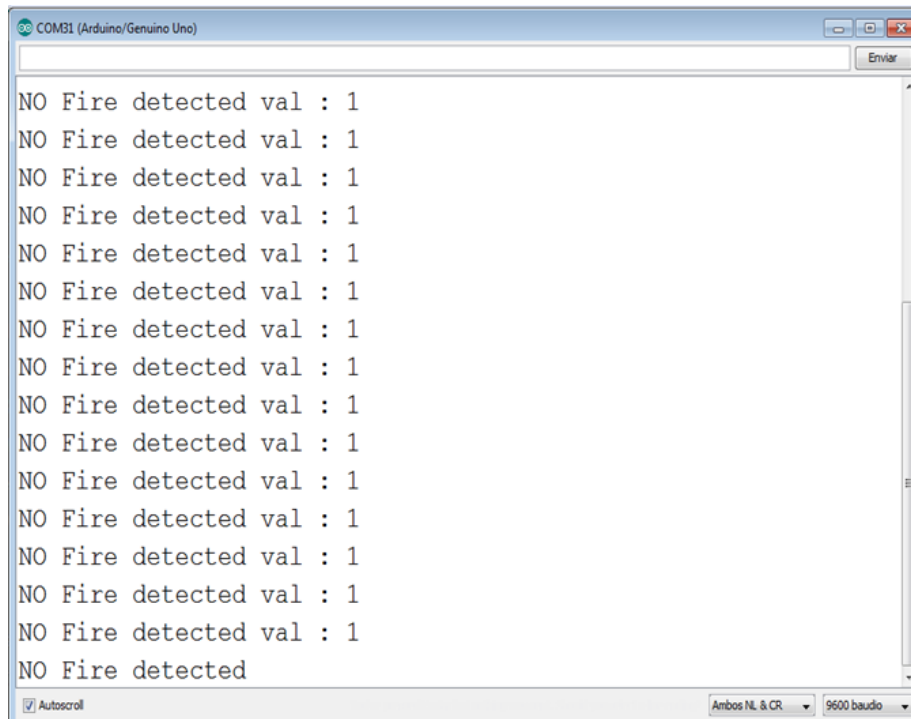
Autoscroll Ambos NL & CR 9600 baudio





```
COM3 (Arduino/Genuino Uno)
Level of alcohol= 125
Level of alcohol= 124
Level of alcohol= 123
Level of alcohol= 123
Level of alcohol= 123
Level of alcohol= 123
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 122
Level of alcohol= 123
Level of alcohol= 123
Level of alcohol= 123
Level of alcohol= 122
```

Autoscroll Arbos NL & CR 9600 baud



COMB1 (Arduino/Genuino Uno)

```
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected val : 1  
NO Fire detected
```

Autoscroll Ambos NL & CR 9600 baudo

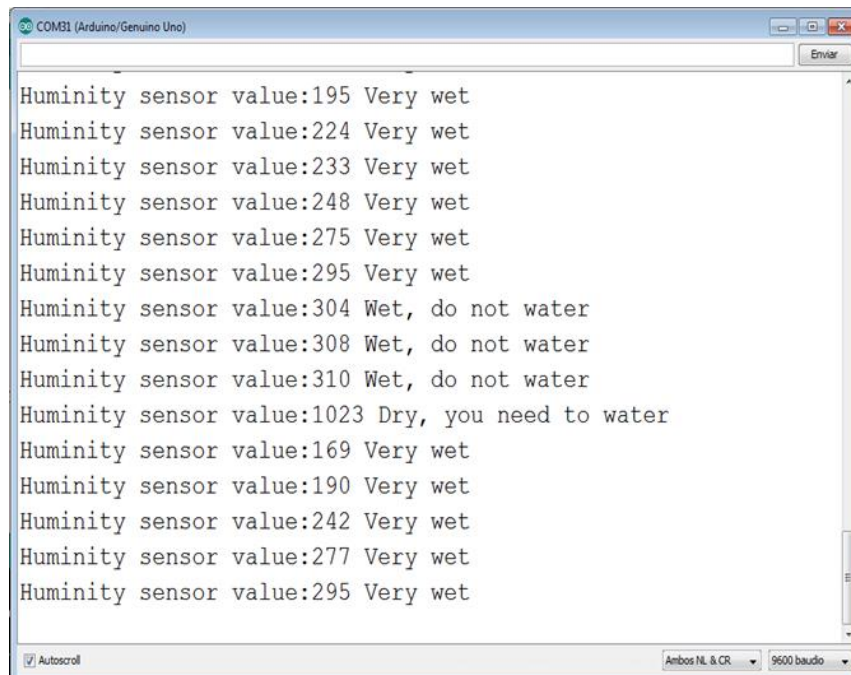


COMB1 (Arduino/Genuino Uno)

```
NO Fire detected val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED val : 0  
Fire DETECTED
```

Autoscroll Ambos NL & CR 9600 baudo

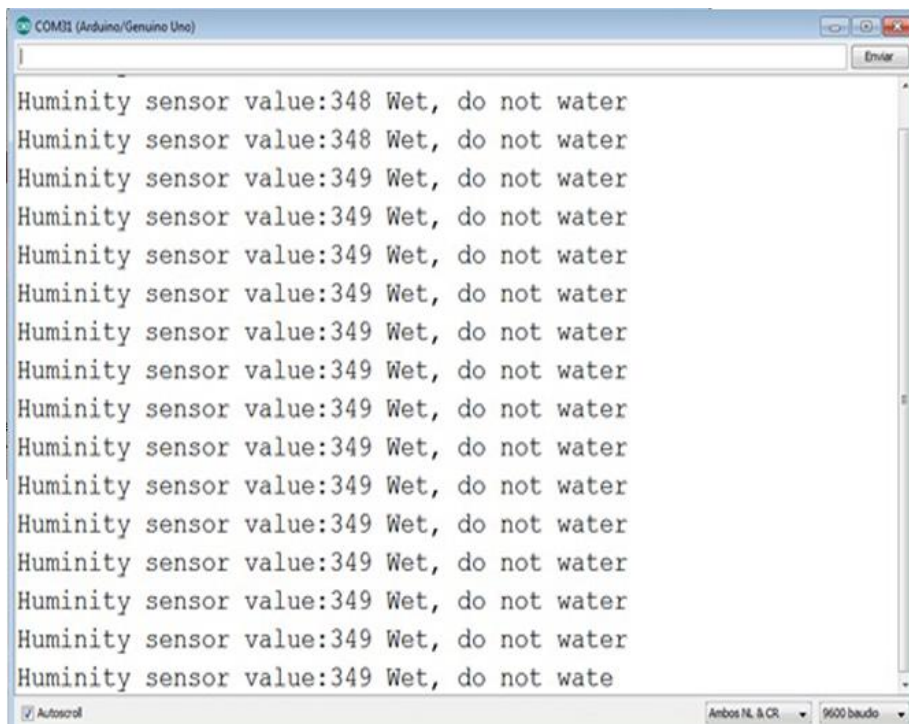




A screenshot of a serial monitor window titled "COM31 (Arduino/Genuino Uno)". The window displays a series of 15 lines of text, each representing a humidity sensor reading. The text is as follows:

```
Huminity sensor value:195 Very wet  
Huminity sensor value:224 Very wet  
Huminity sensor value:233 Very wet  
Huminity sensor value:248 Very wet  
Huminity sensor value:275 Very wet  
Huminity sensor value:295 Very wet  
Huminity sensor value:304 Wet, do not water  
Huminity sensor value:308 Wet, do not water  
Huminity sensor value:310 Wet, do not water  
Huminity sensor value:1023 Dry, you need to water  
Huminity sensor value:169 Very wet  
Huminity sensor value:190 Very wet  
Huminity sensor value:242 Very wet  
Huminity sensor value:277 Very wet  
Huminity sensor value:295 Very wet
```

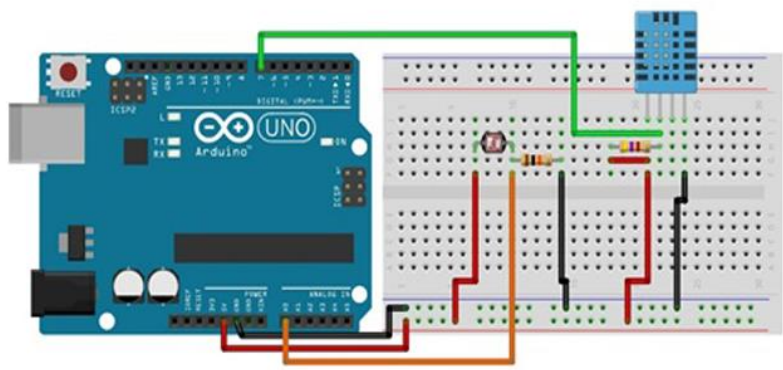
The window includes a "Enviar" button at the top right, an "Autoscroll" checkbox at the bottom left, and a status bar at the bottom right showing "Ambos NL & CR" and "9600 baudo".



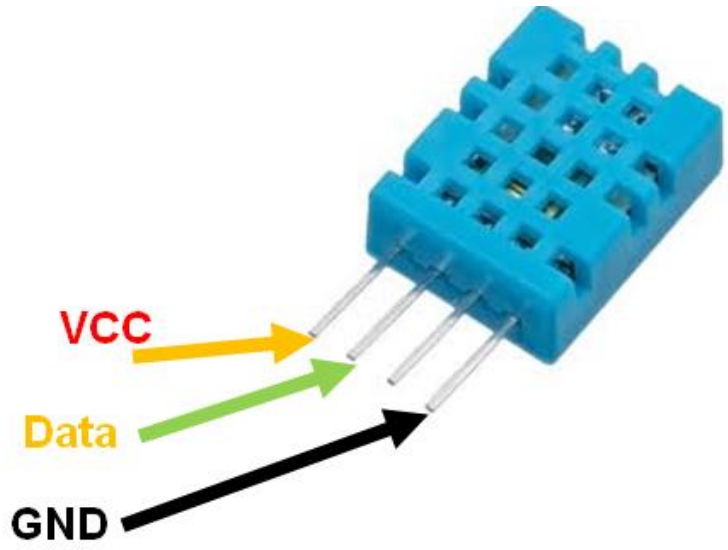
A screenshot of a serial monitor window titled "COM31 (Arduino/Genuino Uno)". The window displays a series of 15 lines of text, each representing a humidity sensor reading. The text is as follows:

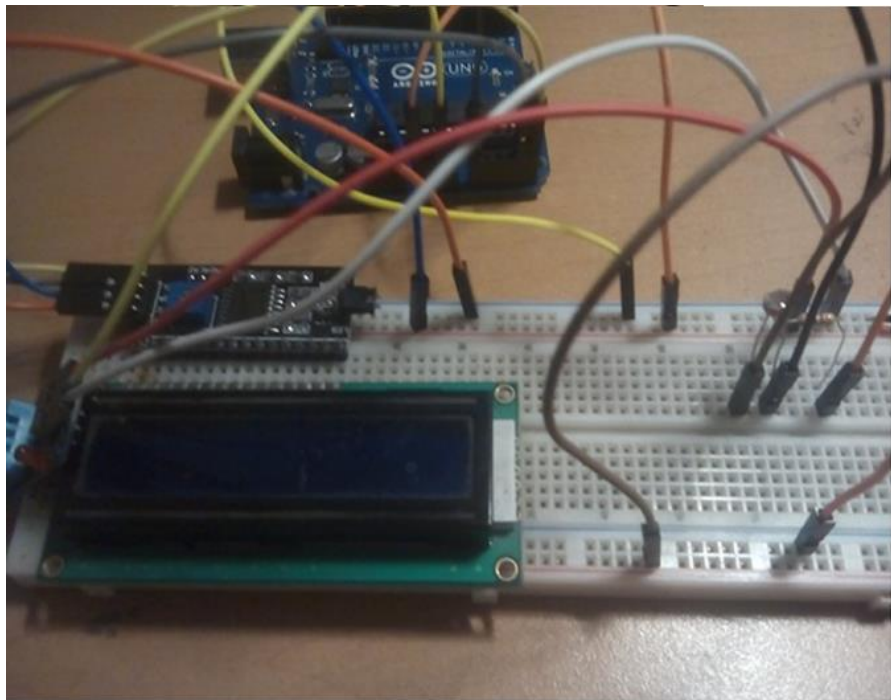
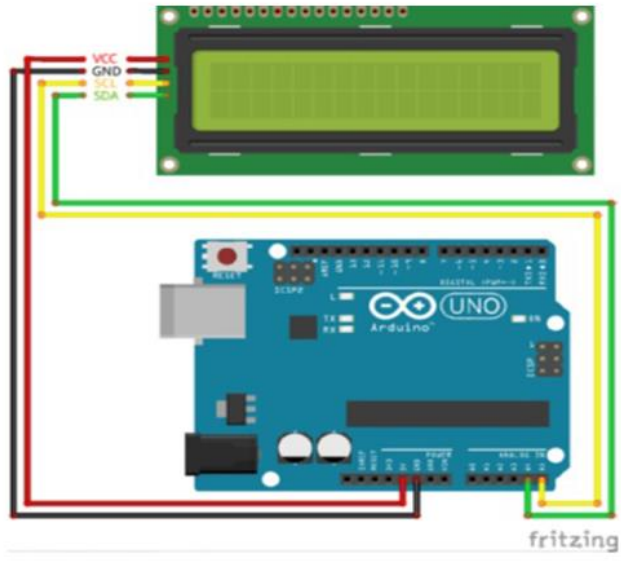
```
Huminity sensor value:348 Wet, do not water  
Huminity sensor value:348 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not water  
Huminity sensor value:349 Wet, do not wate
```

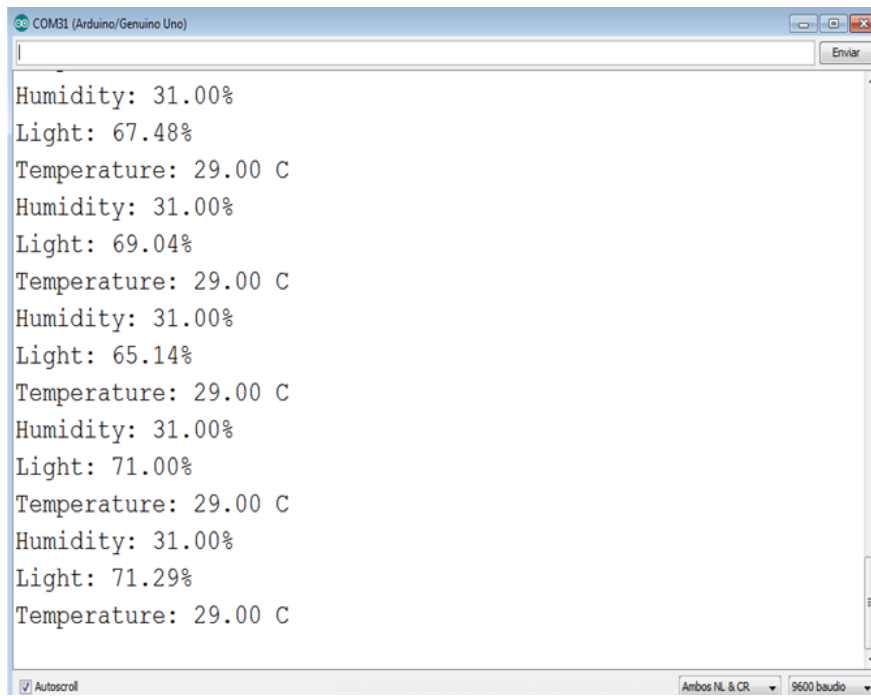
The window includes a "Enviar" button at the top right, an "Autoscroll" checkbox at the bottom left, and a status bar at the bottom right showing "Ambos NL & CR" and "9600 baudo".



fritzing

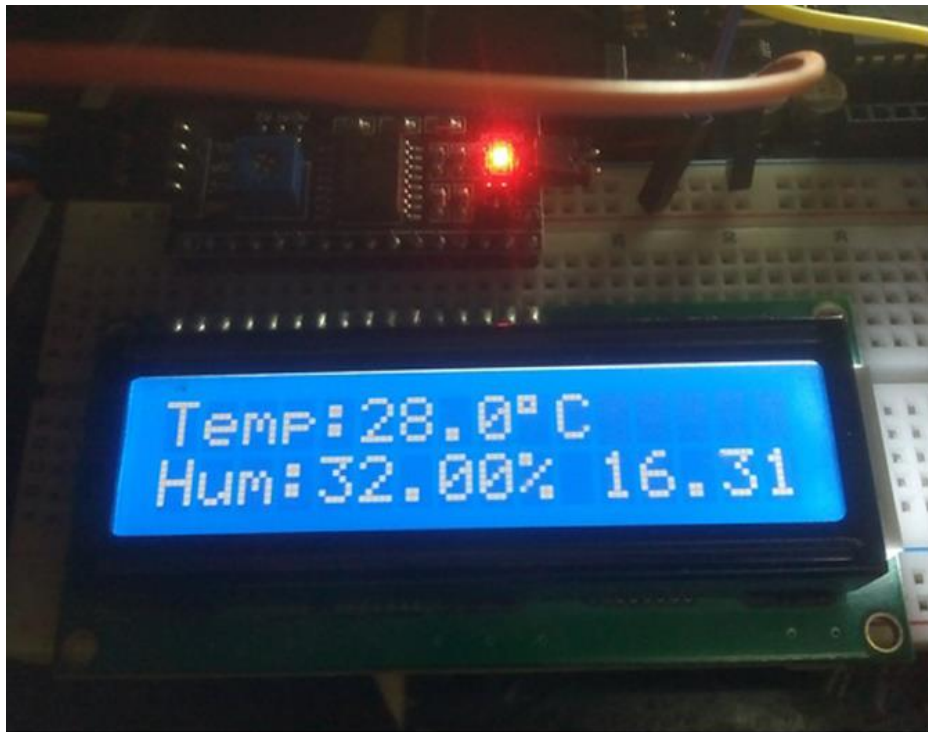


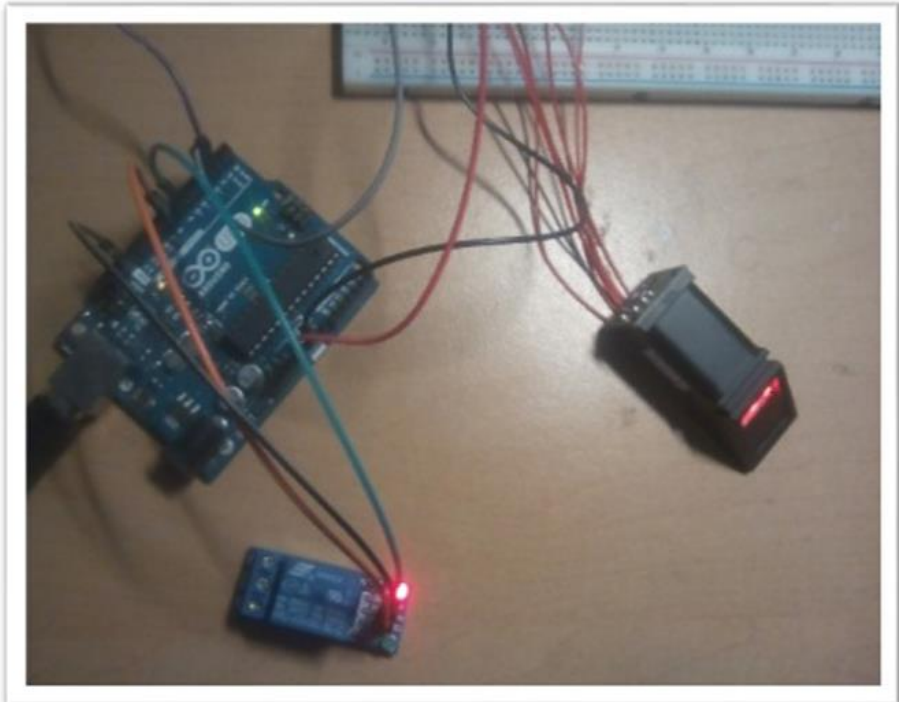




The image shows a screenshot of the Arduino IDE serial monitor window. The window title is "COM31 (Arduino/Genuino Uno)". The main area displays a series of sensor readings: Humidity: 31.00%, Light: 67.48%, Temperature: 29.00 C, Humidity: 31.00%, Light: 69.04%, Temperature: 29.00 C, Humidity: 31.00%, Light: 65.14%, Temperature: 29.00 C, Humidity: 31.00%, Light: 71.00%, Temperature: 29.00 C, Humidity: 31.00%, Light: 71.29%, and Temperature: 29.00 C. The window includes a text input field at the top right with an "Enviar" button, a scroll bar on the right, and a status bar at the bottom with "Autoscroll" checked, "Ambos NL & CR" selected, and "9600 baudo" selected.

```
Humidity: 31.00%  
Light: 67.48%  
Temperature: 29.00 C  
Humidity: 31.00%  
Light: 69.04%  
Temperature: 29.00 C  
Humidity: 31.00%  
Light: 65.14%  
Temperature: 29.00 C  
Humidity: 31.00%  
Light: 71.00%  
Temperature: 29.00 C  
Humidity: 31.00%  
Light: 71.29%  
Temperature: 29.00 C
```





```
COM11 (Arduino/Genuino Uno)
12
Adafruit Fingerprint sensor enrollment
Found fingerprint sensor!
Ready to enroll a fingerprint! Please Type in the ID # you want to save this finger as...
```

Autoscroll

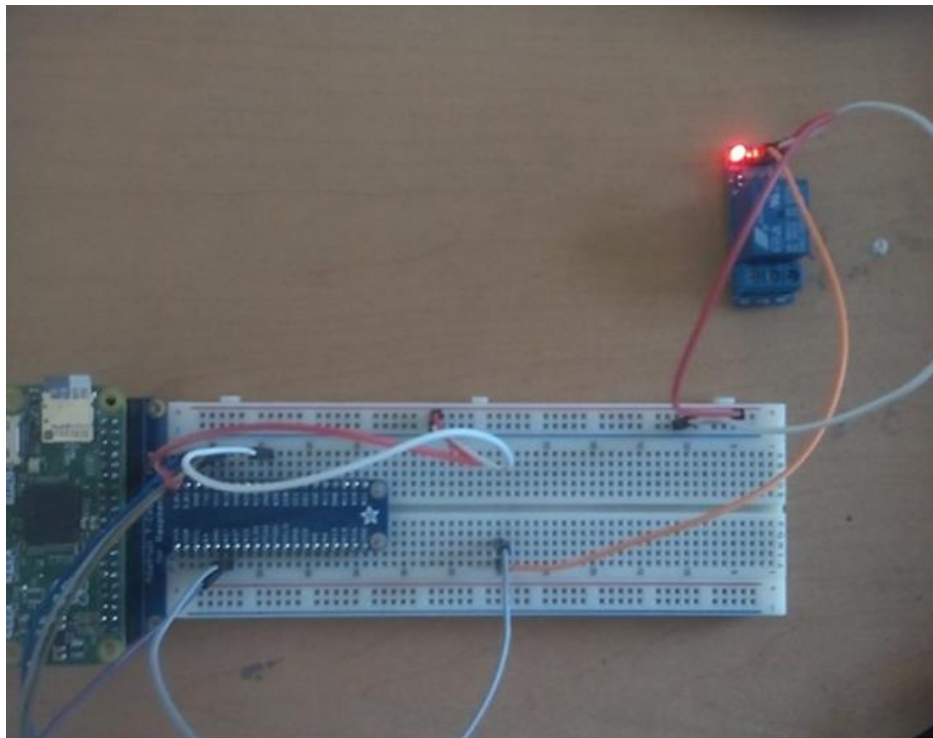
Retorno de carro 9600 baudo


```
COM11 (Arduino/Genuino Uno)
.....
Image taken
Image converted
Remove finger
ID 12
Place same finger again
.....
Autoscroll
Retorno de carro 9600 baudo
```

```
COM11 (Arduino/Genuino Uno)
.....
Image taken
Image converted
Remove finger
ID 12
Place same finger again
.....Image taken
Image converted
Creating model for #12
Prints matched!
ID 12
Stored!
Ready to enroll a fingerprint! Please Type in the ID # you want to save this finger as...
Autoscroll
Retorno de carro 9600 baudo
```

Chapter 4: Control-Connected Devices





https://nodejs.org/en/

node
JS

HOME | ABOUT | DOWNLOADS | DOCS | FOUNDATION | GET INVOLVED | SECURITY | NEWS

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world.

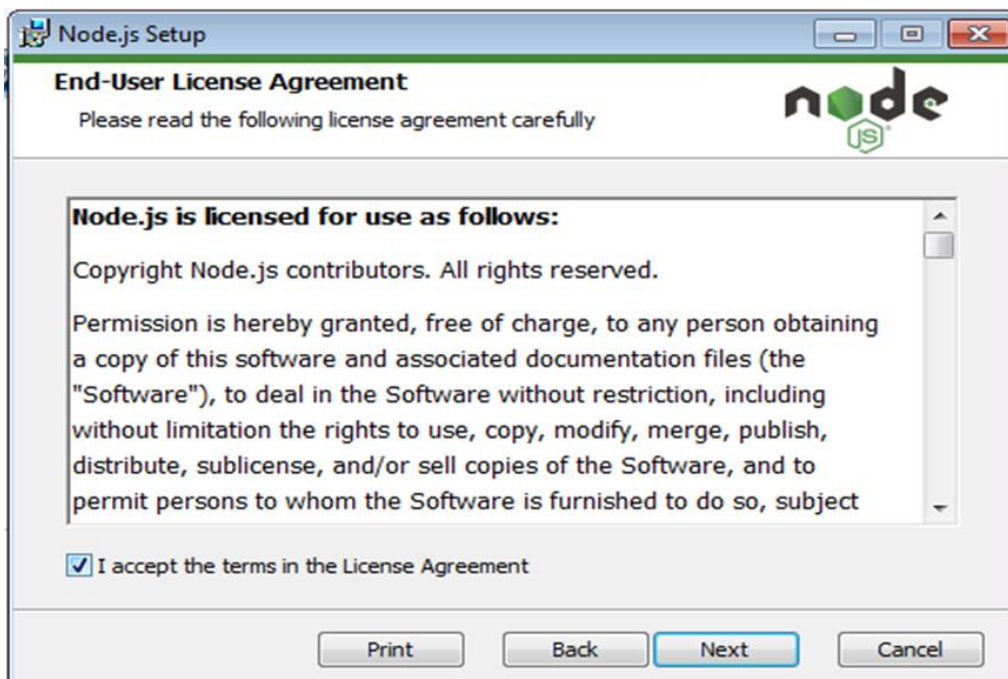
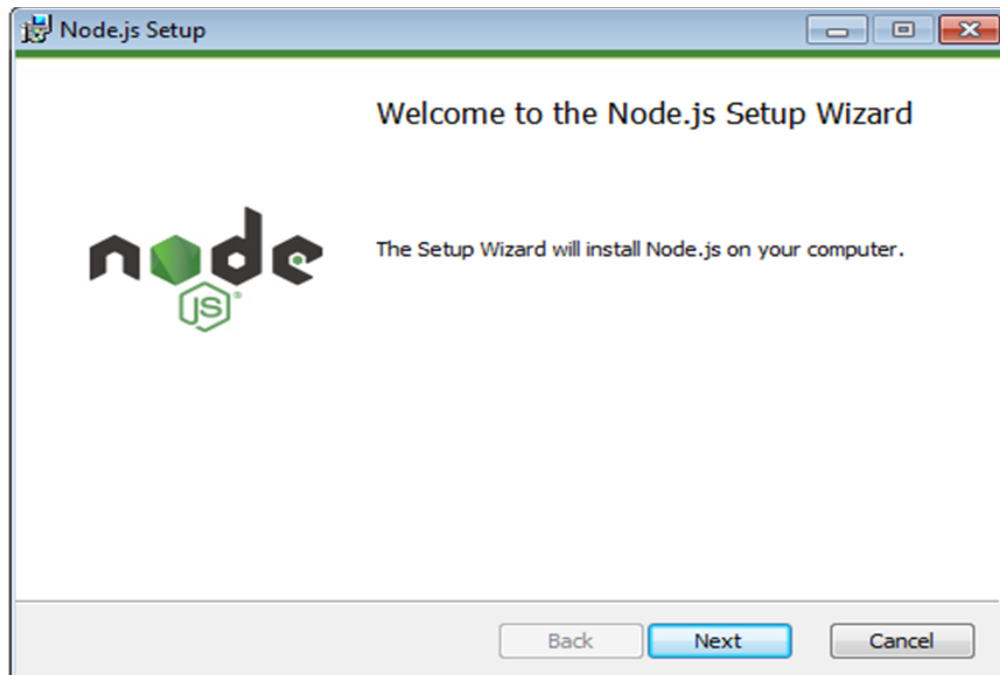
Important security notification regarding npm

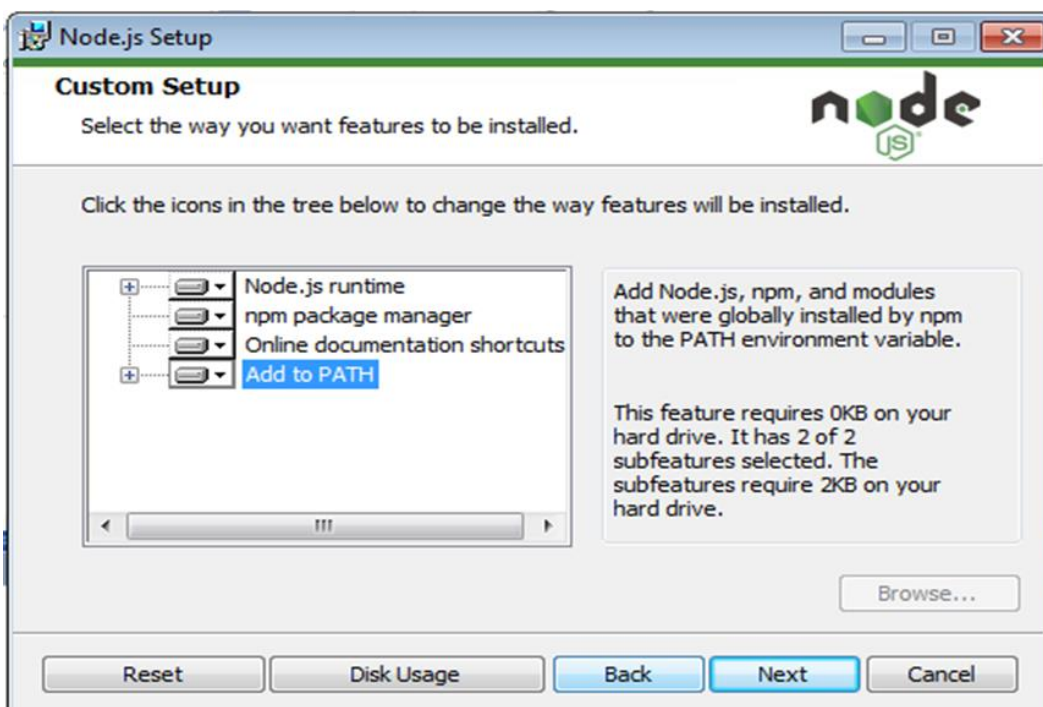
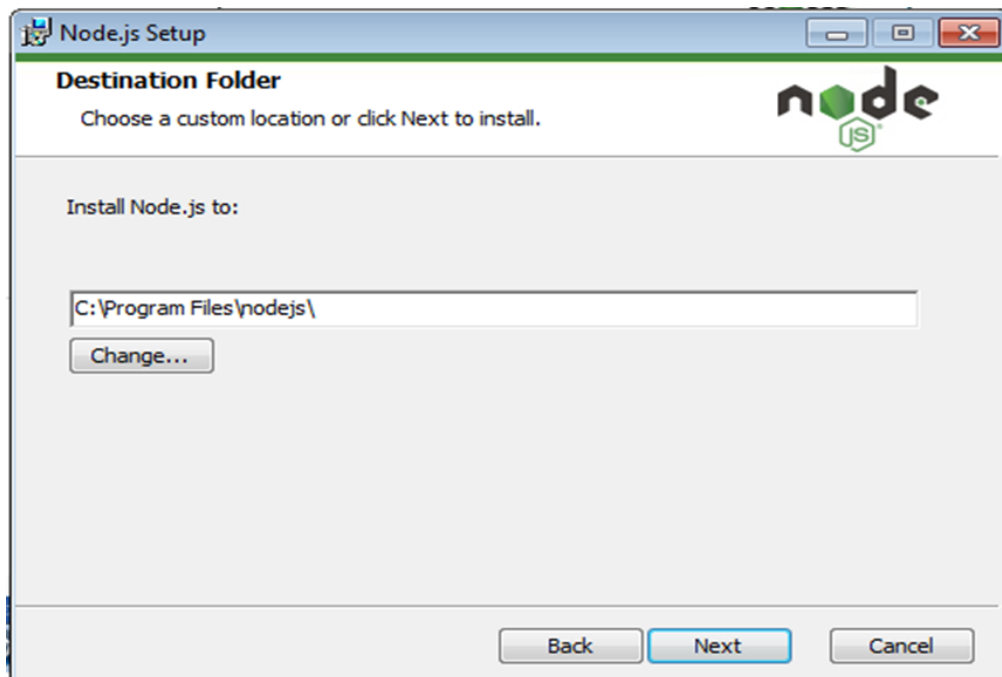
Download for Windows (x64)

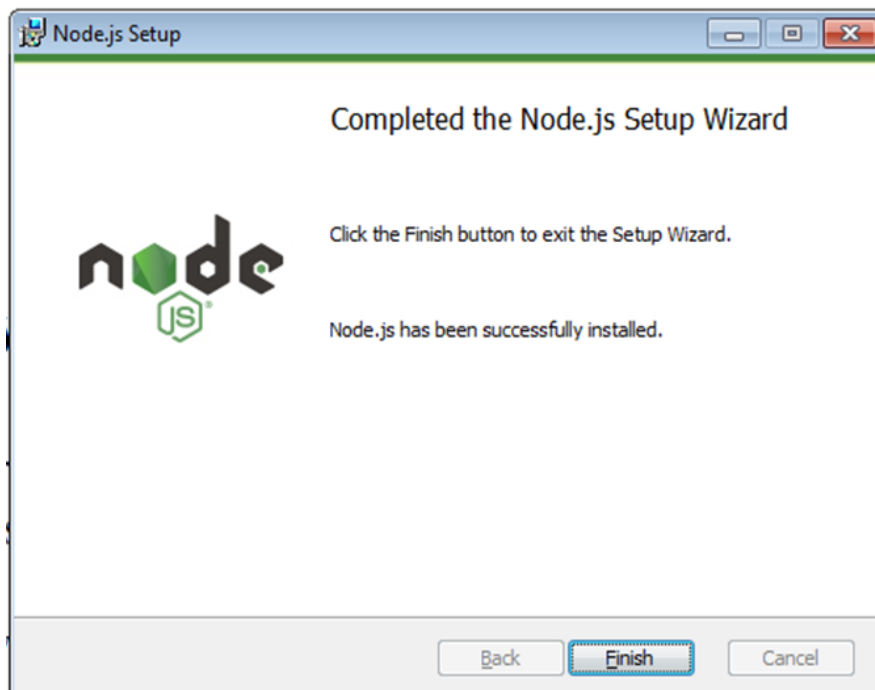
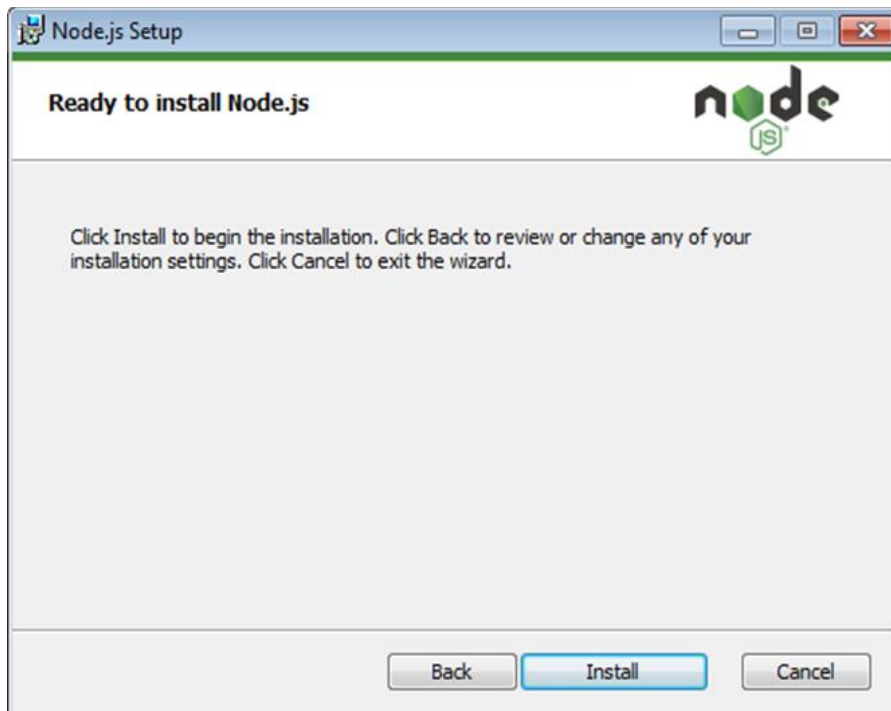
v4.4.3 LTS Recommended For Most Users	v5.10.1 Stable Latest Features
---	--

[Other Downloads](#) | [Changelog](#) | [API Docs](#) [Other Downloads](#) | [Changelog](#) | [API Docs](#)

Or have a look at the [LTS schedule](#).

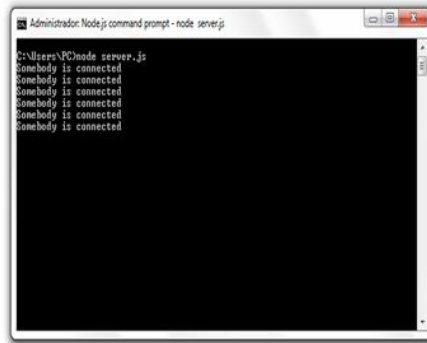


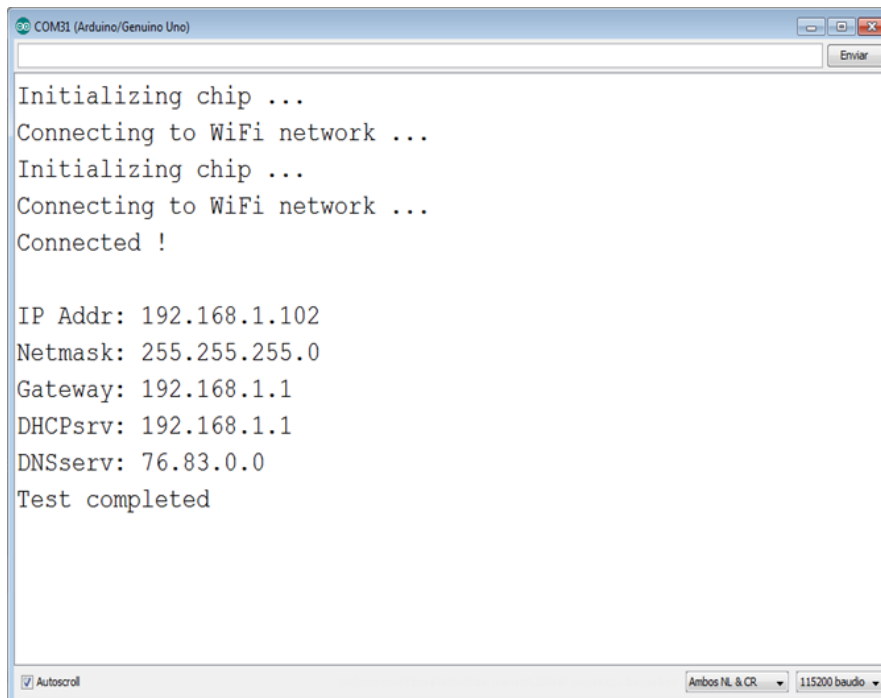






The Server works perfect

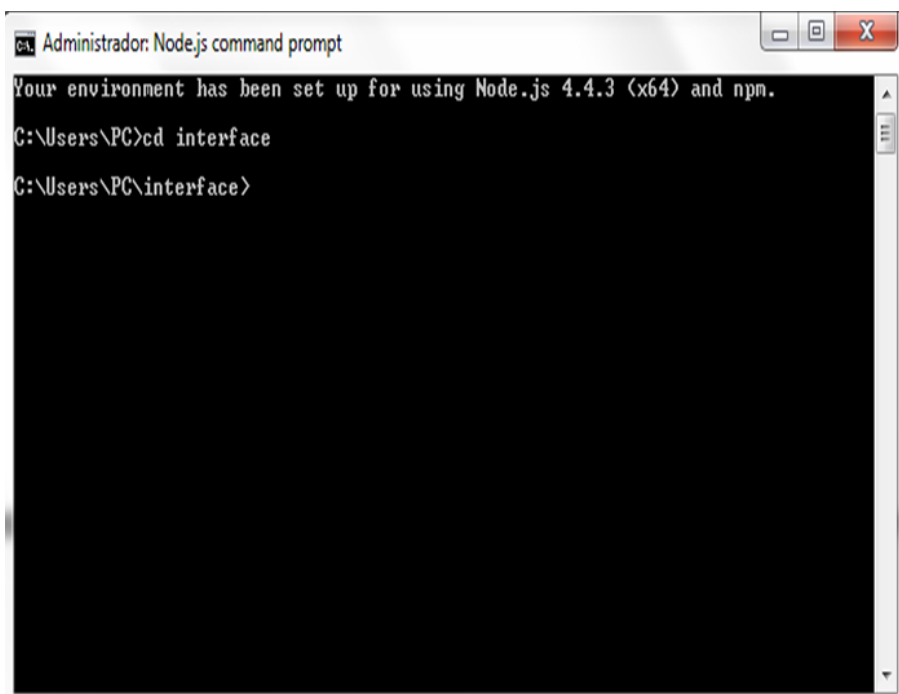




COM31 (Arduino/Genuino Uno)

```
Initializing chip ...  
Connecting to WiFi network ...  
Initializing chip ...  
Connecting to WiFi network ...  
Connected !  
  
IP Addr: 192.168.1.102  
Netmask: 255.255.255.0  
Gateway: 192.168.1.1  
DHCPsrv: 192.168.1.1  
DNSServ: 76.83.0.0  
Test completed
```

Autoscroll | Ambos NL & CR | 115200 baudio

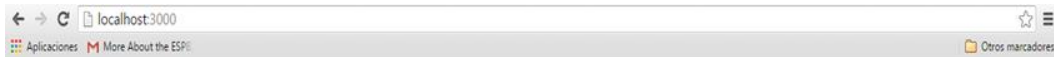


Administrador: Node.js command prompt

```
Your environment has been set up for using Node.js 4.4.3 (x64) and npm.  
C:\Users\PC>cd interface  
C:\Users\PC\interface>
```



```
Administrador: Node.js command prompt - node app.js
Your environment has been set up for using Node.js 4.4.3 (x64) and npm.
C:\Users\PC>cd interface
C:\Users\PC\interface>node app.js
Listening on port 3000
```



Wifi Monitor

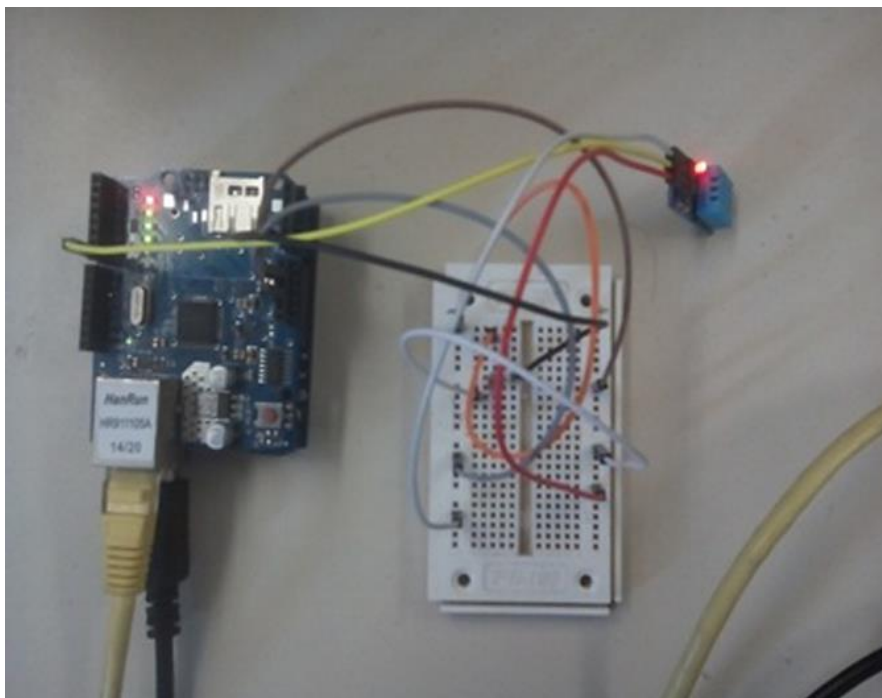
Temperature: 29 °C

Humidity: 31 %

Light level: 39 %

Device Online

```
Administrator: Node.js command prompt - node app.js
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable light
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable temp
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable hum
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable light
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable temp
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable hum
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable light
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable temp
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable hum
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable light
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable temp
Variable/function request sent to device: monitor
Sending request to address: 192.168.1.104 for variable hum
```



```
← → 192.168.1.153
Aplicaciones More About the ESP8265 Otros marcadores
{"variables": {"light": 30, "temp": 29, "hum": 31, "id": "008", "name": "Ethernet", "connected": true}}
```

```
← → localhost:3000
Aplicaciones More About the ESP8265 Otros marcadores
```

Ethernet Shield Monitoring

Temperature: 29 °C

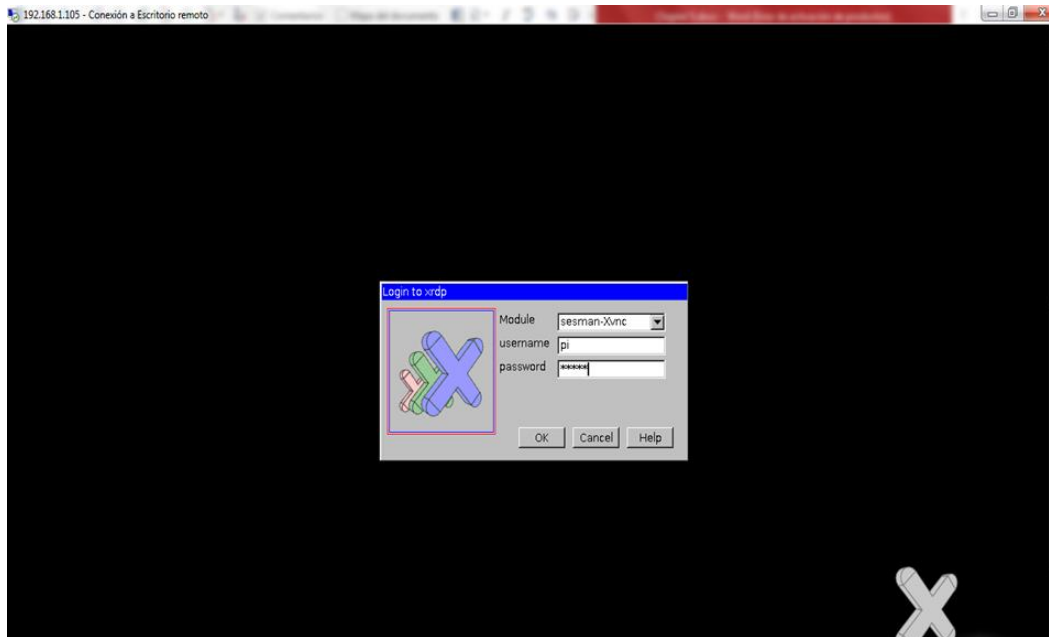
Humidity: 31 %

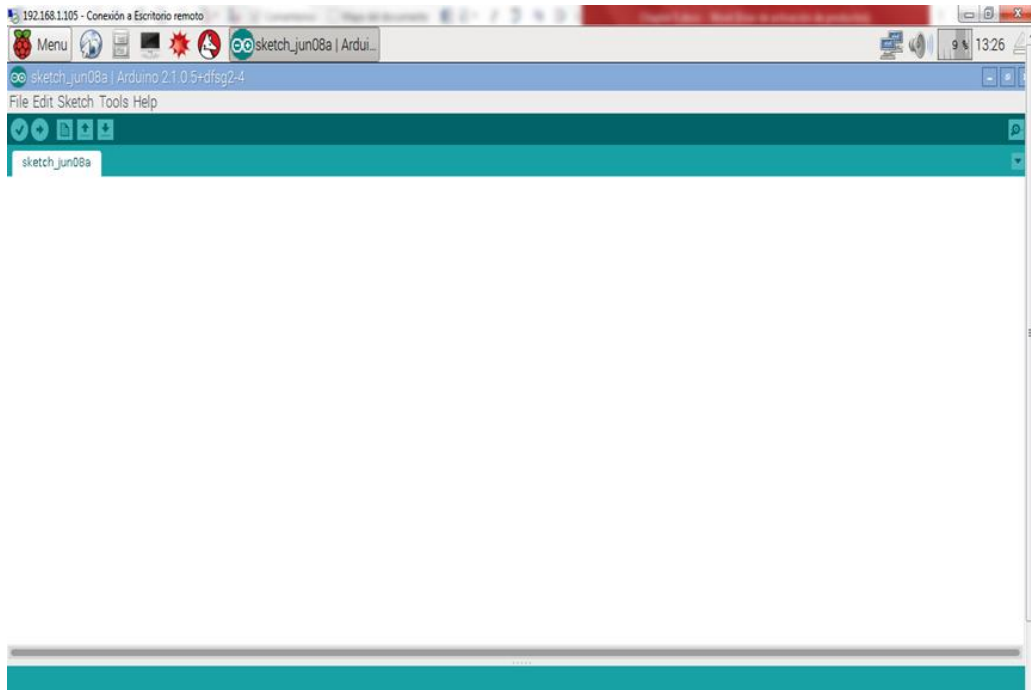
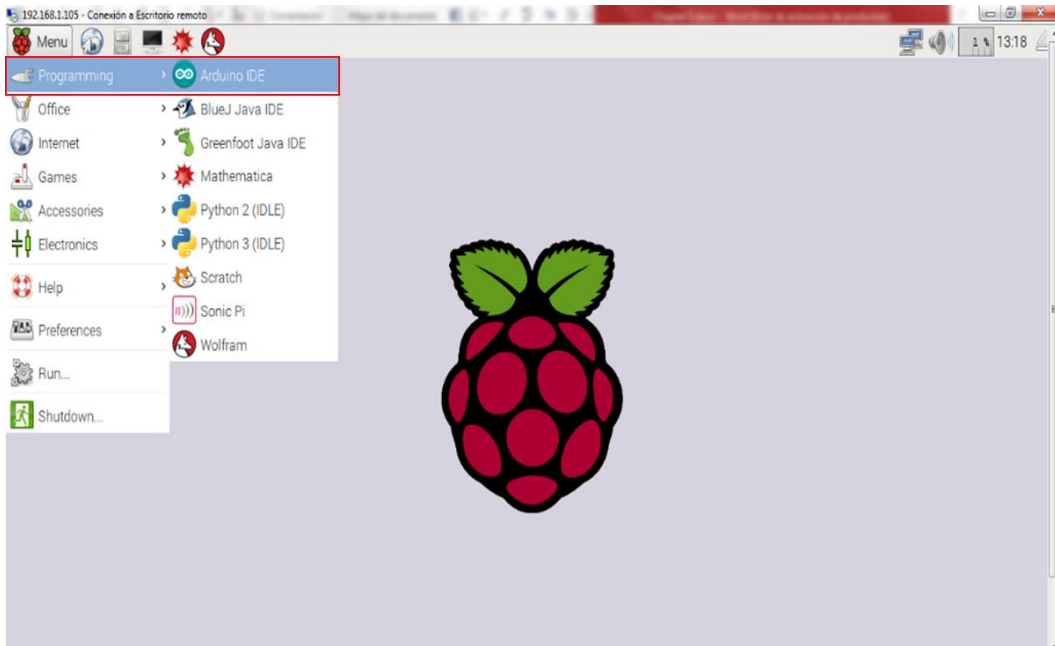
Light level: 35 %

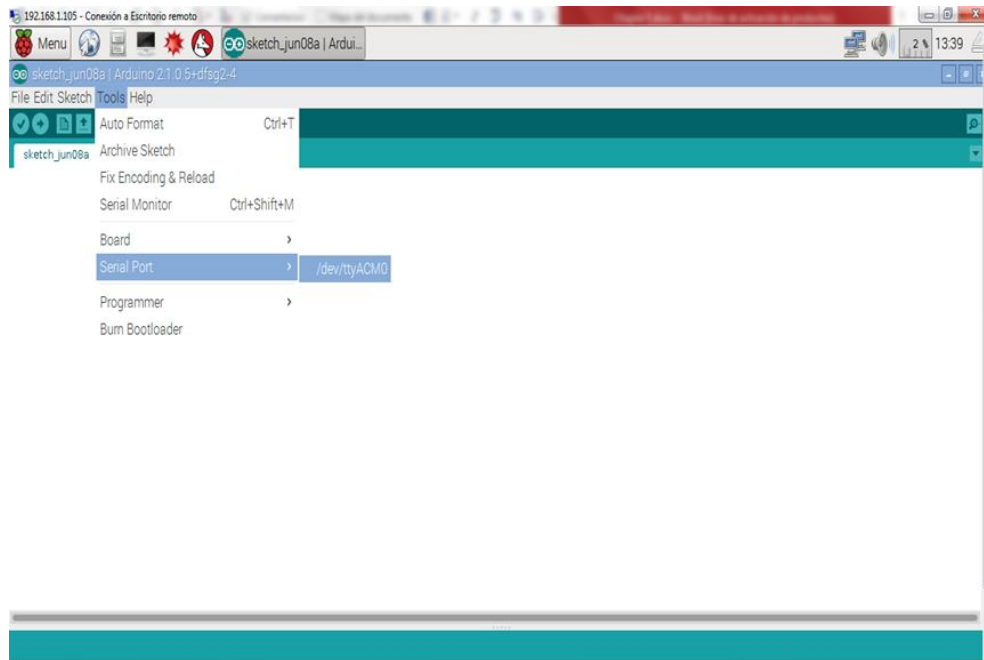
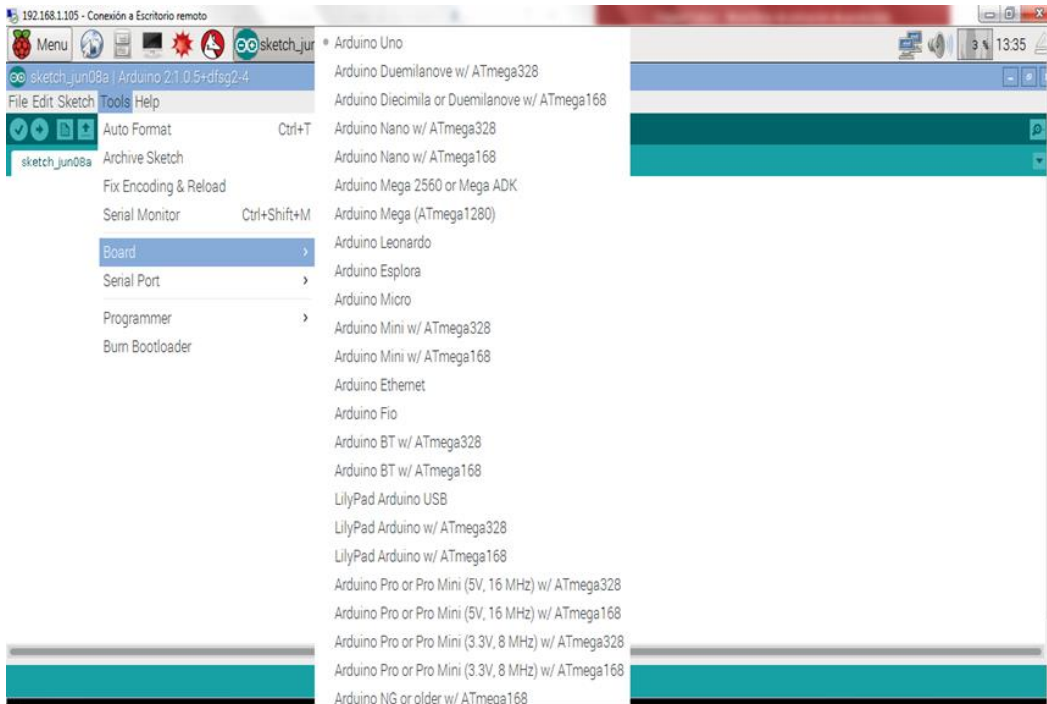
Device Online

```
Administrator: Node.js command prompt - node app.js
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable temp
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable hum
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable temp
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable hum
Variable/function request sent to device: Ethernet
Sending request to address: 192.168.1.153 for variable light
```

Chapter 5: Adding a Webcam to Monitor Your Security System





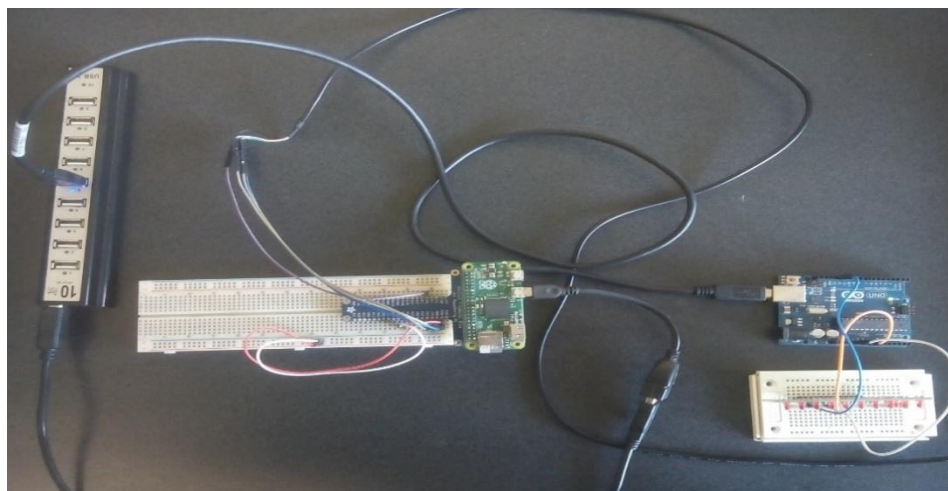


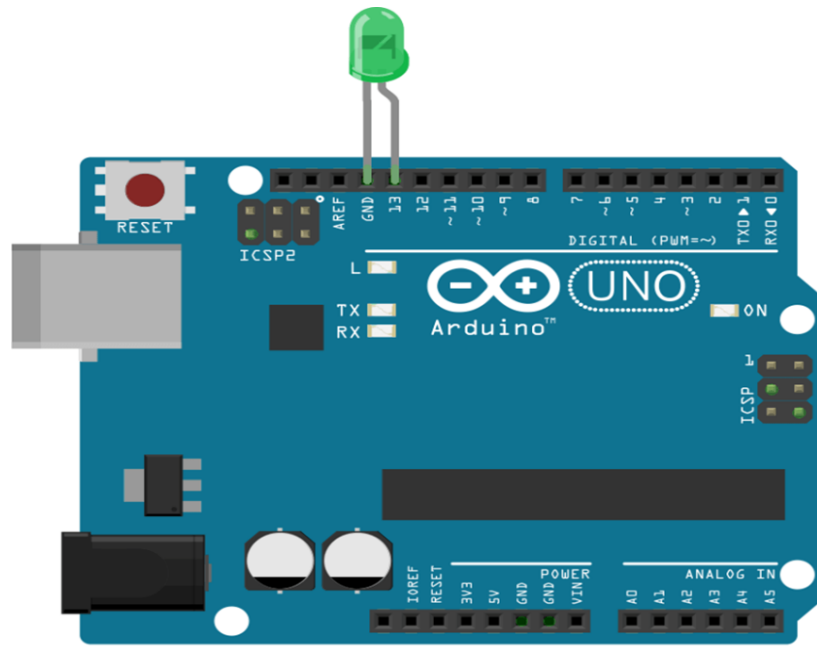
```
192.168.1.105 - Conexión a Escritorio remoto
Menu [Icons] [System Tray] [26h 13:46]
Blink | Arduino 2:1.0.5+dfsg2-4
File Edit Sketch Tools Help
Blink $

// Pin 13 has an LED connected on most Arduino boards.
// give it a name:
int led = 13;

// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led, OUTPUT);
}

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





Made with  Fritzing.org

← → ↻ arduino.local:8080/stream.html Aplicaciones More About the ESP8 Otros marcadores

MJPEG-Streamer
Demo Pages
a resource friendly streaming application

Home
Static
Stream
Java
Javascript
VideoLAN
Control

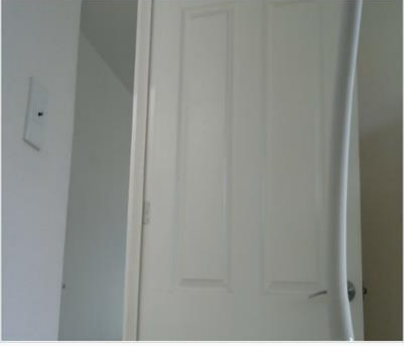
Version info:
v0.1 (Oct 22, 2007)

one or more times.

Source snippet


```

```



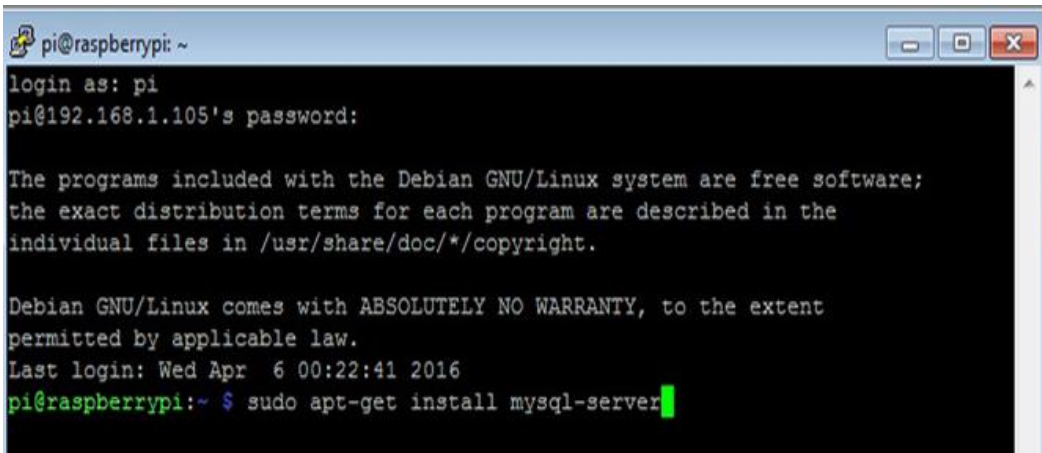
© The MJPG-streamer team | Design by Andreas Viklund

← → ↻ 192.168.1.106/index.html Aplicaciones More About the ESP8 Otros marcadores

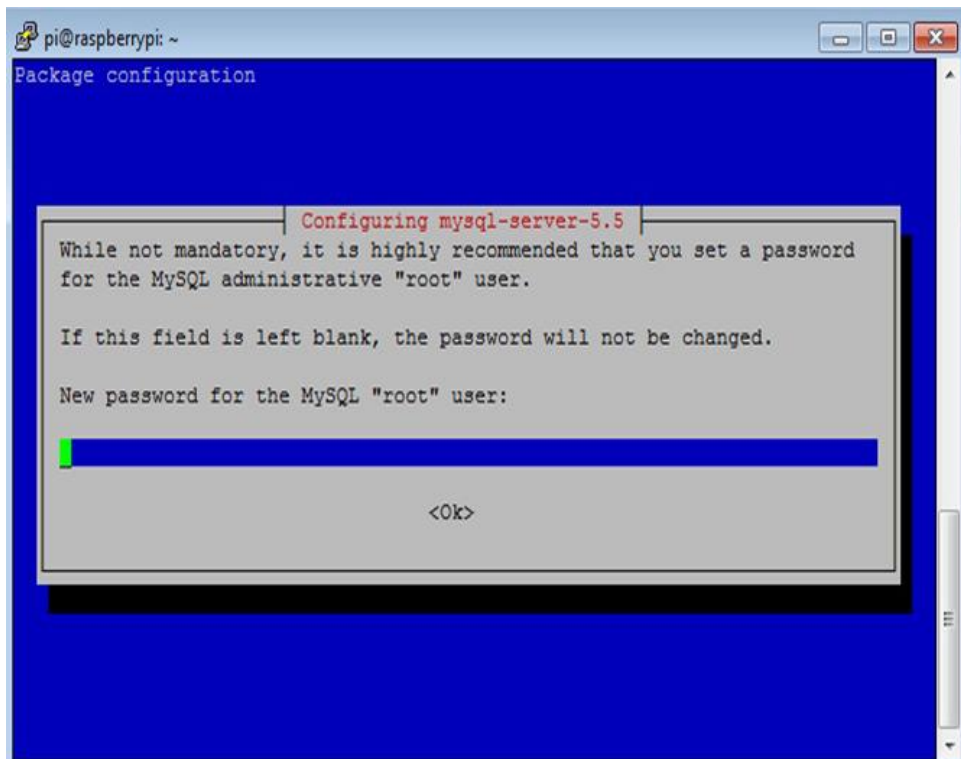




Chapter 6: Building a Web Monitor and Controlling Devices from a Dashboard



```
pi@raspberrypi: ~  
login as: pi  
pi@192.168.1.105's password:  
  
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Wed Apr 6 00:22:41 2016  
pi@raspberrypi:~ $ sudo apt-get install mysql-server
```



```
pi@raspberrypi: ~  
Package configuration  
  
Configuring mysql-server-5.5  
While not mandatory, it is highly recommended that you set a password  
for the MySQL administrative "root" user.  
  
If this field is left blank, the password will not be changed.  
  
New password for the MySQL "root" user:  
[REDACTED]  
  
<Ok>
```

```
pi@raspberrypi: ~
Preparing to unpack ../mysql-server-core-5.5_5.5.44-0+deb8u1_armhf.deb ...
Unpacking mysql-server-core-5.5 (5.5.44-0+deb8u1) ...
Selecting previously unselected package mysql-server-5.5.
Preparing to unpack ../mysql-server-5.5_5.5.44-0+deb8u1_armhf.deb ...
ERROR: There's not enough space in /var/lib/mysql/
dpkg: error processing archive /var/cache/apt/archives/mysql-server-5.5_5.5.44-0+deb8u1_armhf.deb (--unpack):
 subprocess new pre-installation script returned error exit status 1
Selecting previously unselected package libhtml-template-perl.
Preparing to unpack ../libhtml-template-perl_2.95-1_all.deb ...
Unpacking libhtml-template-perl (2.95-1) ...
Selecting previously unselected package mysql-server.
Preparing to unpack ../mysql-server_5.5.44-0+deb8u1_all.deb ...
Unpacking mysql-server (5.5.44-0+deb8u1) ...
Processing triggers for man-db (2.7.0.2-5) ...
/usr/bin/mandb: can't write to /var/cache/man/1161: No space left on device
Errors were encountered while processing:
 /var/cache/apt/archives/mysql-server-5.5_5.5.44-0+deb8u1_armhf.deb
E: Sub-process /usr/bin/dpkg returned an error code (1)
pi@raspberrypi:~ $ mysql --version
mysql Ver 14.14 Distrib 5.5.44, for debian-linux-gnu (armv7l) using readline 6.3
pi@raspberrypi:~ $ mysql -u root -p
Enter password: █
```

```
pi@raspberrypi: ~
full name instead.
160406 3:06:12 [Note] /usr/sbin/mysqld (mysqld 5.5.44-0+deb8u1) starting as process 3257 ...
Setting up mysql-server (5.5.44-0+deb8u1) ...
Processing triggers for systemd (215-17+deb8u3) ...
pi@raspberrypi:~ $ mysql -u root -p
Enter password:
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
pi@raspberrypi:~ $ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 44
Server version: 5.5.44-0+deb8u1 (Raspbian)

Copyright (c) 2000, 2015, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

```
pi@raspberrypi: ~
Aborted
pi@raspberrypi:~ $ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 45
Server version: 5.5.44-0+deb8u1 (Raspbian)

Copyright (c) 2000, 2015, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database                |
+-----+
| information_schema      |
| mysql                   |
| performance_schema     |
+-----+
3 rows in set (0.00 sec)
```

```
pi@raspberrypi: ~
pi@raspberrypi:~ $ <body>
-bash: syntax error near unexpected token `newline'
pi@raspberrypi:~ $ <p> list of databases:</p>
-bash: syntax error near unexpected token `newline'
pi@raspberrypi:~ $ <?php
-bash: ?php: No such file or directory
pi@raspberrypi:~ $ $link = mysql_connect('localhost', 'root', 'ruben');
-bash: syntax error near unexpected token `('
pi@raspberrypi:~ $ $res = mysql_query("SHOW DATABASES");
-bash: syntax error near unexpected token `('
pi@raspberrypi:~ $
pi@raspberrypi:~ $ while ($row = mysql_fetch_assoc($res)) {
-bash: syntax error near unexpected token `('
pi@raspberrypi:~ $     echo $row['Database'] . "<br>";
[Database] . <br>
pi@raspberrypi:~ $ }
-bash: syntax error near unexpected token `}'
pi@raspberrypi:~ $ ?>
-bash: syntax error near unexpected token `newline'
pi@raspberrypi:~ $ </body>
-bash: syntax error near unexpected token `newline'
pi@raspberrypi:~ $ </html>
-bash: syntax error near unexpected token `newline'
pi@raspberrypi:~ $ sudo nano /var/www/html/helloadb.php
```



```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /var/www/html/hellodb.php

<html>
  <head>
    <title>Getting MySQL Database </title>
  </head>

  <body>
    <p> list of databases:</p>
    <?php
$link = mysql_connect('localhost', 'root', 'ruben');
$res = mysql_query("SHOW DATABASES");

while ($row = mysql_fetch_assoc($res)) {
    echo $row['Database'] . "<br>";
}
?>
  </body>
</html>
```

← → 192.168.1.105/hellodb.php

Aplicaciones More About the ESP8265 Otros marcadores

List of Databases:

- information_schema
- mysql
- performance_schema

```
COM35 - PuTTY
Package configuration

| Configuring phpmyadmin |
Please choose the web server that should be automatically configured to
run phpMyAdmin.

Web server to reconfigure automatically:

[ ] apache2
[ ] lighttpd

<Ok>
```

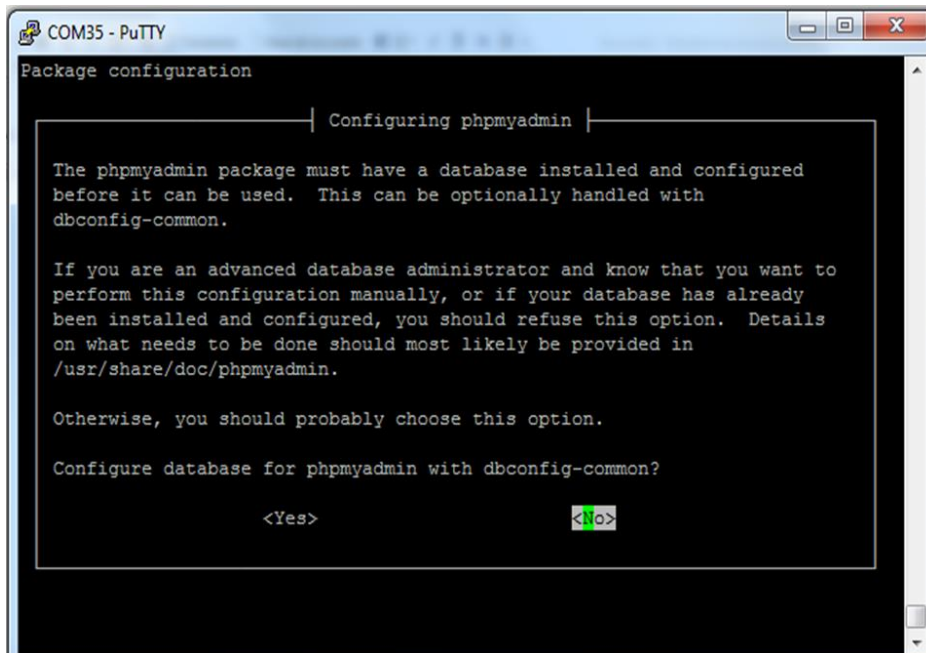
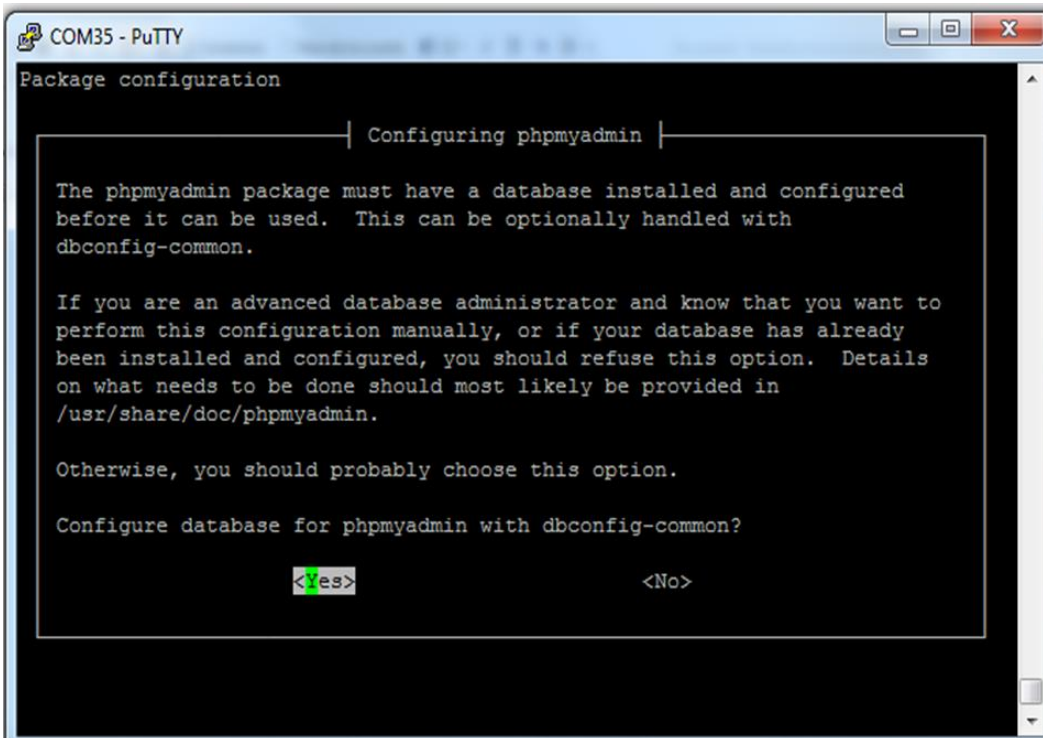
```
COM35 - PuTTY
Package configuration

| Configuring phpmyadmin |
Please choose the web server that should be automatically configured to
run phpMyAdmin.

Web server to reconfigure automatically:

[ ] apache2
[ ] lighttpd

<Ok>
```



```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/apache2/apache2.conf

# This is the main Apache server configuration file. It contains the
# configuration directives that give the server its instructions.
# See http://httpd.apache.org/docs/2.4/ for detailed information about
# the directives and /usr/share/doc/apache2/README.Debian about Debian specific
# hints.
#
#
# Summary of how the Apache 2 configuration works in Debian:
# The Apache 2 web server configuration in Debian is quite different to
# upstream's suggested way to configure the web server. This is because Debian's
# default Apache2 installation attempts to make adding and removing modules,
# virtual hosts, and extra configuration directives as flexible as possible, in
# order to make automating the changes and administering the server as easy as
# possible.
#
# It is split into several files forming the configuration hierarchy outlined
# below, all located in the /etc/apache2/ directory:
#
# /etc/apache2/
[ Read 221 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^X Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/apache2/apache2.conf Modified
# Include of directories ignores editors' and dpkg's backup files,
# see README.Debian for details.
#
# Include generic snippets of statements
IncludeOptional conf-enabled/*.conf
#
# Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf
#
# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
#
Include /etc/phpmyadmin/apache.conf

Save modified buffer (ANSWERING "No" WILL DESTROY CHANGES) ?
Y Yes
N No ^C Cancel
```



Welcome to phpMyAdmin

Language
English

Log in

Username: root
Password: [masked]

Go

phpMyAdmin

Recent Favorites

- New
- arduino
- arduino0d
- information_schema
- mysql
- performance_schema

Server: localhost

Databases SQL Status Users Export Import Settings Replication Variables Charsets Engines

General Settings

- Change password
- Server connection collation: utf8mb4_general_ci

Appearance Settings

- Language: English
- Theme: pmahomme
- Font size: 82%
- More settings

Database server

- Server: Localhost via UNIX socket
- Server type: MySQL
- Server version: 5.5.52-0+deb8u1 - (Raspbian)
- Protocol version: 10
- User: root@localhost
- Server charset: UTF-8 Unicode (utf8)

Web server

- Apache/2.4.10 (Raspbian)
- Database client version: libmysql - 5.5.52
- PHP extension: mysqli

phpMyAdmin

- Version information: 4.2.12deb2+deb8u2
- Documentation
- Wiki
- Official Homepage
- Contribute
- Get support
- List of changes

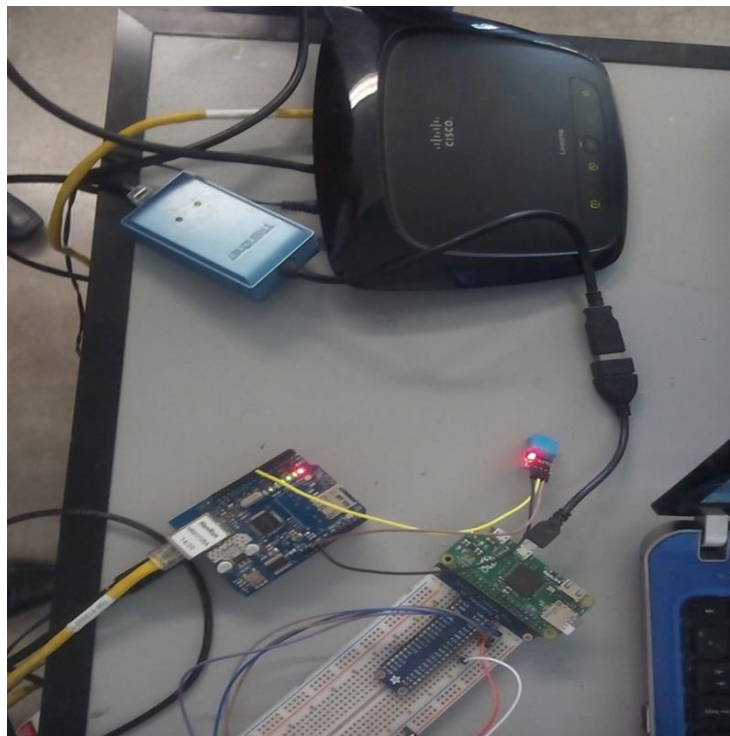
192.168.1.108/phpmyadmin/index.php?token=aba8db2e57b7da3f0a33443977f6c5f#PMAURL-2.tbl_structure.php?db=arduinoobd&table=measurements&server=1&target=&token=ab

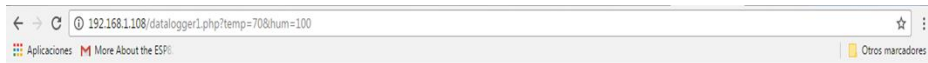
Server: localhost Database: arduinoobd Table: measurements

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	temperature	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	humidity	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values

Information

Space usage		Row statistics	
Data	16 KiB	Format	compact
Index	0 B	Collation	utf8_spanish_ci
Total	16 KiB	Next autoindex	68
		Creation	Nov 03, 2016 at: 08:19 AM





Datos guardados

Server: localhost Database: arduinobd Table: measurements

	id	temperature	humidity
<input type="checkbox"/>	143	25	33
<input type="checkbox"/>	144	25	33
<input type="checkbox"/>	145	25	33
<input type="checkbox"/>	146	25	33
<input type="checkbox"/>	147	25	33
<input type="checkbox"/>	148	25	33
<input type="checkbox"/>	149	25	33
<input type="checkbox"/>	150	25	33
<input type="checkbox"/>	151	70	100
<input type="checkbox"/>	152	25	33
<input type="checkbox"/>	153	25	33
<input type="checkbox"/>	154	25	33
<input type="checkbox"/>	155	25	33
<input type="checkbox"/>	156	25	33
<input type="checkbox"/>	157	25	33
<input type="checkbox"/>	158	25	33
<input type="checkbox"/>	159	25	33

Number of rows: 500 Filter rows: Search this table

Query results operations

192.168.1.108/phpmyadmin/index.php?token=aba8db2e57bf7da3f0a33443977f6c5f#PMAURL-3:sql.php?db=arduinoobd&table=measurements&server=1&target=&token=aba8db2e57

Server: localhost Database: arduinoobd Table: measurements

Number of rows: 500 Filter rows: Search this table

Sort by key: None

	id	temperature	humidity
Edit Copy Delete	1	25	33
Edit Copy Delete	2	25	33
Edit Copy Delete	3	25	33
Edit Copy Delete	4	25	33
Edit Copy Delete	5	25	33
Edit Copy Delete	6	25	33
Edit Copy Delete	7	25	33
Edit Copy Delete	8	25	33
Edit Copy Delete	9	25	33
Edit Copy Delete	10	25	33
Edit Copy Delete	11	25	33
Edit Copy Delete	12	25	33
Edit Copy Delete	13	25	33
Edit Copy Delete	14	25	33
Edit Copy Delete	15	25	33
Edit Copy Delete	16	25	33
Edit Copy Delete	17	25	33

192.168.1.108/query1.php?

Click on the buttons to get Data from MySQL

Get all Data

Humidity <= 15

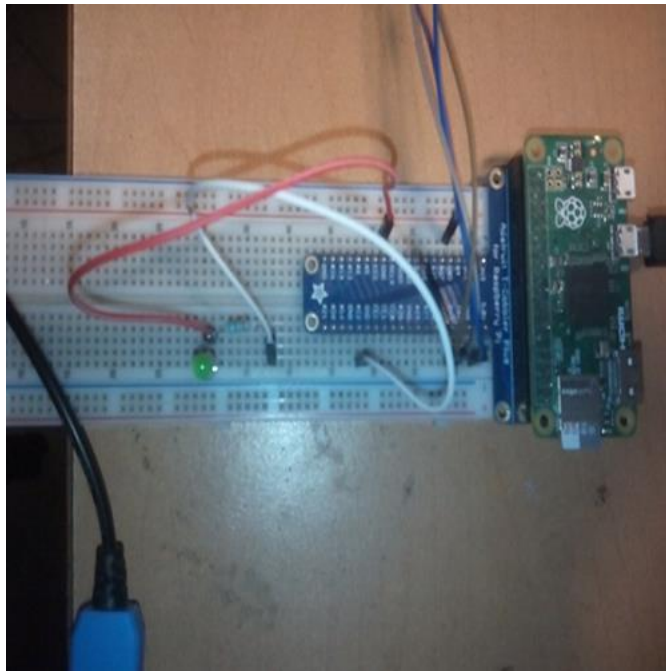
Temperature <=25

Measurements	Temperature (°C)	Humidity (%)
1	25	33
2	25	33
3	25	33
4	25	33
5	25	33
6	25	33
7	25	33
8	25	33
9	25	33
10	25	33
11	25	33
12	25	33
13	25	33
14	25	33
15	25	33
16	25	33
17	25	33

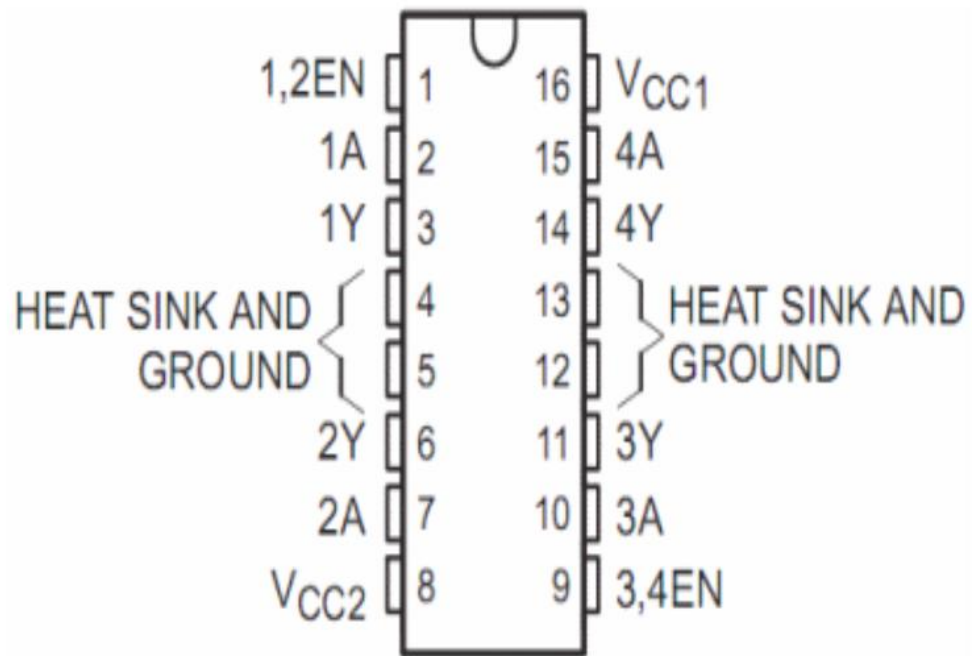
← → C 192.168.1.108/query3.php? ☆

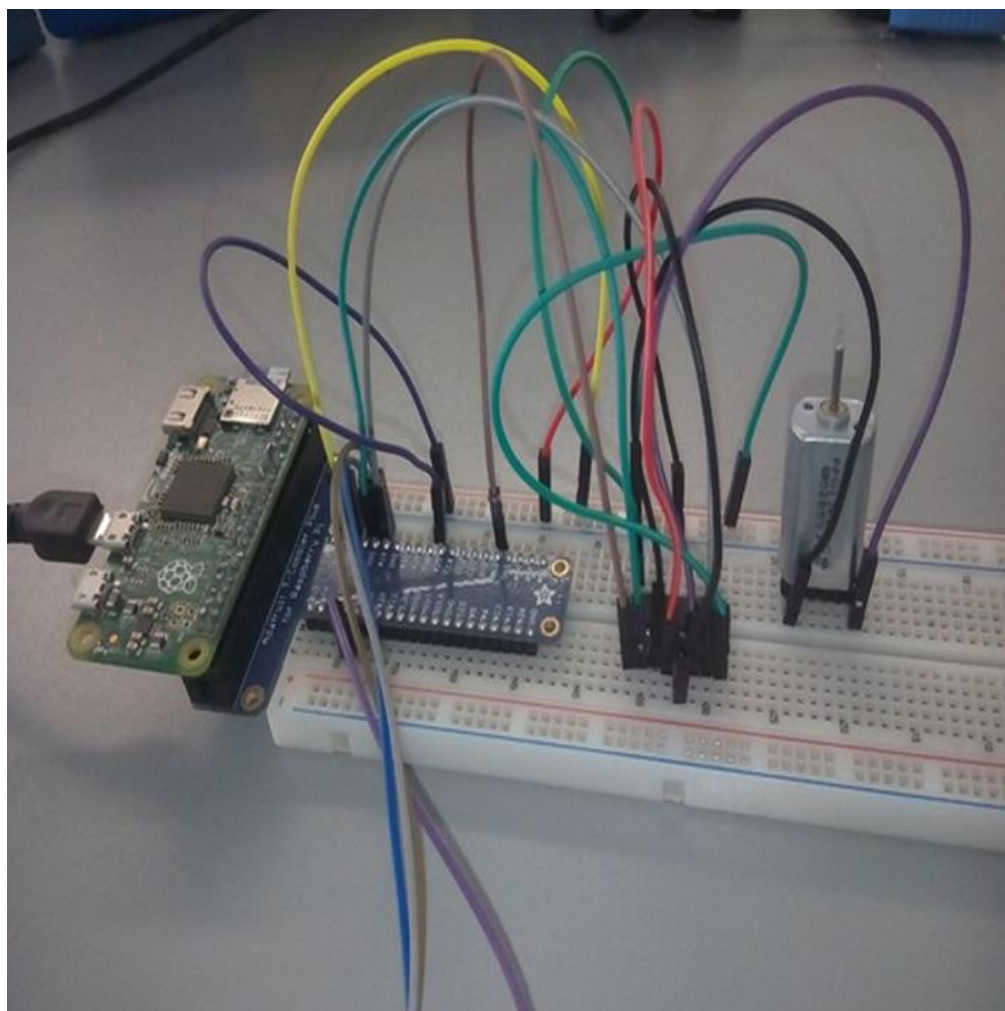
Aplicaciones M More About the ESP8266 Otros marcadores

Measurements	Temperature (°C)	Humidity (%)
1	25	33
2	25	33
3	25	33
4	25	33
5	25	33
6	25	33
7	25	33
8	25	33
9	25	33
10	25	33
11	25	33
12	25	33
13	25	33
14	25	33
15	25	33
16	25	33
17	25	33
18	25	33
19	25	33
20	25	33
21	25	33
22	25	33
23	25	33
24	25	33
25	25	33



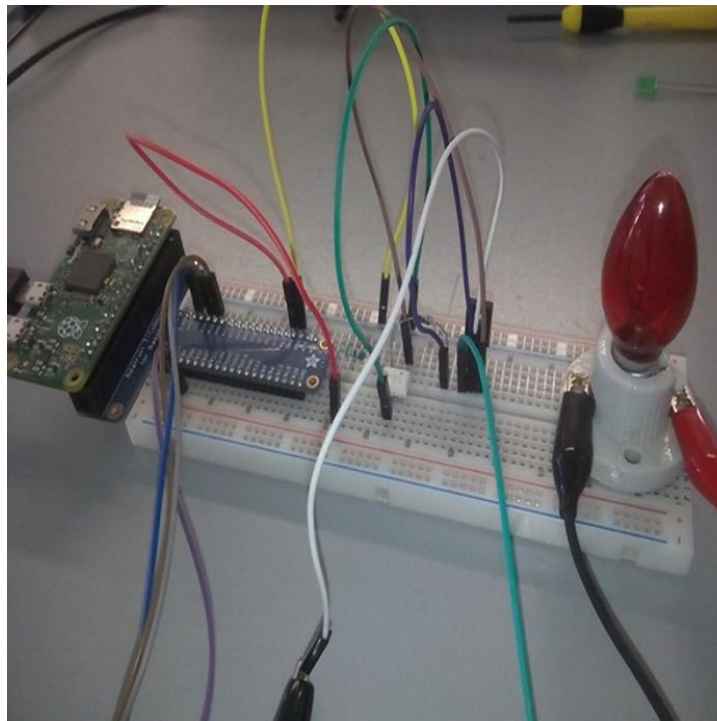
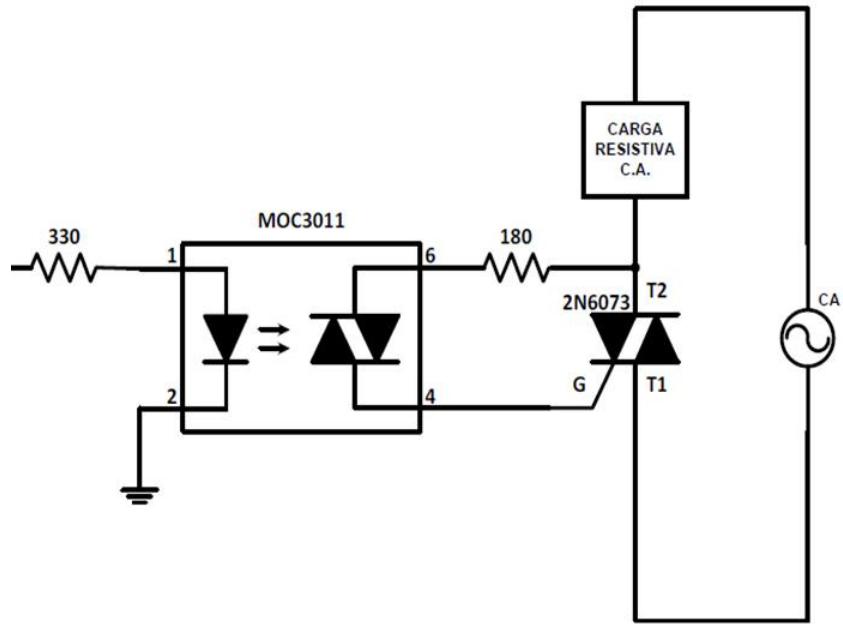
LED Control





Motor Control

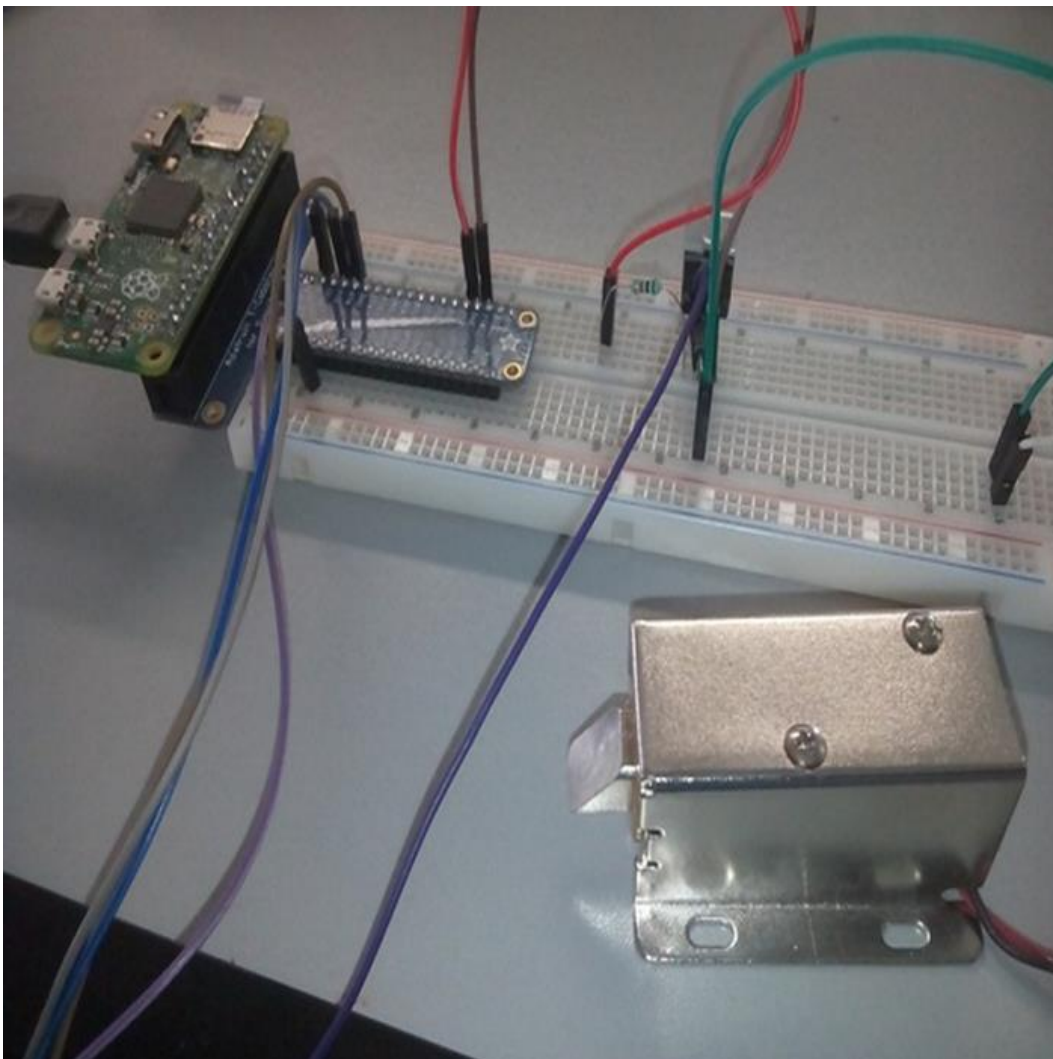


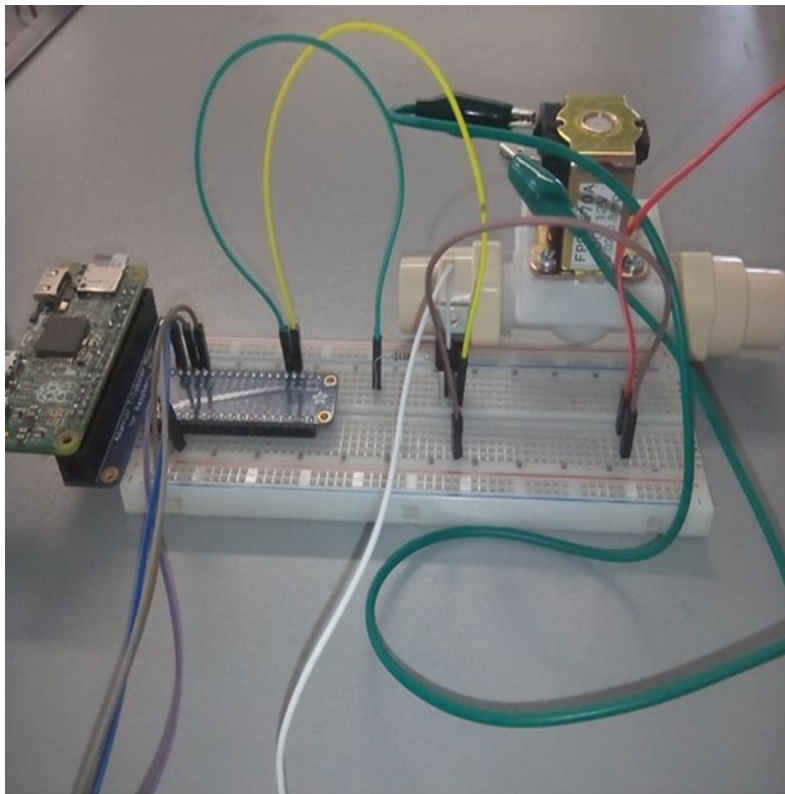


Lamp Control

On

Off





http://whatismyipaddress.com/

Archivo Edición Ver Favoritos Herramientas Ayuda

Recibidos - rubenolivar... Bluetooth Serial Uart Para ... GeneXus, Solución de Des... WampServer, the web dev...

MY IP | IP LOOKUP | SPEED TEST | BLACKLIST CHECK | TRACE EMAIL | CHANGE IP | HIDE IP | IP TOOLS | FAQs | COMMUNITY

IP Lookup

Know the IP address of another computer? You can find where in the world it is—and more.

Trace Email

Track down the geographical location and origin of an email you received.

Hide IP

Learn how to use a high-tech "middleman" to shield your real IP address on the Internet.

VPN Comparison

Compare top rated VPN service providers that meet your needs and budget.

Blacklist Check

Have you been blacklisted?

Your IP Address Is:

207.249.157.116

Your IP Details:

ISP: Axtel, S.A.B. de C.V.
Services: [None Detected](#)
City: León
Region: Guanajuato
Country: Mexico

Don't want this known? [Hide your IP details](#)

Never miss an update

Enter Your Email

[Sign Up](#)

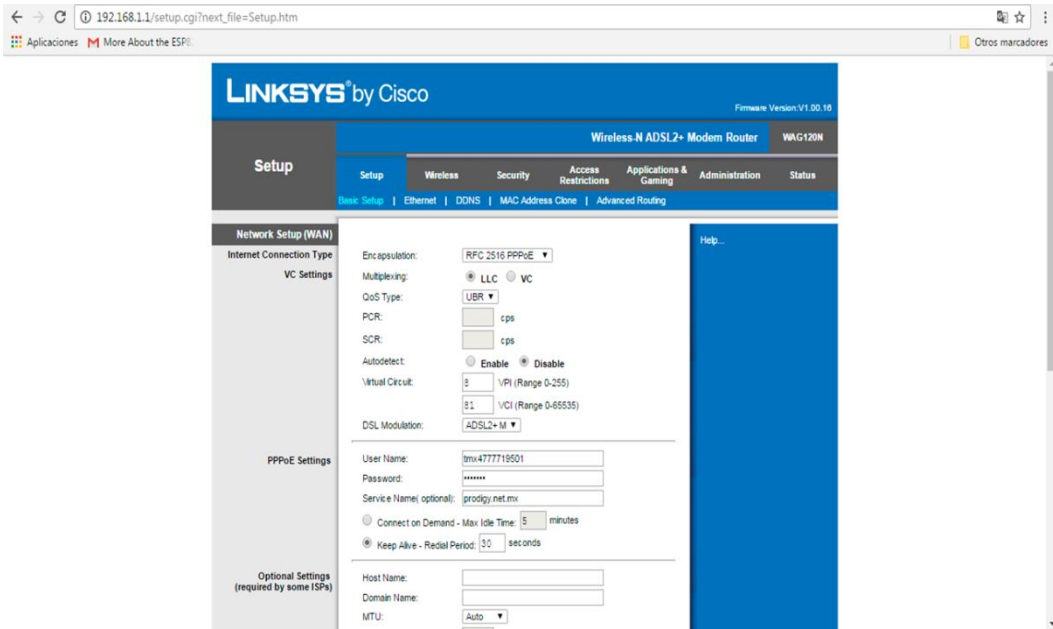
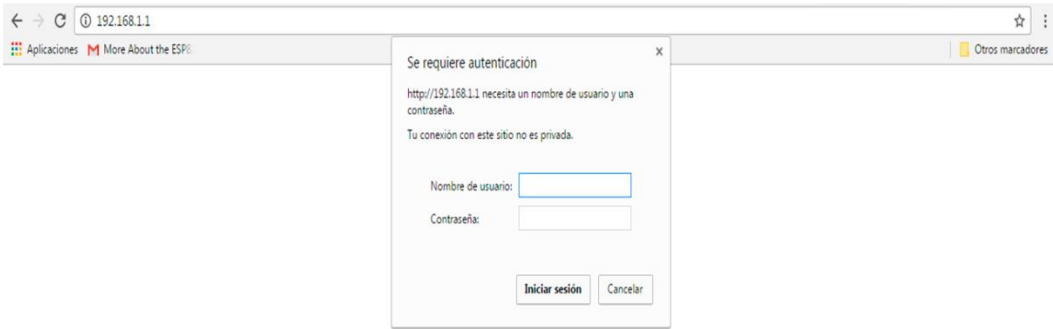
Like our site? [Let us know.](#)

Like this site? [Post a review](#)

http://whatismyipaddress.com/ip/207.249.157.116

130%

Application	External Port	Internal Port	Protocol
HTTP	80	80	TCP ▼
FTP	21	21	TCP ▼
FTP-Data	20	20	TCP ▼
Telnet	23	23	TCP ▼
SMTP	25	25	TCP ▼
TFTP	69	69	UDP ▼
finger	79	79	TCP ▼
NTP	123	123	UDP ▼
POP3	110	110	TCP ▼
NNTP	119	119	TCP ▼
SNMP	161	161	UDP ▼
CVS	2401	2401	TCP ▼
SMS	2701	2701	TCP ▼
SMS-rmctl	2702	2702	TCP ▼



192.168.1.1/setup.cgi?next_file=SingleForwarding.htm

LINKSYS by Cisco Firmware Version: V1.00.10

Wireless-N ADSL2+ Modem Router WAG120N

Applications & Gaming

Single Port Forwarding | Port Range Forwarding | Port Range Triggering | DMZ | QoS

Single Port Forwarding

Application	External Port	Internal Port	Protocol	IP Address	Enable
HTTP	80	80	TCP	192.168.1.104	<input checked="" type="checkbox"/>
FTP	21	21	TCP	192.168.1.104	<input checked="" type="checkbox"/>
FTP:Data	20	20	TCP	192.168.1.0	<input type="checkbox"/>
Telnet	23	23	TCP	192.168.1.0	<input type="checkbox"/>
SMTP	25	25	TCP	192.168.1.0	<input type="checkbox"/>
TFTP	69	69	UDP	192.168.1.0	<input type="checkbox"/>
finger	79	79	TCP	192.168.1.0	<input type="checkbox"/>
NTP	123	123	UDP	192.168.1.0	<input type="checkbox"/>
POP3	110	110	TCP	192.168.1.0	<input type="checkbox"/>
NNTP	119	119	TCP	192.168.1.0	<input type="checkbox"/>
SNMP	161	161	UDP	192.168.1.0	<input type="checkbox"/>
CVS	2401	2401	TCP	192.168.1.0	<input type="checkbox"/>
SMS	2701	2701	TCP	192.168.1.0	<input type="checkbox"/>

10:50 p.m. 10/11/2016

192.168.1.1/setup.cgi?next_file=SingleForwarding.htm

finger	79	79	TCP	192.168.1.0	<input type="checkbox"/>
NTP	123	123	UDP	192.168.1.0	<input type="checkbox"/>
POP3	110	110	TCP	192.168.1.0	<input type="checkbox"/>
NNTP	119	119	TCP	192.168.1.0	<input type="checkbox"/>
SNMP	161	161	UDP	192.168.1.0	<input type="checkbox"/>
CVS	2401	2401	TCP	192.168.1.0	<input type="checkbox"/>
SMS	2701	2701	TCP	192.168.1.0	<input type="checkbox"/>
SMS-emul	2702	2702	TCP	192.168.1.0	<input type="checkbox"/>
DNS	53	53	UDP	192.168.1.103	<input checked="" type="checkbox"/>
vpn	1723	1723	TCP	192.168.1.103	<input checked="" type="checkbox"/>
vnc	47	47	UDP	192.168.1.103	<input checked="" type="checkbox"/>
apache	443	443	TCP	192.168.1.101	<input checked="" type="checkbox"/>
apacheweb	81	81	TCP	192.168.1.102	<input checked="" type="checkbox"/>
rtsp	5555	5555	TCP	192.168.1.105	<input checked="" type="checkbox"/>
rtsp2	5556	5556	TCP	192.168.1.105	<input checked="" type="checkbox"/>
lynx	8088	8088	TCP	192.168.1.103	<input checked="" type="checkbox"/>
lynx2	8043	8043	TCP	192.168.1.103	<input checked="" type="checkbox"/>
telnet	2303	2303	TCP	192.168.1.100	<input checked="" type="checkbox"/>
none	3000	3000	TCP	192.168.1.108	<input checked="" type="checkbox"/>

Save Settings Cancel Changes

CISCO

Change this number of the port (3000)


Change this IP address of your Raspberry Pi Zero

www.noip.com

AVG - Buscar... Segura Do Not Track Tiempo Facebook

Recibidos - rubenolivaramos@gmail... Simple experiment with Bluetooth an... Arduino ejemplos con LCD, Display, ... Free Dynamic DNS - Managed DNS - ...

Free Dynamic DNS Service [Sign Up](#) Home Blog Support Contact Us Sign In


 [Services](#) [Why No-IP?](#) [Download](#) [Support](#)

Enhanced Dynamic DNS

more features, flexibility & control

Connect remotely to your computer, DVR, webcam or run your own web server or website on a dynamic IP address.
[What is Dynamic DNS?](#)

[Sign Up Now](#) Up to 25 Hostnames



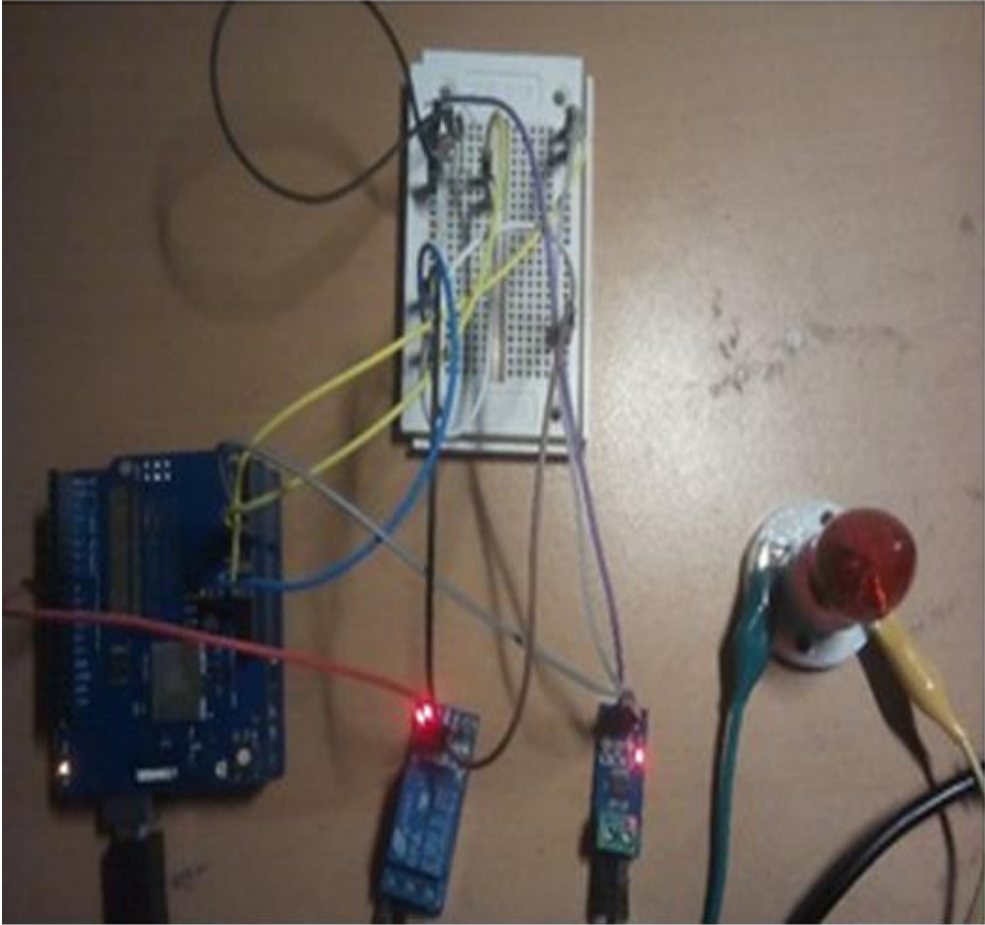
Personal Use

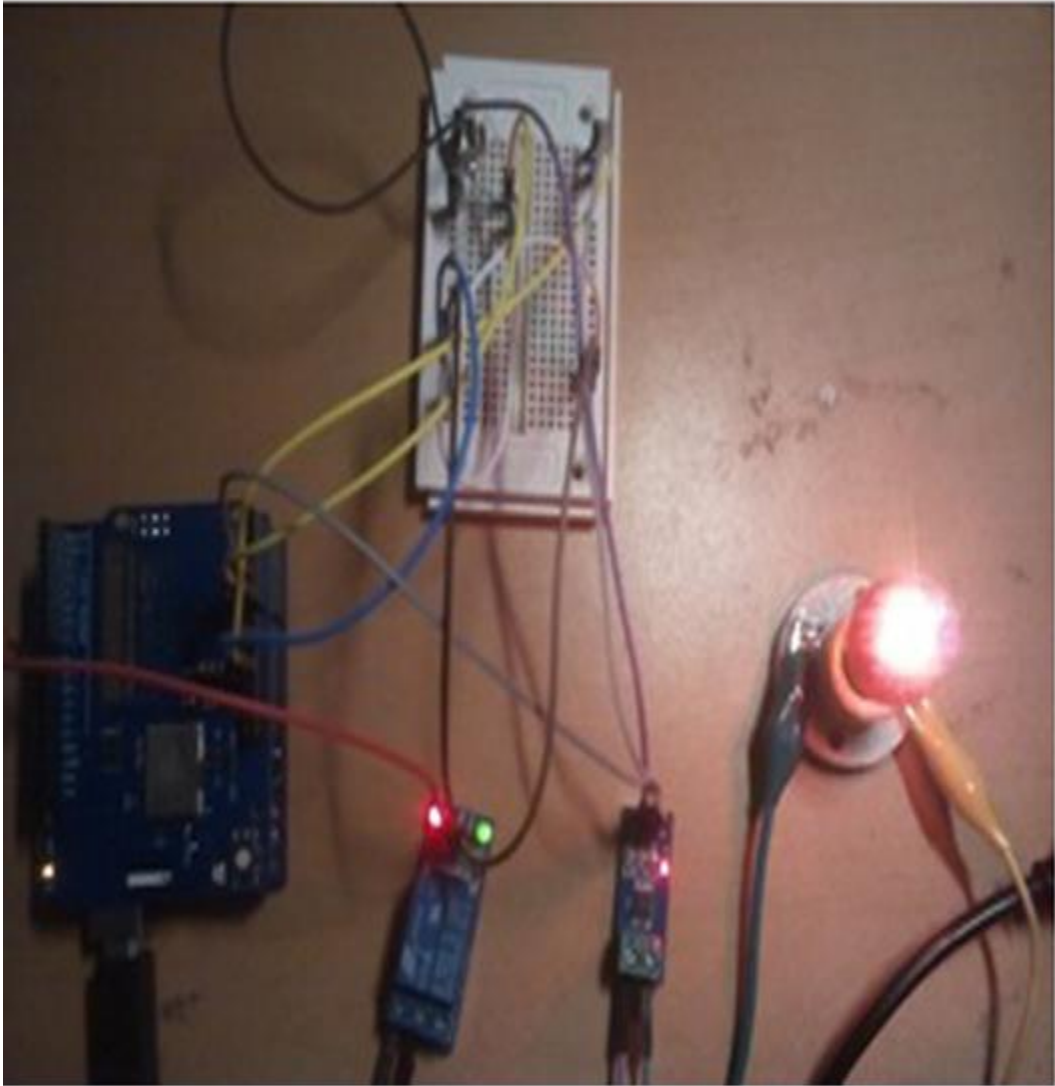
Dynamic DNS allows you to monitor your home remotely via webcam, access your computer remotely, or even run your own server all on a dynamic IP address.

Business Use

Trust our DNS experts with your web domains DNS management. Our Managed DNS will ensure your website is fast, reliable and always available.

or [Elegiendo a static.net...](#)





Control and monitor current consumption of light

On

Off

Power: 1 W

Light level: 30 %

Lamp Online

```
Administrator: Node.js command prompt - node app.js
Sending request to address: 192.168.1.107 for variable id
Error adding the device
C:\Users\PC-interface>node app.js
Listening on port 3000
Sending request to address: 192.168.1.107 for variable id
Device added with ID: 001
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable power
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable power
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable power
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
Variable/function request sent to device: smart_lamp
Sending request to address: 192.168.1.107 for variable light
```

Control and monitor current consumption of light

On

Off

Power: 3 W

Light level: 31 %

Lamp Online

Control and monitor current consumption of light

Power: 0 W

Light level: 4 %

Lamp Online

Remote panel from Raspberry Pi Zero

Lamp control room one:

Lamp control room two:

Monitoring room three:

Temperature: 32 C

Humidity: 30 %

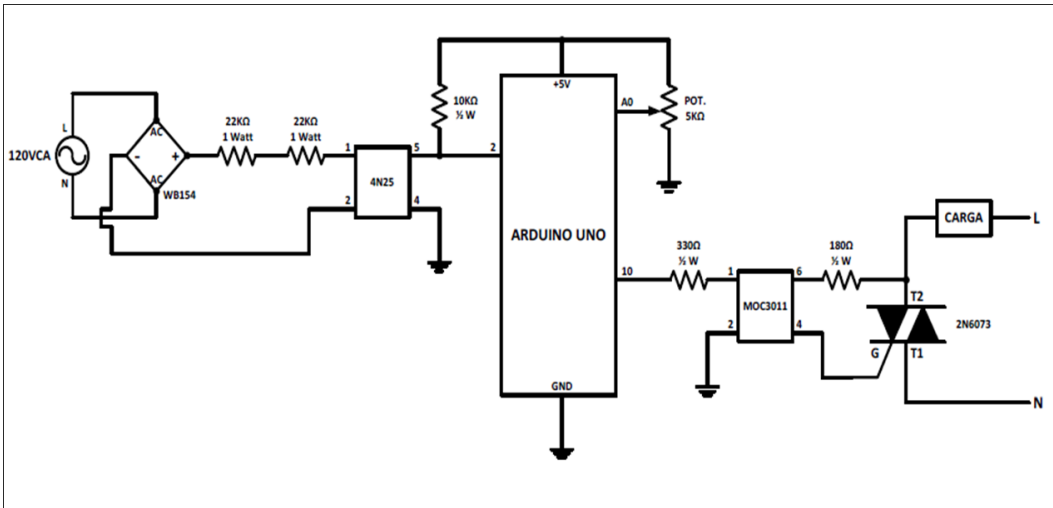
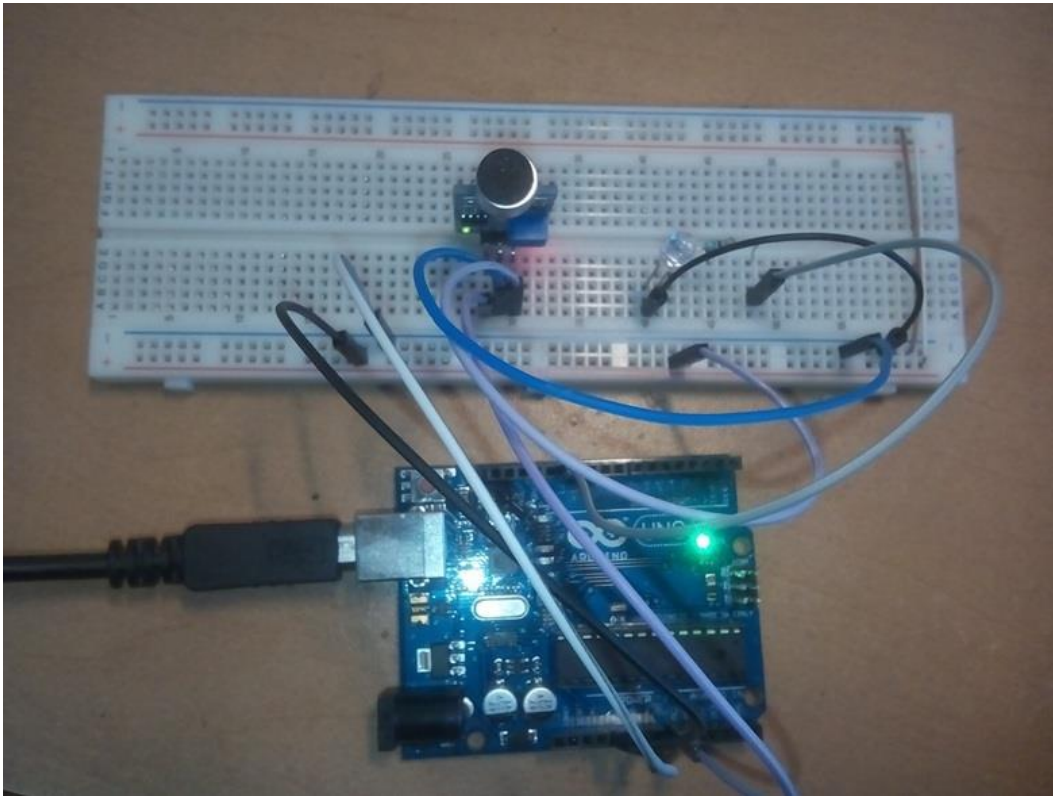
Monitoring room four:

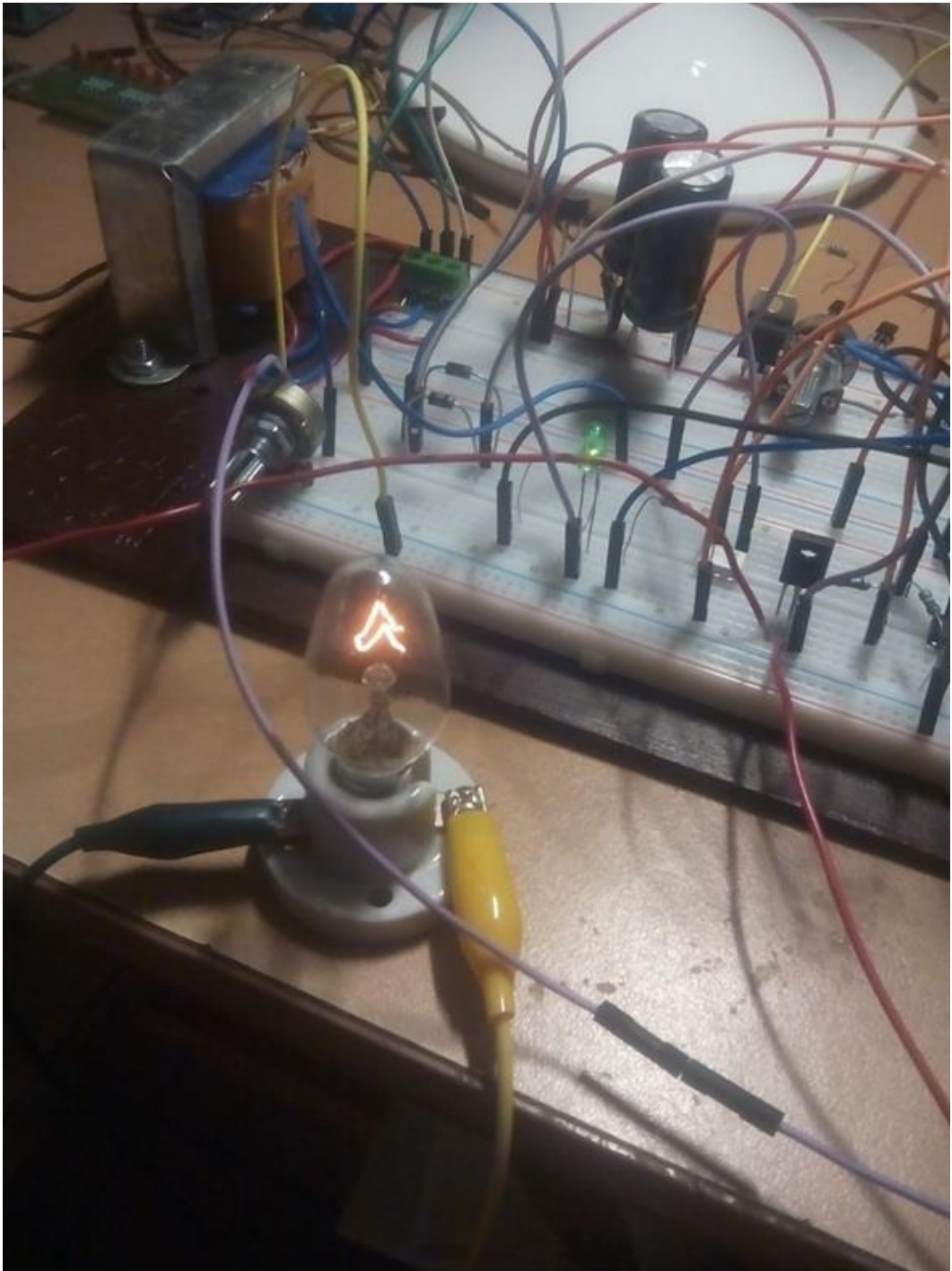
Temperature: 31 C

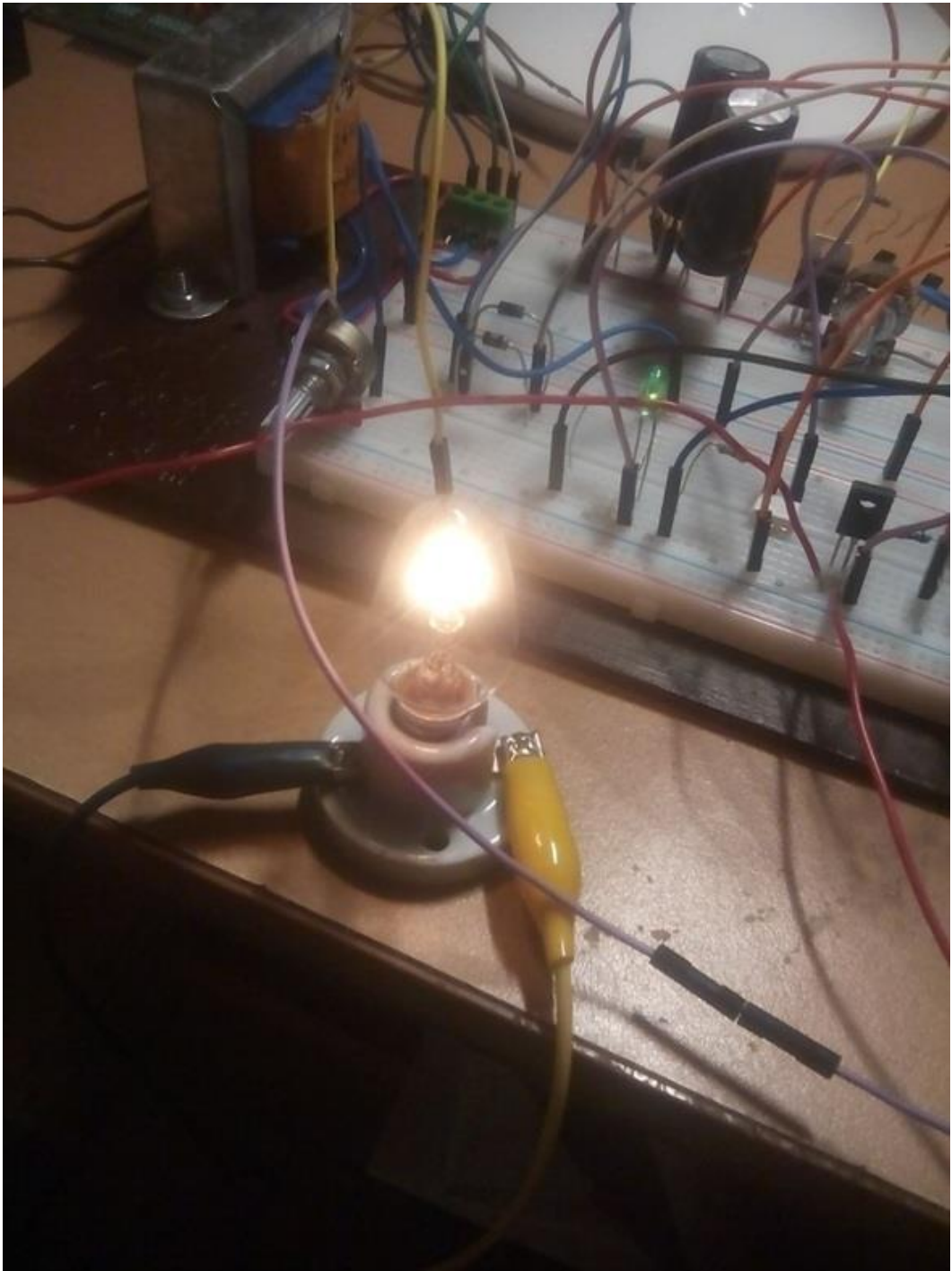
Humidity: 30 %

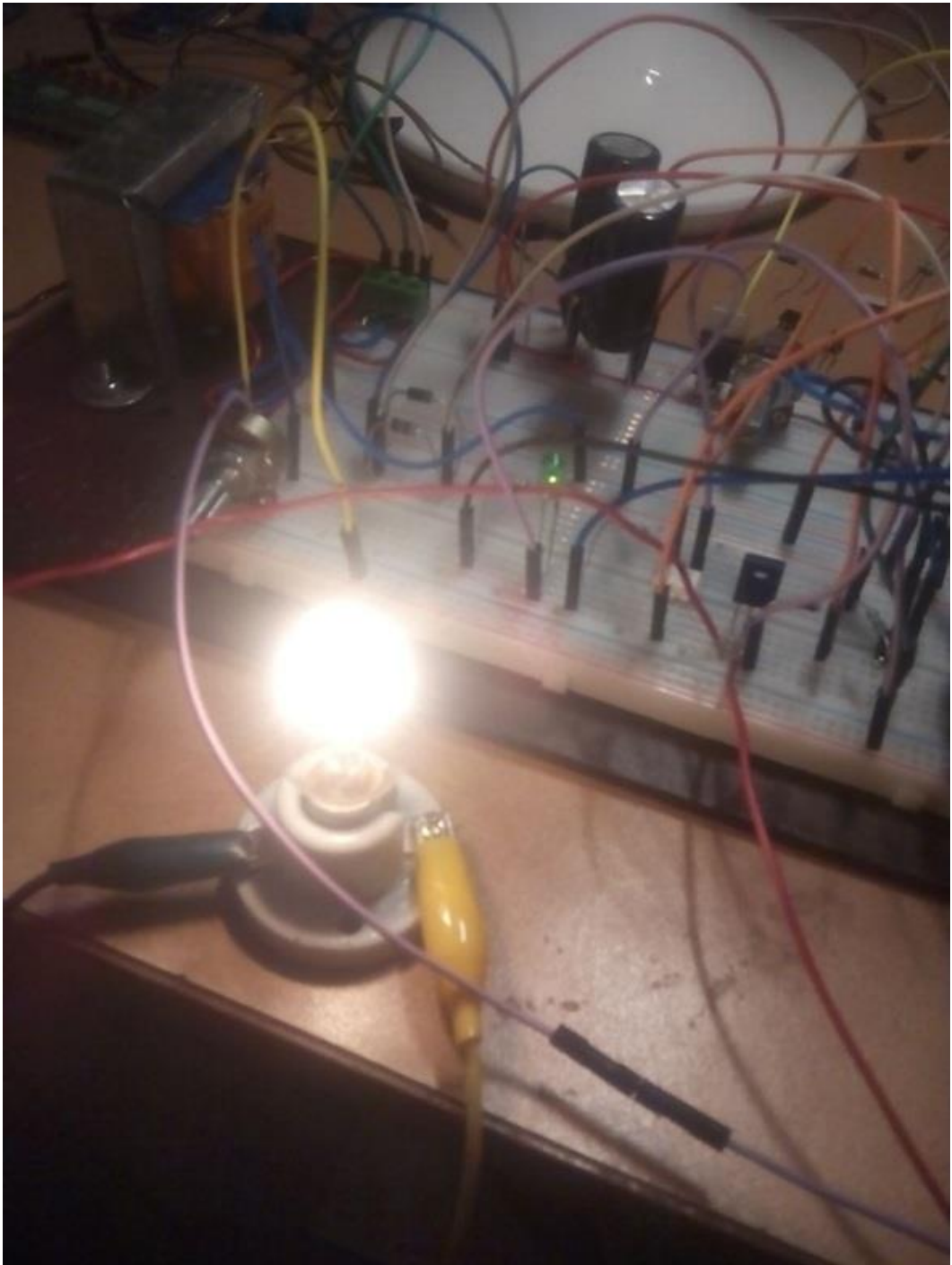
```
pi@raspberrypi:~/interface$ cd
pi@raspberrypi:~$ cd interface
pi@raspberrypi:~/interface$ node app.js
Listening on port 3000
```







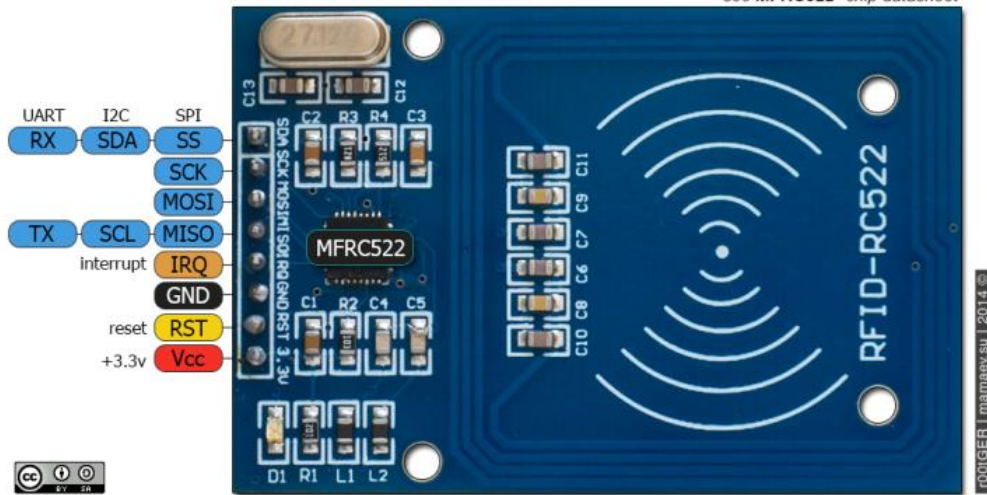






RFID-RC522 pinout

see **MFRC522*** chip datasheet

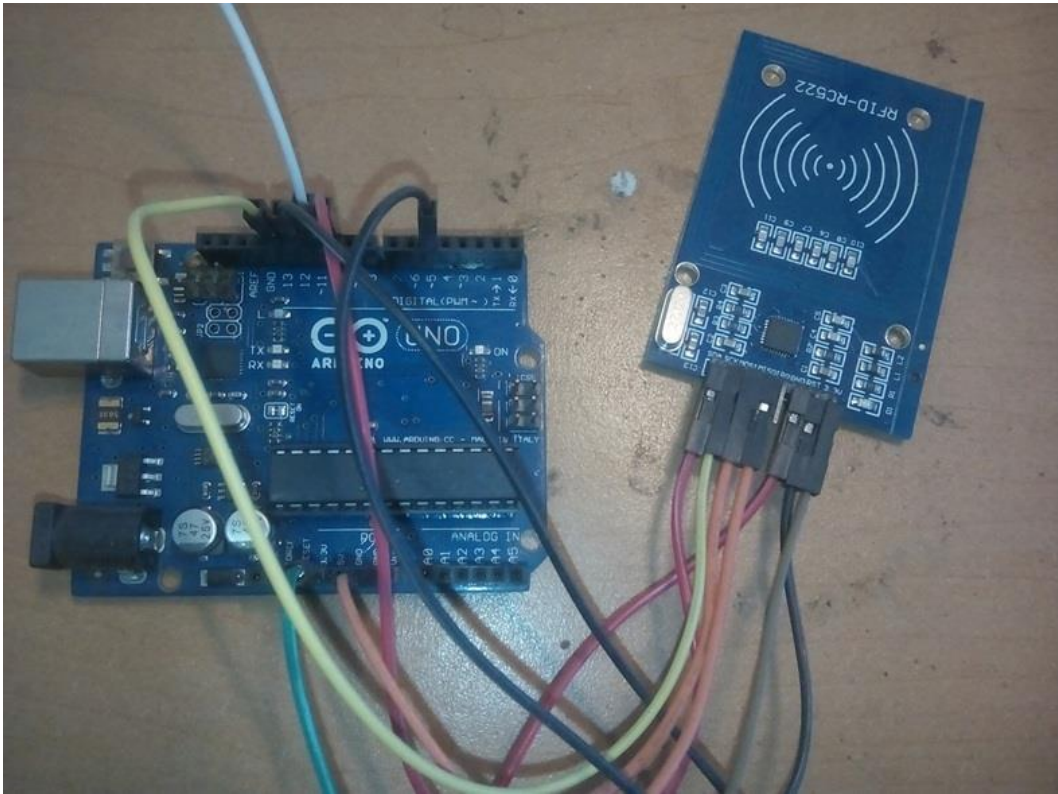


```
COM16 (Arduino/Genuino Uno)
Looking for RC522
Found RC522Firmware version 0x92.
Access Granted
Access Granted
```

Autoscroll | Ambos NL & CR | 115200 baudo

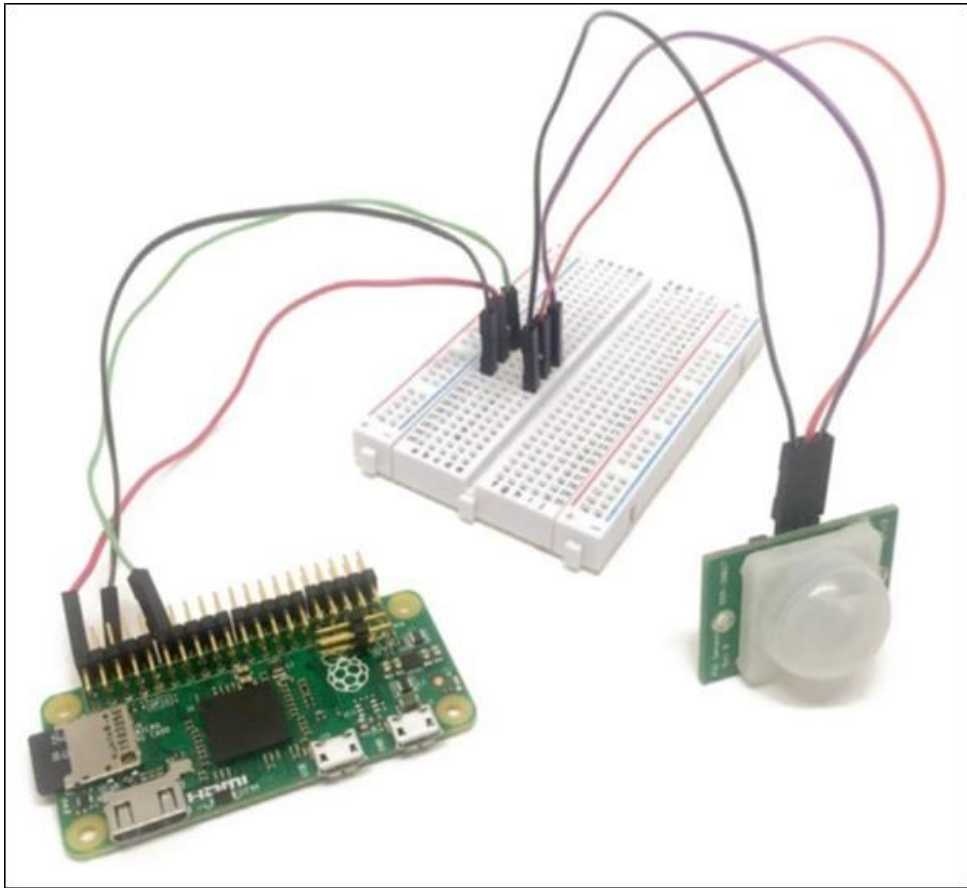
```
COM16 (Arduino/Genuino Uno)
Looking for RC522
Found RC522Firmware version 0x92.
Access Granted
Access Granted
Looking for RC522
Found RC522Firmware version 0x92.
Access Granted
Serial:D6 12 DB B8 A7 NO Access
```

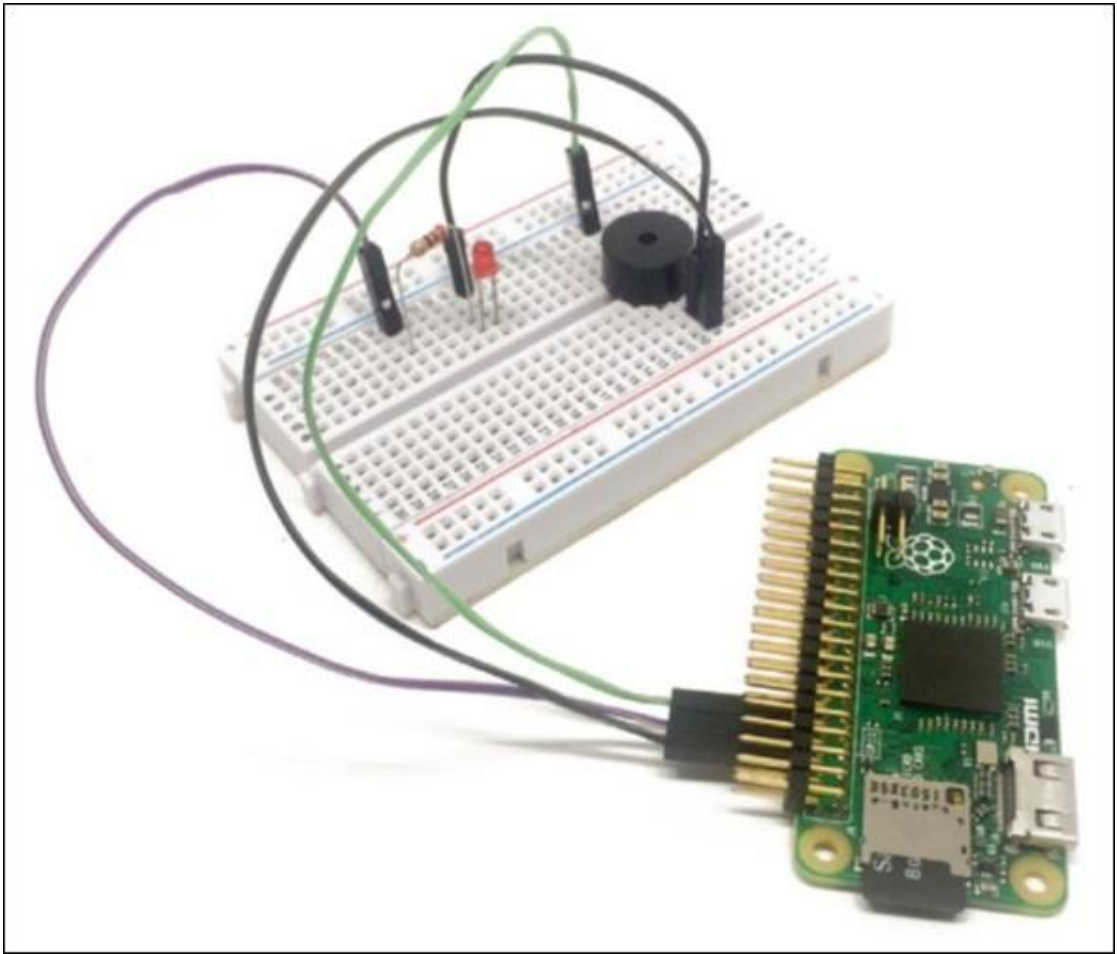
Autoscroll | Ambos NL & CR | 115200 baudo

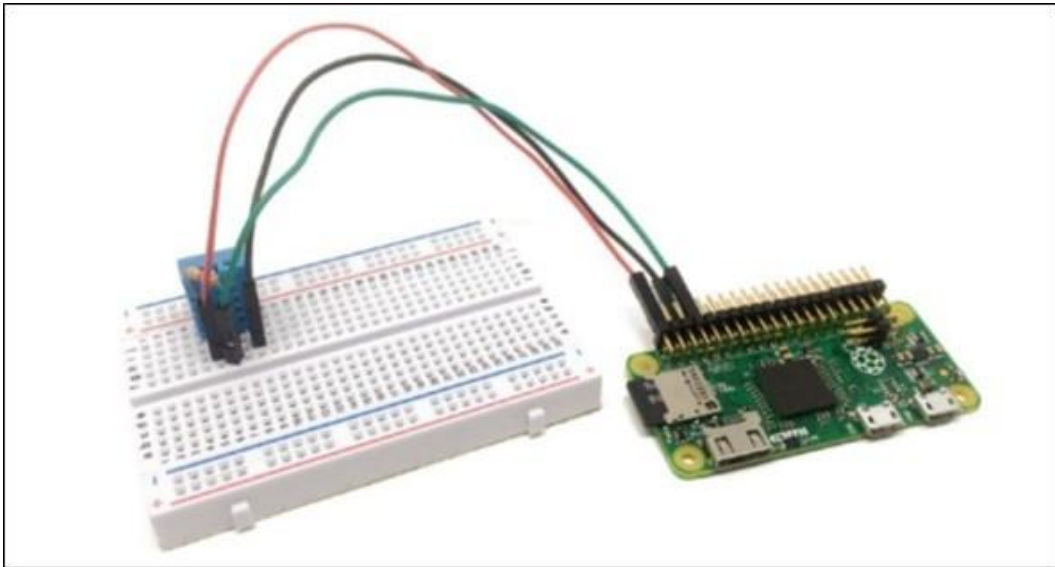




```
COM46 (Arduino/Genuino Uno) 115200 bauds
Enter
180
179
179
179
179
179
179
179
179
179
179
179
179
179
180
180
179
179
179
179
1
Autoscroll 115200 bauds
```





freeboard beta

Pricing Login

Visualize the Internet of Things.

Ridiculously simple dashboards for your devices.

[START NOW](#)

Raspberry Pi Zero

Create New

DATASOURCE

A datasource for connecting to things at [dweet.io](#).

TYPE ▼

NAME

THING NAME

Example: salty-dog-1

KEY

If the thing is not locked, you can ignore this field

SHOW FULL PAYLOAD NO

If on, gives access to the full Dweet payload (used to obtain timestamp). If not, only the Content object is captured

SAVE

CANCEL

WIDGET

TYPE: Gauge

TITLE: Temperature

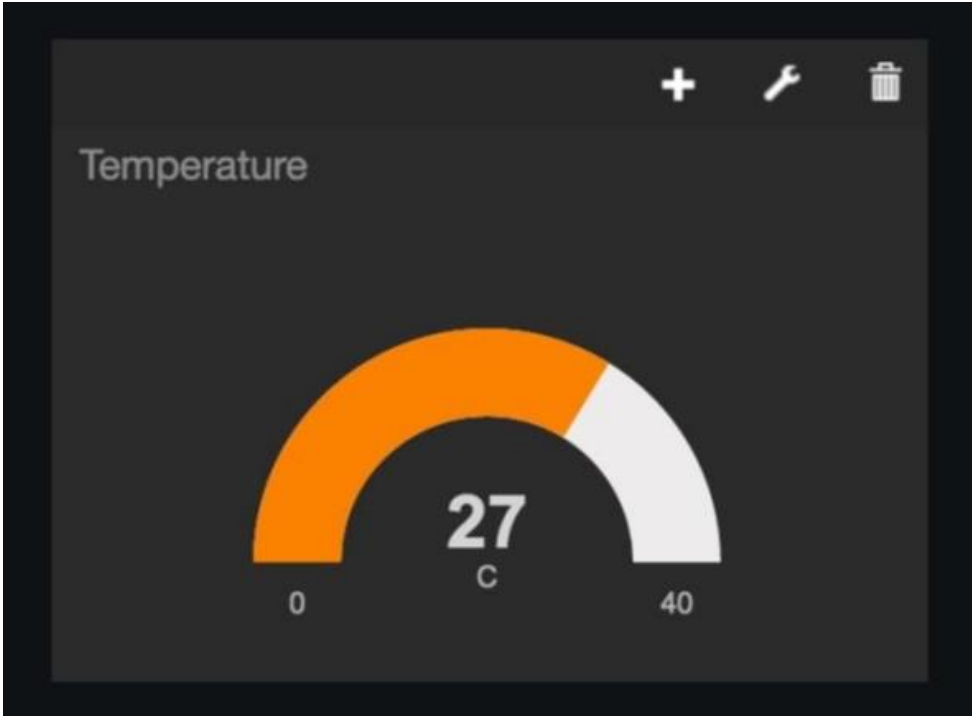
VALUE: `datasources["Pi Zero"]["temperature"]` + DATASOURCE JS EDITOR

UNITS: C

MINIMUM: 0

MAXIMUM: 40

SAVE CANCEL



WIDGET

TYPE: Gauge

TITLE: Humidity

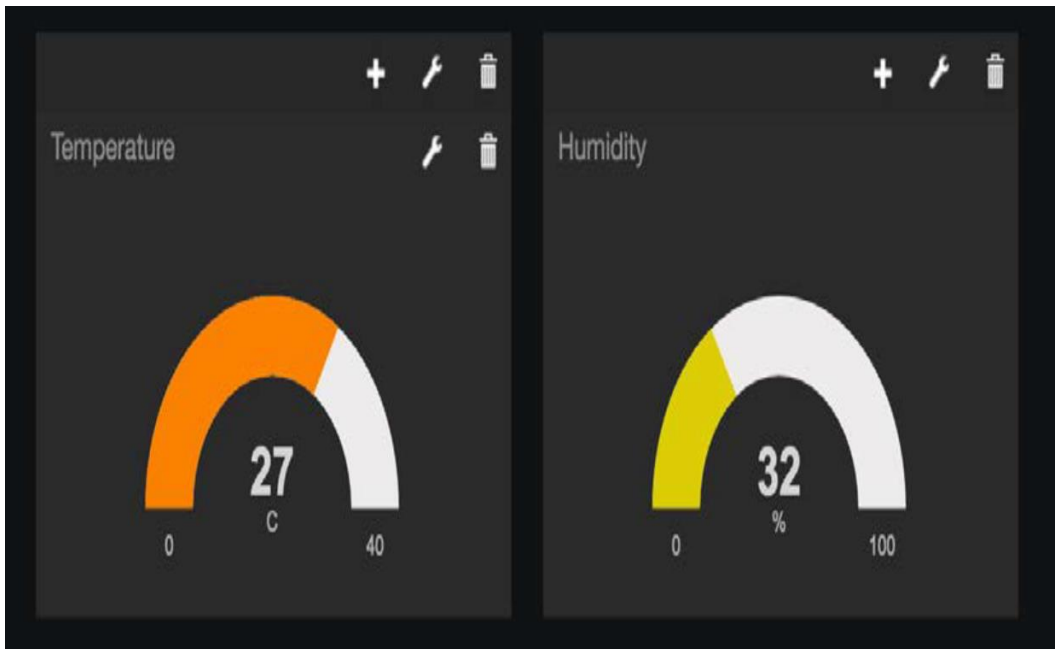
VALUE: `datasources["Pi Zero"]["humidity"]` + DATASOURCE ✕ JS EDITOR

UNITS: %

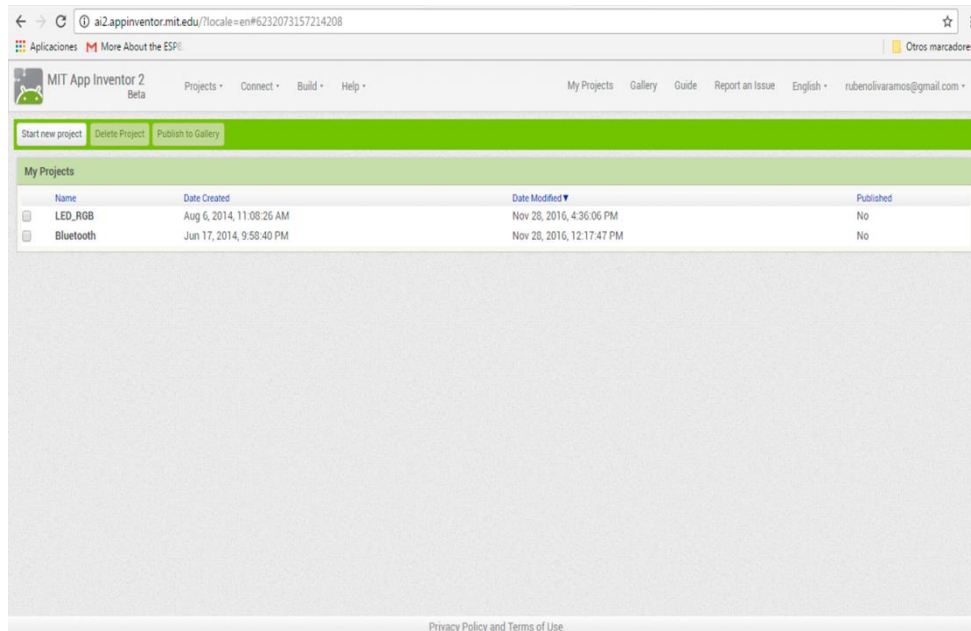
MINIMUM: 0

MAXIMUM: 100

SAVE CANCEL



Chapter 8: Monitoring and Controlling Your Devices from a Smart Phone



The screenshot shows the MIT App Inventor 2 web interface. The browser address bar displays the URL `ai2.appinventor.mit.edu/?locale=en#6232073157214208`. The page header includes the MIT App Inventor 2 logo and navigation links: [Projects](#), [Connect](#), [Build](#), and [Help](#). On the right side of the header, there are links for [My Projects](#), [Gallery](#), [Guide](#), [Report an Issue](#), [English](#), and the user's email `rubenolivamos@gmail.com`. Below the header, there is a green navigation bar with buttons for [Start new project](#), [Delete Project](#), and [Publish to Gallery](#). The main content area is titled "My Projects" and contains a table with the following data:

Name	Date Created	Date Modified	Published
<input type="checkbox"/> LED_RGB	Aug 6, 2014, 11:08:26 AM	Nov 28, 2016, 4:36:06 PM	No
<input type="checkbox"/> Bluetooth	Jun 17, 2014, 9:58:40 PM	Nov 28, 2016, 12:17:47 PM	No

At the bottom of the page, there is a link for [Privacy Policy and Terms of Use](#).

ai2.appinventor.mit.edu/?locale=en#6232073157214208

Aplicaciones More About the ESP® Otros marcadores

MIT App Inventor 2 Beta Projects · Connect · Build · Help · My Projects Gallery Guide Report an Issue English · rubenolivaramos@gmail.com ·

Start new project Delete Project Publish

My Projects

LED_RGB
Bluetooth

My projects

- Start new project
- Import project (.aia) from my computer ...
- Import project (.aia) from a repository ...
- Delete Project
- Save project
- Save project as ...
- Checkpoint
- Export selected project (.aia) to my computer
- Export all projects
- Import keystore
- Export keystore
- Delete keystore

Name	Date Modified	Published
LED_RGB	Nov 28, 2016, 4:36:06 PM	No
Bluetooth	Nov 28, 2016, 12:17:47 PM	No

Privacy Policy and Terms of Use

ai2.appinventor.mit.edu/?locale=en#5614722863595520

Aplicaciones More About the ESP® Otros marcadores

MIT App Inventor 2 Beta Projects · Connect · Build · Help · My Projects Gallery Guide Report an Issue English · rubenolivaramos@gmail.com ·

Start new project Delete Project Publish to Gallery

My Projects

Name	Date Created	Date Modified	Published
LED_RGB	Aug 6, 2014, 11:08:26 AM	Nov 28, 2016, 4:36:06 PM	No
Bluetooth	Jun 17, 2014, 9:58:40 PM	Nov 28, 2016, 12:17:47 PM	No

Create new App Inventor project

Project name:

Cancel OK

Privacy Policy and Terms of Use

ai2.appinventor.mit.edu/?locale=en#5614722863595520

Aplicaciones More About the ESP! Otros marcadores

MIT App Inventor 2 Beta Projects Connect Build Help My Projects Gallery Guide Report an Issue English rubenolivaramos@gmail.com

Start new project Delete Project Publish to Gallery

My Projects

Name	Date Created	Date Modified	Published
<input type="checkbox"/> LED_RGB	Aug 6, 2014, 11:08:26 AM	Nov 28, 2016, 4:36:06 PM	No
<input type="checkbox"/> Bluetooth	Jun 17, 2014, 9:58:40 PM	Nov 28, 2016, 12:17:47 PM	No

Create new App Inventor project

Project name:

Cancel OK

[Privacy Policy and Terms of Use](#)

ai2.appinventor.mit.edu/?locale=en#6379100340748288

Aplicaciones More About the ESP! Otros marcadores

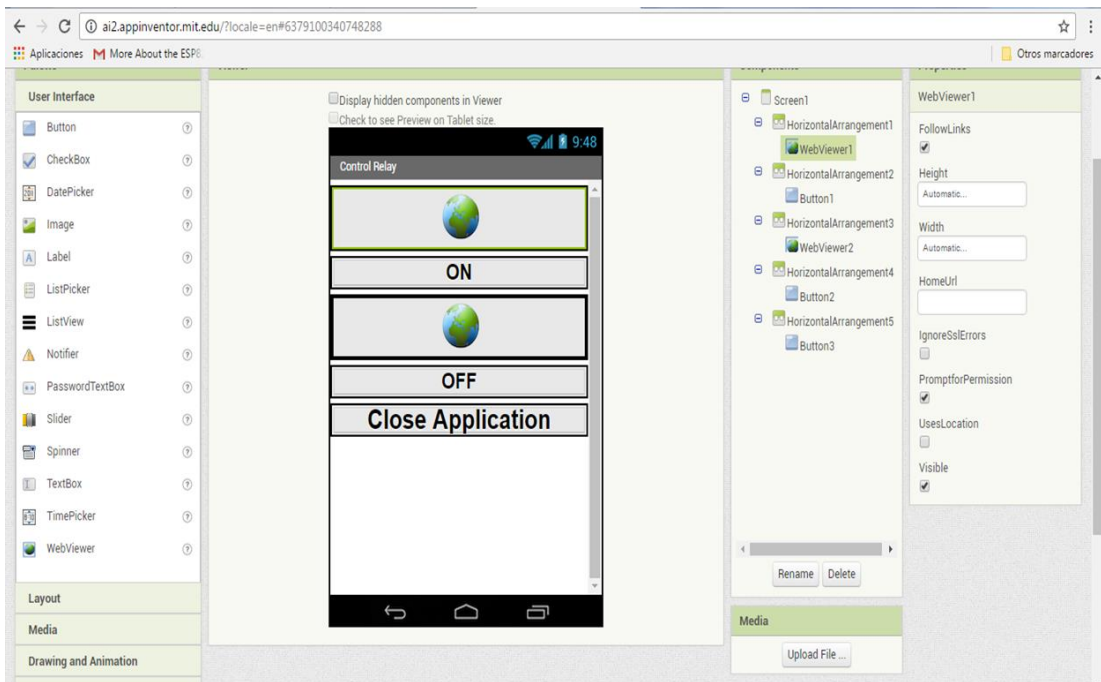
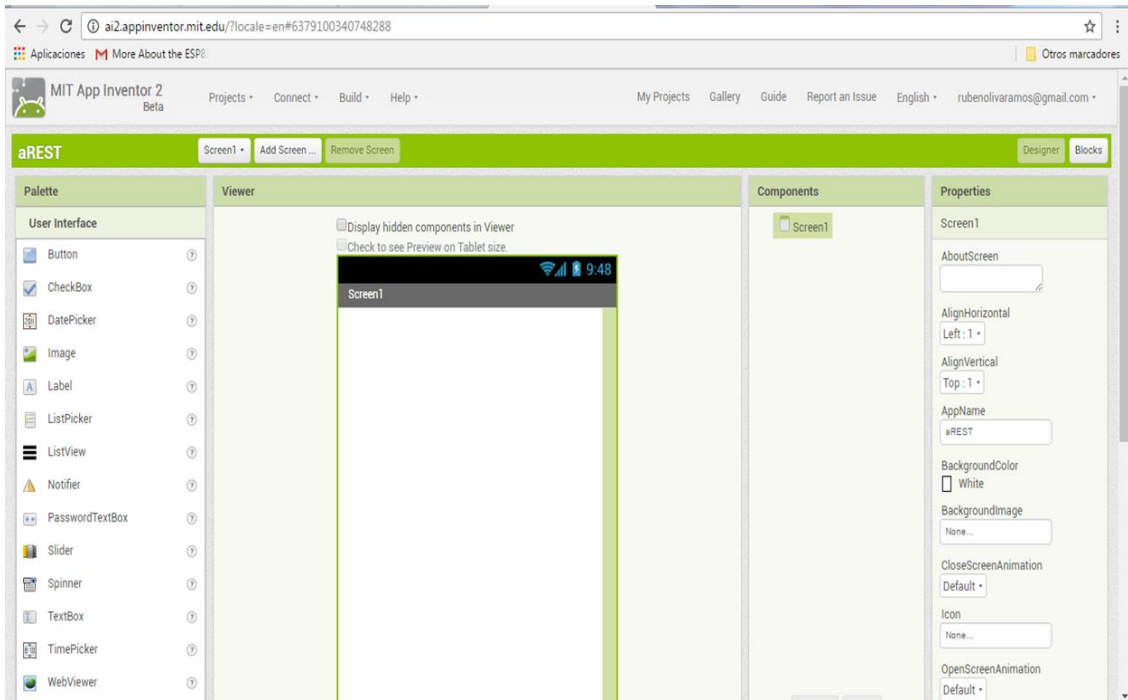
MIT App Inventor 2 Beta Projects Connect Build Help My Projects Gallery Guide Report an Issue English rubenolivaramos@gmail.com

Start new project Delete Project Publish to Gallery

My Projects

Name	Date Created	Date Modified	Published
<input type="checkbox"/> aREST	Dec 4, 2016, 7:46:25 PM	Dec 4, 2016, 7:46:25 PM	No
<input type="checkbox"/> LED_RGB	Aug 6, 2014, 11:08:26 AM	Nov 28, 2016, 4:36:06 PM	No
<input type="checkbox"/> Bluetooth	Jun 17, 2014, 9:58:40 PM	Nov 28, 2016, 12:17:47 PM	No

[Privacy Policy and Terms of Use](#)



Components

- Screen1
 - HorizontalArrangement1
 - WebView1
 - HorizontalArrangement2
 - Button1
 - HorizontalArrangement3
 - WebView2
 - HorizontalArrangement4
 - Button2
 - HorizontalArrangement5
 - Button3

Horizontal scrollbar

Rename Delete

Properties

WebView1

FollowLinks

Height

Width

HomeUrl

IgnoreSslErrors

PromptforPermission

UsesLocation

Visible

ai2.appinventor.mit.edu/?locale=en#6379100340748288

Aplicaciones More About the ESP: Otros marcadores

MIT App Inventor 2 Beta Projects Connect Build Help My Projects Gallery Guide Report an Issue English rubenolivaramos@gmail.com

aREST Screen1 Add Screen Remove Screens Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - HorizontalArranger
 - WebView1
 - HorizontalArranger
 - Button1
 - HorizontalArranger
 - WebView2
 - HorizontalArranger
 - Button2

Viewer

when Button3 Click do close application

when Button1 Click do call WebView1 GoToUrl url WebView1 HomeUri

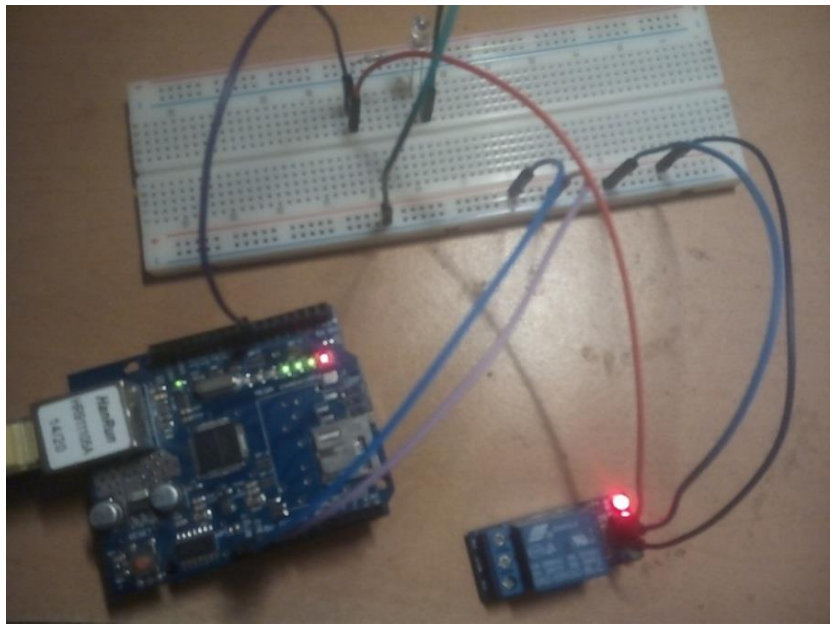
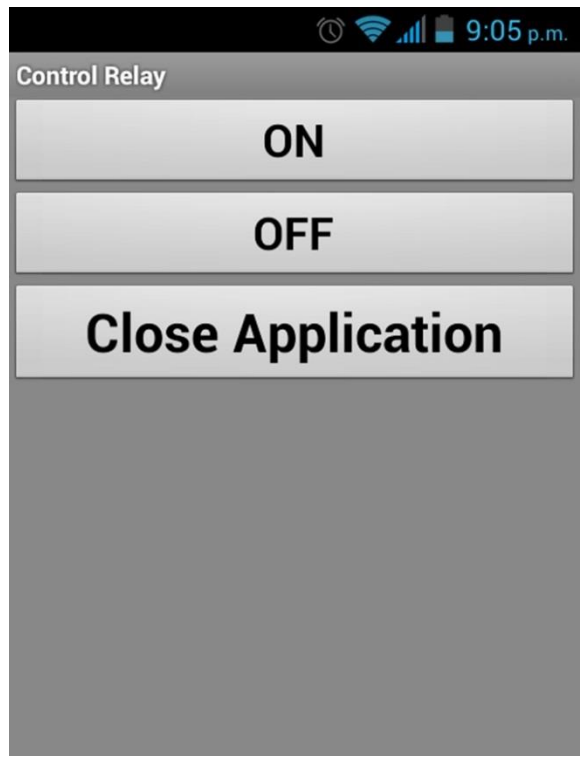
when Button2 Click do call WebView2 GoToUrl url WebView2 HomeUri

Show Warnings

192.168.1.110/digital/7/0

Aplicaciones More About the ESP: Otros marcadores

```
{ "message": "Pin D7 set to 0", "id": "1", "name": "APPinventor", "connected": true }
```



Create New Project

New Project

Android Studio

Configure your new project

Application name:

Company Domain:

Package name: [Edit](#)

Project location: ...

[Previous](#) [Next](#) [Cancel](#) [Finish](#)

Create New Project

Target Android Devices

Select the form factors your app will run on

Different platforms require separate SDKs

Phone and Tablet

Minimum SDK: [Lower API levels target more devices, but have fewer features available. By targeting API 17 and later, your app will run on approximately 61.3% of the devices that are active on the Google Play Store. Help me choose.](#)

TV

Minimum SDK:

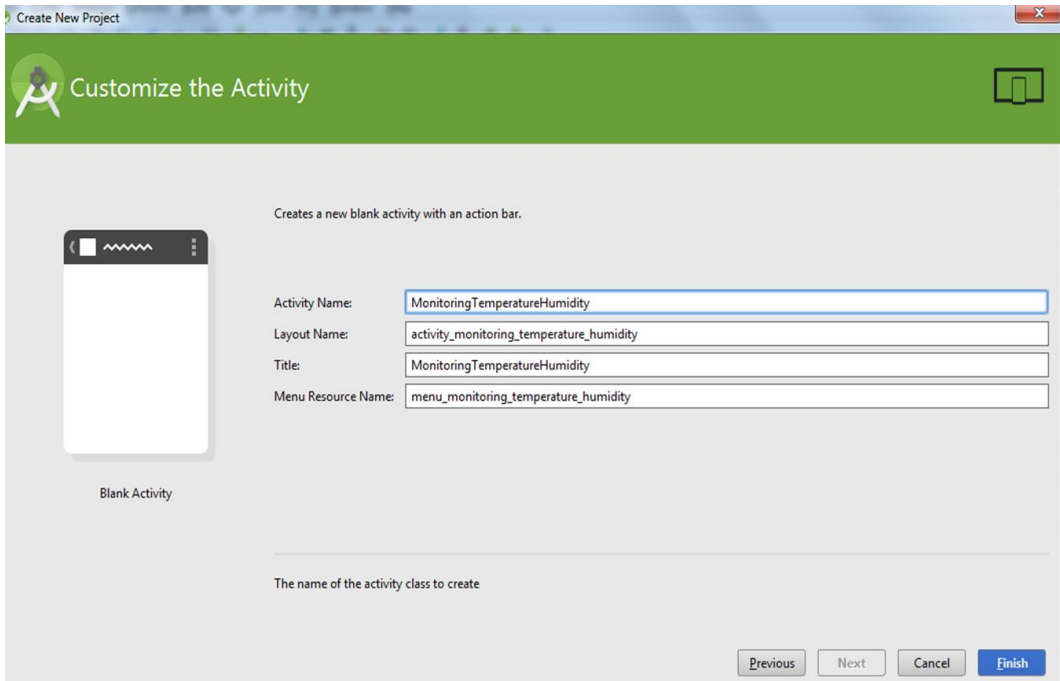
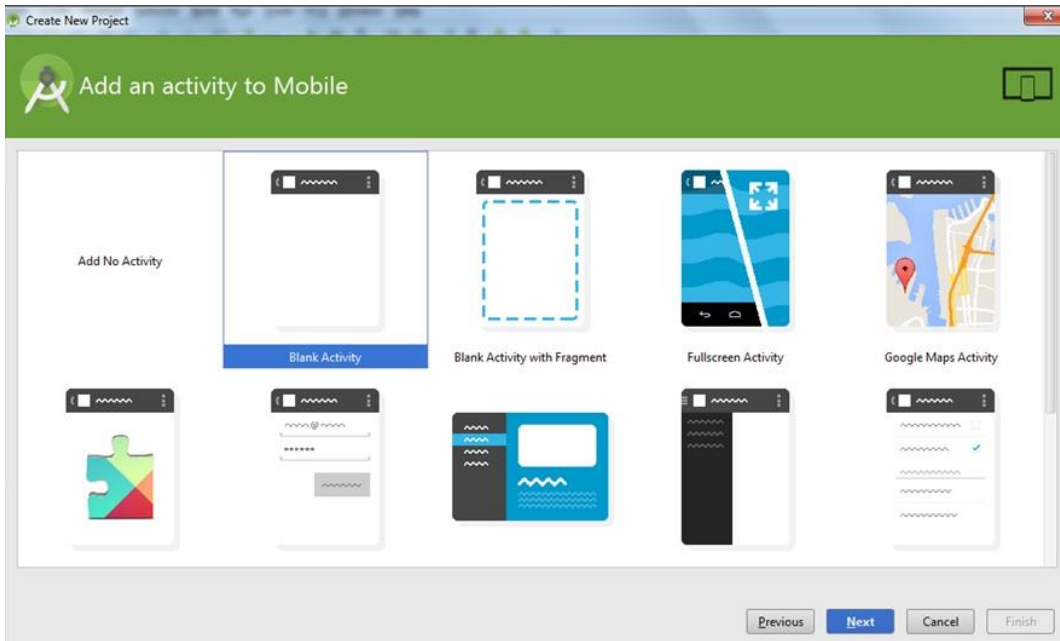
Wear

Minimum SDK:

Glass (Not Installed)

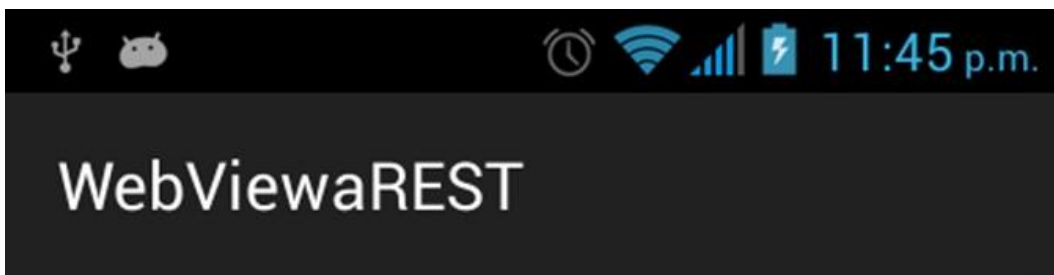
Minimum SDK:

[Previous](#) [Next](#) [Cancel](#) [Finish](#)

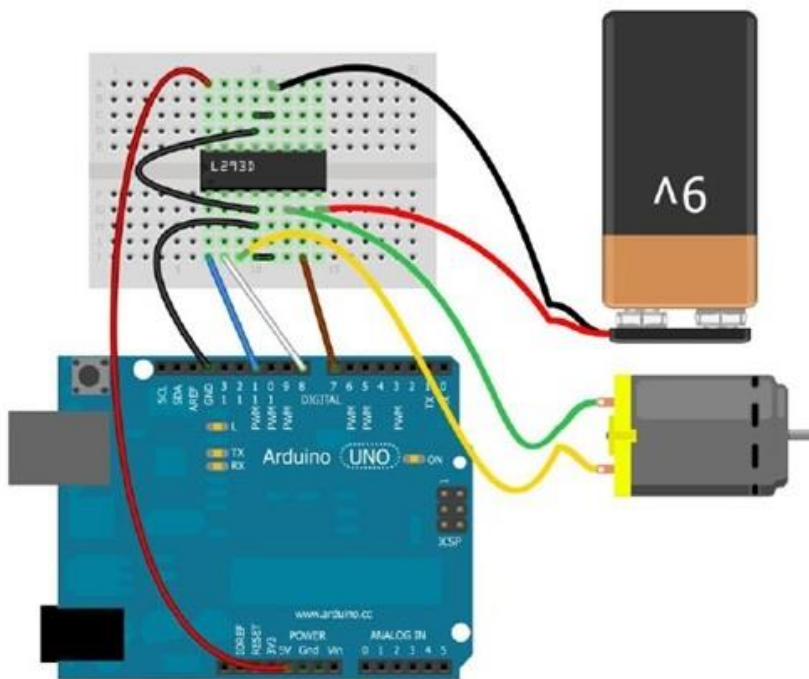
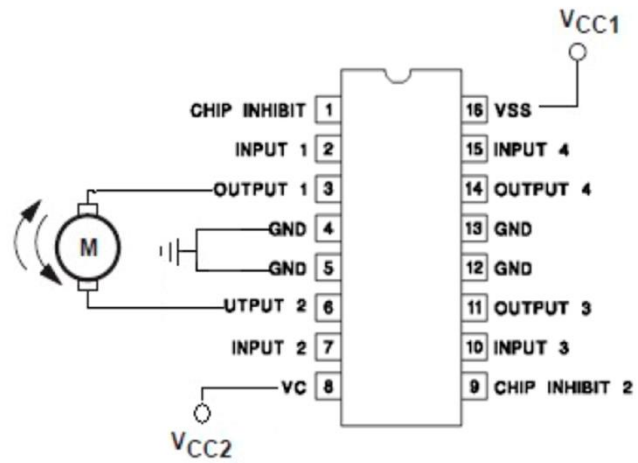




```
{"temperature": 24, "id": "1", "name":  
"AndroidStudio", "connected": true}
```



```
{"humidity": 40, "id": "1", "name":  
"AndroidStudio", "connected": true}
```





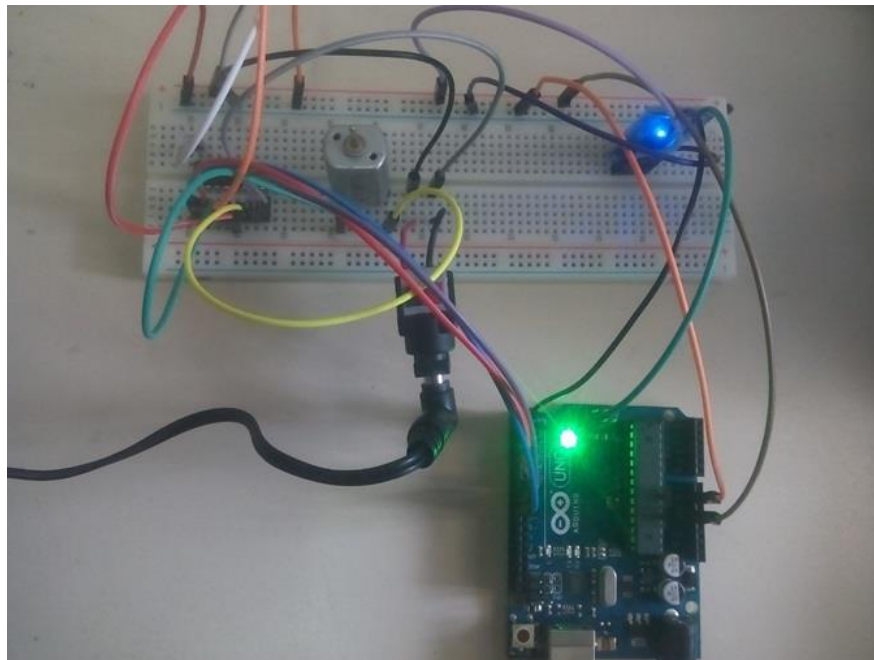
Control Android-Arduino

Left

Right

Stop

Value PWM:
055



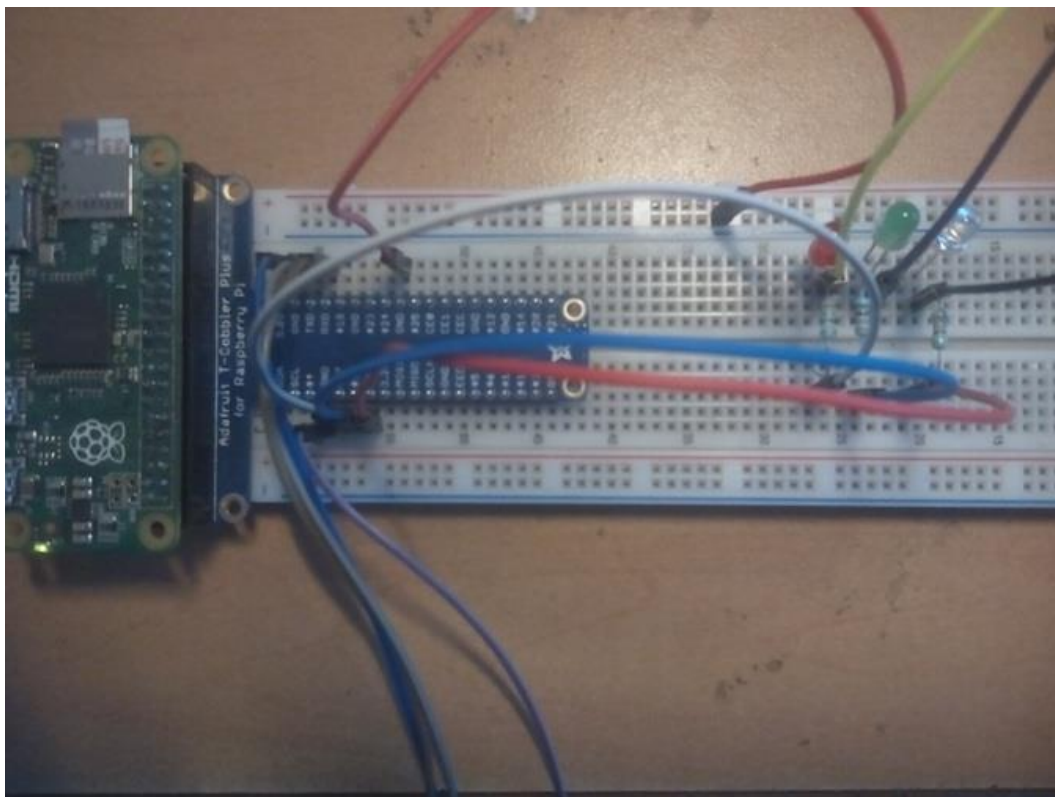
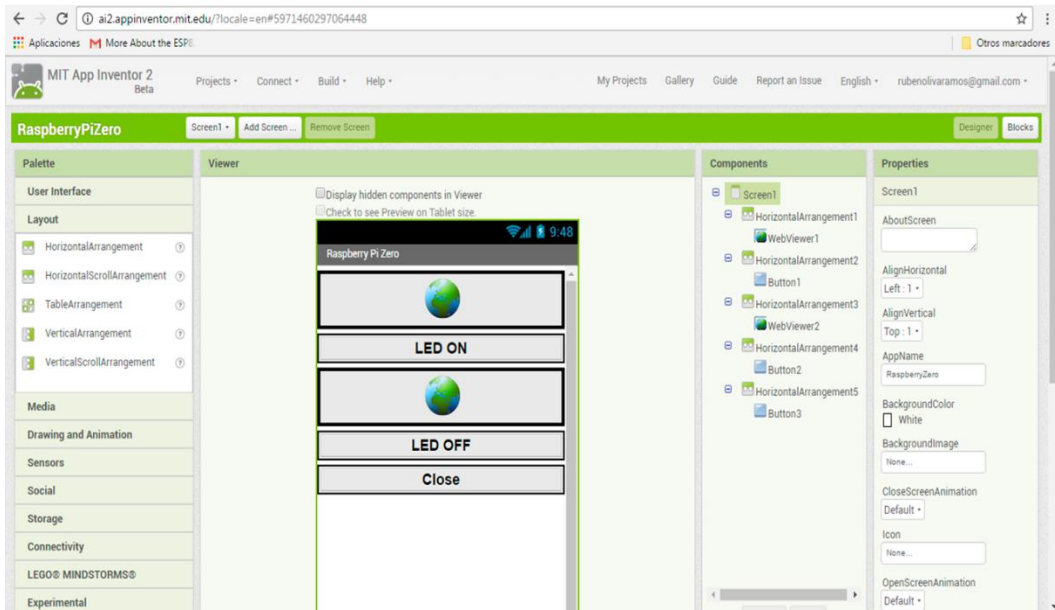
HomeUrl

IgnoreSslErrors


PromptforPermission

UsesLocation

Visible



```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /boot/cmdline.txt Modified
dwc_otg.lpm_enable=0 console=tty1 root=/dev/mmcblk0p2 rootfstype=ext4 elevator=$
bcm2708.vc_i2c_override=1
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

 not connected

Setup

Display hexadecimal

Send hexadecimal

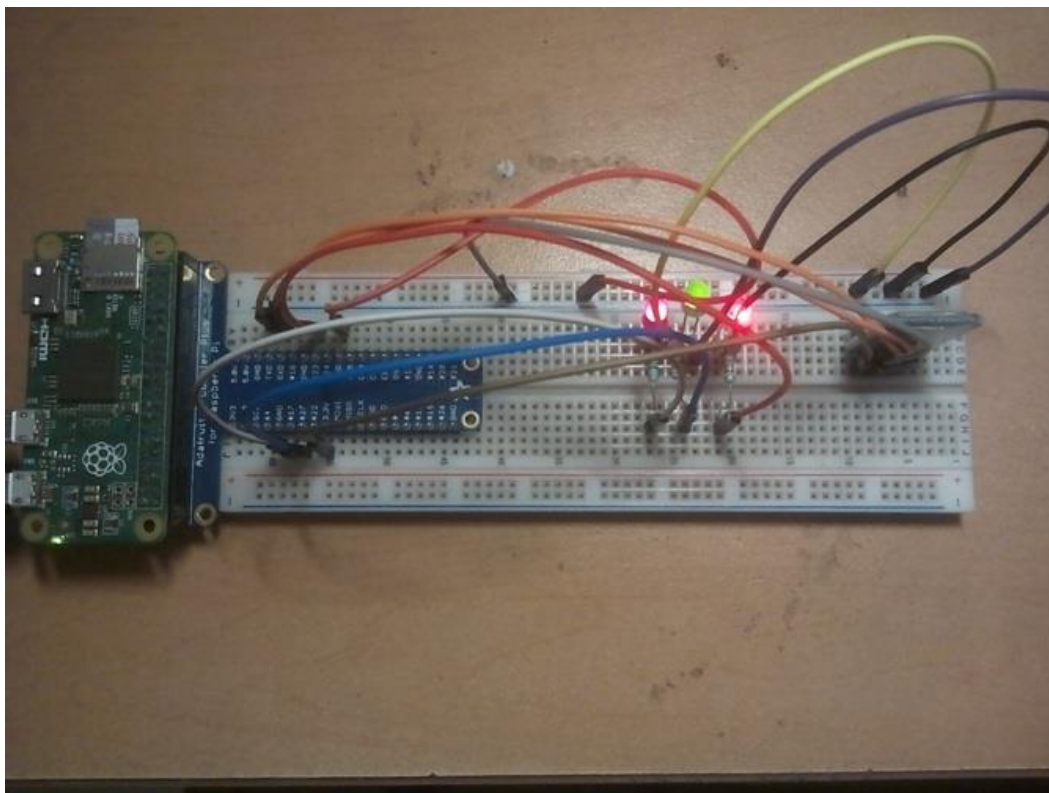
Keep screen on

Append newline(\r\n)

Save

Send

```
pi@raspberrypi: ~  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Mon Dec 5 20:04:53 2016  
pi@raspberrypi:~$ sudo python ch06_01.py  
initializing...  
opening serial port  
True  
running now  
RCV: 1  
RCV: 2  
RCV: 3  
RCV: 4  
RCV: 5  
RCV: 6  
RCV: 1  
RCV: 2  
RCV: 3  
RCV: 4  
RCV: 5  
RCV: 6  
█
```



Chapter 9: Putting It All Together







