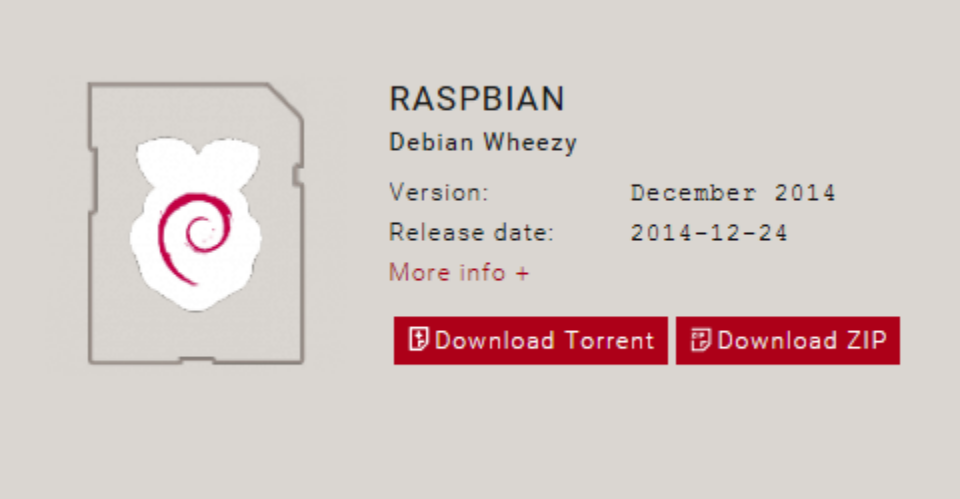
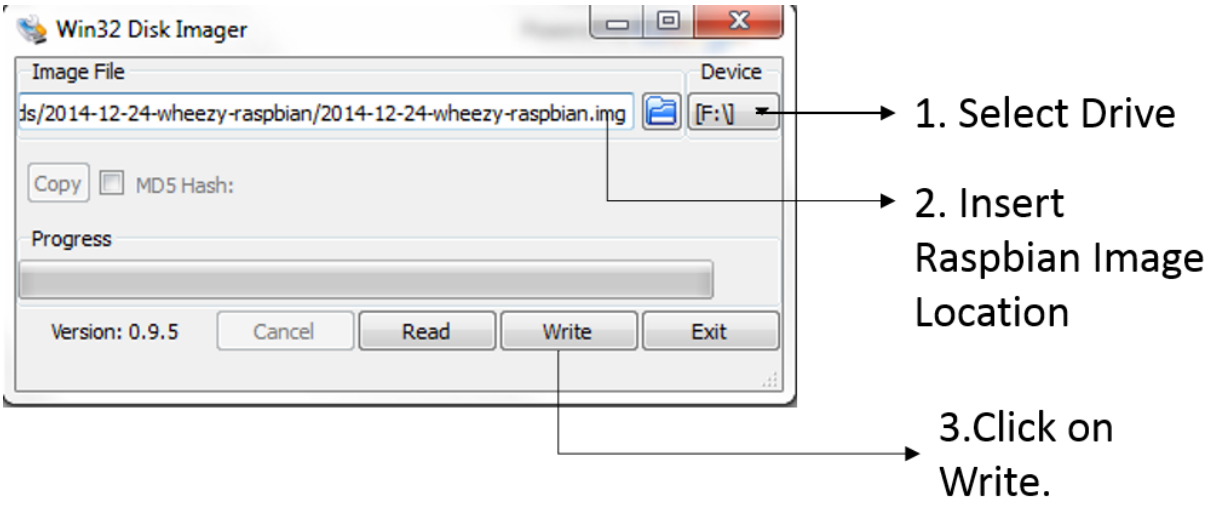
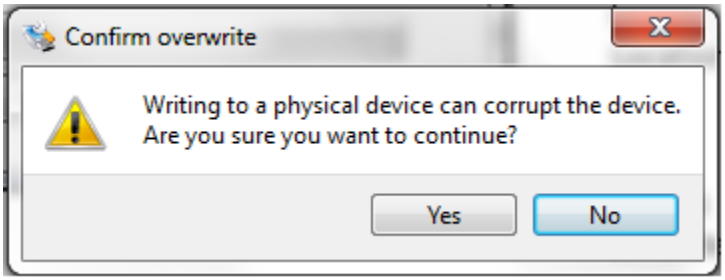
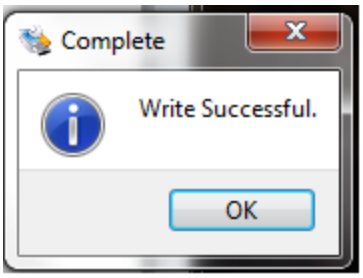
Chapter 1

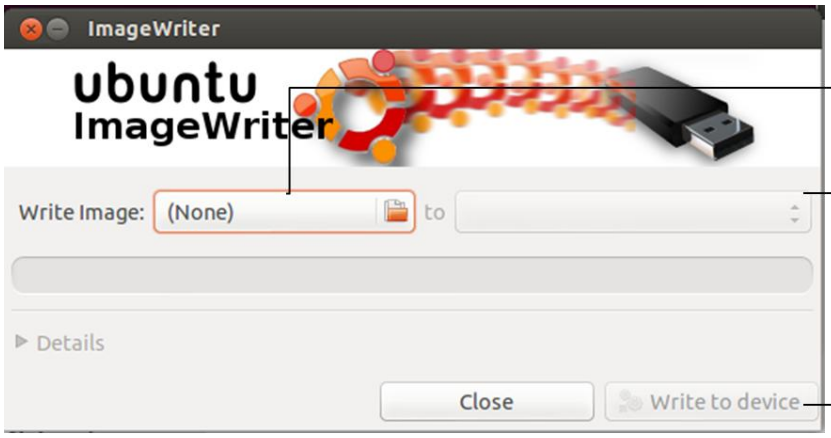

RASPBIAN
Debian Wheezy
Version: December 2014
Release date: 2014-12-24
More info +
Download Torrent
Download ZIP


Win32 Disk Imager
Image File
Device
ds/2014-12-24-wheezy-raspbian/2014-12-24-wheezy-raspbian.img
[F:\]
Copy
MD5 Hash:
Progress
Version: 0.9.5
Cancel
Read
Write
Exit
1. Select Drive
2. Insert Raspbian Image Location
3.Click on Write.


Confirm overwrite
Writing to a physical device can corrupt the device.
Are you sure you want to continue?
Yes
No



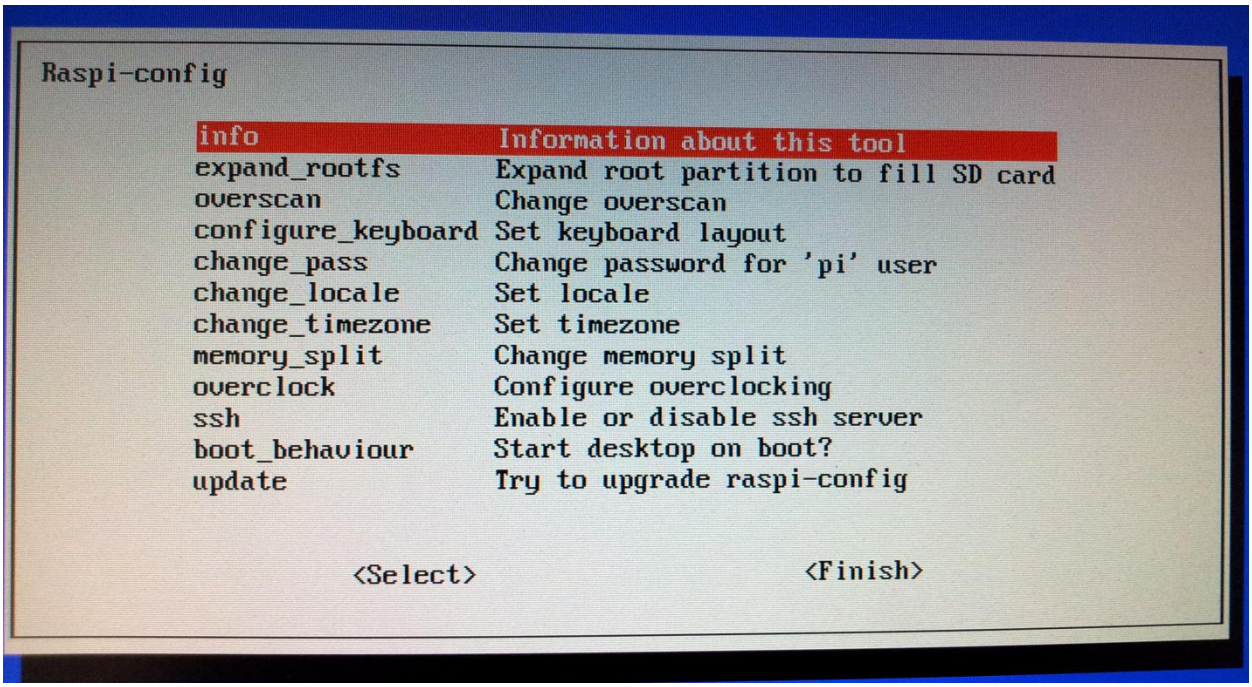

```
guest-ZLhCre@sai-VirtualBox: ~
guest-ZLhCre@sai-VirtualBox:~$ df-h
df-h: command not found
guest-ZLhCre@sai-VirtualBox:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       123G  4.5G  112G   4% /
udev            1.8G  4.0K  1.8G   1% /dev
tmpfs           705M  760K  704M   1% /run
none            5.0M     0  5.0M   0% /run/lock
none            1.8G  152K  1.8G   1% /run/shm
none            100M   48K  100M   1% /run/user
none            1.8G  1.1M  1.8G   1% /tmp/guest-ZLhCre
/dev/sdb5       3.8G   41M  3.7G   2% /media/guest-ZLhCre/01CDC8FDDC8B7320
guest-ZLhCre@sai-VirtualBox:~$
```



1. Choose Image

2. Select SD card

3. Write Device



GPIO Numbers

Raspberry Pi B
Rev 1 P1 GPIO Header

	Pin No.		
3.3V	1	2	5V
GPIO0	3	4	5V
GPIO1	5	6	GND
GPIO4	7	8	GPIO14
GND	9	10	GPIO15
GPIO17	11	12	GPIO18
GPIO21	13	14	GND
GPIO22	15	16	GPIO23
3.3V	17	18	GPIO24
GPIO10	19	20	GND
GPIO9	21	22	GPIO25
GPIO11	23	24	GPIO8
GND	25	26	GPIO7

Raspberry Pi A/B
Rev 2 P1 GPIO Header

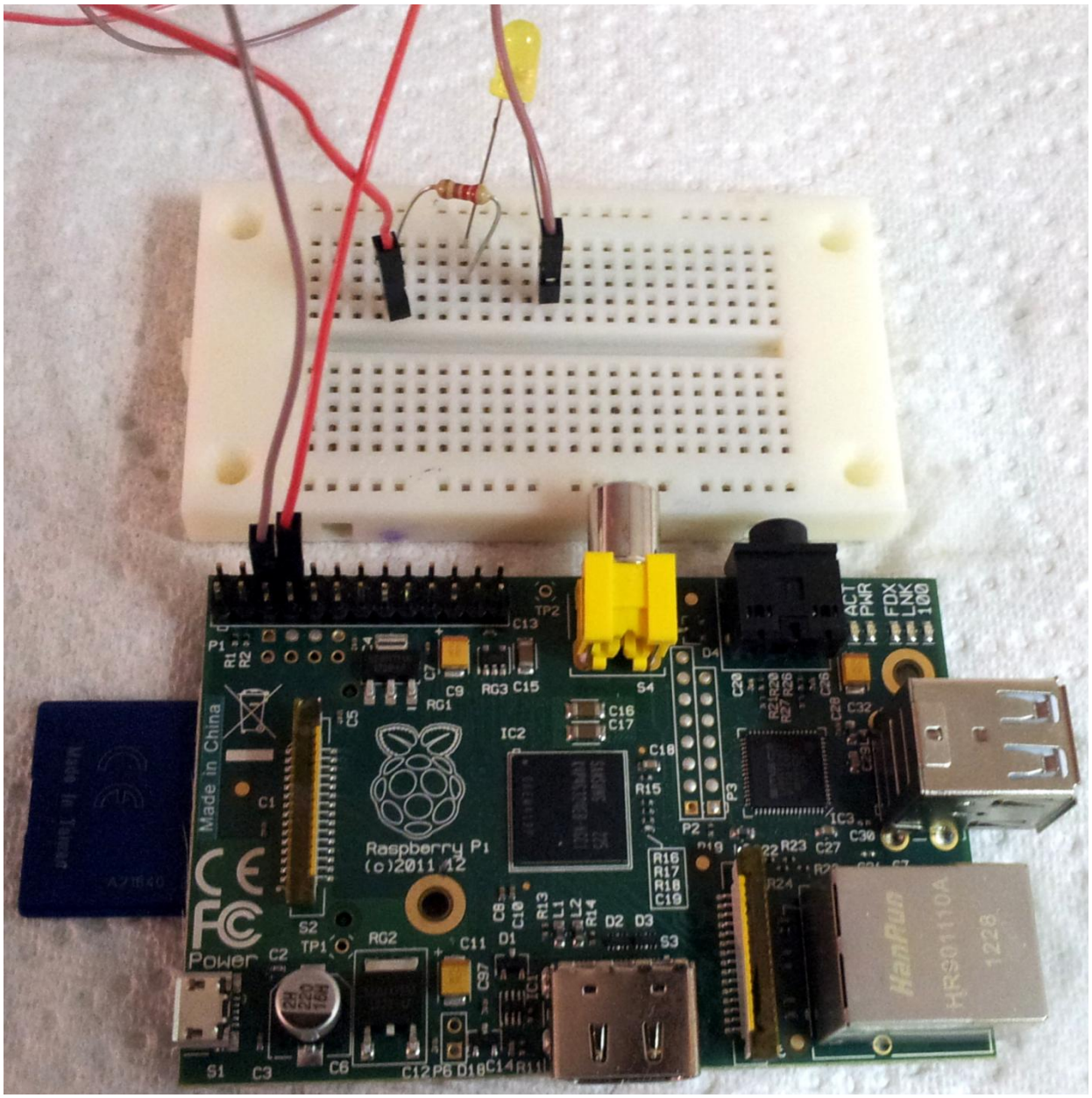
	Pin No.		
3.3V	1	2	5V
GPIO2	3	4	5V
GPIO3	5	6	GND
GPIO4	7	8	GPIO14
GND	9	10	GPIO15
GPIO17	11	12	GPIO18
GPIO27	13	14	GND
GPIO22	15	16	GPIO23
3.3V	17	18	GPIO24
GPIO10	19	20	GND
GPIO9	21	22	GPIO25
GPIO11	23	24	GPIO8
GND	25	26	GPIO7

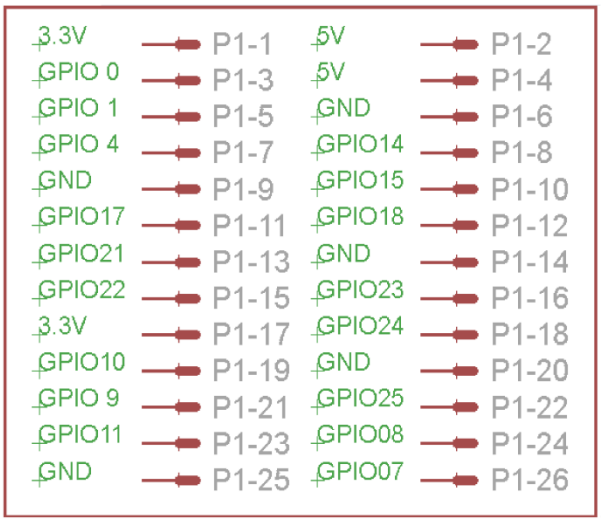
Raspberry Pi B+
B+ J8 GPIO Header

	Pin No.		
3.3V	1	2	5V
GPIO2	3	4	5V
GPIO3	5	6	GND
GPIO4	7	8	GPIO14
GND	9	10	GPIO15
GPIO17	11	12	GPIO18
GPIO27	13	14	GND
GPIO22	15	16	GPIO23
3.3V	17	18	GPIO24
GPIO10	19	20	GND
GPIO9	21	22	GPIO25
GPIO11	23	24	GPIO8
GND	25	26	GPIO7
DNC	27	28	DNC
GPIO5	29	30	GND
GPIO6	31	32	GPIO12
GPIO13	33	34	GND
GPIO19	35	36	GPIO16
GPIO26	37	38	GPIO20
GND	39	40	GPIO21

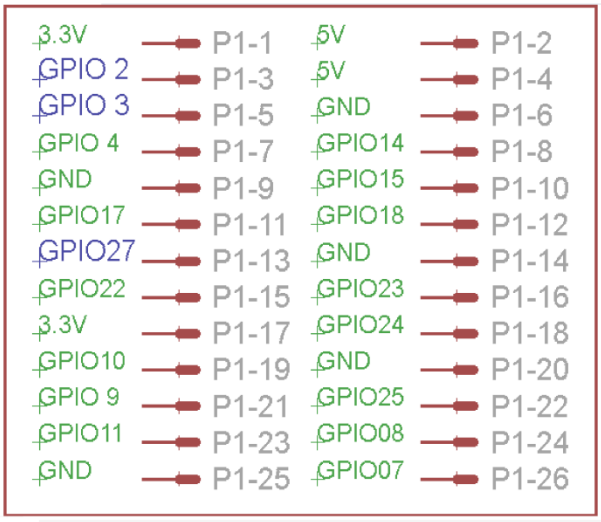
Key

Power +	UART
GND	SPI
I²C	GPIO

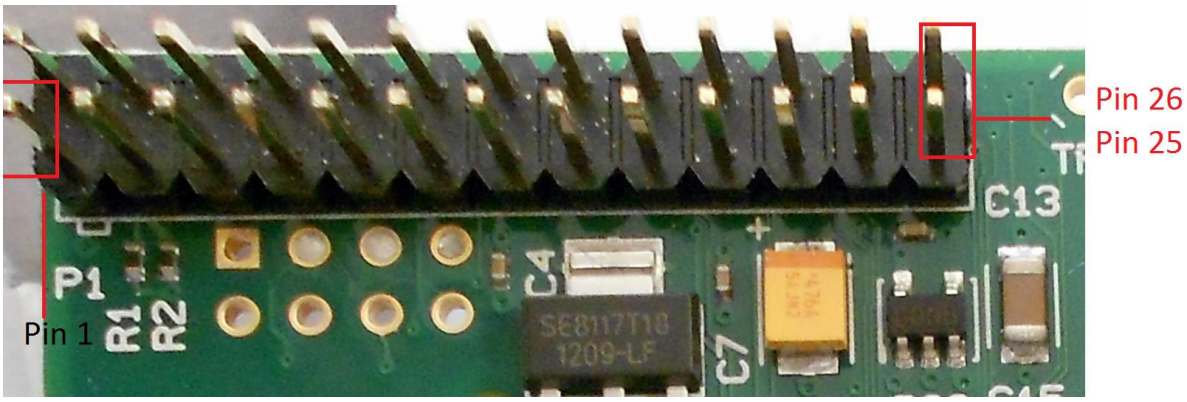

Made in China
Raspberry Pi
(c)2011 12
Power
ACT
PWR
FDX
LNK
100
HanRun
HR301110A
1228

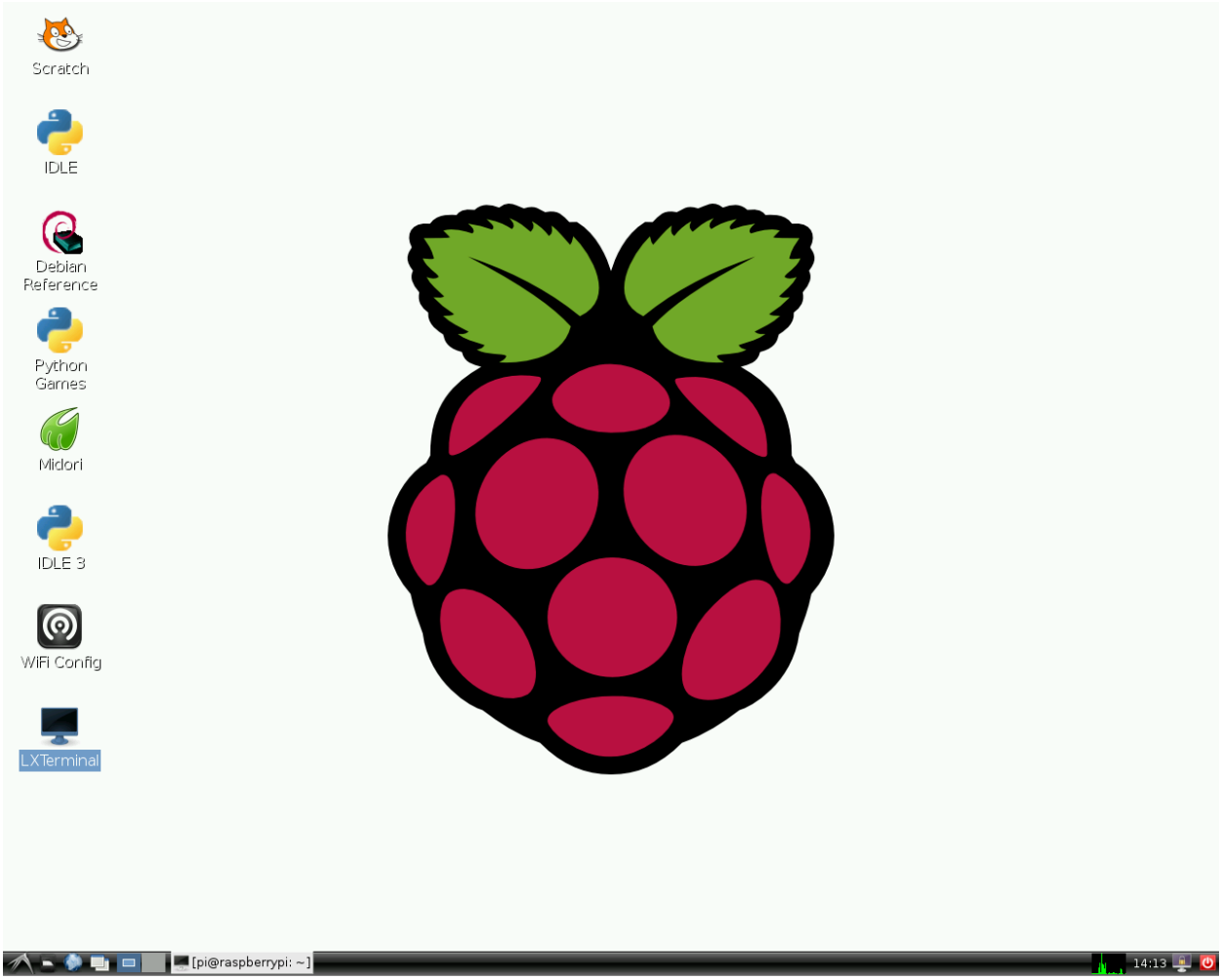


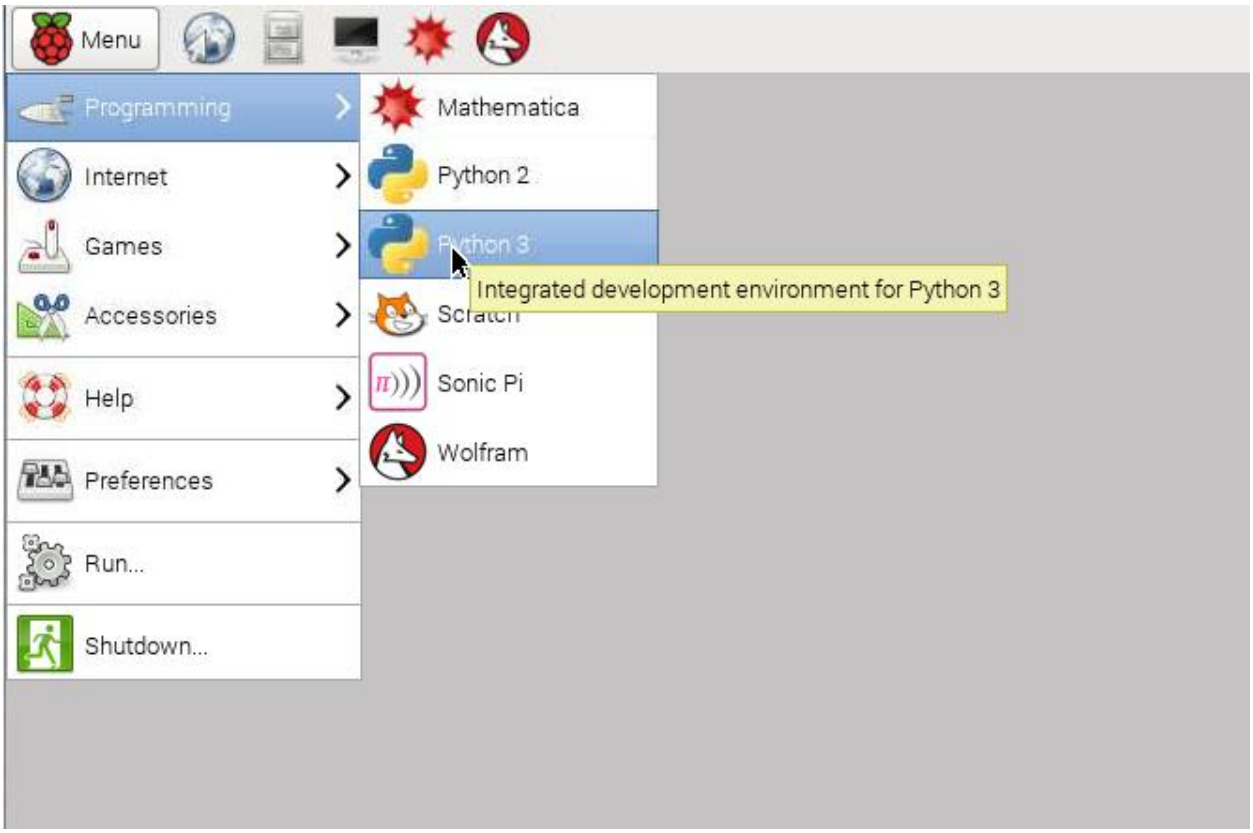
GPIO Rev1

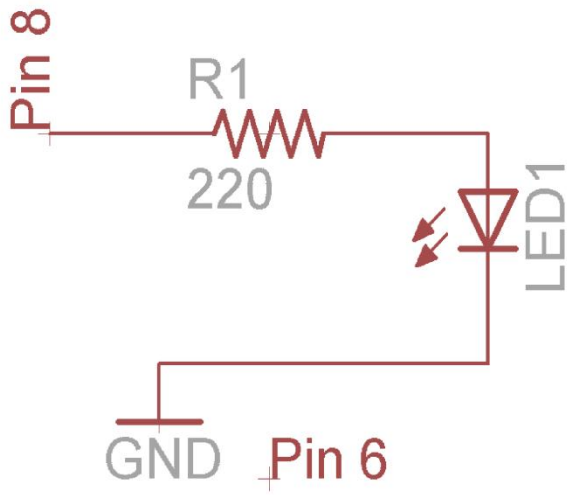


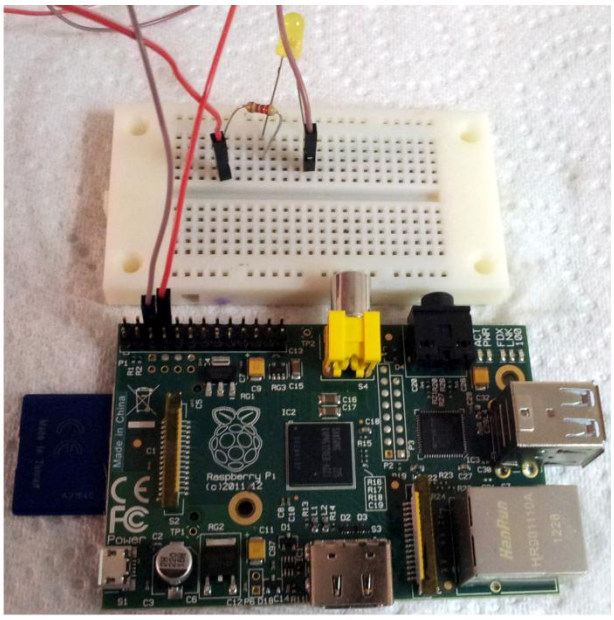
GPIO Rev 2

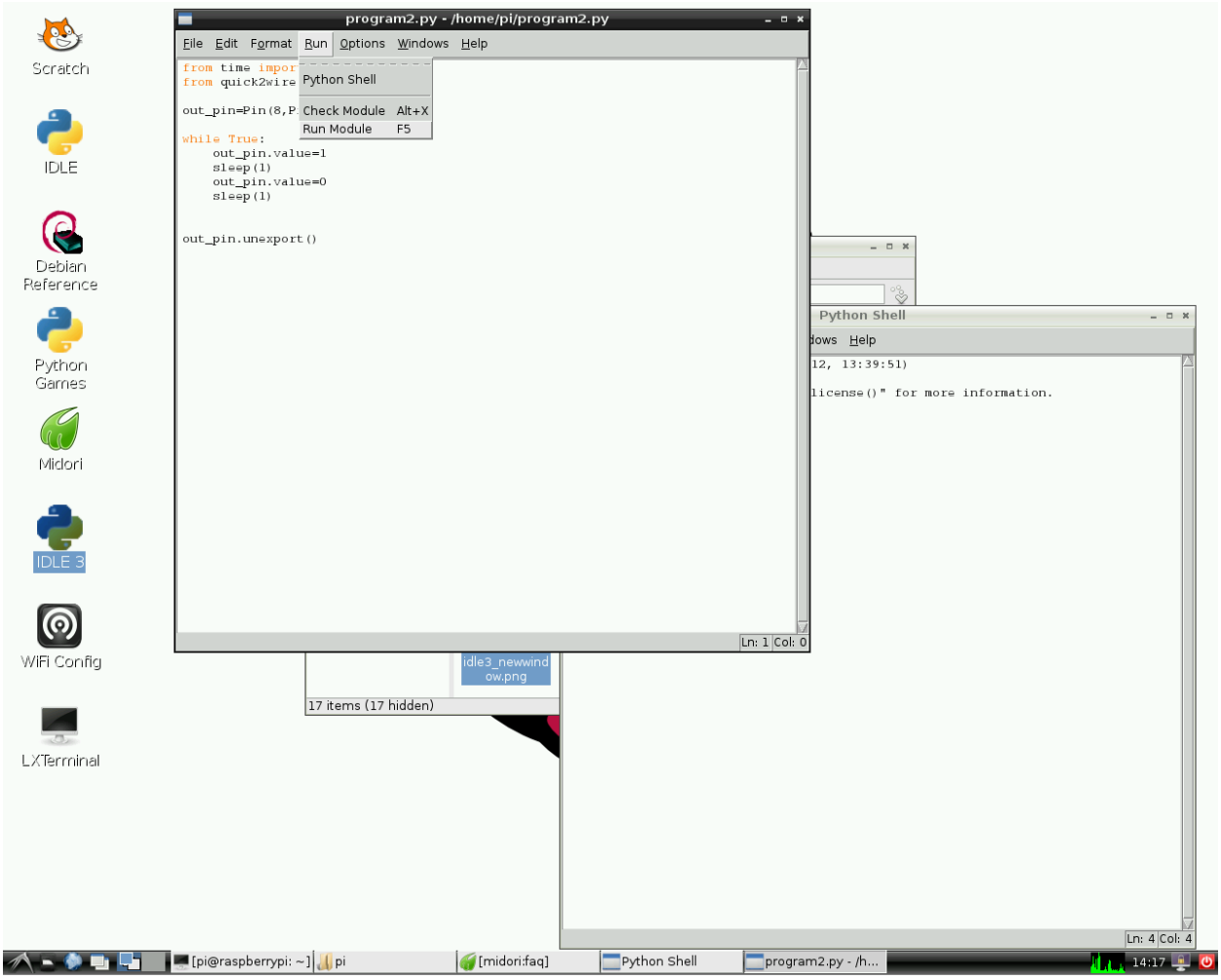


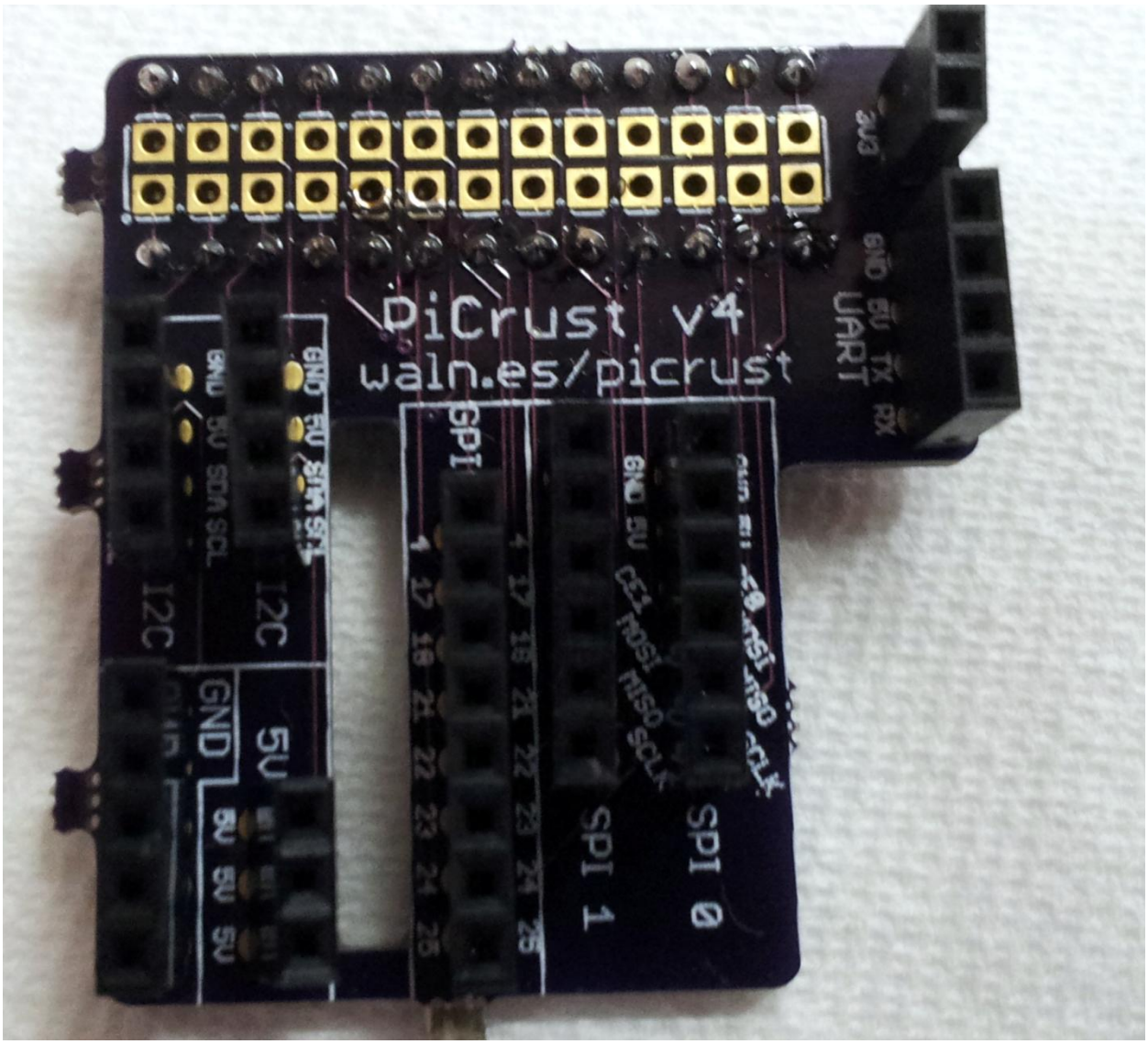

Scratch
IDLE
Debian Reference
Python Games
Midori
IDLE 3
WiFi Config
LXTerminal
[pi@raspberrypi: ~]
14:13

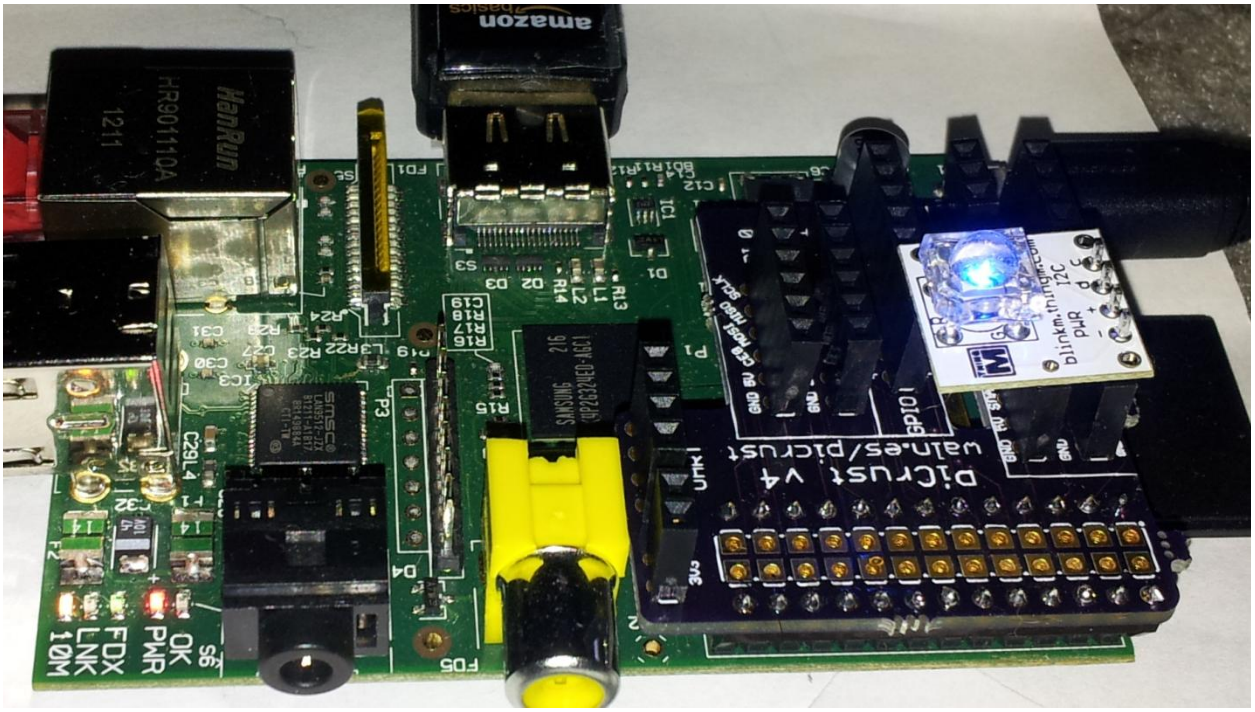

Menu
Programming
Internet
Games
Accessories
Help
Preferences
Run...
Shutdown...
Mathematica
Python 2
Python 3
Integrated development environment for Python 3
Scratch
Sonic Pi
Wolfram

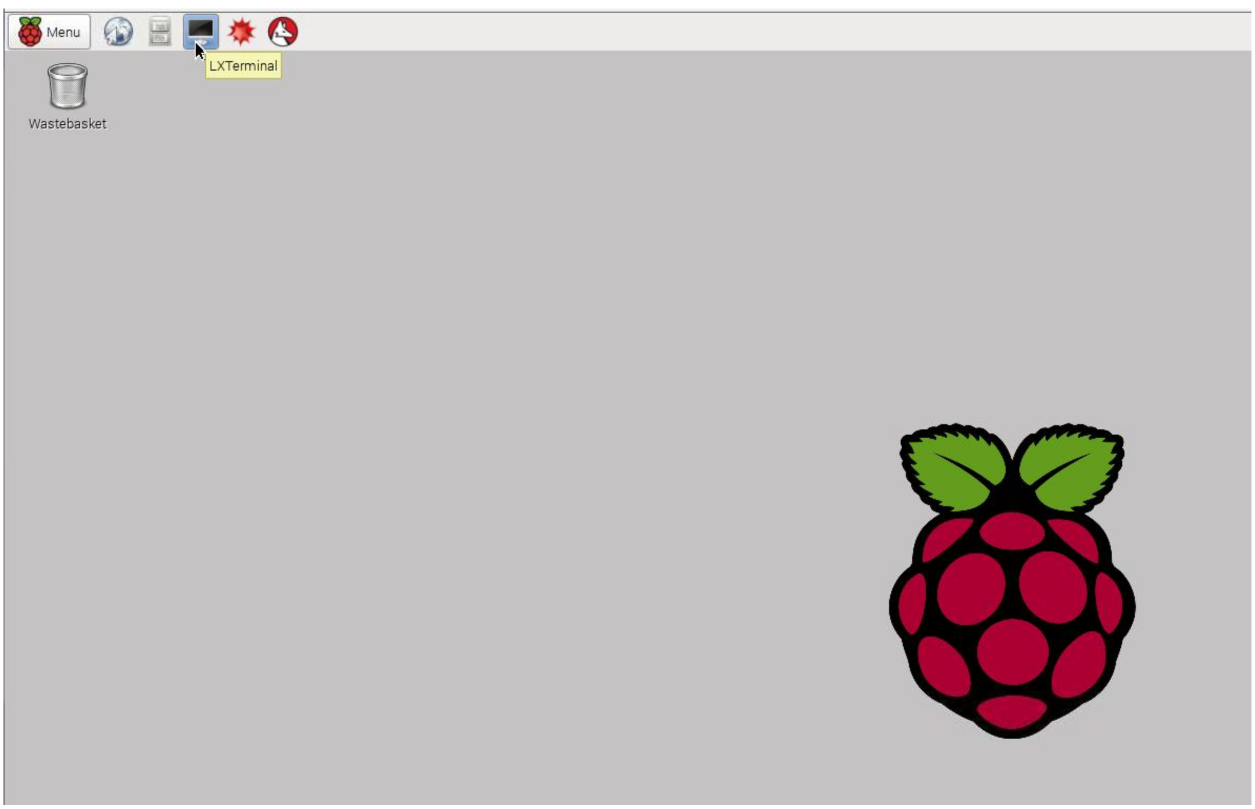

Pin 8
R1
220
LED1
GND
Pin 6

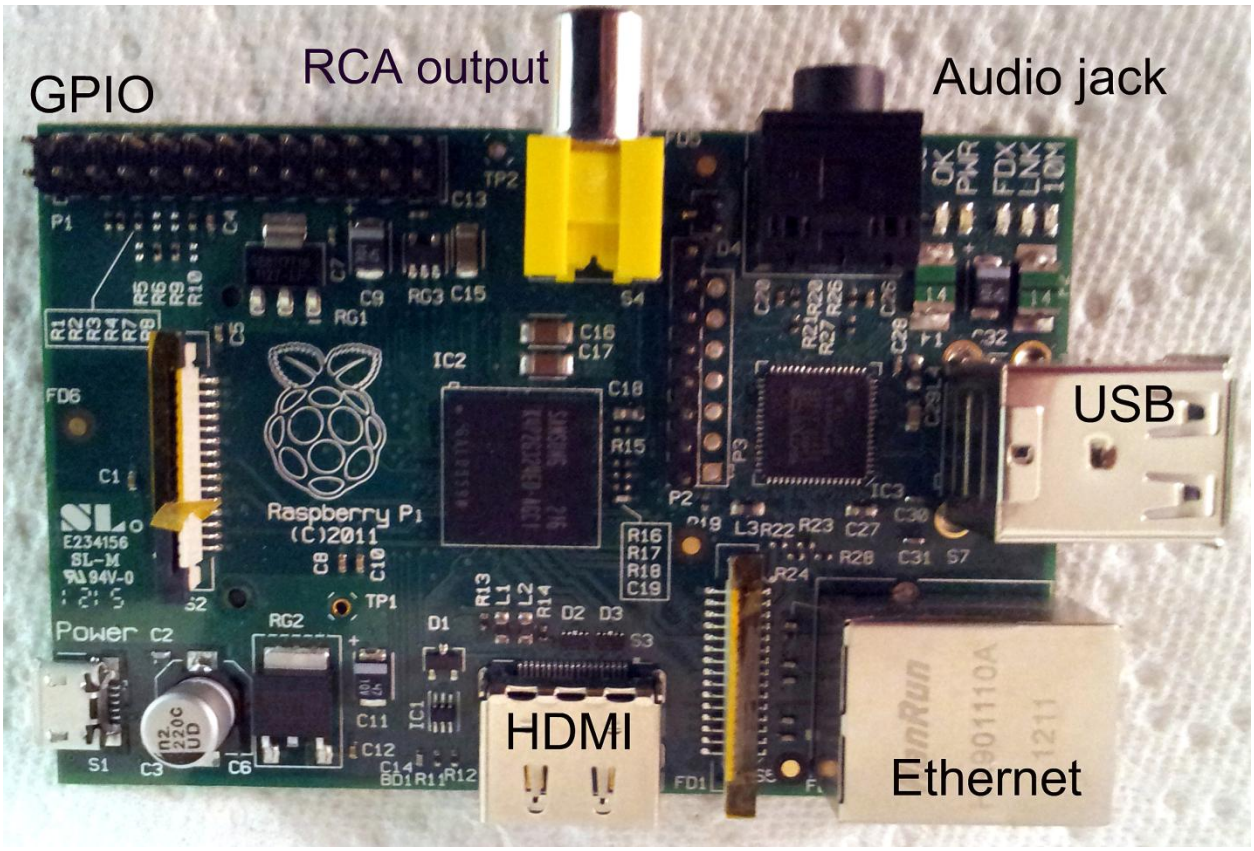



Scratch
IDLE
Debian Reference
Python Games
Midori
IDLE 3
WiFi Config
LXTerminal
program2.py - /home/pi/program2.py
File Edit Format Run Options Windows Help
Python Shell
Check Module Alt+X
Run Module F5
from time impor
from quick2wire
out_pin=Pin(8,P
while True:
out_pin.value=1
sleep(1)
out_pin.value=0
sleep(1)
out_pin.unexport()
Ln: 1 Col: 0
idle3_newwindow.png
17 items (17 hidden)
Python Shell
dows Help
12, 13:39:51)
license()" for more information.
Ln: 4 Col: 4
[pi@raspberrypi: ~]
pi
[midori:faq]
Python Shell
program2.py - /h...
14:17

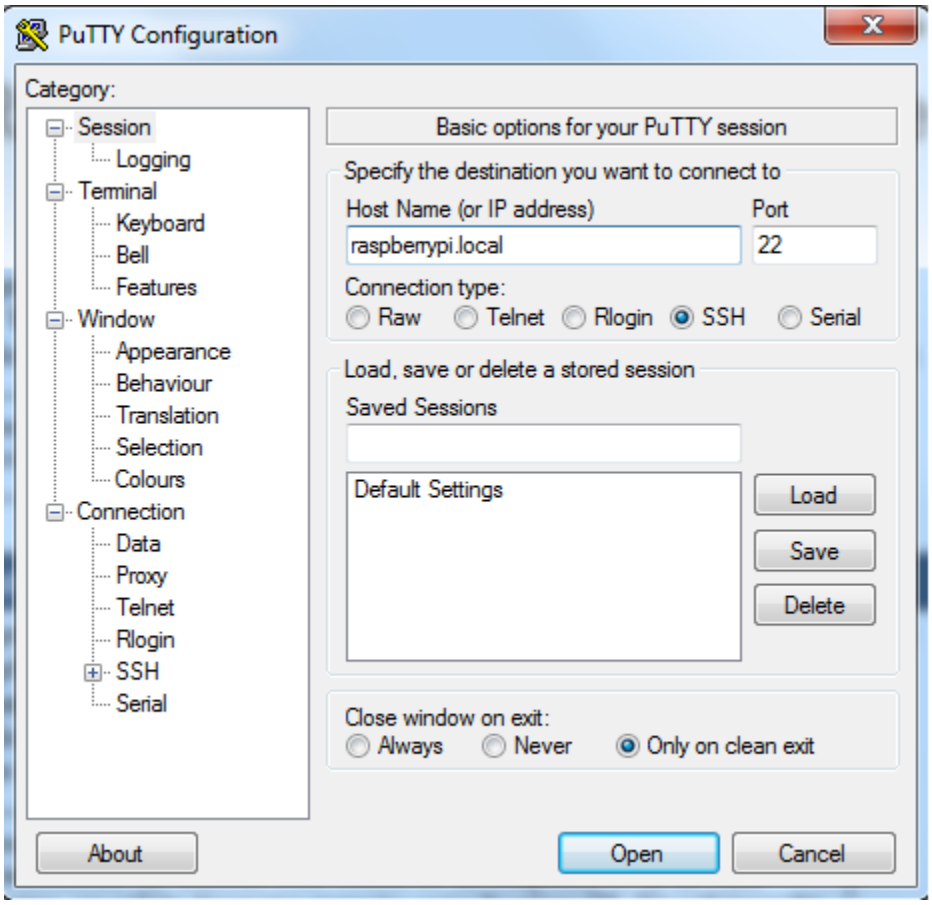

PiCrust v4
waln.es/picrust
UART
3V3
GND
5V
TX
RX
GPI
SPI 0
SPI 1
GND
5V
CE1
MOSI
MISO
SCLK
I2C
SDA
SCL
5V
GND

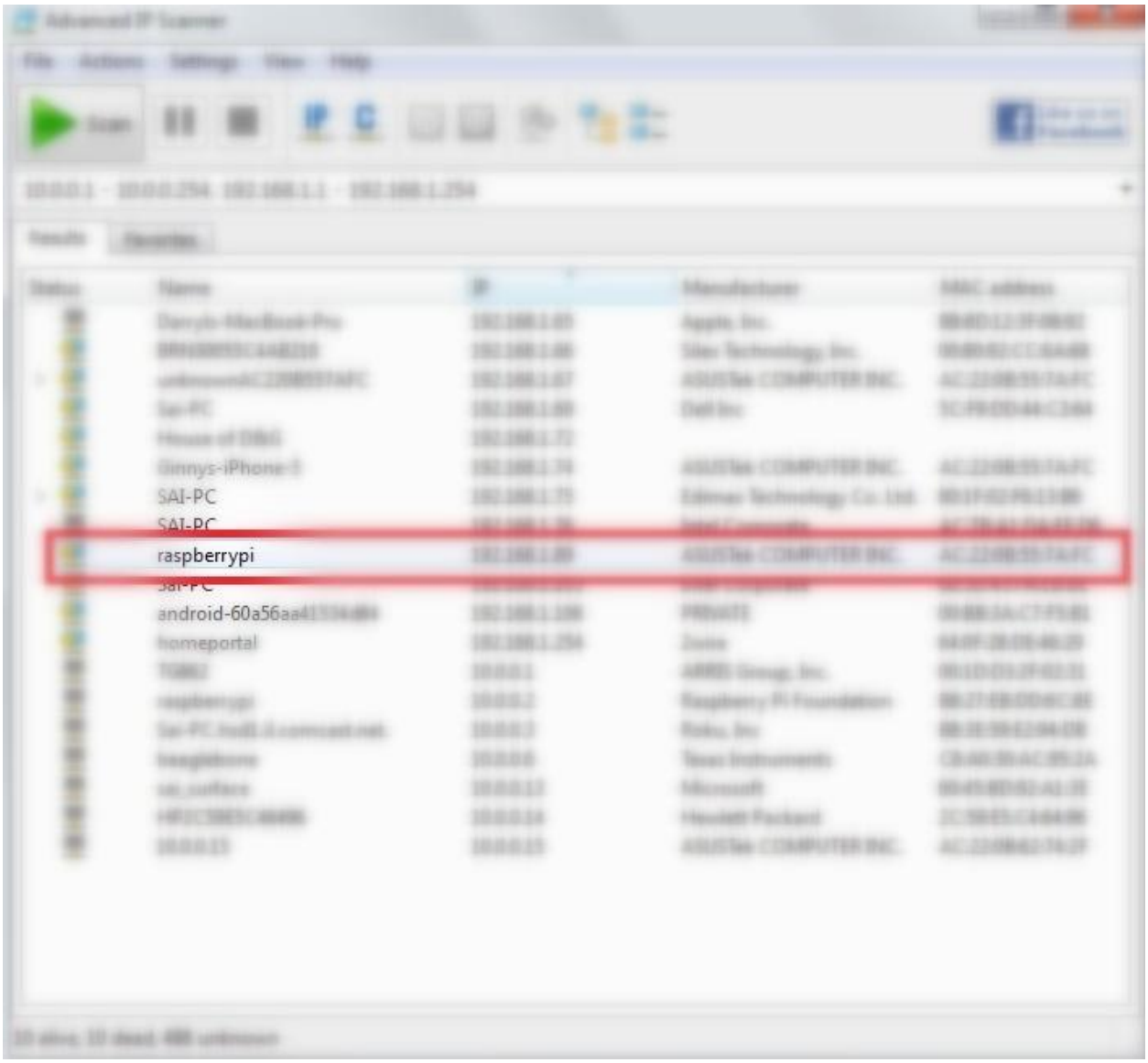

amazon
HanRun
HR911110A
1211
SAMSUNG
PiCrust v4
wain.es/picrust
OK
PWR
FDX
LNK
10M

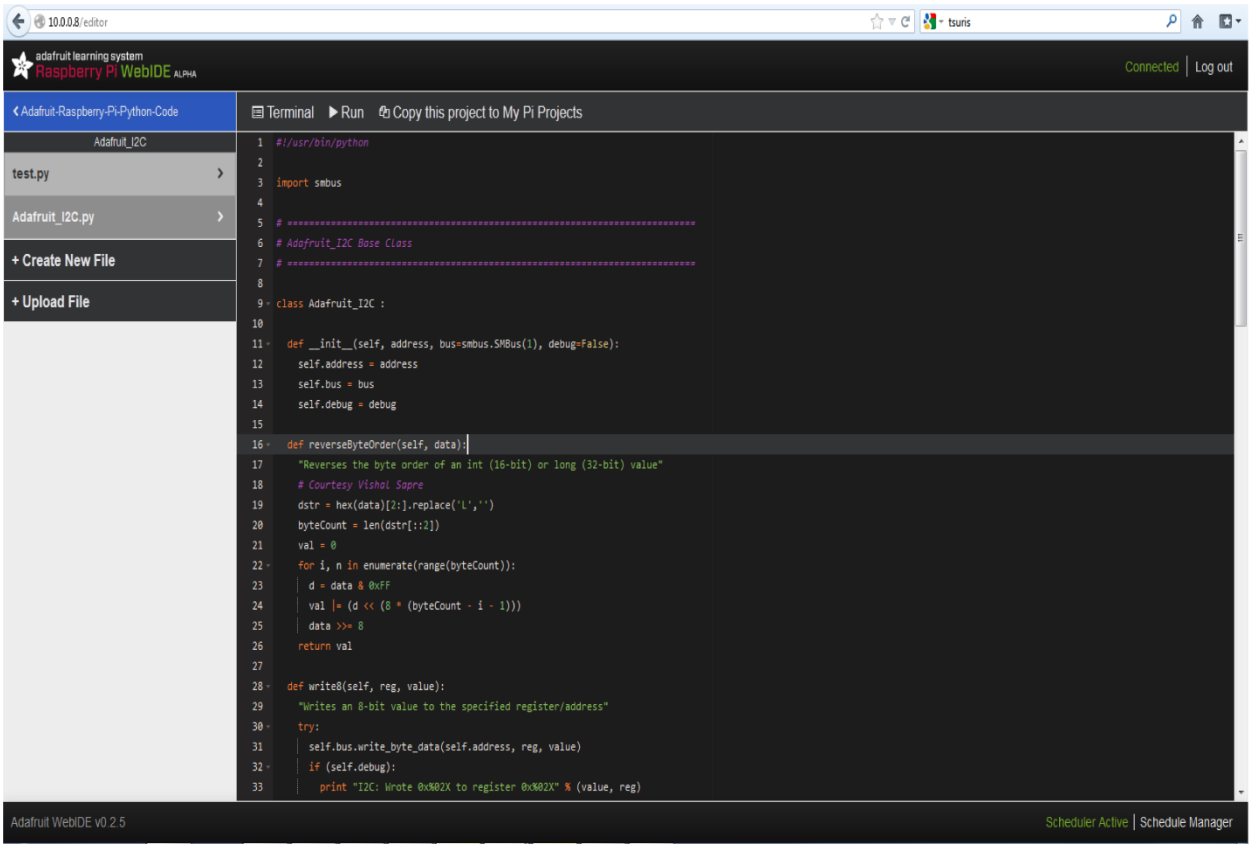

Menu
LXTerminal
Wastebasket

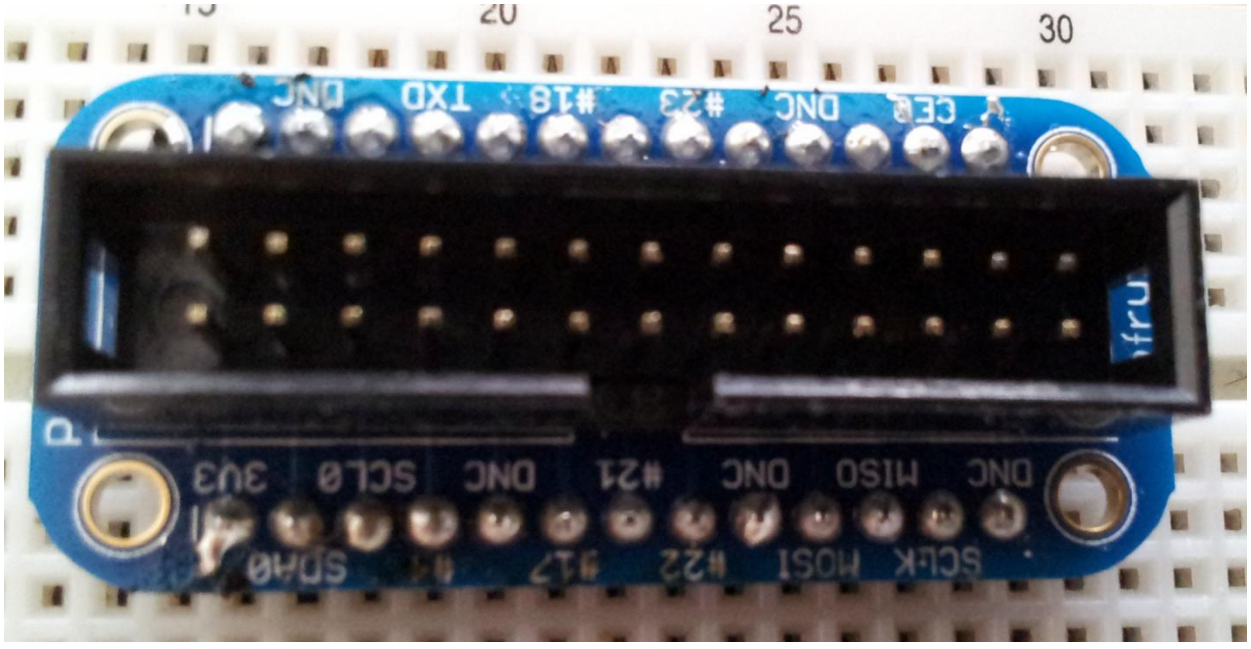

GPIO
RCA output
Audio jack
USB
HDMI
Ethernet
Raspberry Pi
(C)2011
Power

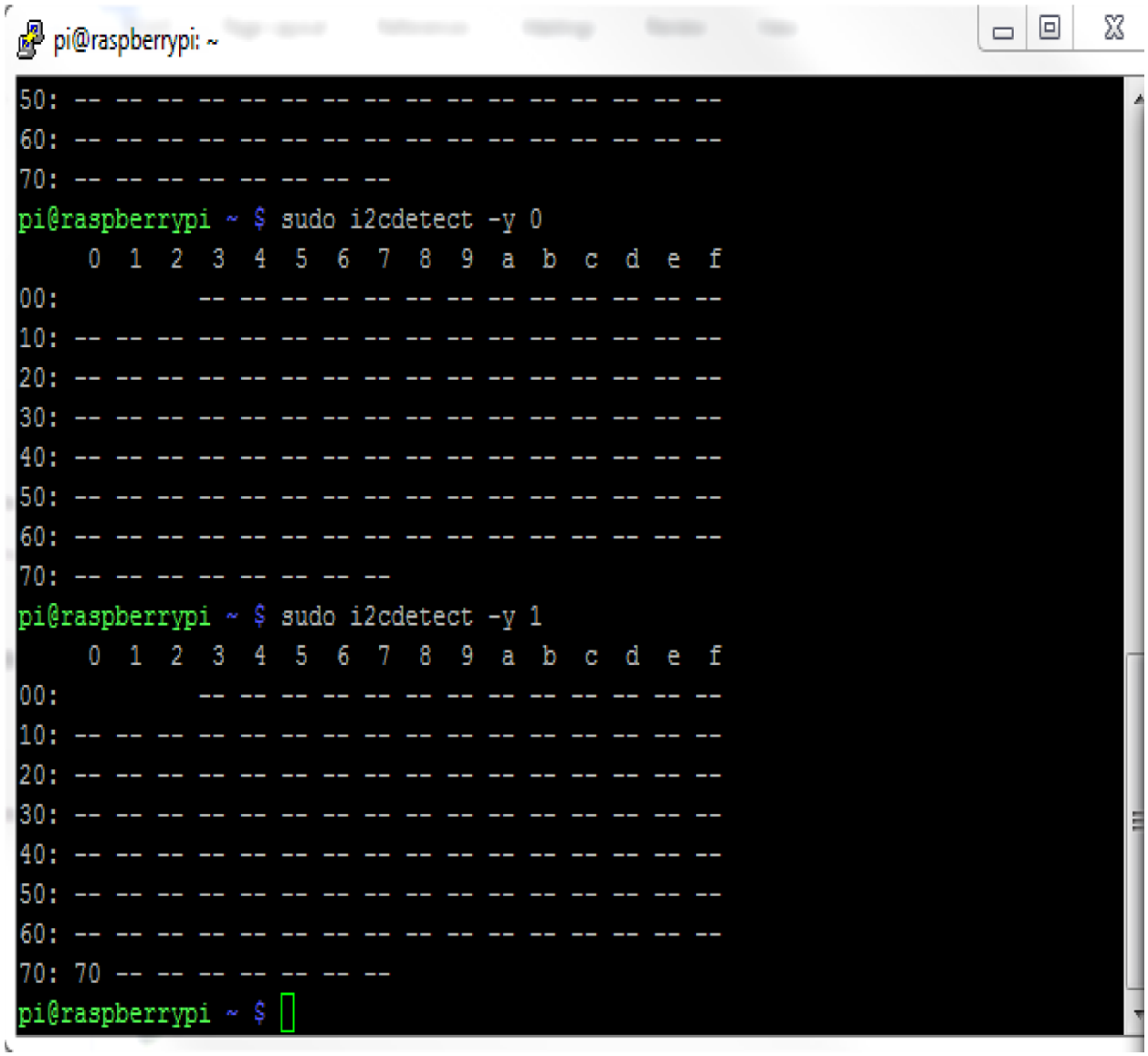
Chapter 2

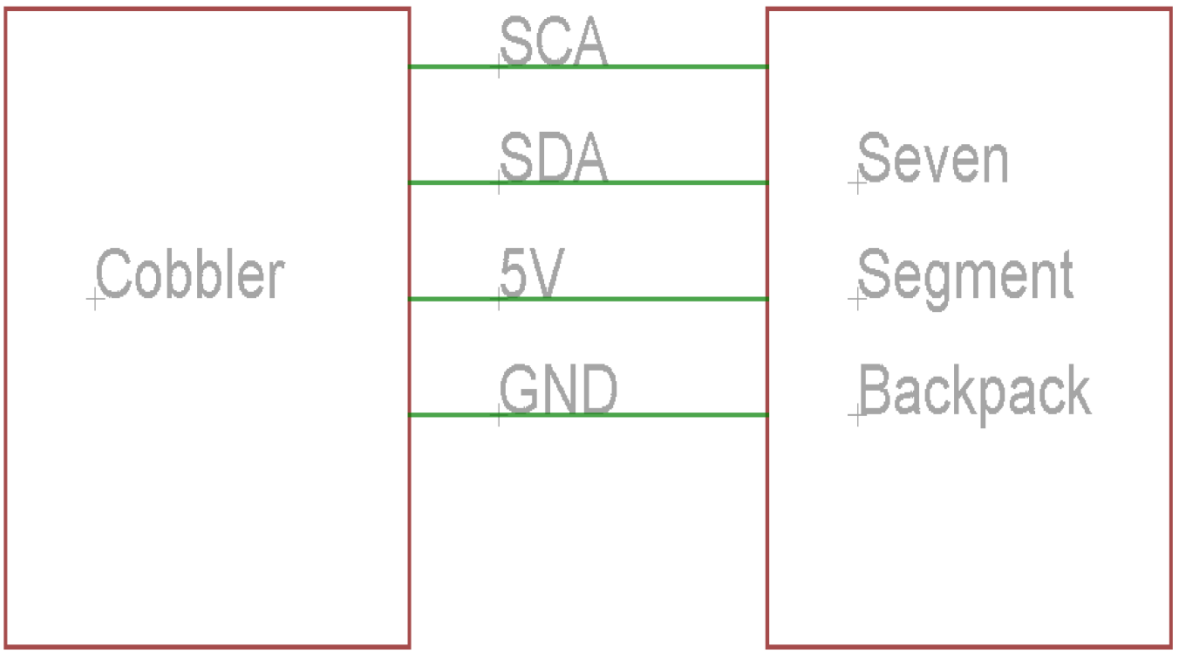

PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Serial
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
raspberrypi.local
22
Connection type:
Raw
Telnet
Rlogin
SSH
Serial
Load, save or delete a stored session
Saved Sessions
Default Settings
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Open
Cancel

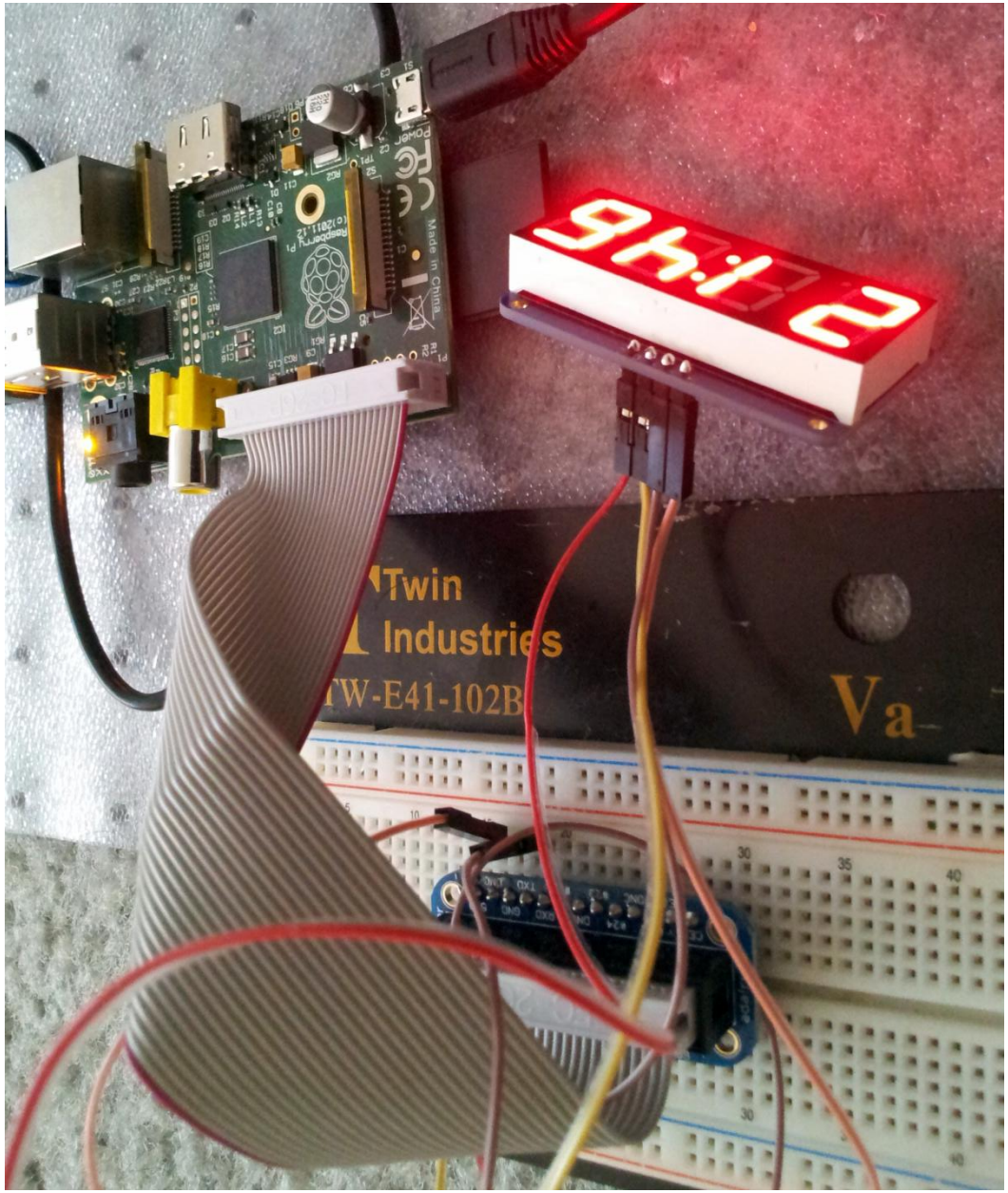

raspberrypi

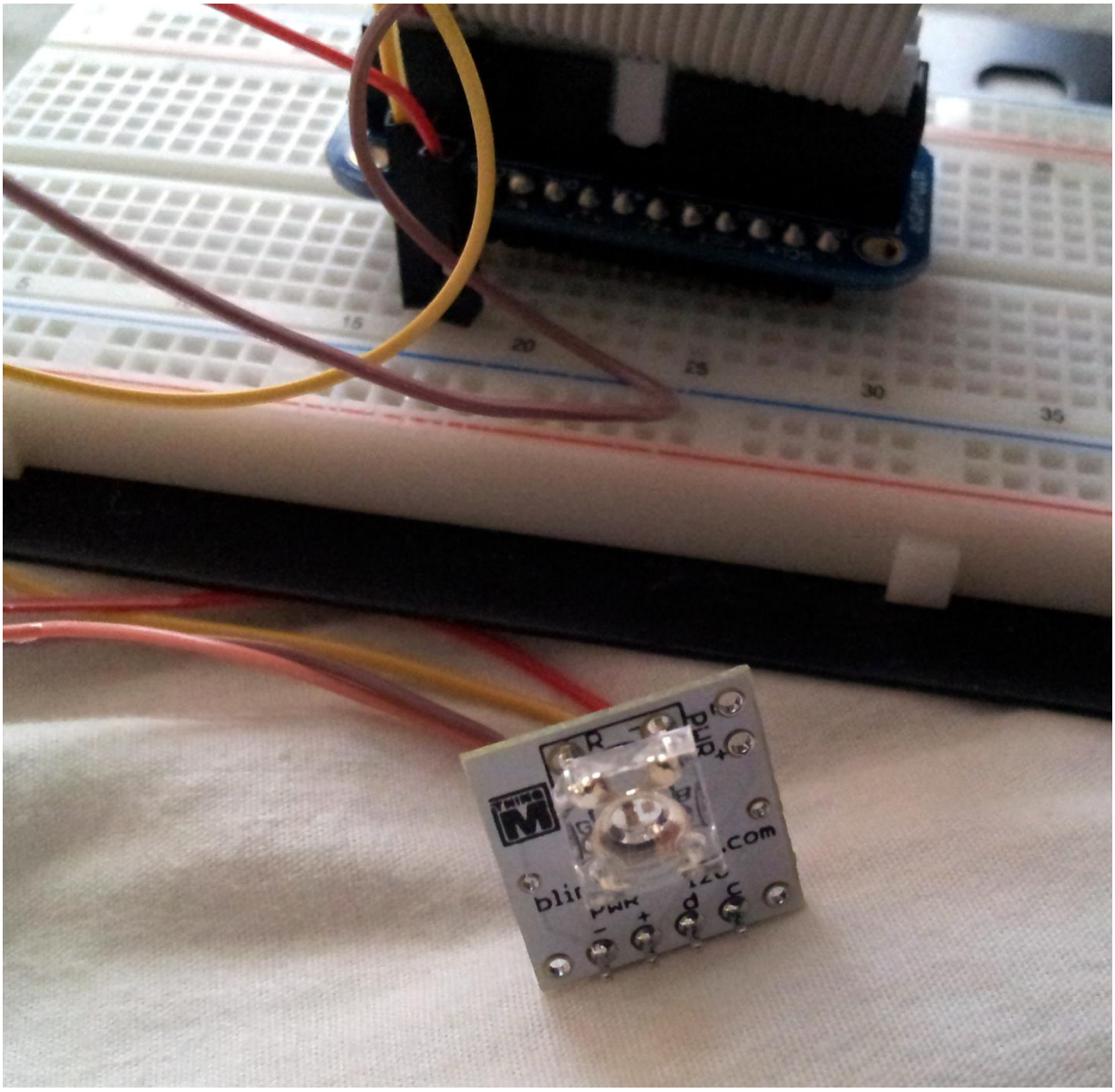

10.0.0.8/editor
tsuris
adafruit learning system
Raspberry Pi WebIDE ALPHA
Connected | Log out
Adafruit-Raspberry-Pi-Python-Code
Terminal
Run
Copy this project to My Pi Projects
Adafruit_I2C
test.py
Adafruit_I2C.py
+ Create New File
+ Upload File
#!/usr/bin/python
import smbus
# ===
# Adafruit_I2C Base Class
# ===
class Adafruit_I2C :
def __init__(self, address, bus=smbus.SMBus(1), debug=False):
self.address = address
self.bus = bus
self.debug = debug
def reverseByteOrder(self, data):
"Reverses the byte order of an int (16-bit) or long (32-bit) value"
# Courtesy Vishal Sapre
dstr = hex(data)[2:].replace('L','')
byteCount = len(dstr[::2])
val = 0
for i, n in enumerate(range(byteCount)):
d = data & 0xFF
val |= (d << (8 * (byteCount - i - 1)))
data >>= 8
return val
def write8(self, reg, value):
"Writes an 8-bit value to the specified register/address"
try:
self.bus.write_byte_data(self.address, reg, value)
if (self.debug):
print "I2C: Wrote 0x%02X to register 0x%02X" % (value, reg)
Adafruit WebIDE v0.2.5
Scheduler Active | Schedule Manager

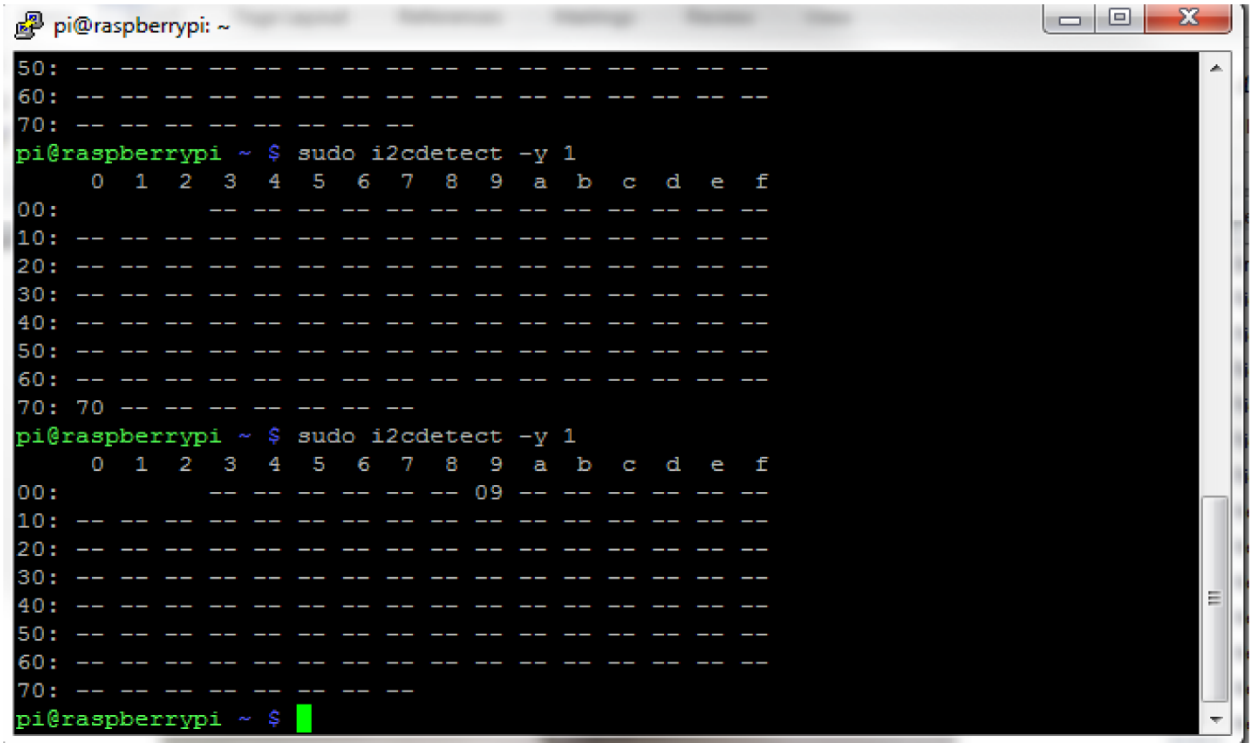

20
25
30
TXD
#18
#23
GND
CE0
3V3
SCL0
GND
#21
GND
MISO
GND
SDA0
#17
#22
MOSI
SCLK

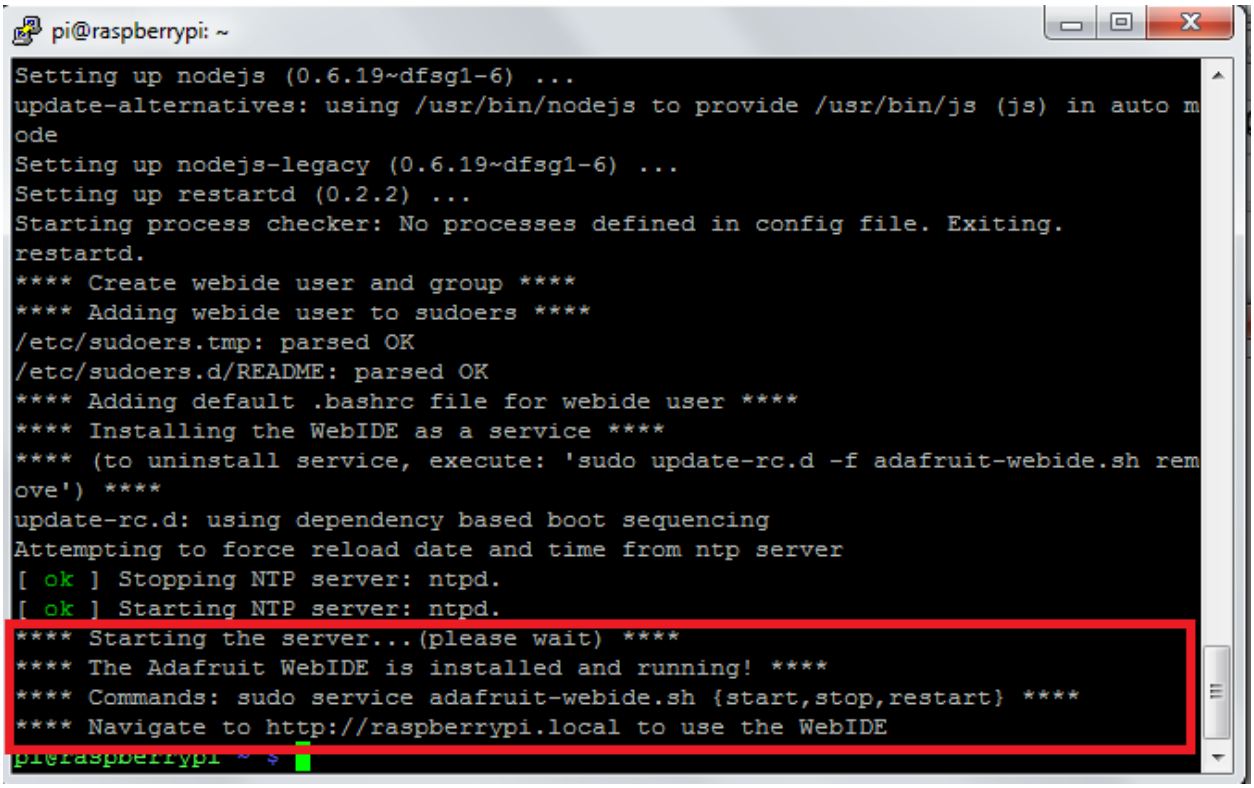

pi@raspberrypi: ~
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- --
pi@raspberrypi ~ $ sudo i2cdetect -y 0
0 1 2 3 4 5 6 7 8 9 a b c d e f
00: -- -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- --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

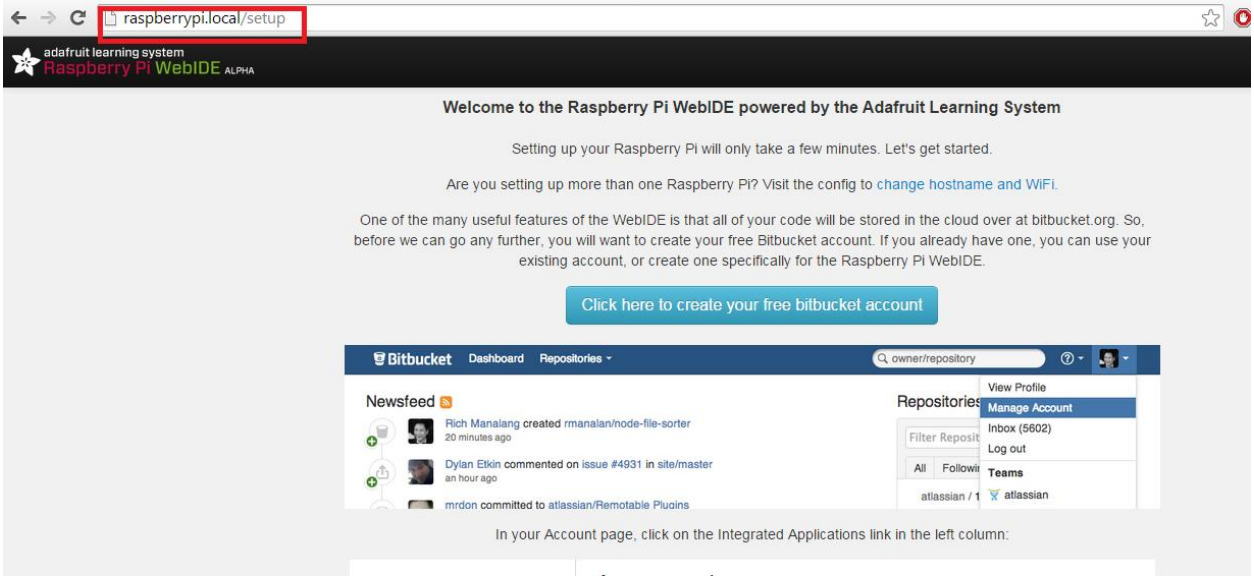

Cobbler
SCA
SDA
5V
GND
Seven
Segment
Backpack

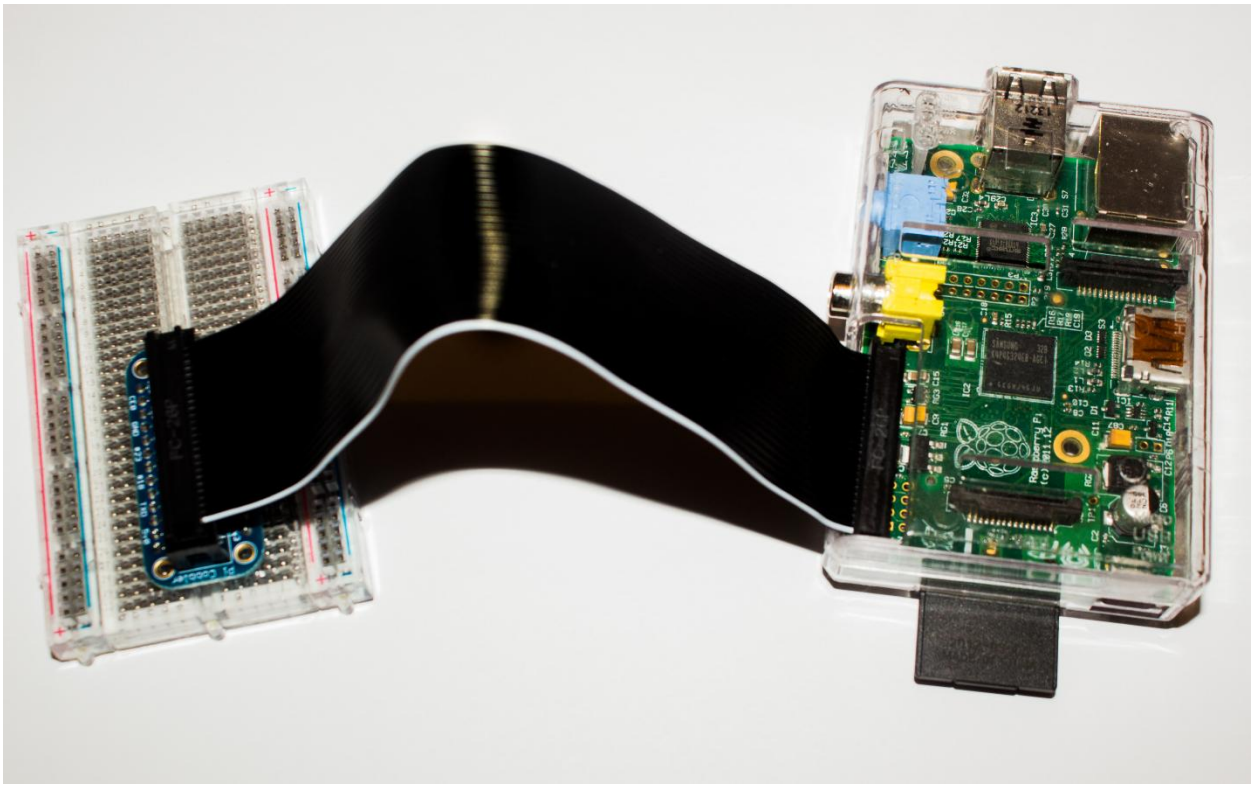

Twin
Industries
Va

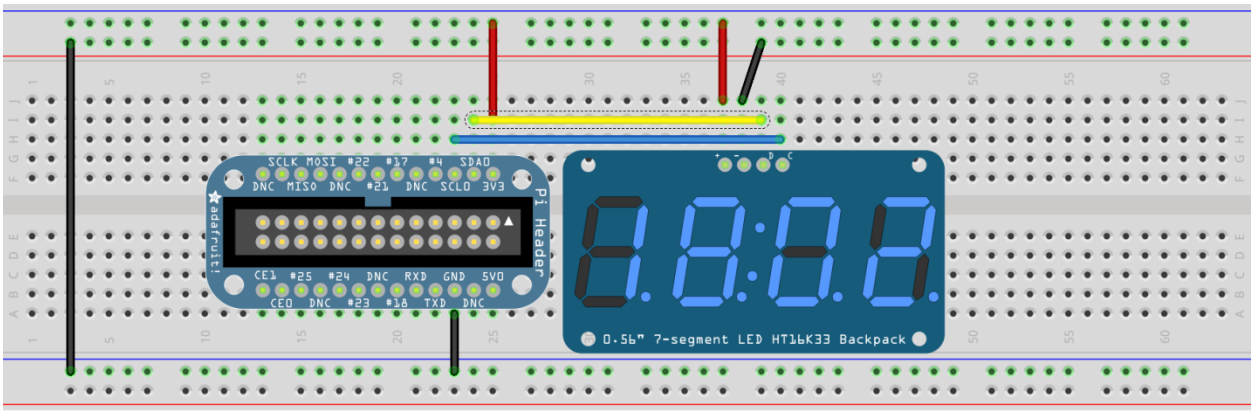

15
20
25
30
35
PWR
I2C


pi@raspberrypi: ~
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- --
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: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: 70 -- -- -- -- -- -- --
pi@raspberrypi ~ $ sudo i2cdetect -y 1
0 1 2 3 4 5 6 7 8 9 a b c d e f
00: -- -- -- -- -- -- -- 09 -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- --
pi@raspberrypi ~ $

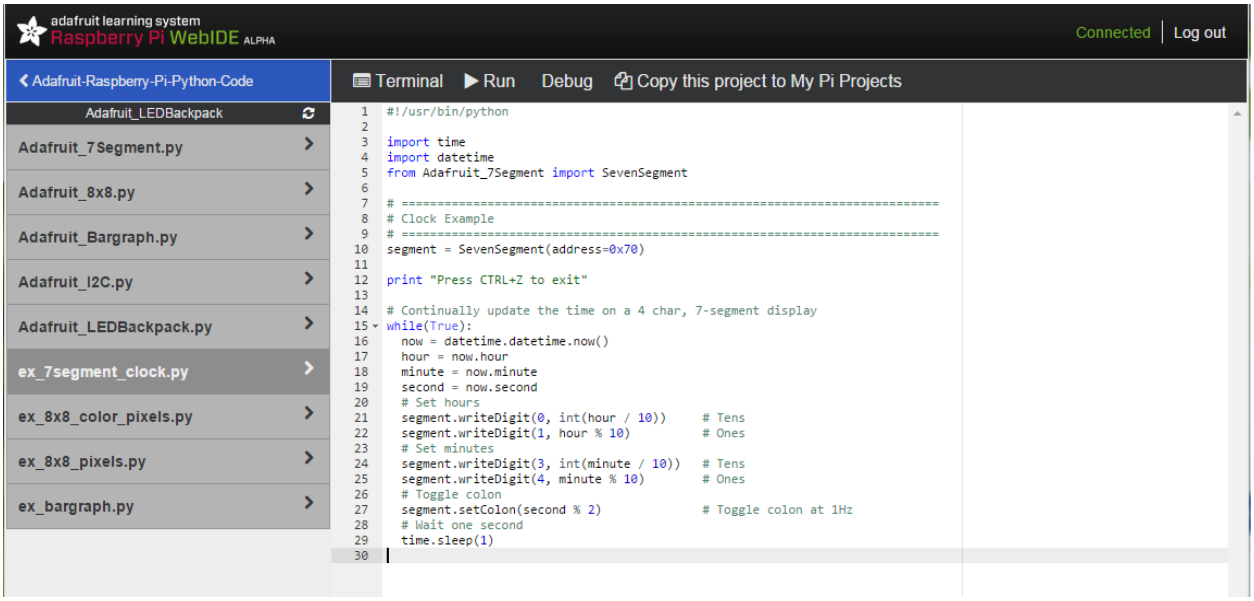

pi@raspberrypi: ~
Setting up nodejs (0.6.19~dfsg1-6) ...
update-alternatives: using /usr/bin/nodejs to provide /usr/bin/js (js) in auto m
ode
Setting up nodejs-legacy (0.6.19~dfsg1-6) ...
Setting up restartd (0.2.2) ...
Starting process checker: No processes defined in config file. Exiting.
restartd.
**** Create webide user and group ****
**** Adding webide user to sudoers ****
/etc/sudoers.tmp: parsed OK
/etc/sudoers.d/README: parsed OK
**** Adding default .bashrc file for webide user ****
**** Installing the WebIDE as a service ****
**** (to uninstall service, execute: 'sudo update-rc.d -f adafruit-webide.sh rem
ove') ****
update-rc.d: using dependency based boot sequencing
Attempting to force reload date and time from ntp server
[ok] Stopping NTP server: ntpd.
[ok] Starting NTP server: ntpd.
**** Starting the server...(please wait) ****
**** The Adafruit WebIDE is installed and running! ****
**** Commands: sudo service adafruit-webide.sh {start,stop,restart} ****
**** Navigate to http://raspberrypi.local to use the WebIDE
pi@raspberrypi ~ $

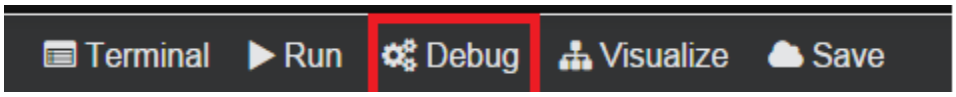

raspberrypi.local/setup
adafruit learning system
Raspberry Pi WebIDE ALPHA
Welcome to the Raspberry Pi WebIDE powered by the Adafruit Learning System
Setting up your Raspberry Pi will only take a few minutes. Let's get started.
Are you setting up more than one Raspberry Pi? Visit the config to change hostname and WiFi.
One of the many useful features of the WebIDE is that all of your code will be stored in the cloud over at bitbucket.org. So, before we can go any further, you will want to create your free Bitbucket account. If you already have one, you can use your existing account, or create one specifically for the Raspberry Pi WebIDE.
Click here to create your free bitbucket account
Bitbucket
Dashboard
Repositories
owner/repository
Newsfeed
Rich Manalang created rmanalan/node-file-sorter
20 minutes ago
Dylan Etkin commented on issue #4931 in site/master
an hour ago
mrdon committed to atlassian/Remotable Plugins
View Profile
Manage Account
Inbox (5602)
Log out
Teams
atlassian
In your Account page, click on the Integrated Applications link in the left column:

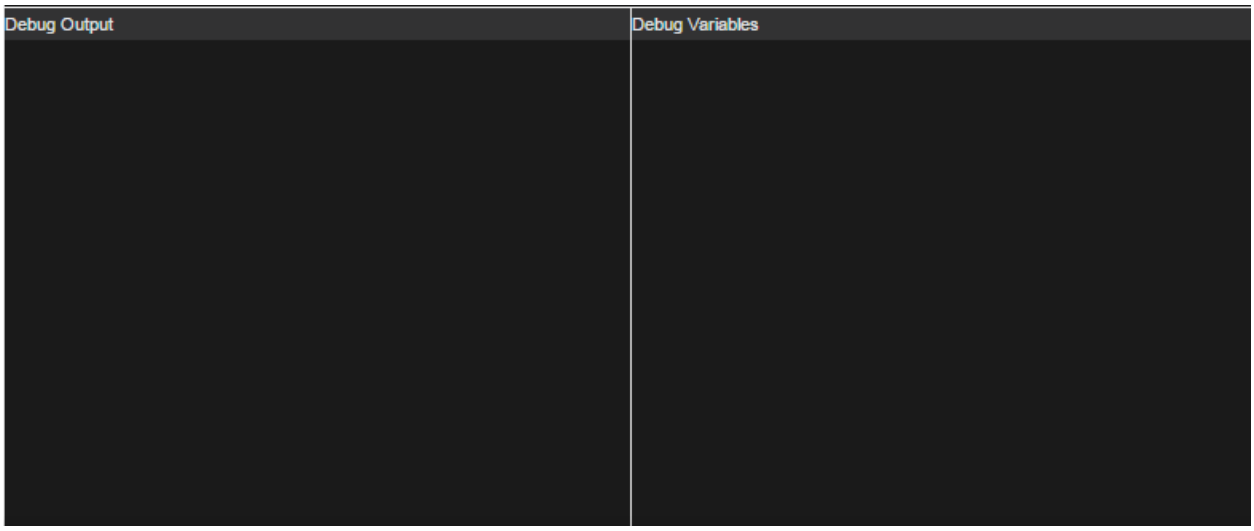



SCLK MOSI #22 #17 #4 SDA0
DNC MISO DNC #21 DNC SCL0 3V3
CE1 #25 #24 DNC RXD GND 5V0
CE0 DNC #23 #18 TXD DNC
Pi Header
0.56" 7-segment LED HT16K33 Backpack

fritzing

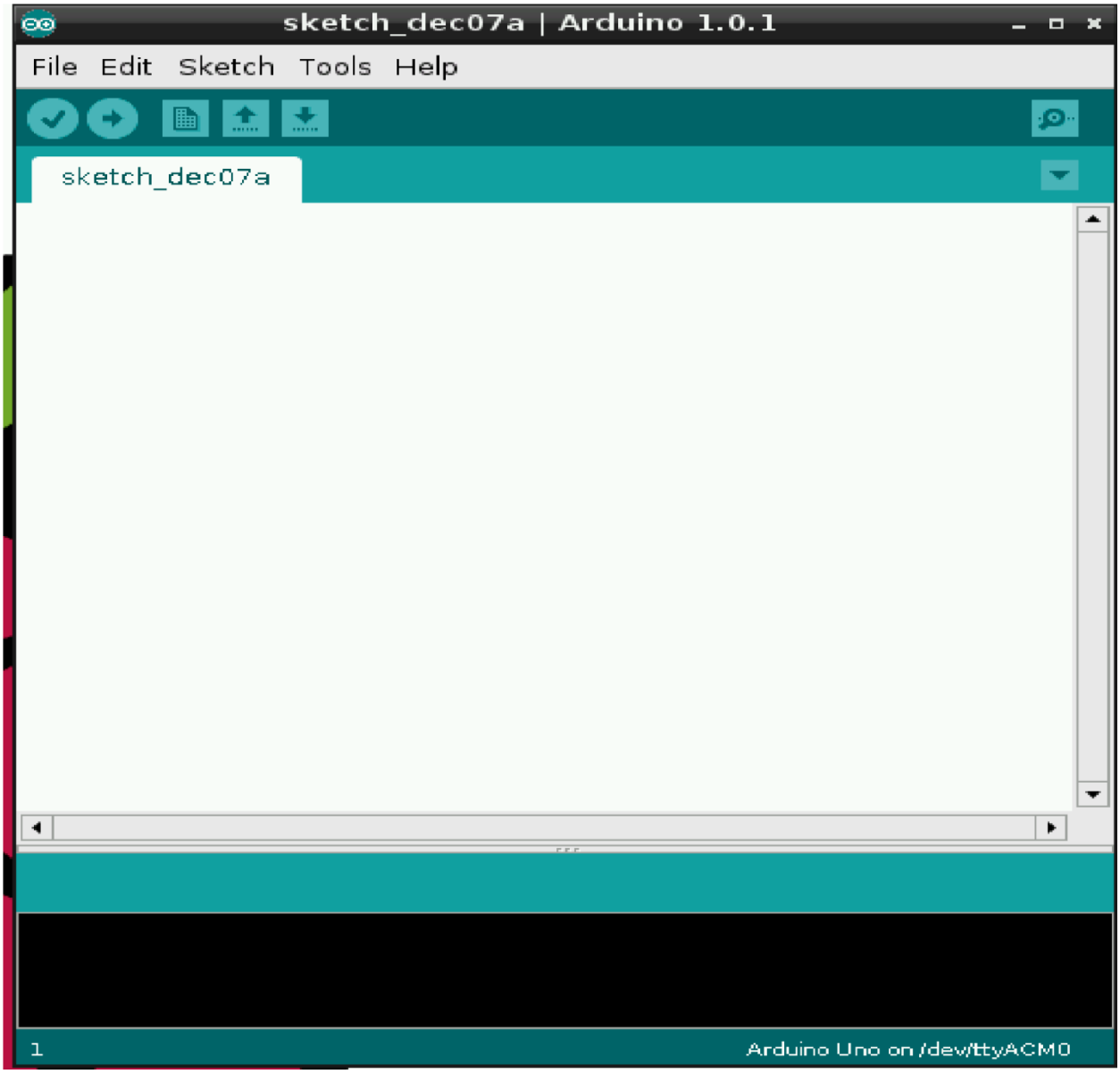

adafruit learning system
Raspberry Pi WebIDE ALPHA
Connected | Log out
Adafruit-Raspberry-Pi-Python-Code
Adafruit_LEDBackpack
Adafruit_7Segment.py
Adafruit_8x8.py
Adafruit_Bargraph.py
Adafruit_I2C.py
Adafruit_LEDBackpack.py
ex_7segment_clock.py
ex_8x8_color_pixels.py
ex_8x8_pixels.py
ex_bargraph.py
Terminal
Run
Debug
Copy this project to My Pi Projects
#!/usr/bin/python
import time
import datetime
from Adafruit_7Segment import SevenSegment
# ===
# Clock Example
# ===
segment = SevenSegment(address=0x70)
print "Press CTRL+Z to exit"
# Continually update the time on a 4 char, 7-segment display
while(True):
now = datetime.datetime.now()
hour = now.hour
minute = now.minute
second = now.second
# Set hours
segment.writeDigit(0, int(hour / 10)) # Tens
segment.writeDigit(1, hour % 10) # Ones
Set minutes
segment.writeDigit(3, int(minute / 10)) # Tens
segment.writeDigit(4, minute % 10) # Ones
Toggle colon
segment.setColon(second % 2) # Toggle colon at 1Hz
# Wait one second
time.sleep(1)

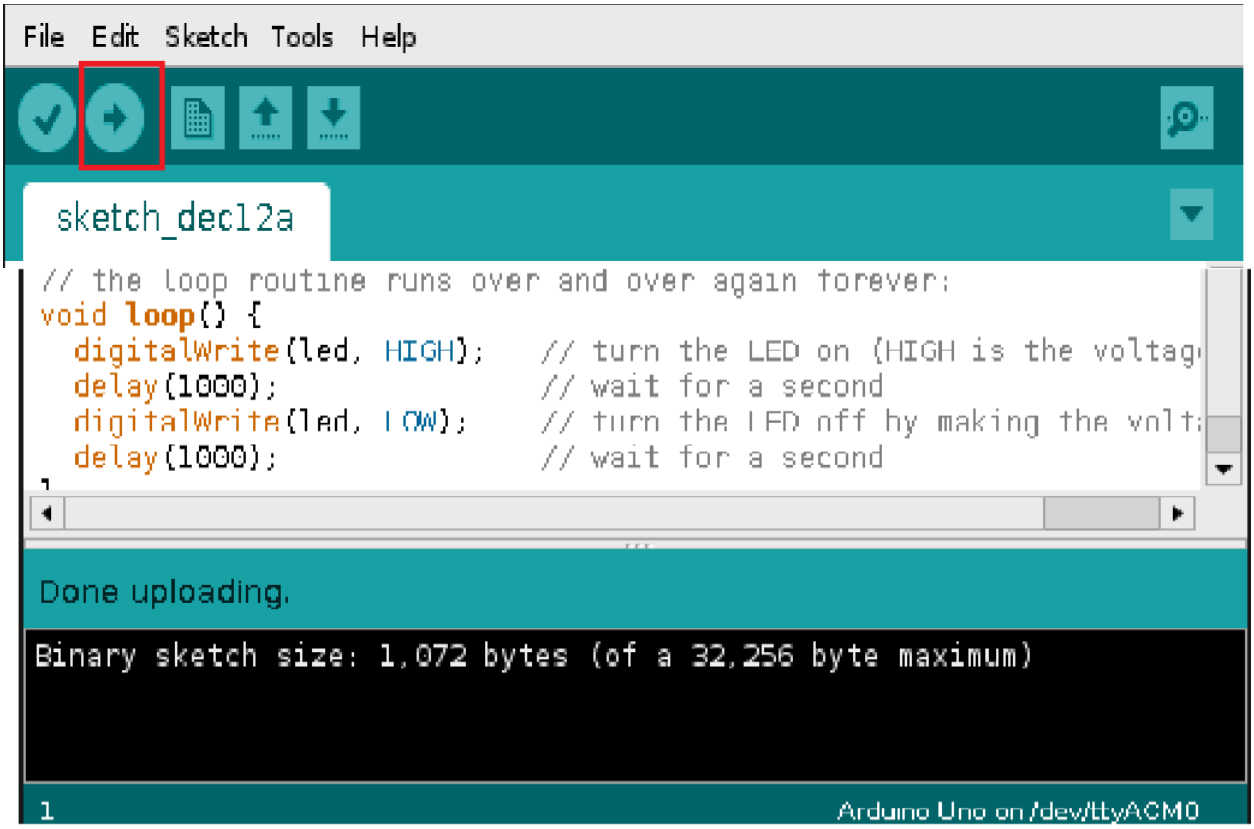

Terminal
Run
Debug
Visualize
Save

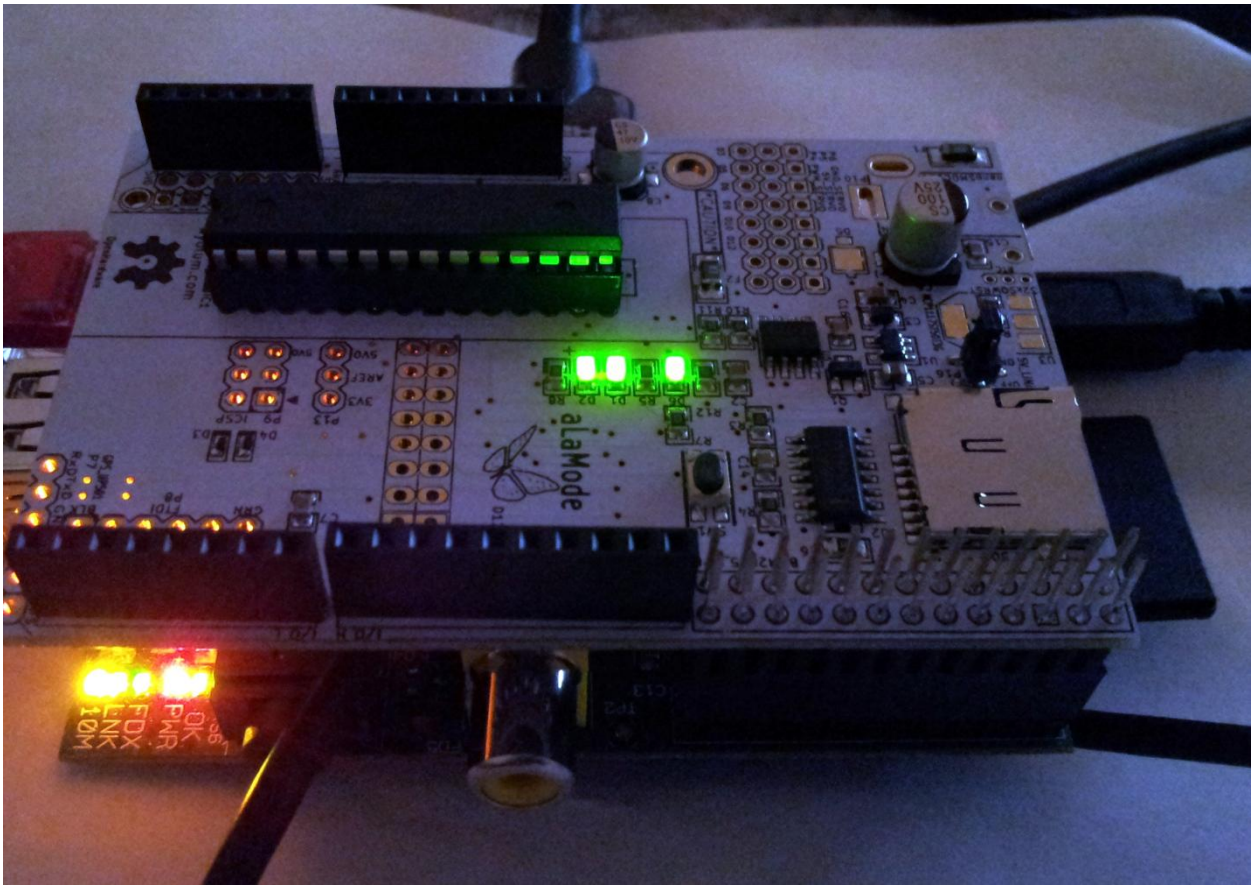


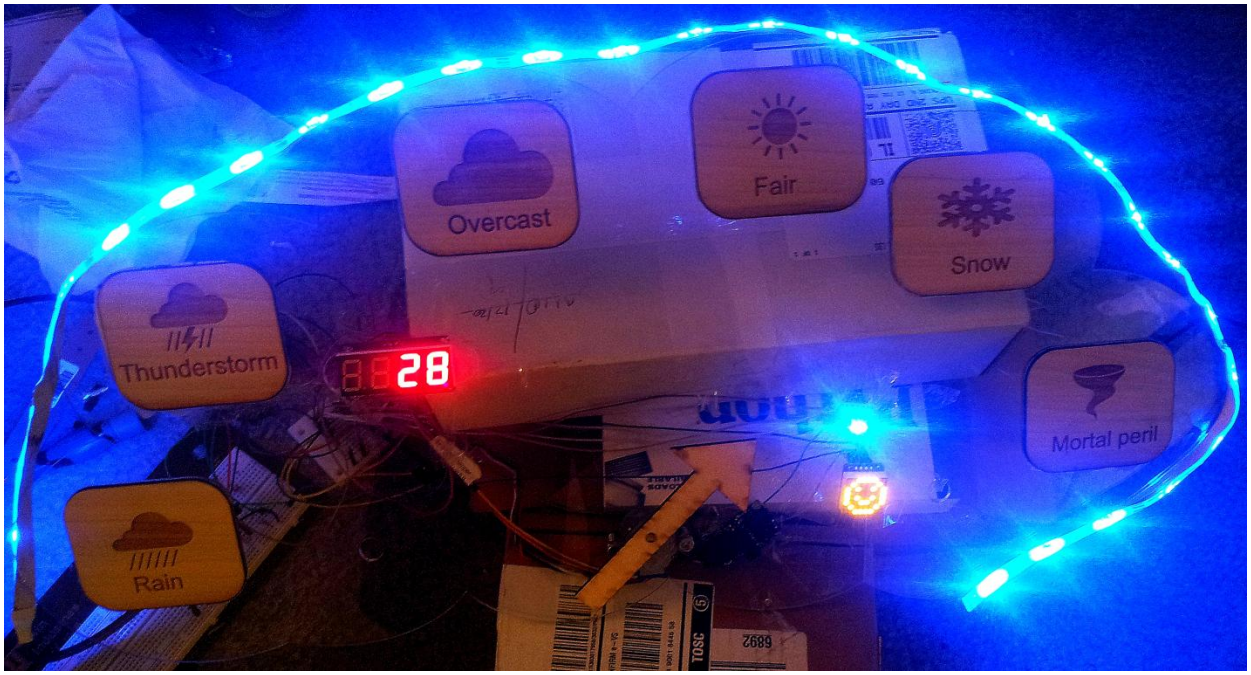
Id	Description	Color sequence
0	eeprom script default startup	white→red→green→blue→off (can be programmed)
1	RGB	red→green→blue
2	white flash	white→off
3	red flash	red→off
4	green flash	green→off
5	blue flash	blue→off
6	cyan flash	cyan→off
7	magenta flash	magenta→off
8	yellow flash	yellow→off
9	black	off
10	hue cycle	red→yellow→green→cyan→blue→purple
11	mood light	random hue→random hue
12	virtual candle	random yellows
13	water reflections	random blues
14	old neon	random orangeish reds
15	the seasons	spring colors→summer→fall→winter
16	thunderstrom	random blues & purples→white flashes
17	stop light	red→green→yellow
18	morse code	S.O.S in white

Chapter 3


sketch_dec07a | Arduino 1.0.1
File Edit Sketch Tools Help
sketch_dec07a
1
Arduino Uno on /dev/ttyACM0

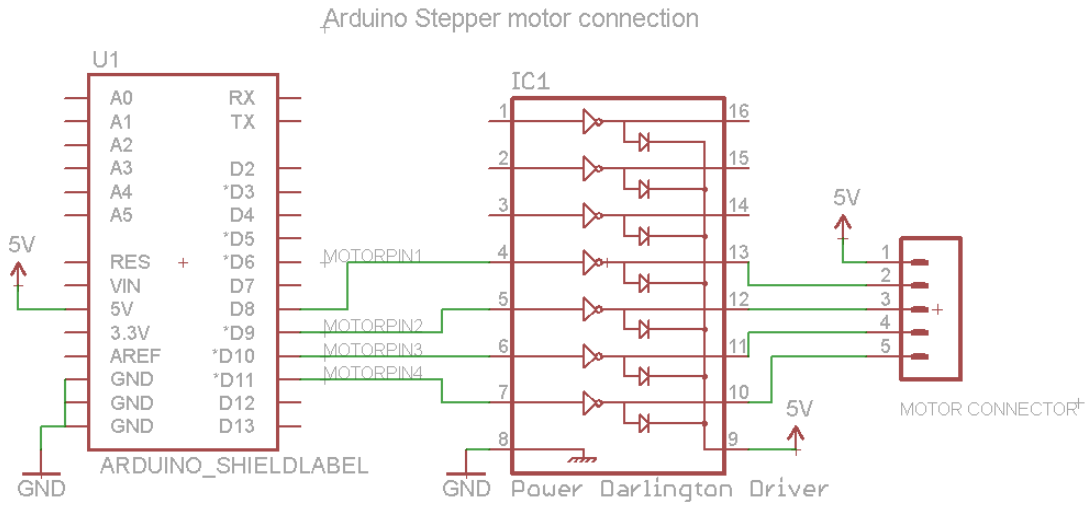

File Edit Sketch Tools Help
sketch_dec12a
// the loop routine runs over and over again forever:
void loop() {
digitalWrite(led, HIGH); // turn the LED on (HIGH is the voltag
delay(1000); // wait for a second
digitalWrite(led, LOW); // turn the LED off by making the volt
delay(1000); // wait for a second
}
Done uploading.
Binary sketch size: 1,072 bytes (of a 32,256 byte maximum)
1
Arduino Uno on /dev/ttyACM0

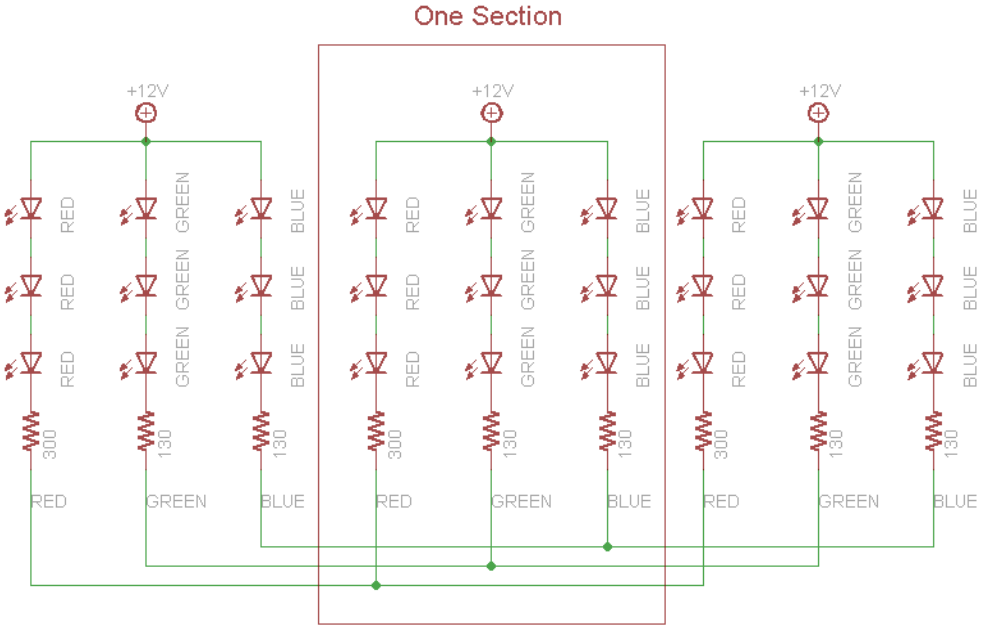

aLaMode

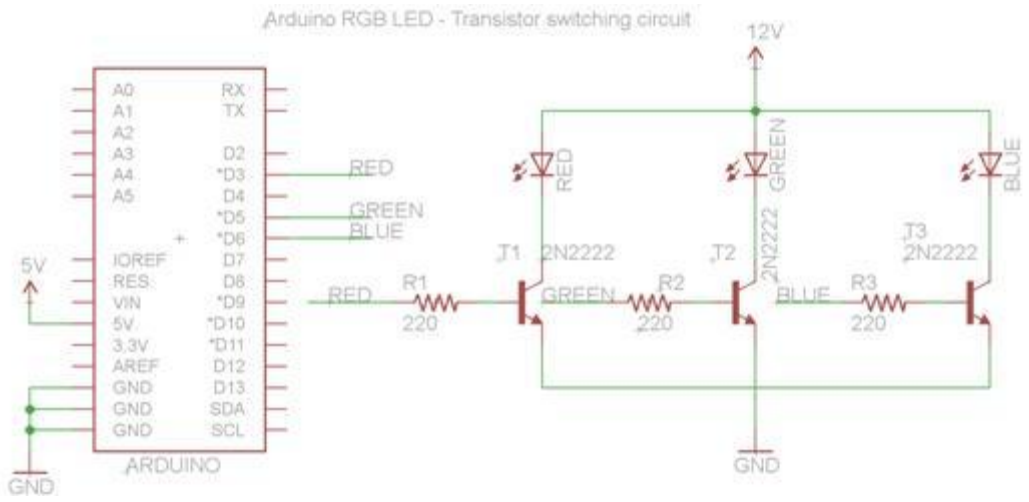

Overcast
Fair
Snow
Thunderstorm
28
Mortal peril
Rain

SWITCHING SEQUENCE

Lead Wire Color	---> CW Direction (1-2 Phase)							
	1	2	3	4	5	6	7	8
4 ORG	-	-						-
3 YEL		-	-	-				
2 PIK				-	-	-		
1 BLU						-	-	-

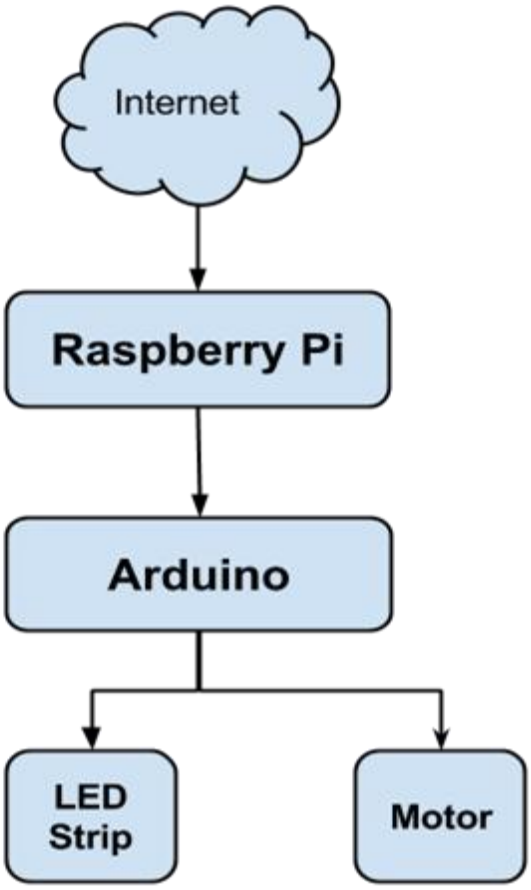

Arduino Stepper motor connection
U1
A0
A1
A2
A3
A4
A5
RES
VIN
5V
3.3V
AREF
GND
GND
GND
RX
TX
D2
*D3
D4
*D5
*D6
D7
D8
*D9
*D10
*D11
D12
D13
ARDUINO_SHIELDLABEL
5V
GND
MOTORPIN1
MOTORPIN2
MOTORPIN3
MOTORPIN4
IC1
GND
Power Darlington Driver
5V
5V
MOTOR CONNECTOR


One Section
+12V
+12V
+12V
RED
GREEN
BLUE
300
130
RED
GREEN
BLUE

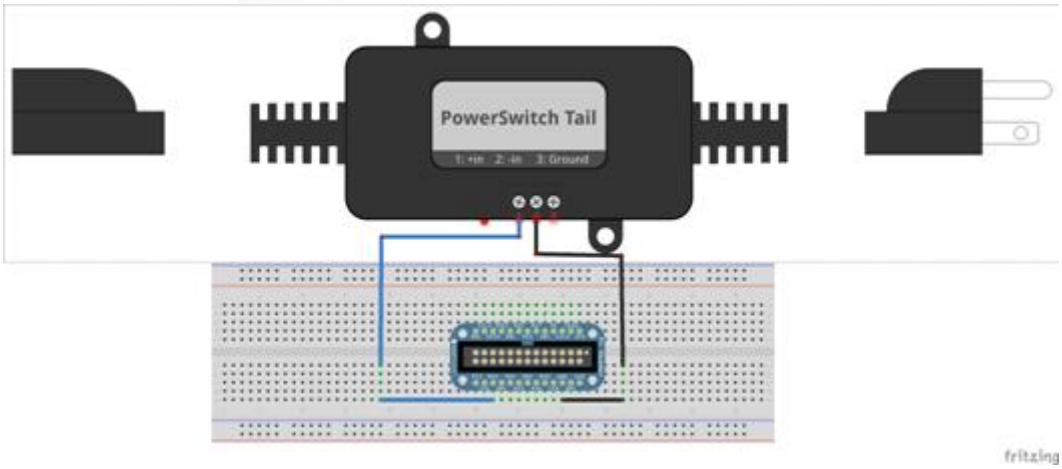

Arduino RGB LED - Transistor switching circuit
12V
A0
A1
A2
A3
A4
A5
RX
TX
D2
*D3
D4
*D5
*D6
D7
D8
*D9
*D10
*D11
D12
D13
SDA
SCL
IOREF
RES
VIN
5V
3.3V
AREF
GND
GND
GND
ARDUINO
5V
GND
RED
GREEN
BLUE
RED
R1
220
J1
2N2222
RED
GREEN
R2
220
J2
2N2222
GREEN
BLUE
R3
220
J3
2N2222
BLUE
GND

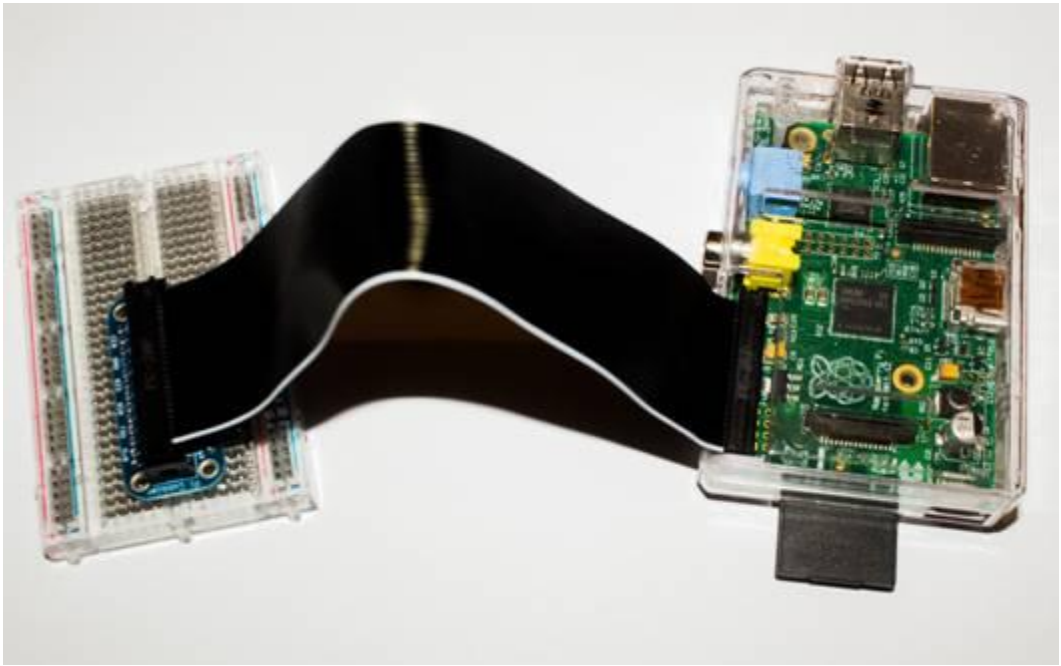

Start process
Scan for serial ports
Establish serial port connection
Obtain weather data from NOAA
Parse weather data
Transmit temperature
Transmit weather forecast
Transmit RGB and LED matrix data
Repeat process for 60 minutes

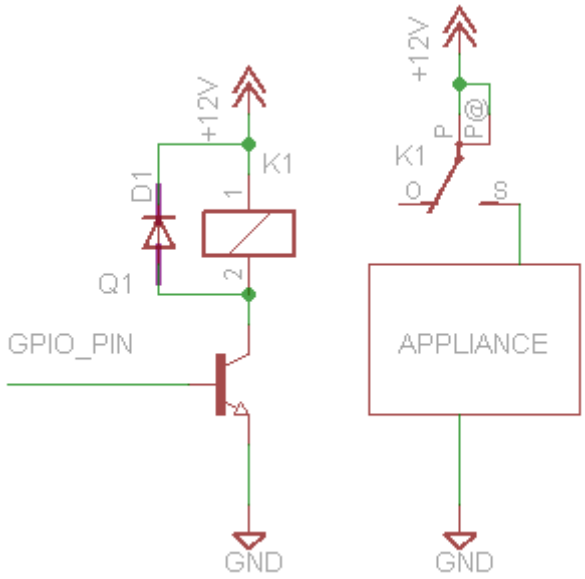

NATIONAL WEATHER SERVICE
HOME
FORECAST
PAST WEATHER
WEATHER SAFETY
INFORMATION CENTER
NEWS
SEARCH
ABOUT
Bitter Cold Settling into Western and Central U.S.; Heavy Rainfall Continues from Gulf Coast to Ohio Valley
A very slow-moving cold front will continue to focus heavy precipitation from Louisiana to the Ohio Valley through Monday morning. Numerous Flood and Flash Flood Watches are in effect in this region. Meanwhile, well below average temperatures have settled into the western and central parts of the country.
Read More...
SKOKIE IL
En Español
Light Snow
17°F
-8°C
Humidity 74%
Wind Speed W 18 G 26 mph
Barometer 30.13 in (1021.4 mb)
Dewpoint 10°F (-12°C)
Visibility 10.00 mi
Wind Chill 1°F (-17°C)
Last Update on 13 Jan 7:51 pm CST
Current conditions at
Chicago/O'Hare (KORD)
Lat: 41.98 Lon: -87.9 Elev: 658ft.
More Local Wx | 3 Day History | Mobile Weather
Share
TONIGHT
MONDAY
MONDAY NIGHT
TUESDAY
TUESDAY NIGHT
WEDNESDAY
WEDNESDAY NIGHT
THURSDAY
THURSDAY NIGHT
Partly Cloudy
Low: 14 °F
Sunny
High: 26 °F
Mostly Clear
Low: 16 °F
Mostly Sunny
High: 29 °F
Breezy
Low: 21 °F
Breezy
High: 35 °F
Partly Cloudy
Low: 24 °F
Mostly Sunny
High: 28 °F
Partly Cloudy
Low: 21 °F

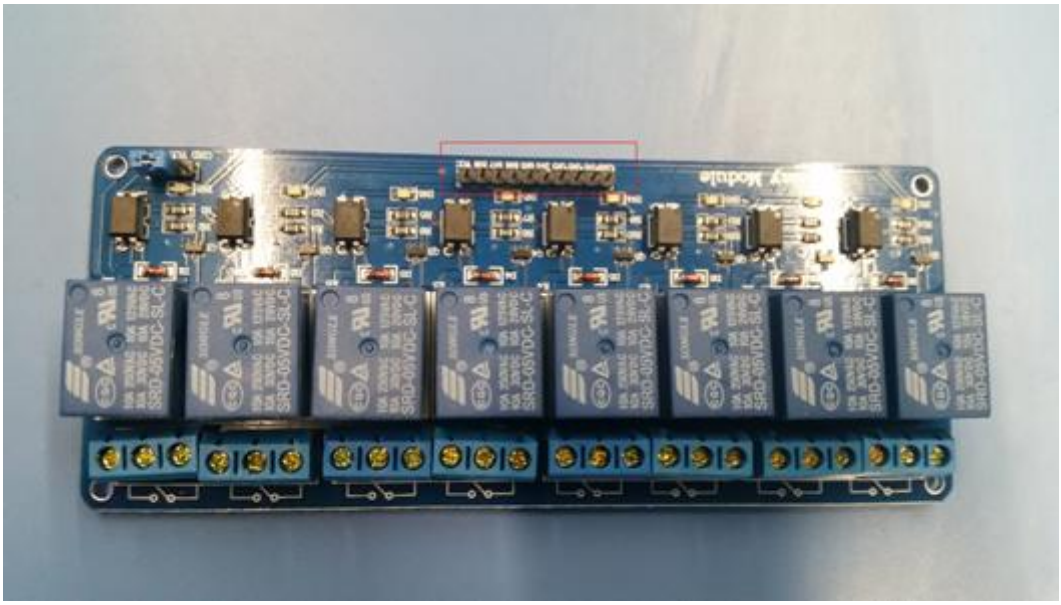

Internet
Raspberry Pi
Arduino
LED Strip
Motor

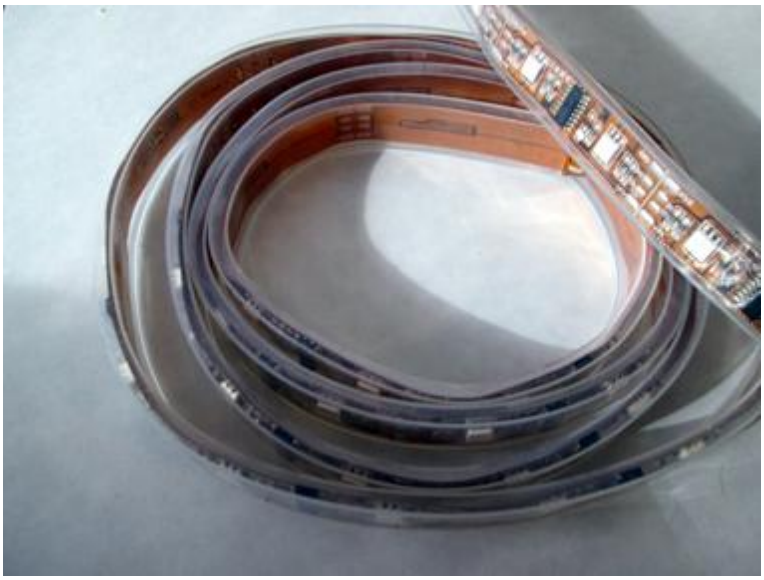
Chapter 4

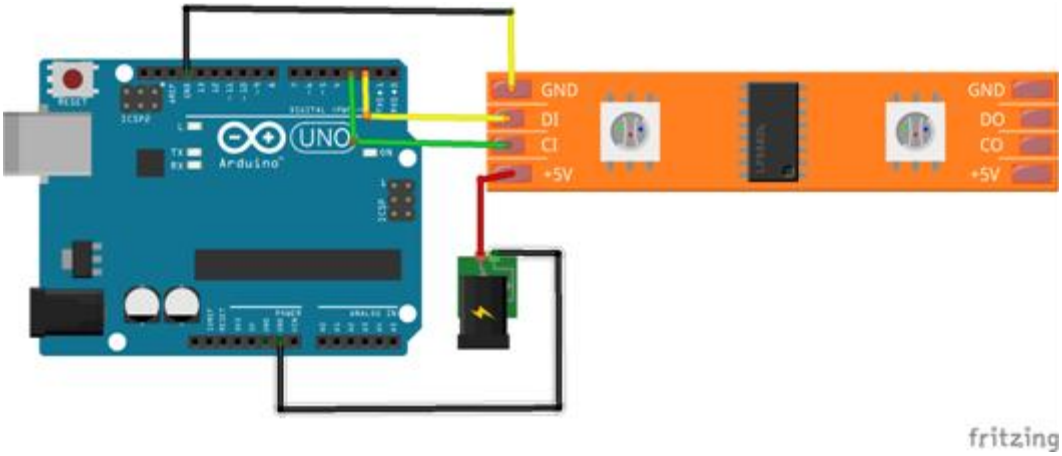

PowerSwitch Tail
1: +in 2: -in 3: Ground
fritzing




+12V
K1
D1
1
Q1
2
GPIO_PIN
GND
+12V
P@
P
K1
O
S
APPLIANCE
GND

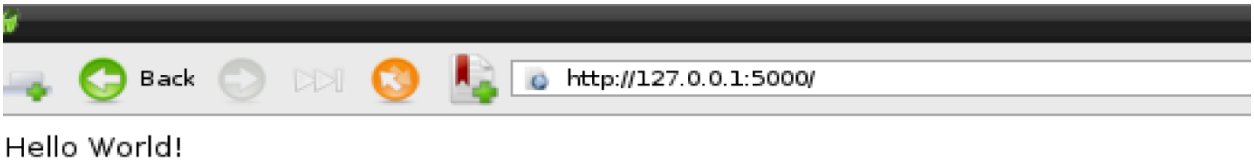




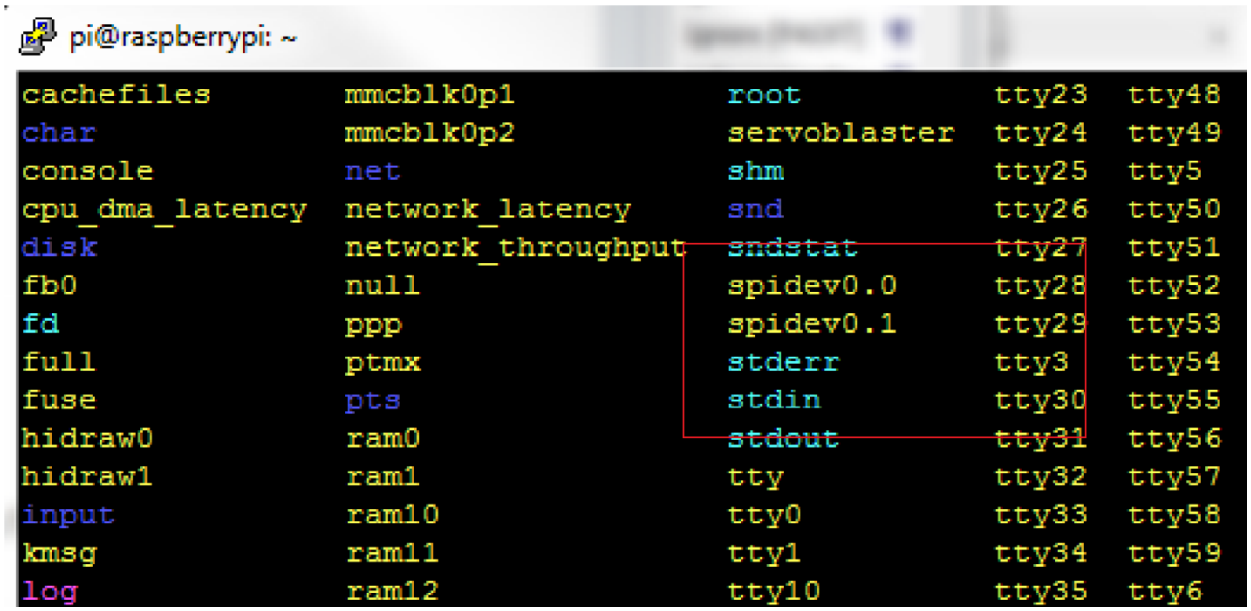

GND
DI
CI
+5V
GND
DO
CO
+5V
UNO
Arduino
fritzing

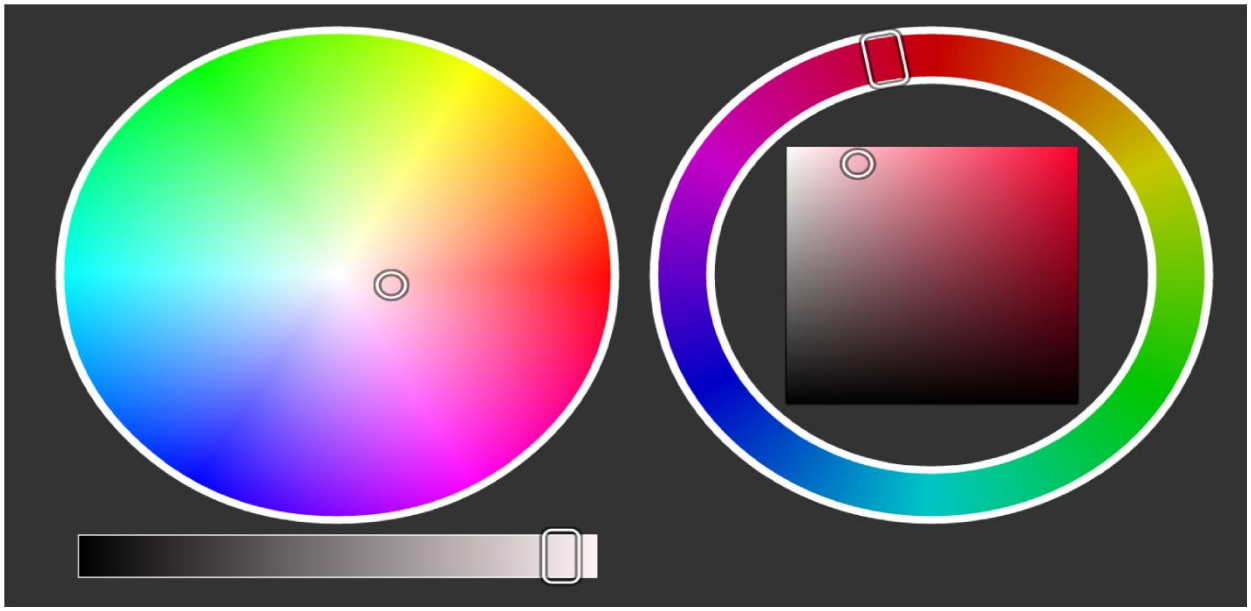
Hello world!

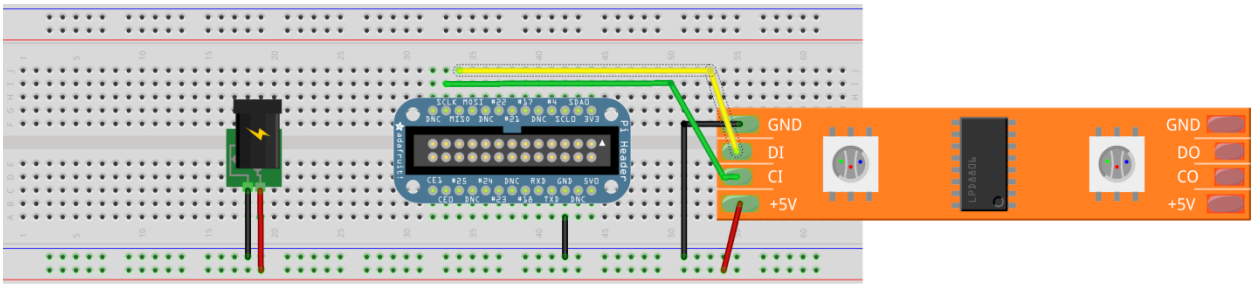
Chapter 5

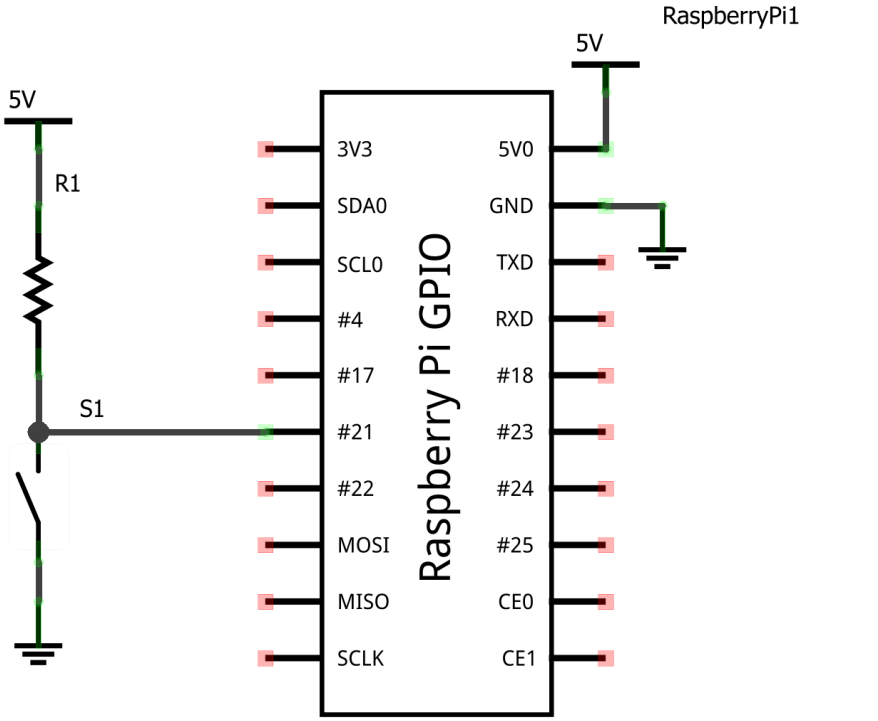

Back
http://127.0.0.1:5000/

Hello World!

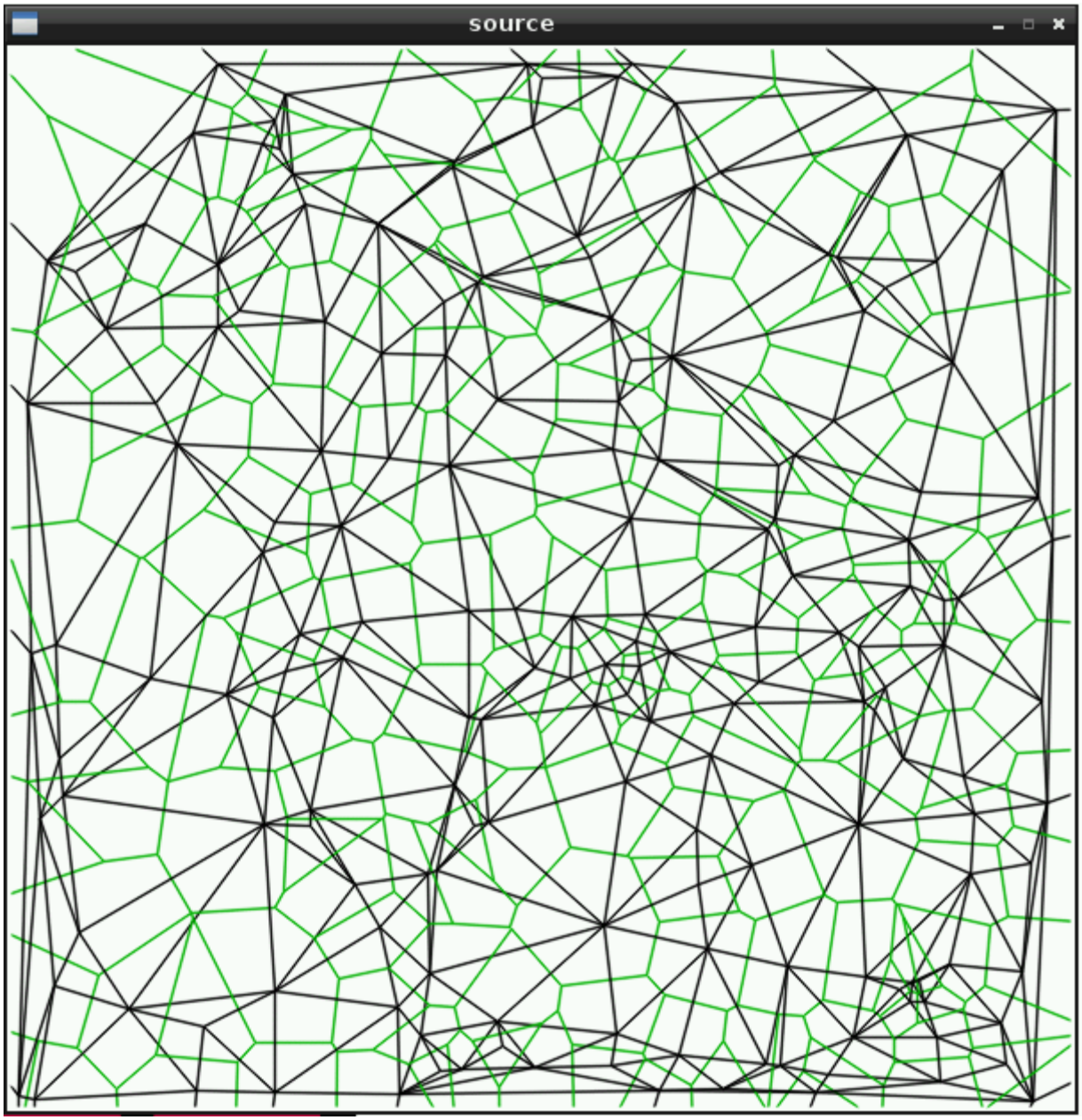

pi@raspberrypi: ~
cachefiles mmcblk0p1 root tty23 tty48
char mmcblk0p2 servoblaster tty24 tty49
console net shm tty25 tty5
cpu_dma_latency network_latency snd tty26 tty50
disk network_throughput sndstat tty27 tty51
fb0 null spidev0.0 tty28 tty52
fd ppp spidev0.1 tty29 tty53
full ptmx stderr tty3 tty54
fuse pts stdin tty30 tty55
hidraw0 ram0 stdout tty31 tty56
hidraw1 ram1 tty tty32 tty57
input ram10 tty0 tty33 tty58
kmsg ram11 tty1 tty34 tty59
log ram12 tty10 tty35 tty6



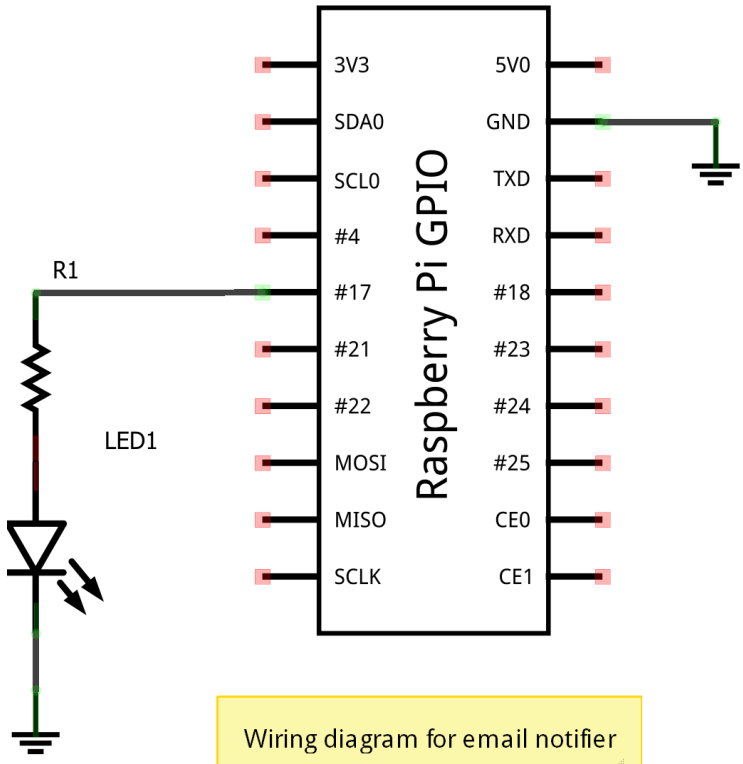

GND
DI
CI
+5V
GND
DO
CO
+5V
fritzing



Chapter 6

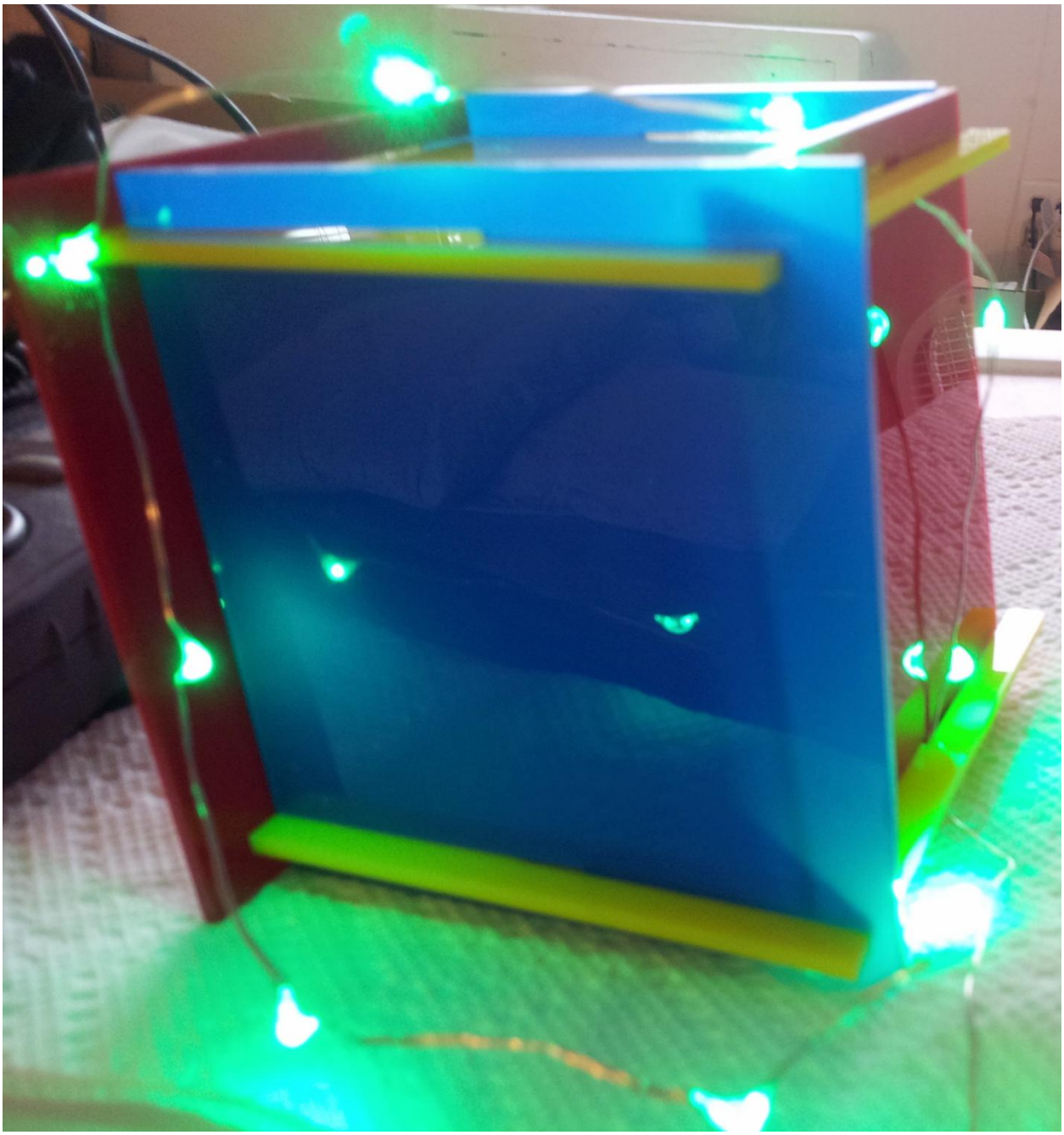


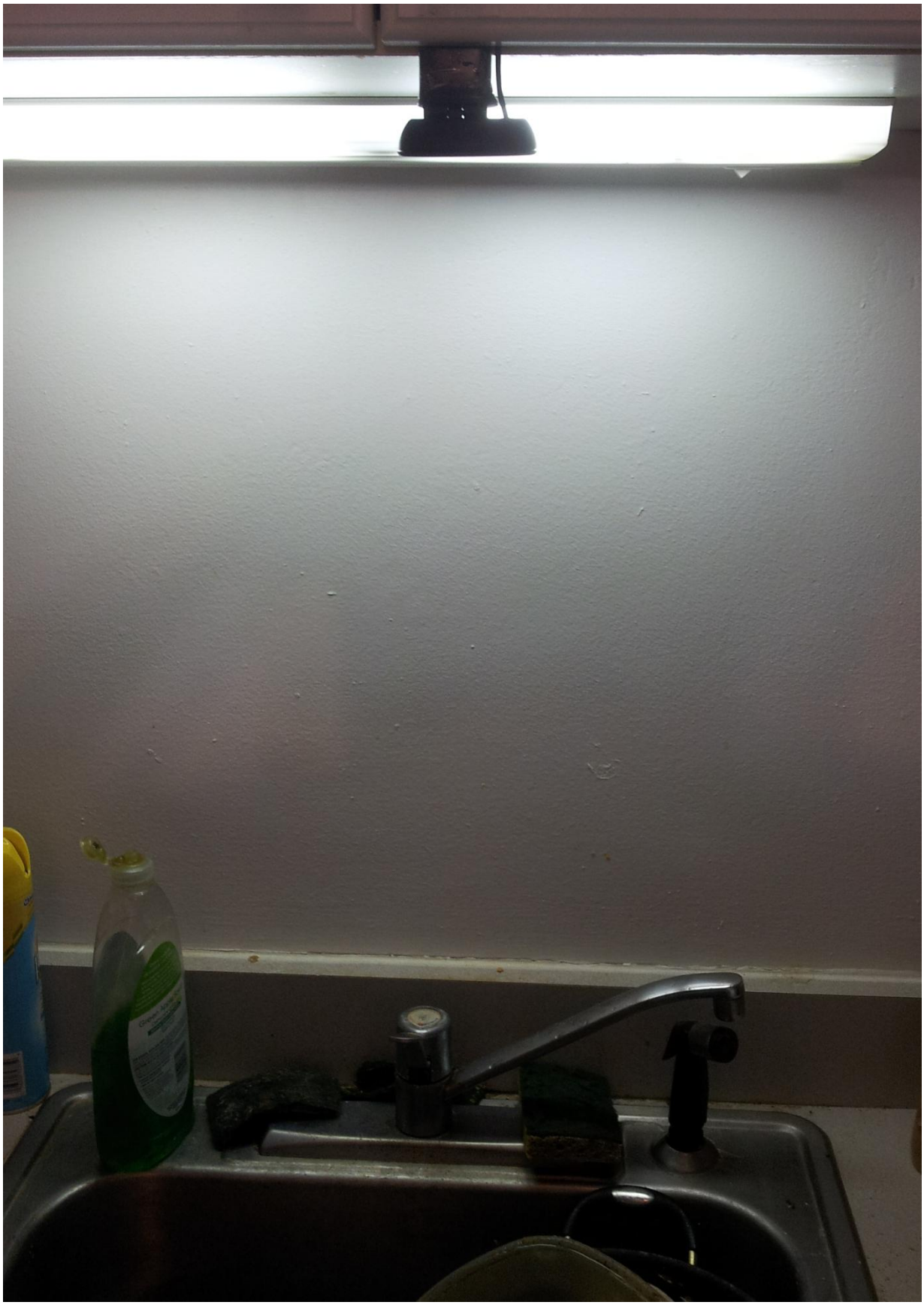
RaspberryPi GPIO

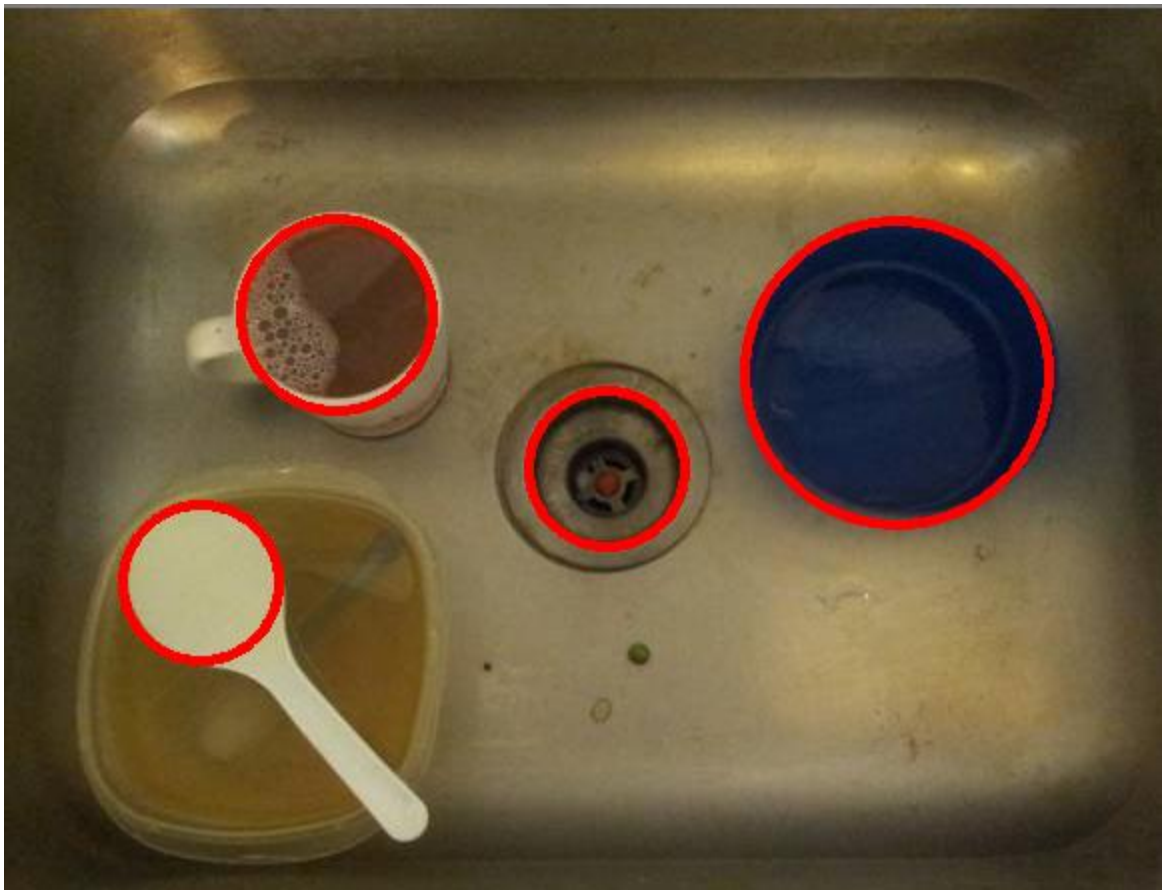


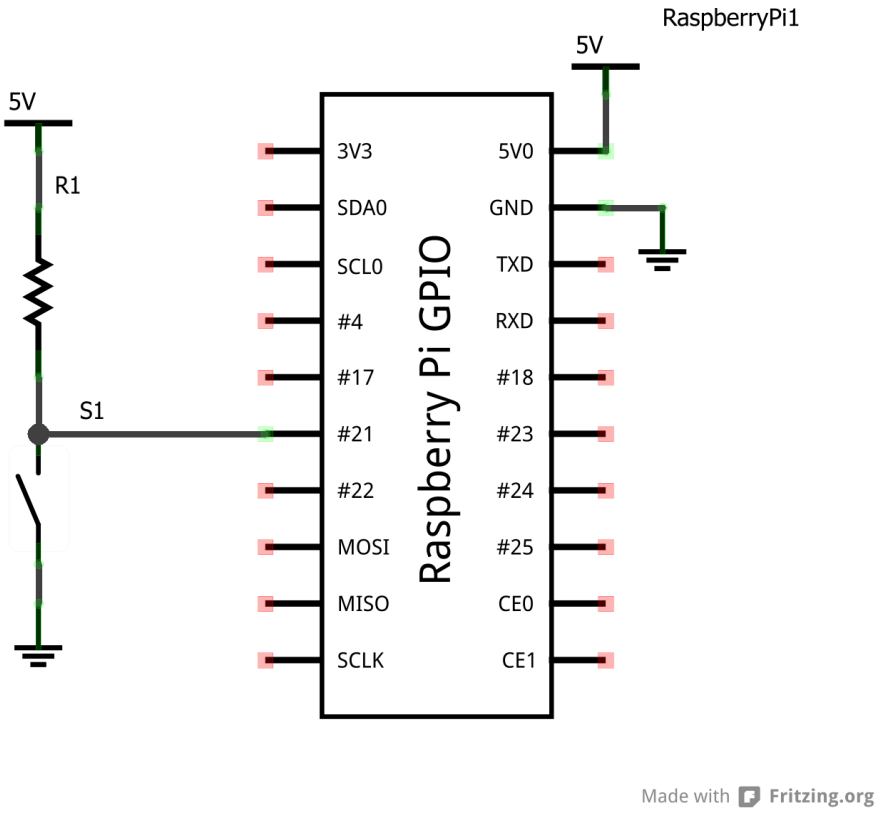
Wiring diagram for email notifier

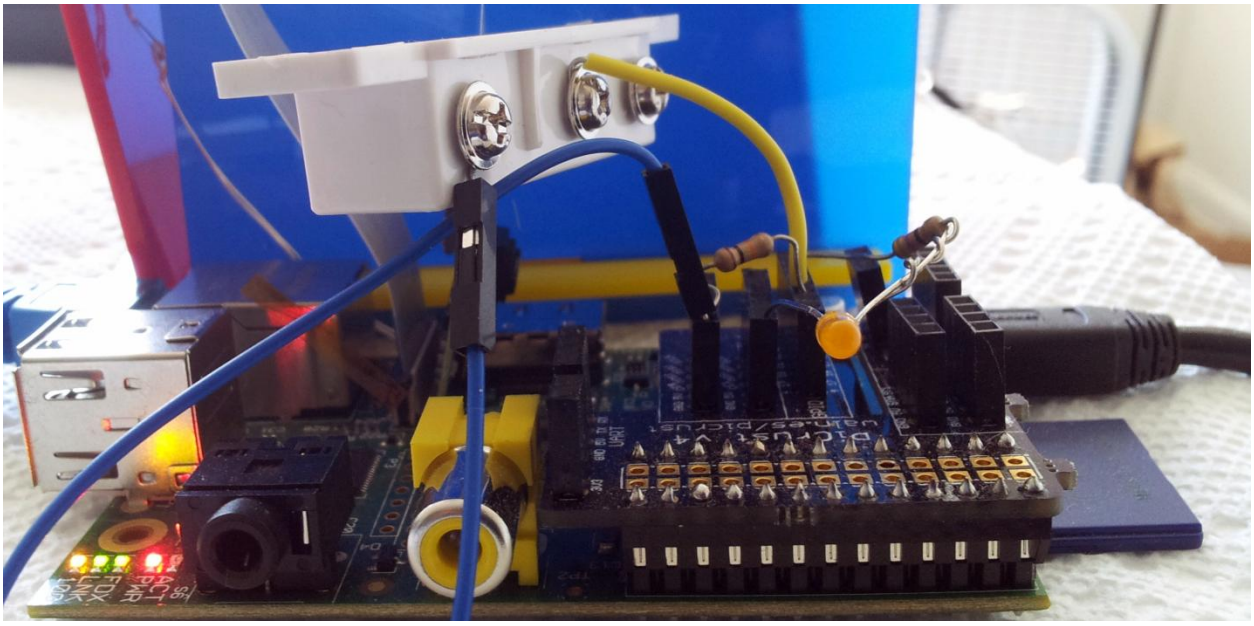
Made with Fritzing.org

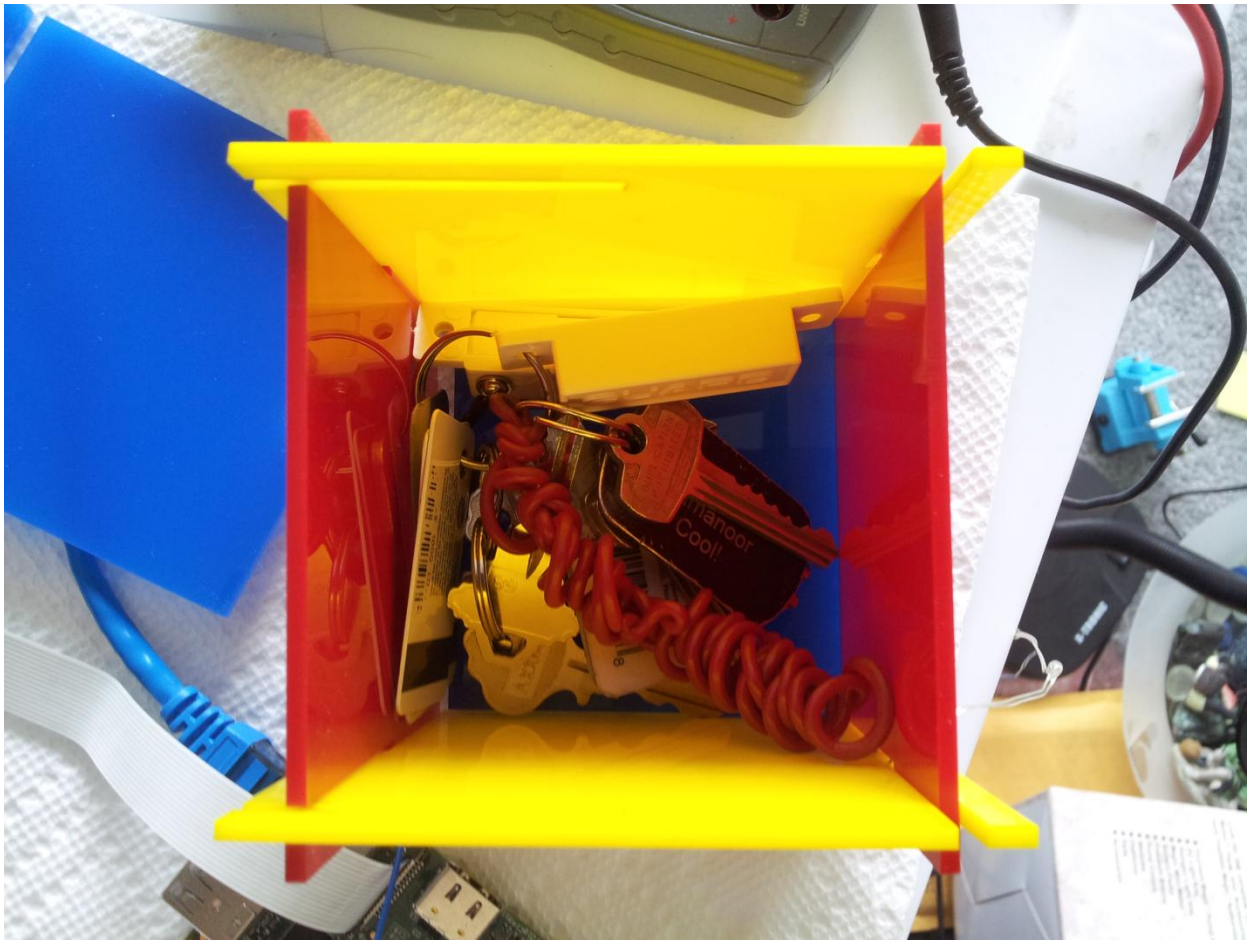




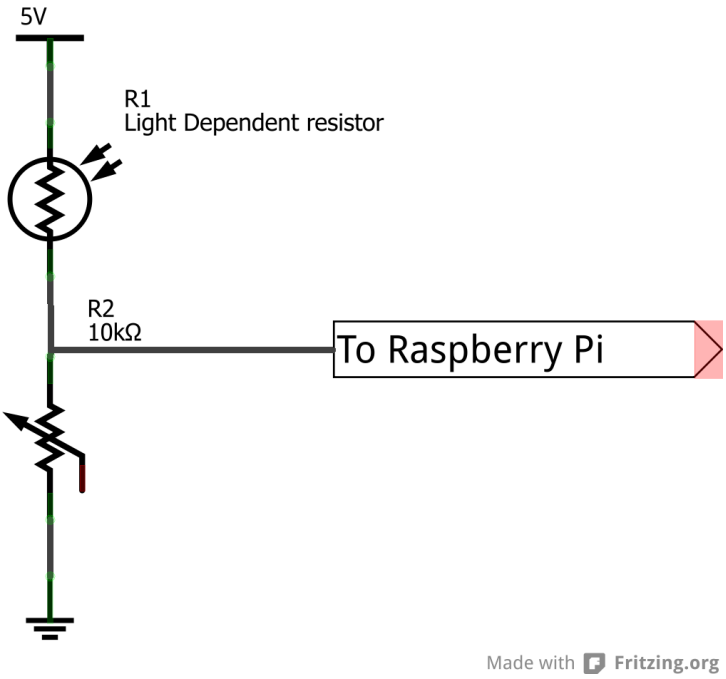


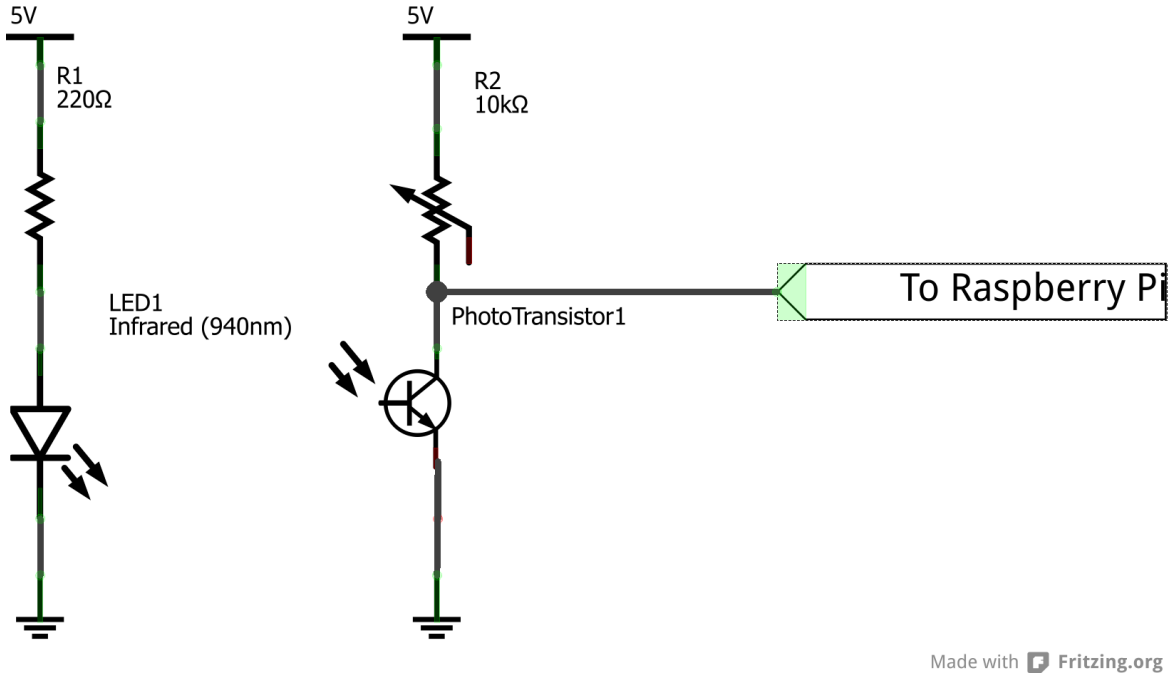

RaspberryPi1
5V
5V
R1
S1
3V3
SDA0
SCL0
#4
#17
#21
#22
MOSI
MISO
SCLK
Raspberry Pi GPIO
5V0
GND
TXD
RXD
#18
#23
#24
#25
CE0
CE1
Made with Fritzing.org

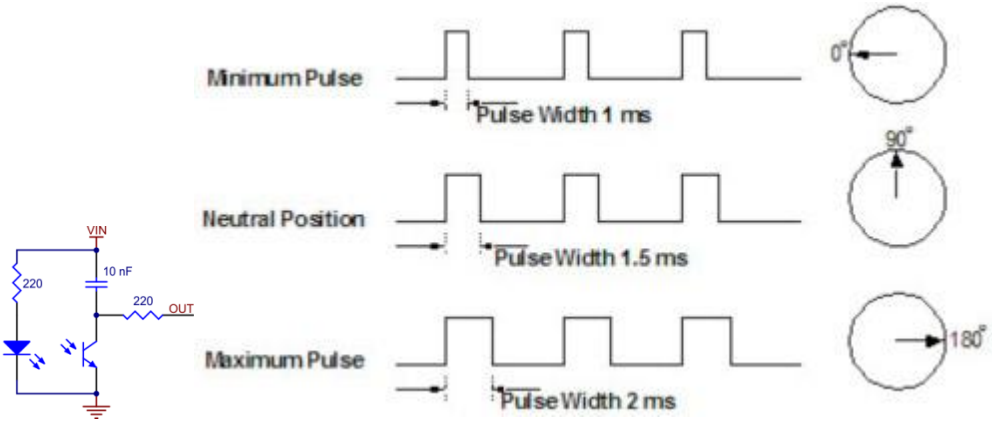


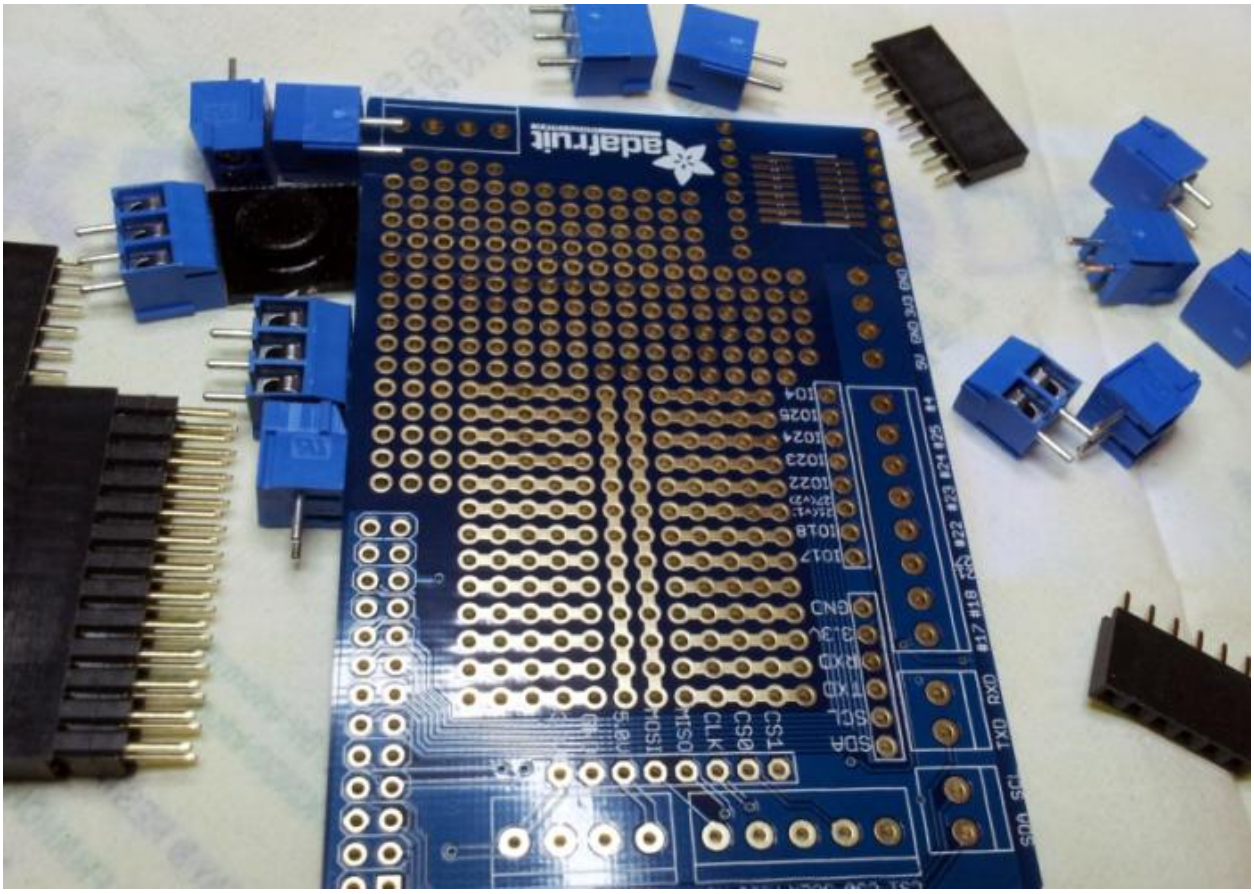

Cool!

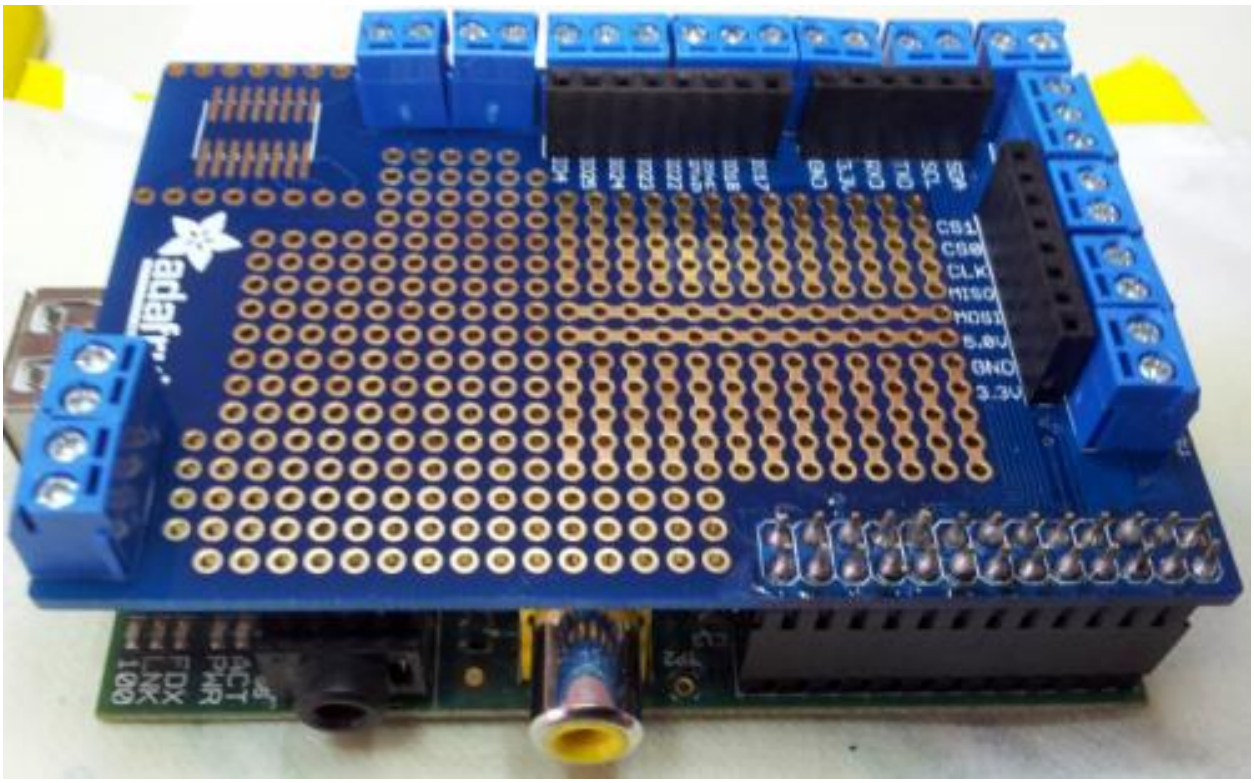
Chapter 7

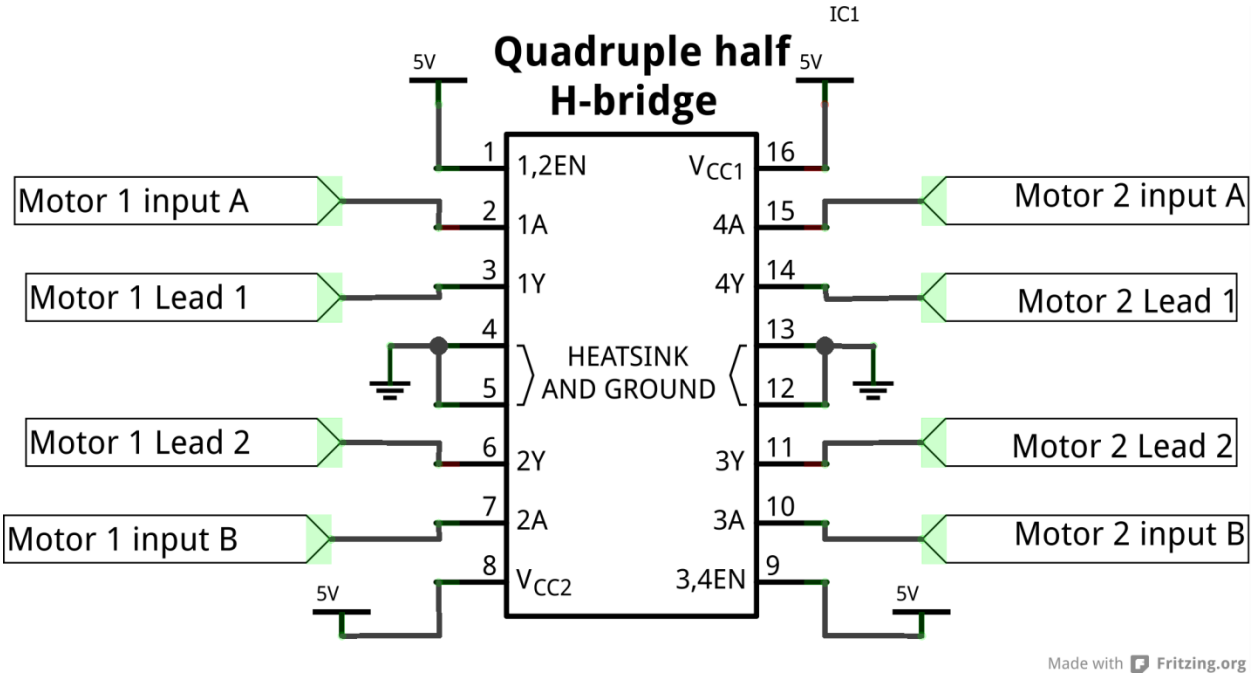

5V
R1
Light Dependent resistor
R2
10kΩ
To Raspberry Pi
Made with Fritzing.org

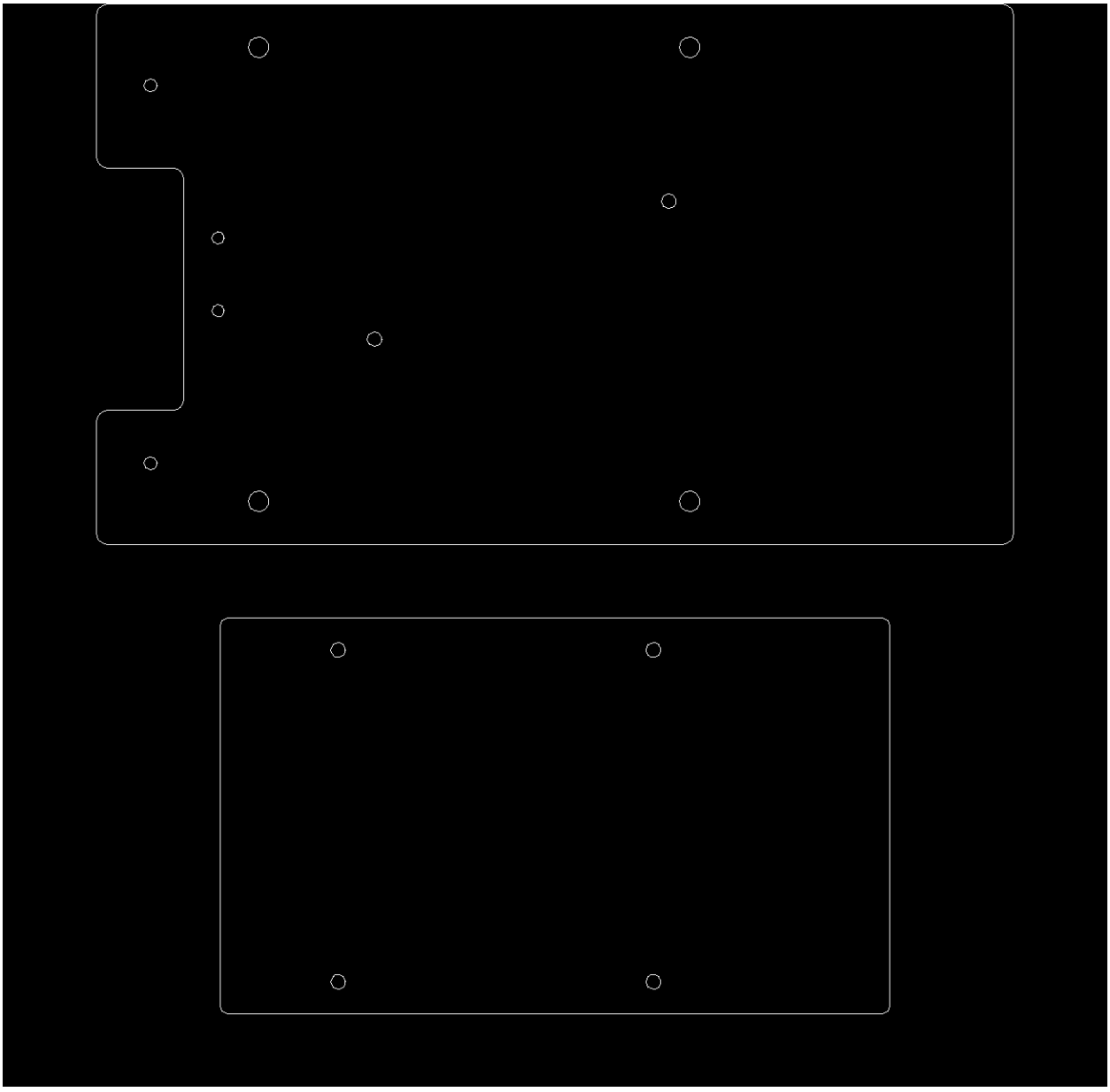

5V
R1
220Ω
LED1
Infrared (940nm)
5V
R2
10kΩ
PhotoTransistor1
To Raspberry Pi
Made with Fritzing.org

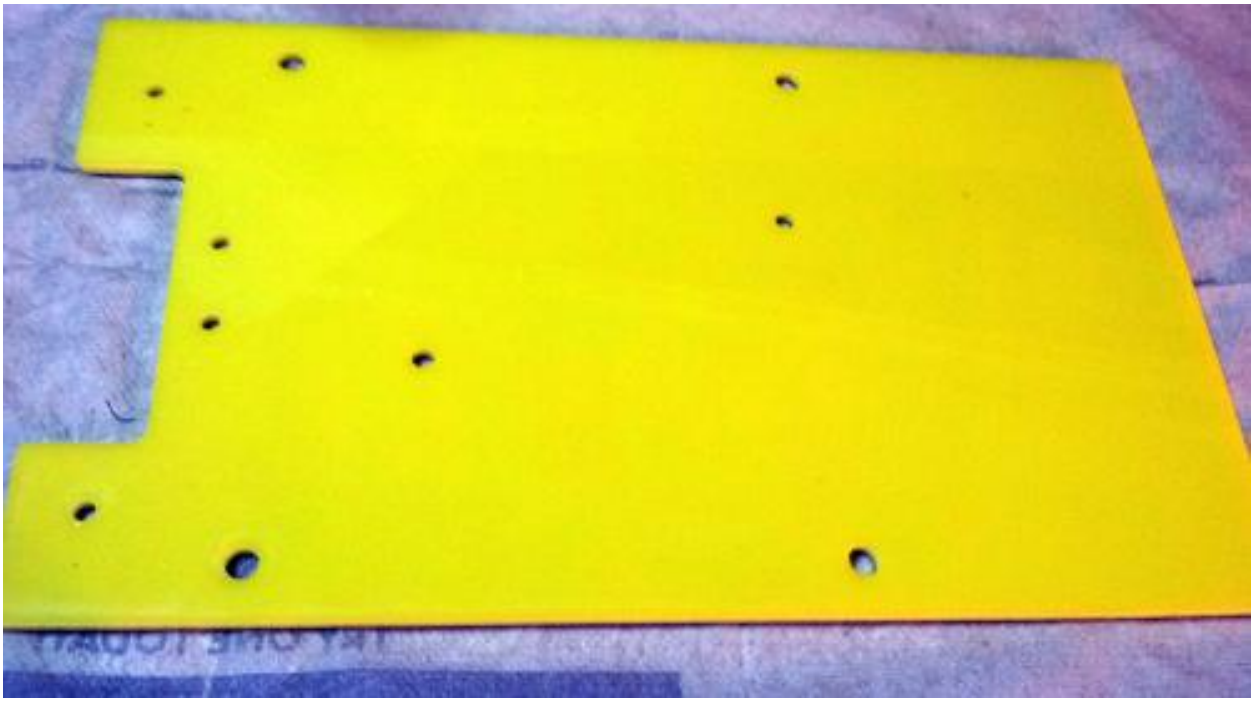

VIN
220
10 nF
220
OUT
Minimum Pulse
Pulse Width 1 ms
0°
Neutral Position
Pulse Width 1.5 ms
90°
Maximum Pulse
Pulse Width 2 ms
180°

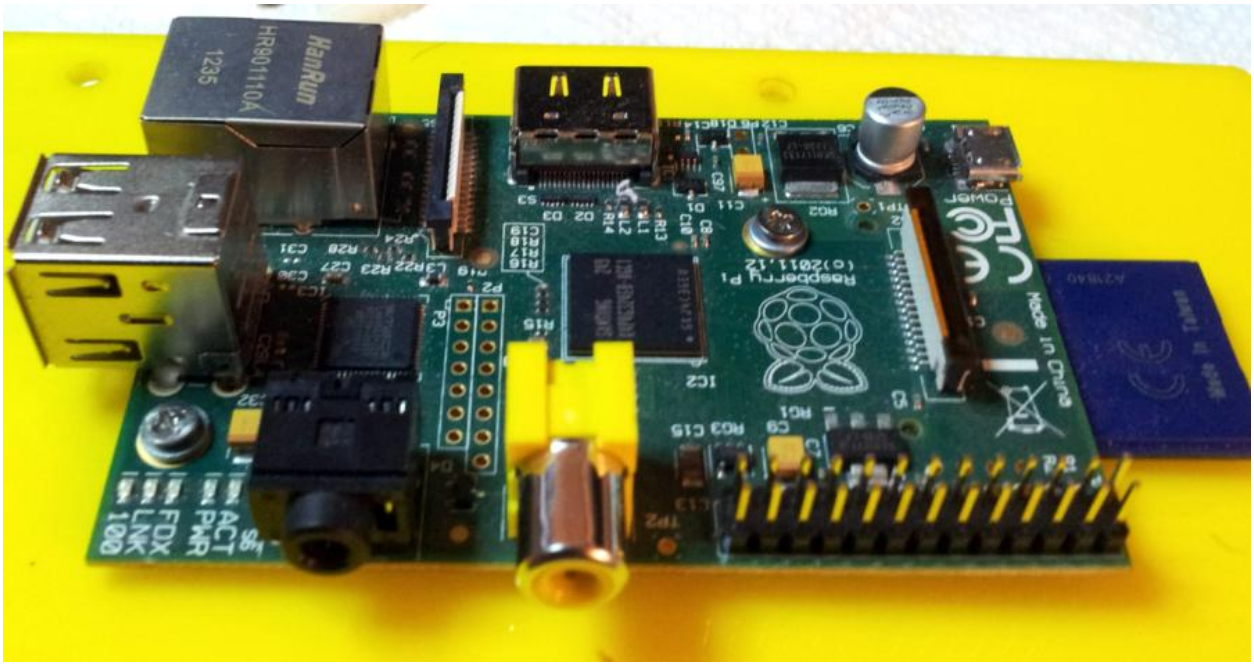

adafruit

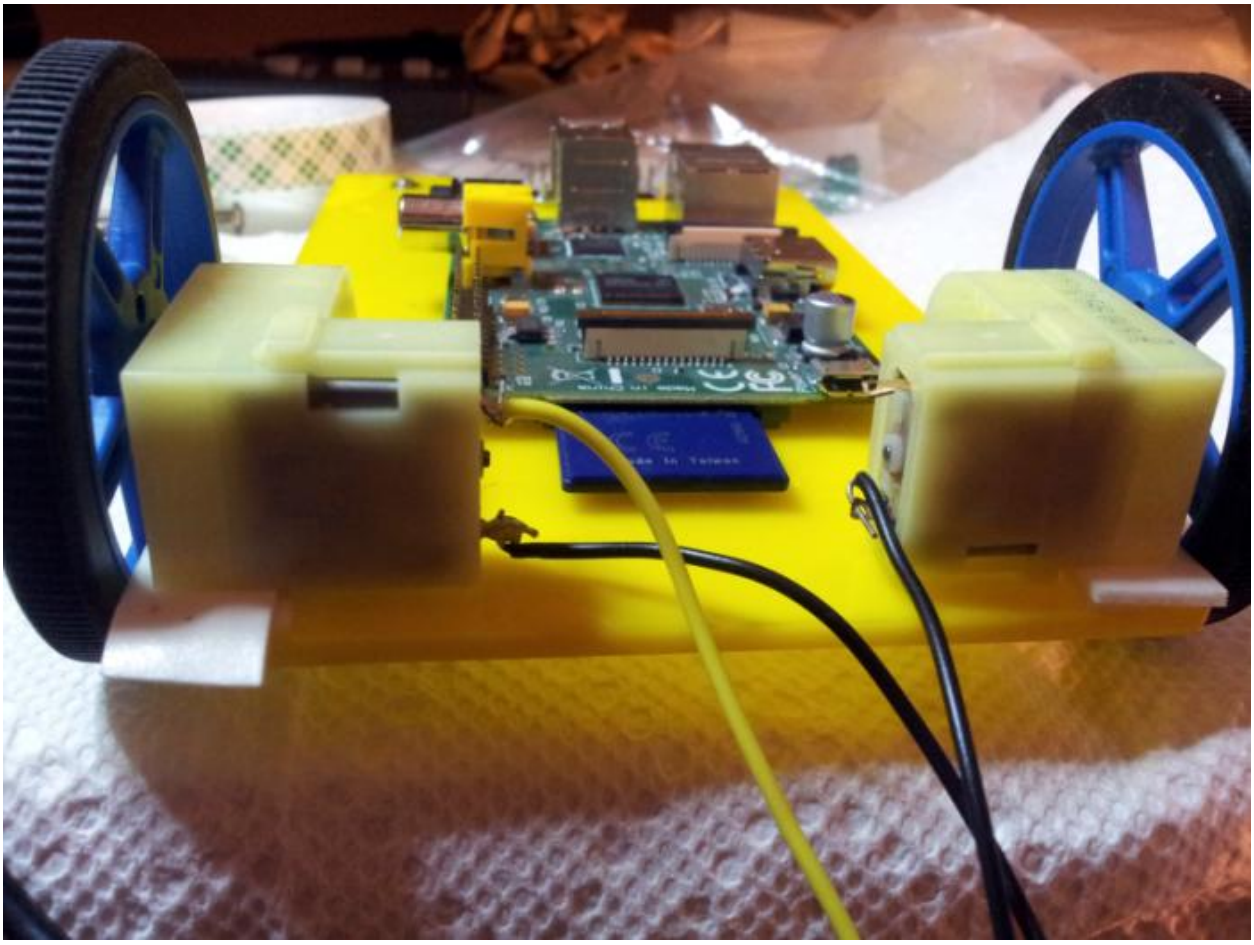

adafruit

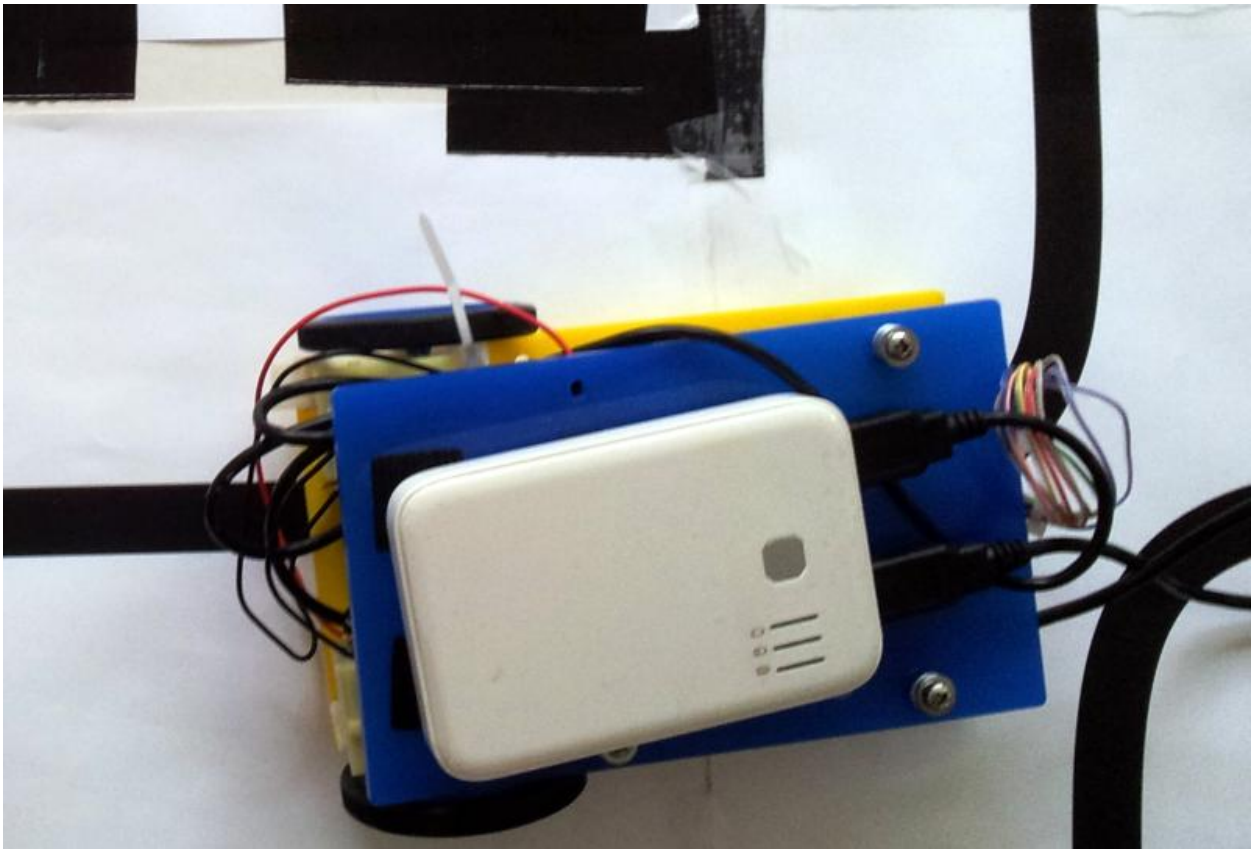

IC1
Quadruple half H-bridge
5V
5V
1
1,2EN
V_{CC1}
16
Motor 1 input A
2
1A
4A
15
Motor 2 input A
3
1Y
4Y
14
Motor 1 Lead 1
Motor 2 Lead 1
4
13
HEATSINK AND GROUND
5
12
Motor 1 Lead 2
6
2Y
3Y
11
Motor 2 Lead 2
7
2A
3A
10
Motor 1 input B
Motor 2 input B
8
V_{CC2}
3,4EN
9
5V
5V
Made with Fritzing.org

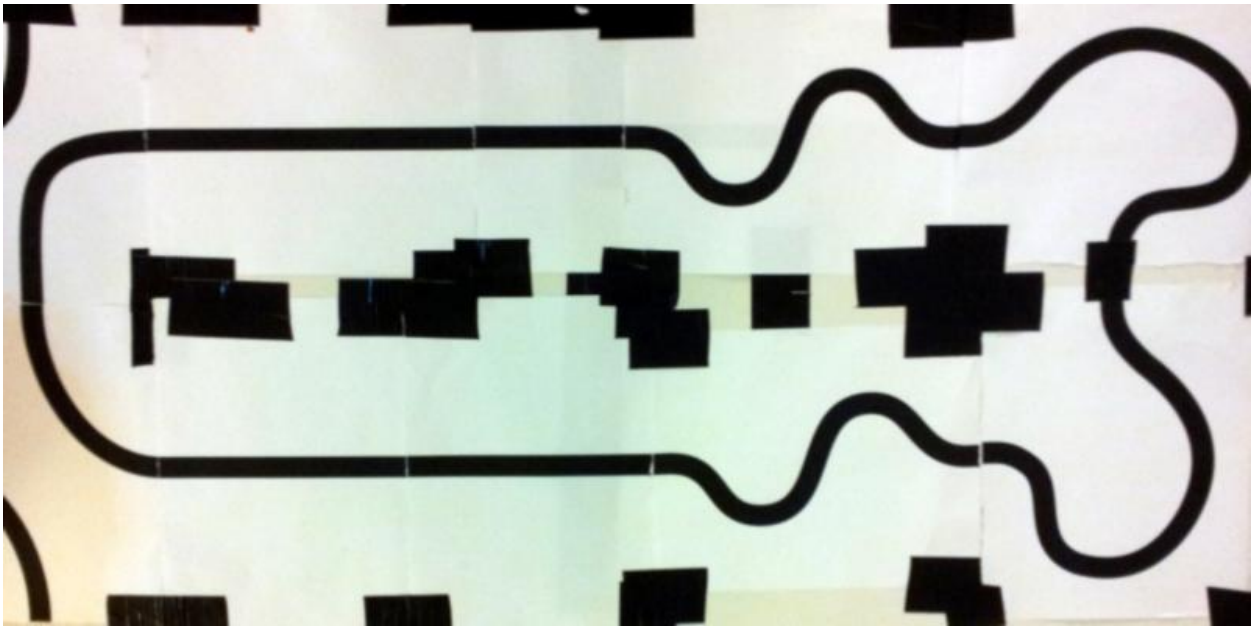


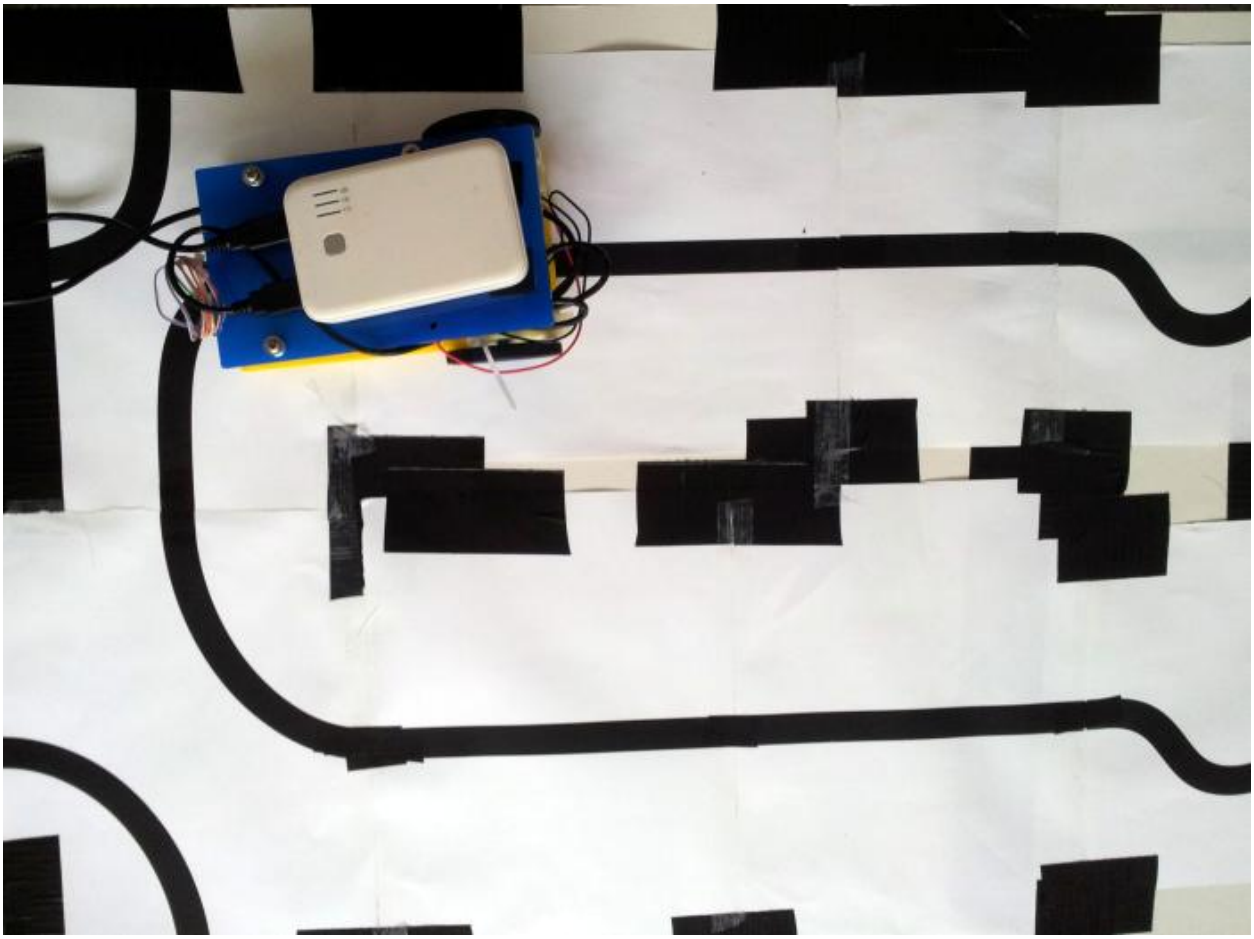


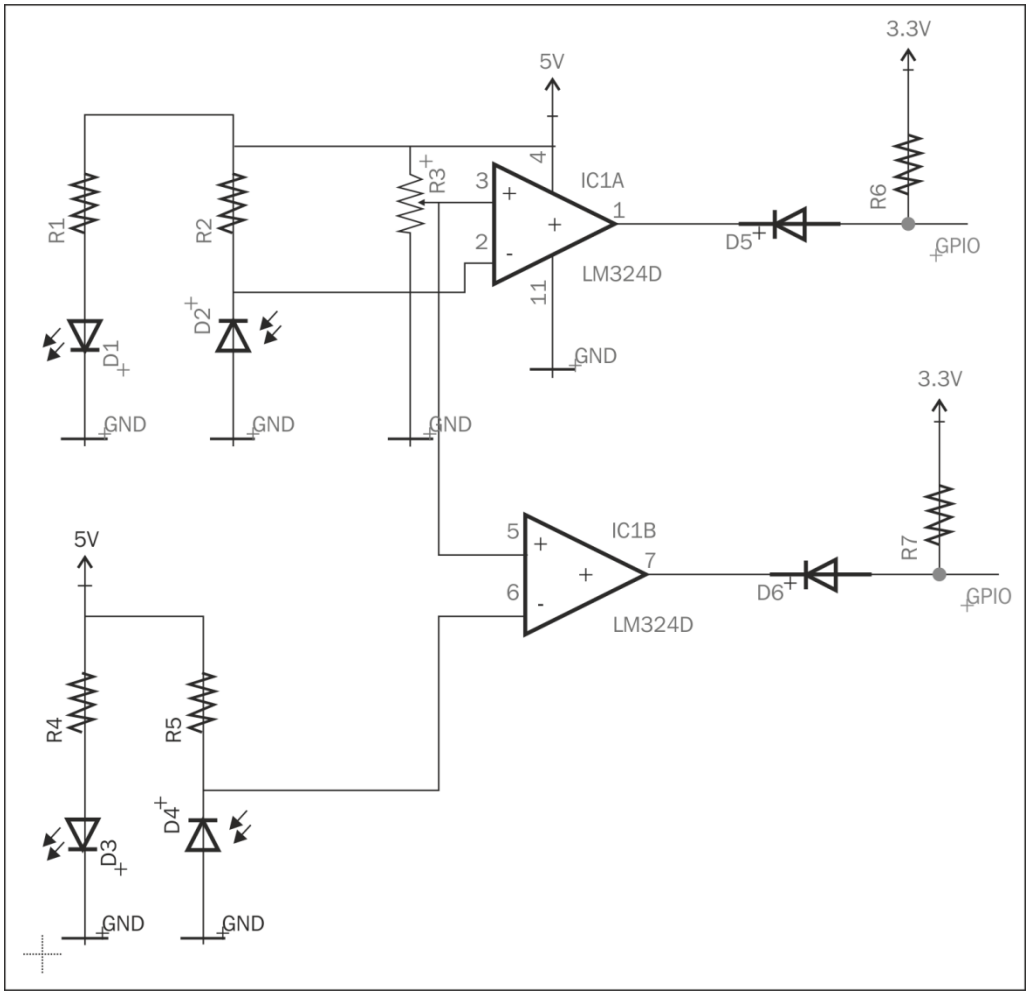

HanRun
HR901110A
1235
FDX
LNK
100
ACT
PWR











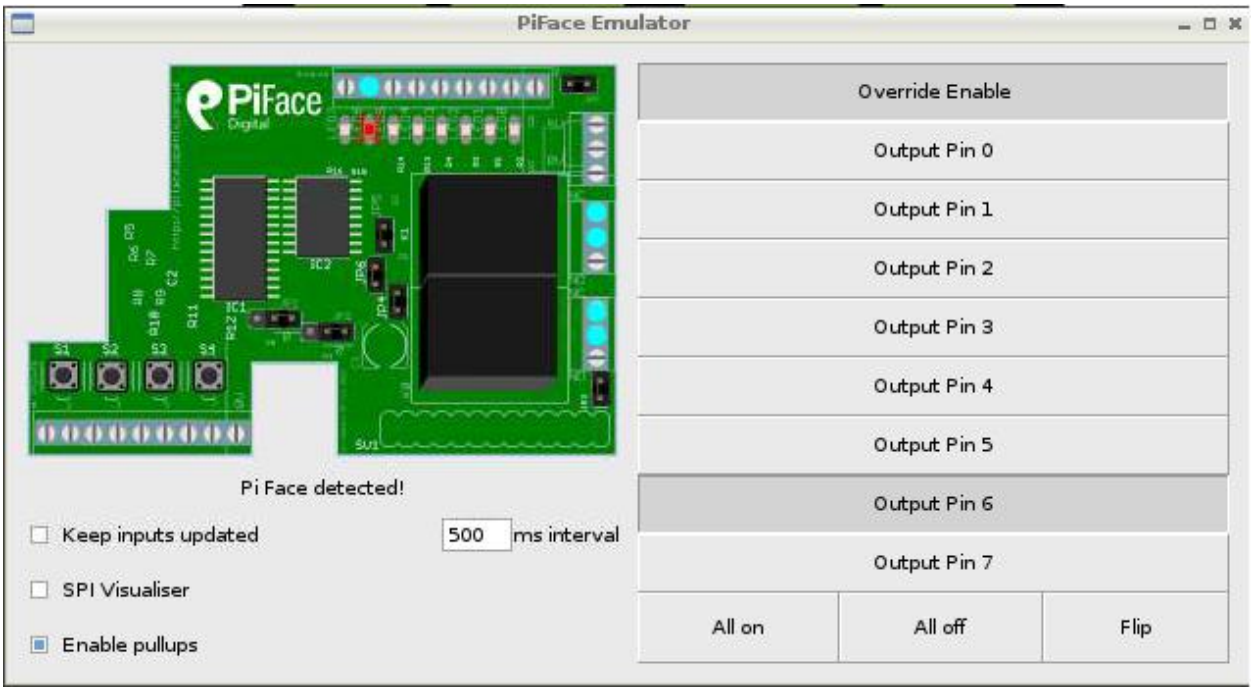
FUNCTION TABLE
(each driver)

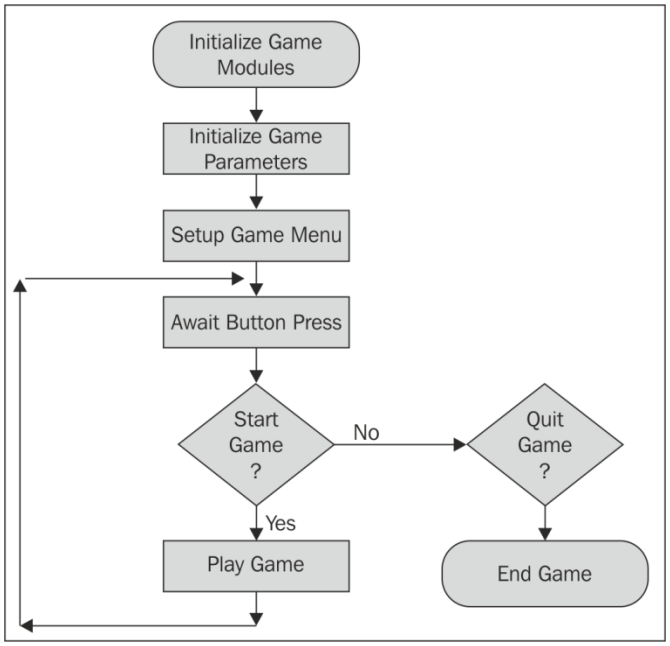
INPUTS†		OUTPUT
A	EN	Y
H	H	H
L	H	L
X	L	Z

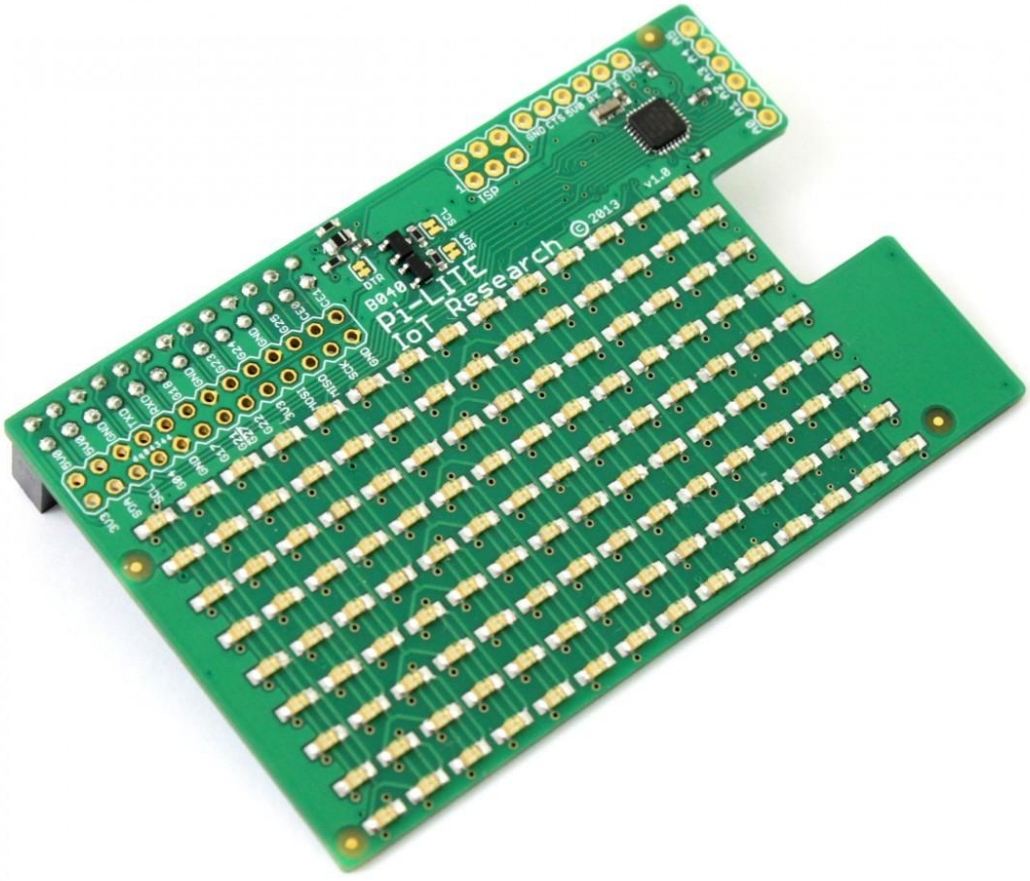
H = high-level, L = low-level
X = irrelevant
Z = high-impedance (off)
† In the thermal shutdown mode, the output is in a high-impedance state regardless of the input levels.

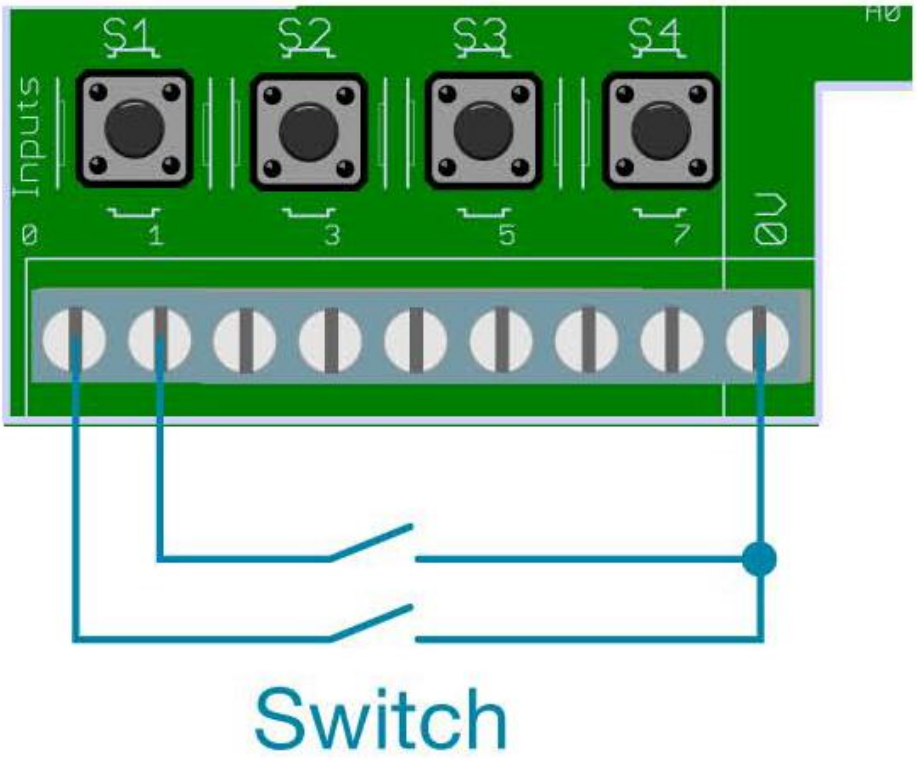
Chapter 8


Start Game
Exit
PRIORITY MAIL
ULINE
BOX CERTIFICATE
SINGLEWALL
PLEASANT PRAIRIE, WISCONSIN USA
12 x 9 x 4
S-4521
ULINE
uline.com
PRIORITY


PiFace Emulator
PiFace
Digital
Pi Face detected!
Keep inputs updated
500
ms interval
SPI Visualiser
Enable pullups
Override Enable
Output Pin 0
Output Pin 1
Output Pin 2
Output Pin 3
Output Pin 4
Output Pin 5
Output Pin 6
Output Pin 7
All on
All off
Flip

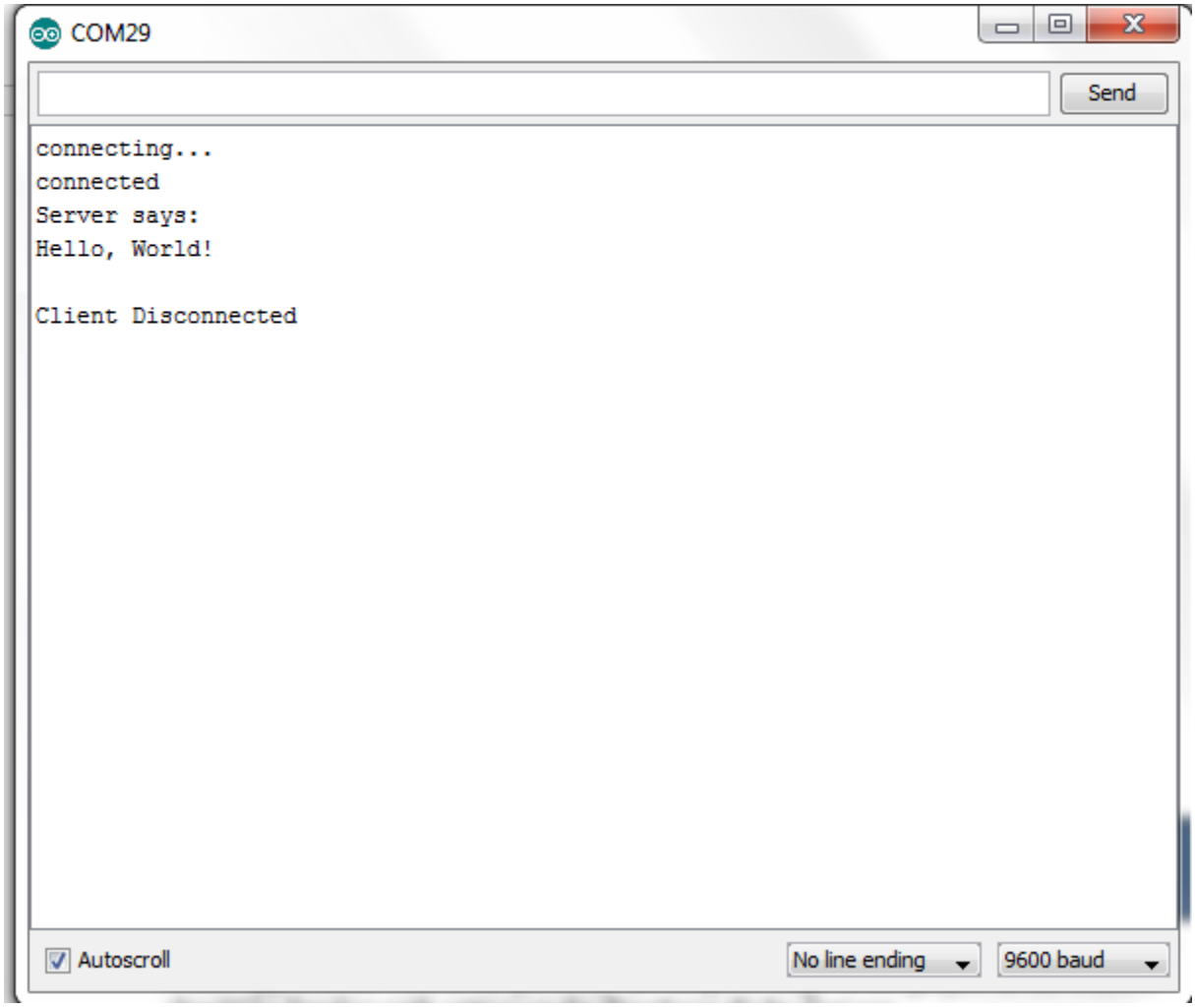

Initialize Game Modules
Initialize Game Parameters
Setup Game Menu
Await Button Press
Start Game ?
No
Quit Game ?
Yes
Play Game
End Game

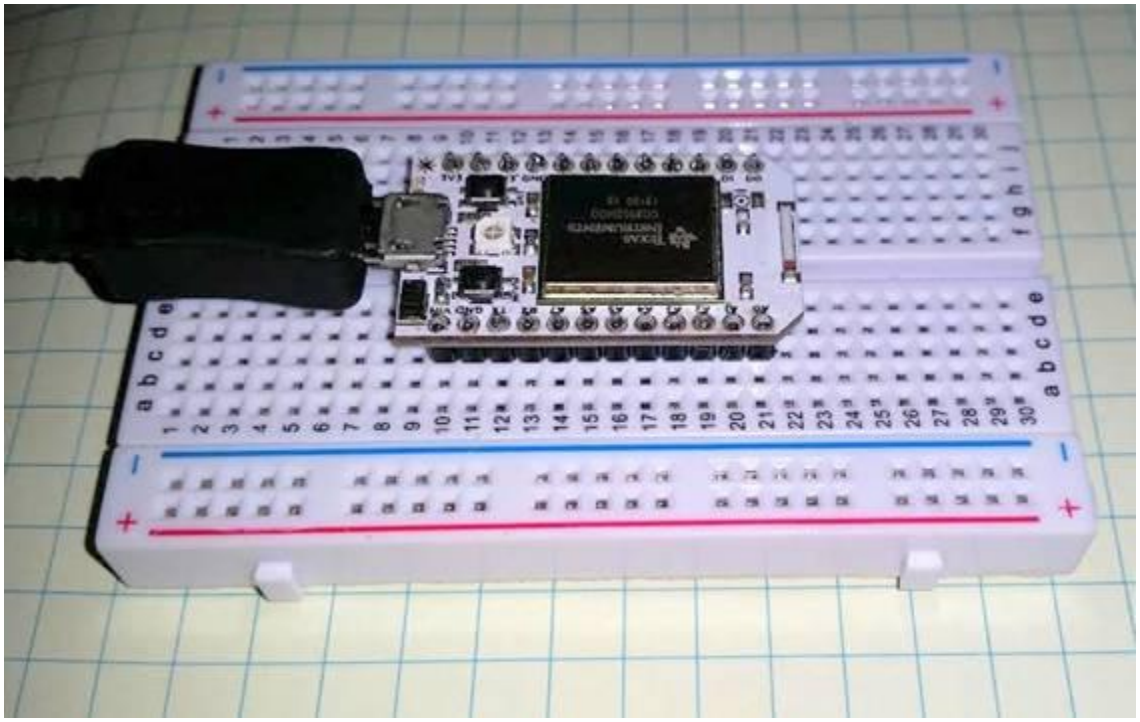

Pi-LITE
IoT Research
2013
v1.0

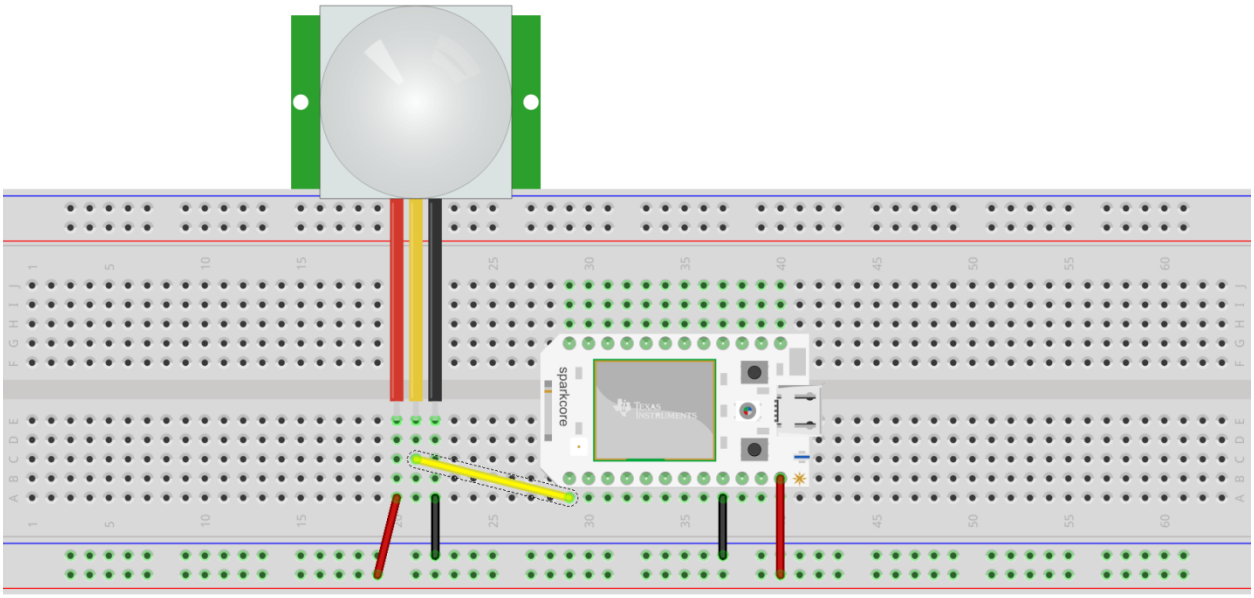


Switch

Chapter 9


COM29
Send
connecting...
connected
Server says:
Hello, World!
Client Disconnected
Autoscroll
No line ending
9600 baud




sparkcore
fritzing

CODER

Space Rocks!

Eyeball

Hello Coder

Chapter 10

Form To Record Health Parameters

Blood Pressure:

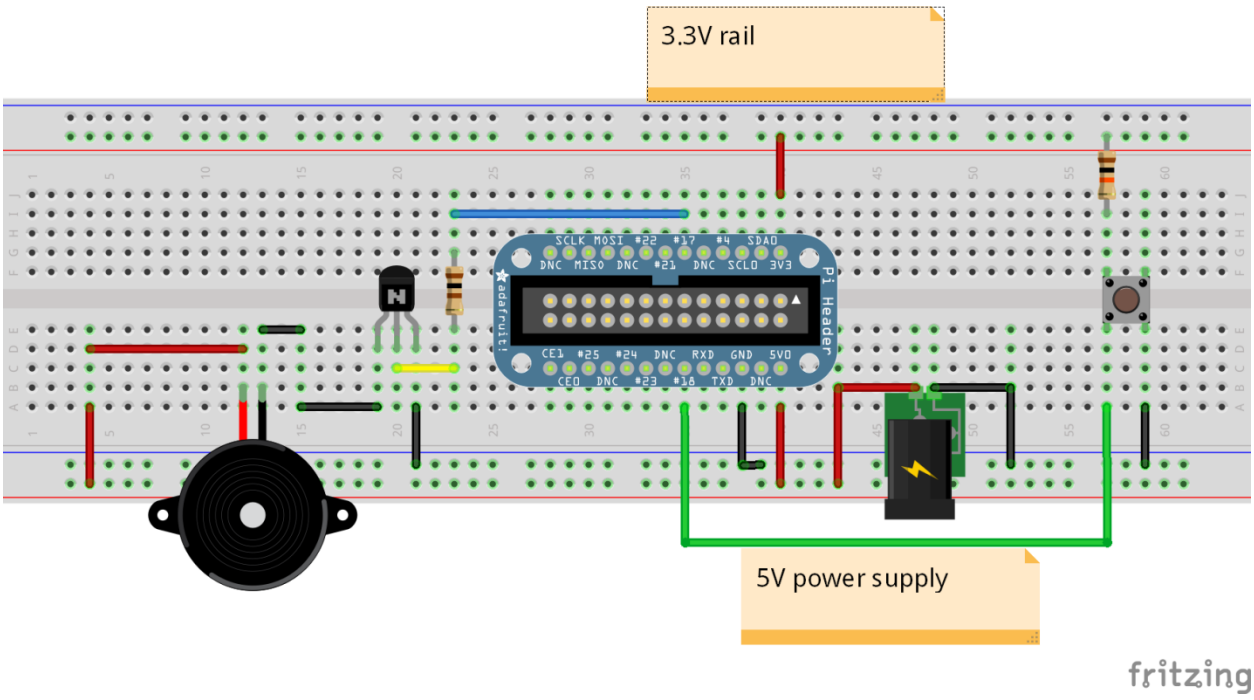
SpO_2:

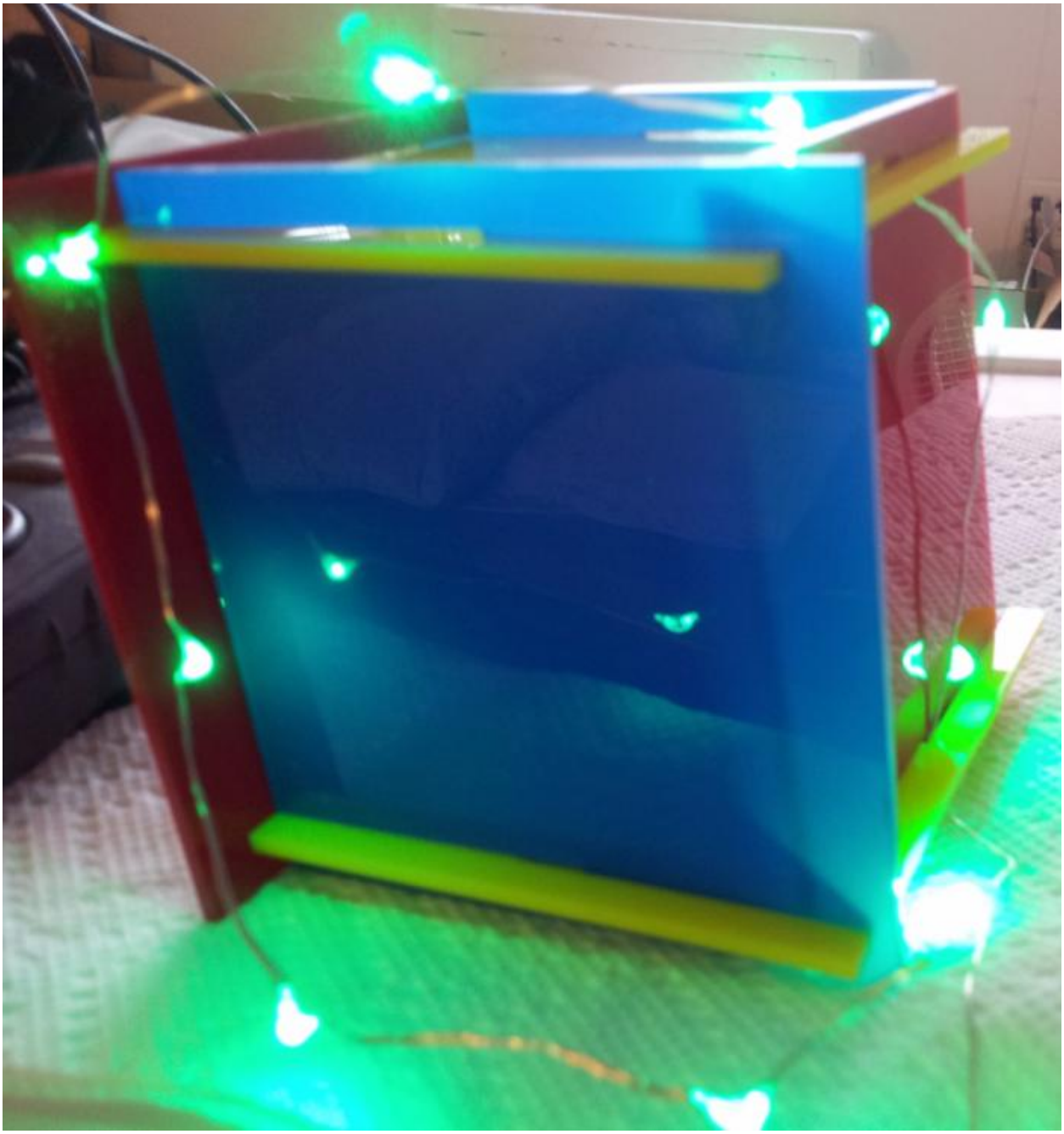
Pulse:

Submit Record

Your Data Has Been Recorded To A CSV File!

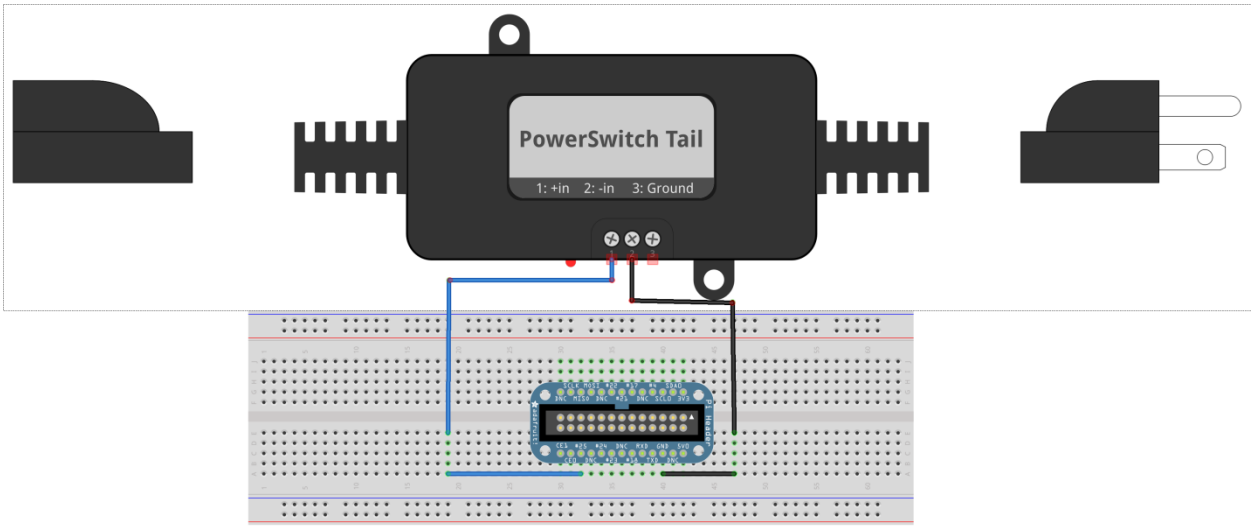
Data Recorded: Blood Pressure: **120/80** Oxygen Saturation:**99** Pulse:**78**

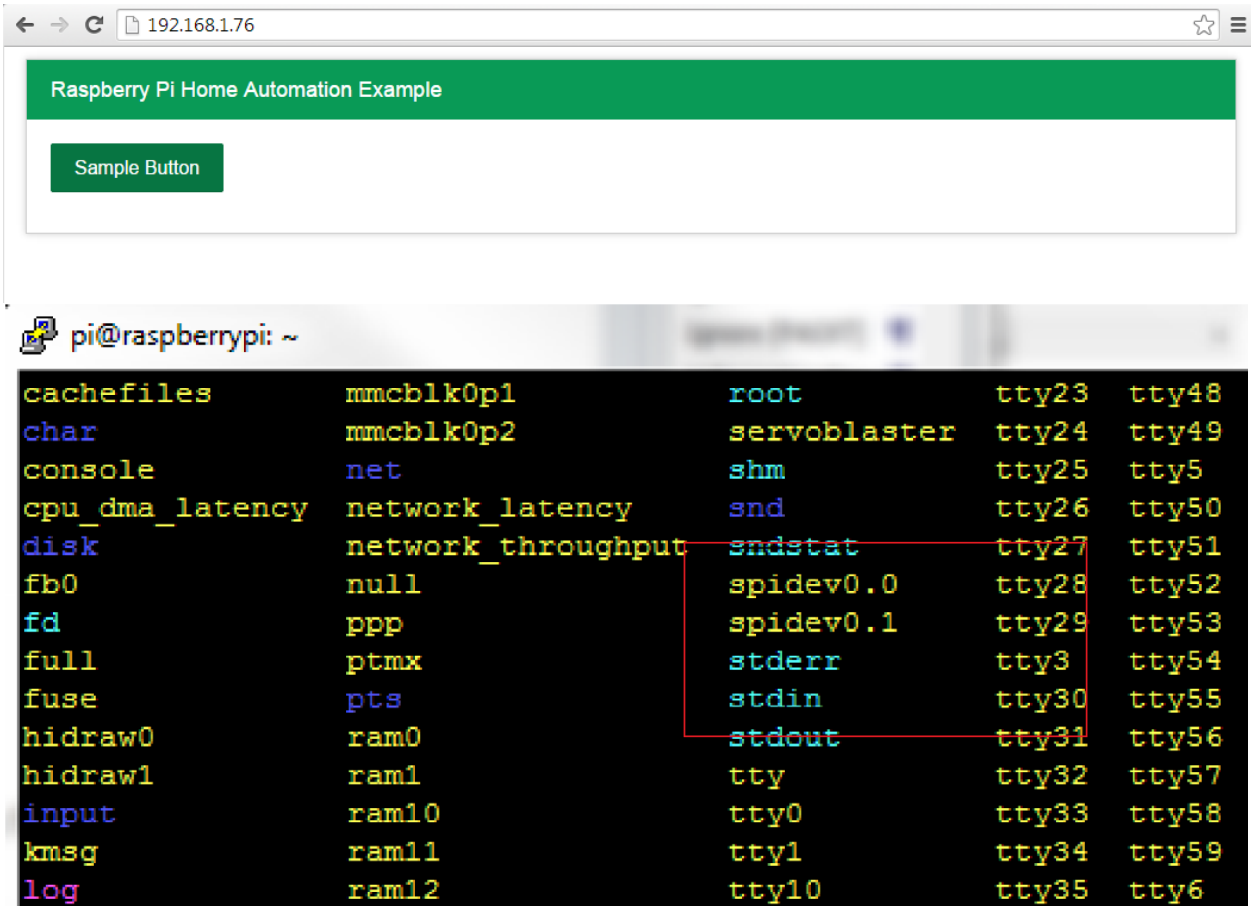


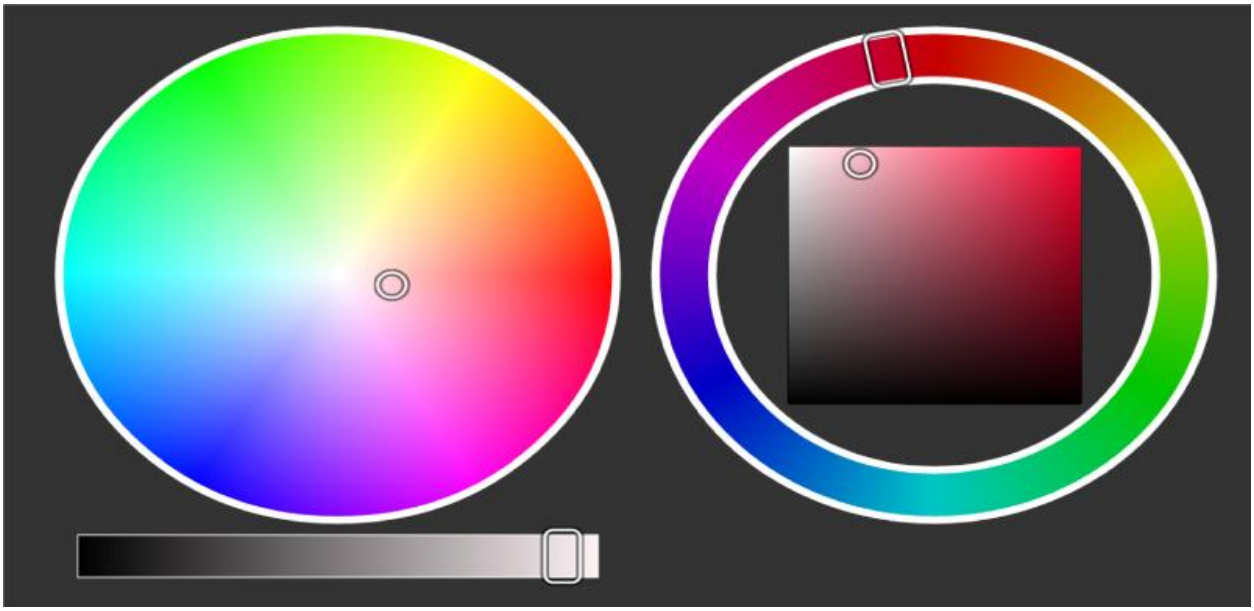


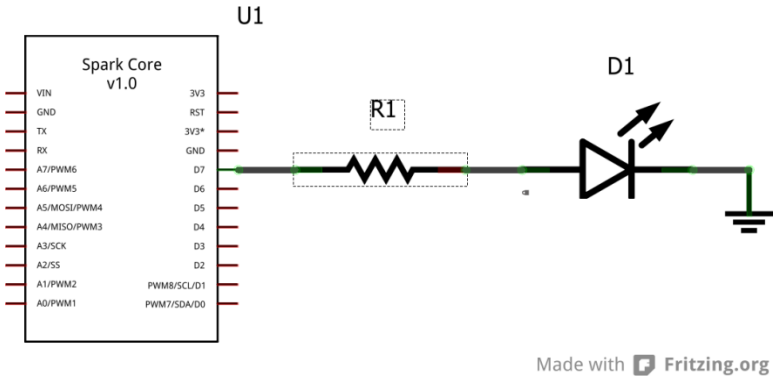
Chapter 11

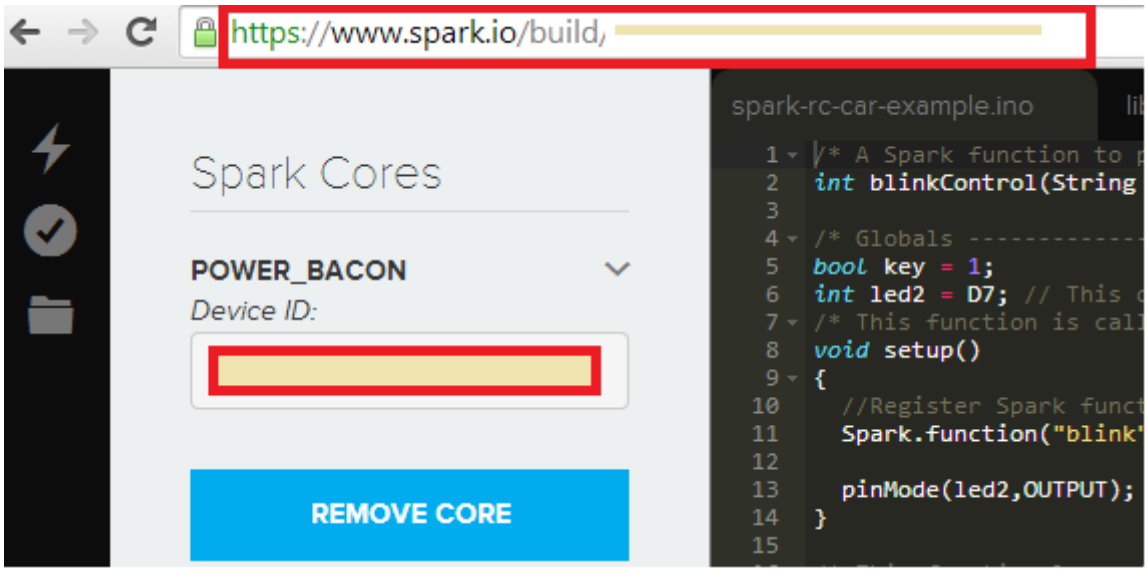

PowerSwitch Tail II

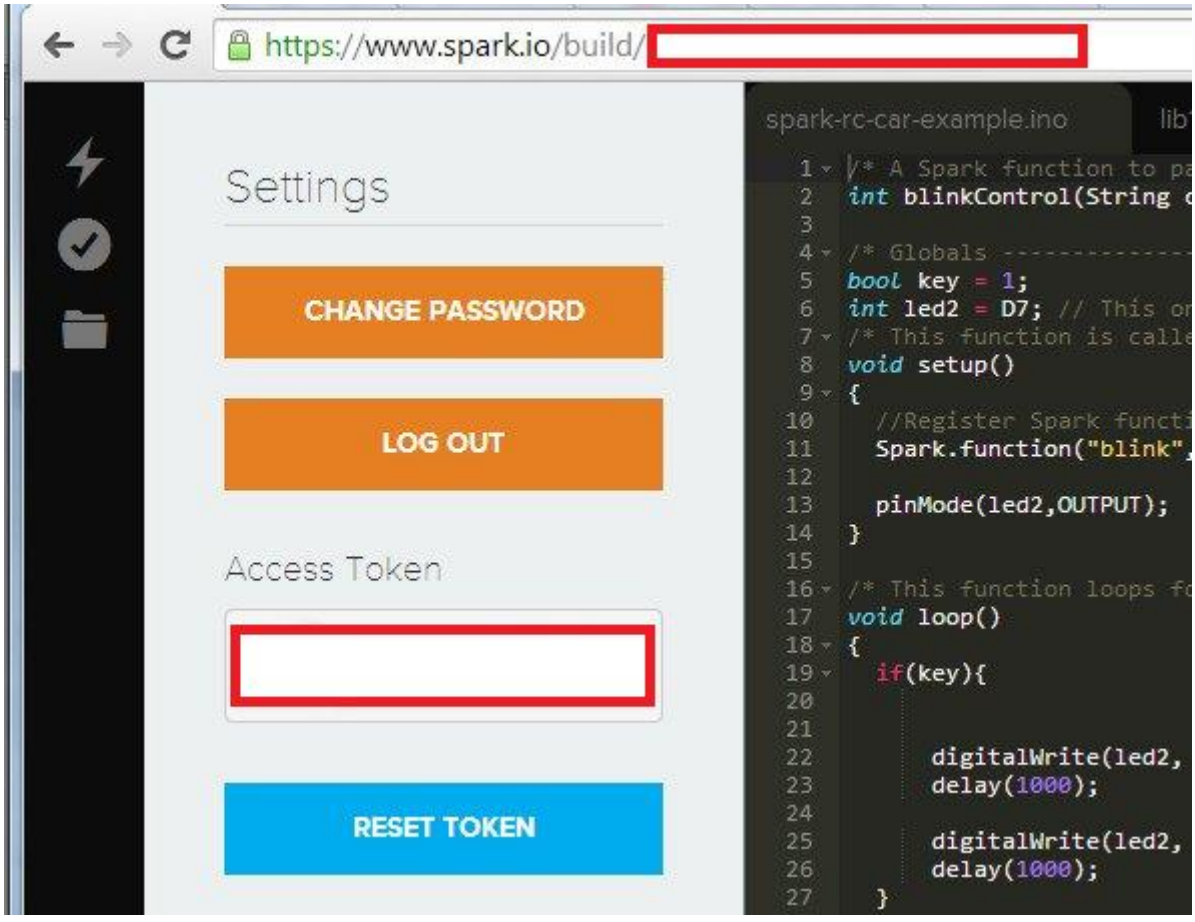

PowerSwitch Tail
1: +in 2: -in 3: Ground
fritzing


192.168.1.76
Raspberry Pi Home Automation Example
Sample Button
pi@raspberrypi: ~
cachefiles mmcblk0p1 root tty23 tty48
char mmcblk0p2 servoblaster tty24 tty49
console net shm tty25 tty5
cpu_dma_latency network_latency snd tty26 tty50
disk network_throughput sndstat tty27 tty51
fb0 null spidev0.0 tty28 tty52
fd ppp spidev0.1 tty29 tty53
full ptmx stderr tty3 tty54
fuse pts stdin tty30 tty55
hidraw0 ram0 stdout tty31 tty56
hidraw1 ram1 tty tty32 tty57
input ram10 tty0 tty33 tty58
kmsg ram11 tty1 tty34 tty59
log ram12 tty10 tty35 tty6

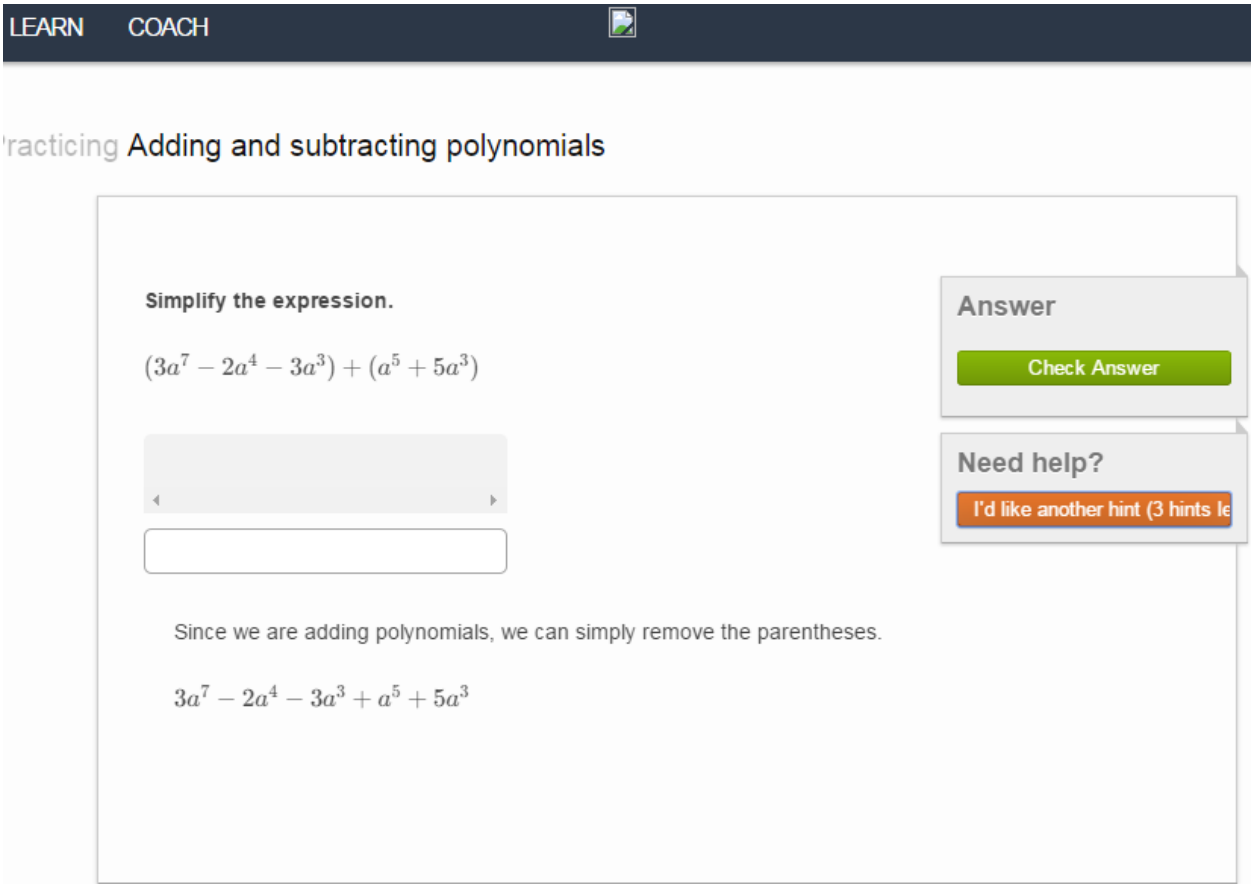


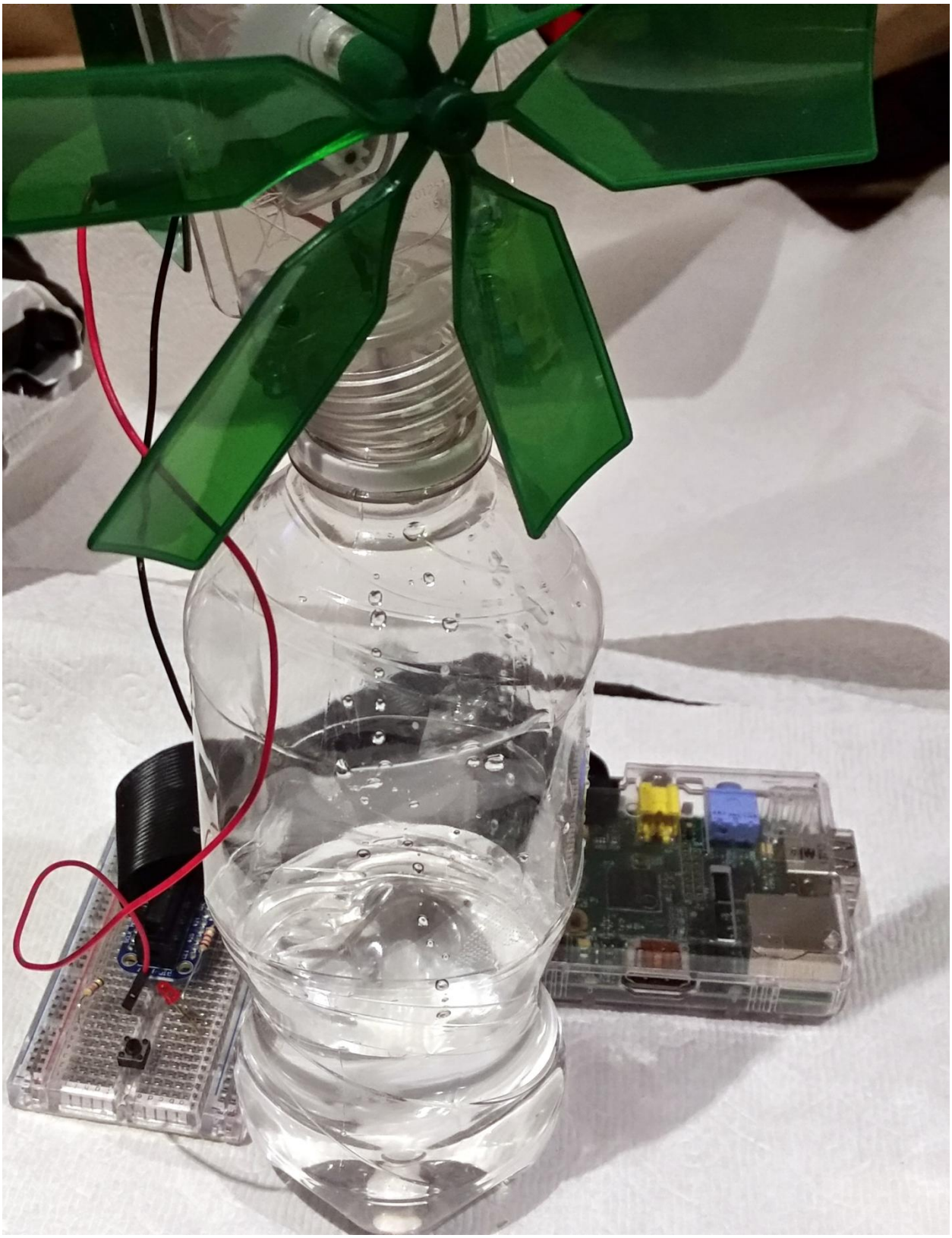

U1
Spark Core
v1.0
VIN
GND
TX
RX
A7/PWM6
A6/PWM5
A5/MOSI/PWM4
A4/MISO/PWM3
A3/SCK
A2/SS
A1/PWM2
A0/PWM1
3V3
RST
3V3*
GND
D7
D6
D5
D4
D3
D2
PWM8/SCL/D1
PWM7/SDA/D0
R1
D1
Made with Fritzing.org

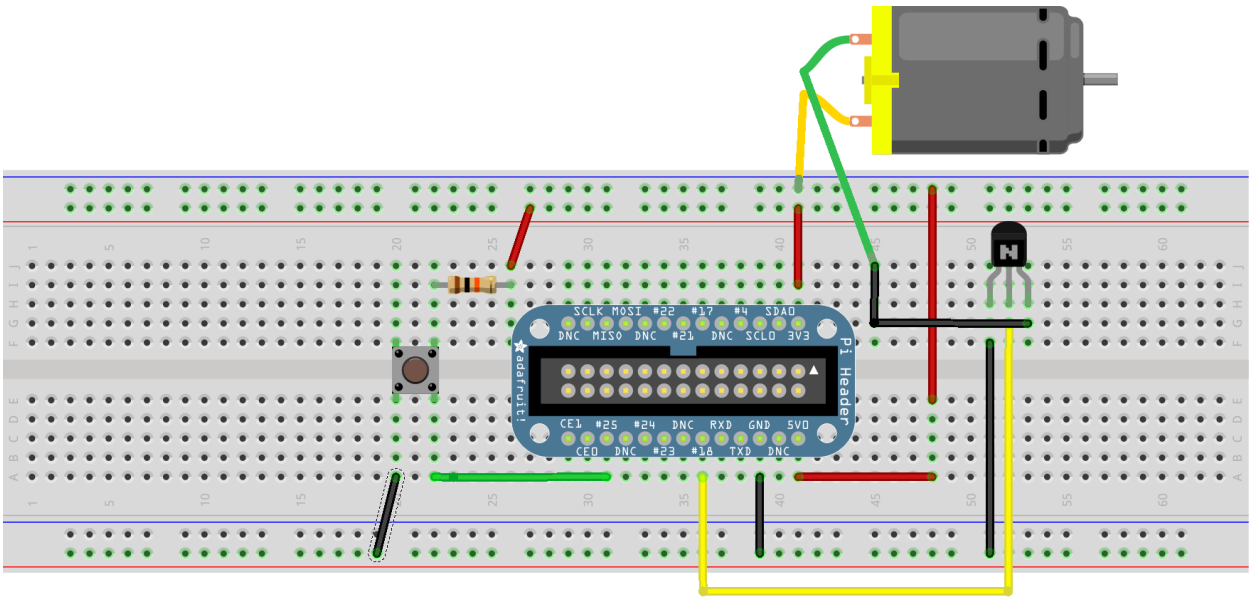

https://www.spark.io/build/
Spark Cores
POWER_BACON
Device ID:
REMOVE CORE
spark-rc-car-example.ino
/* A Spark function to
int blinkControl(String
/* Globals
bool key = 1;
int led2 = D7; // This
/* This function is cal
void setup()
{
//Register Spark funct
Spark.function("blink"
pinMode(led2,OUTPUT);
}


https://www.spark.io/build/
Settings
CHANGE PASSWORD
LOG OUT
Access Token
RESET TOKEN
spark-rc-car-example.ino
/* A Spark function to pa
int blinkControl(String
/* Globals
bool key = 1;
int led2 = D7; // This or
/* This function is calle
void setup()
{
//Register Spark functi
Spark.function("blink",
pinMode(led2,OUTPUT);
}
/* This function loops fo
void loop()
{
if(key){
digitalWrite(led2,
delay(1000);
digitalWrite(led2,
delay(1000);
}

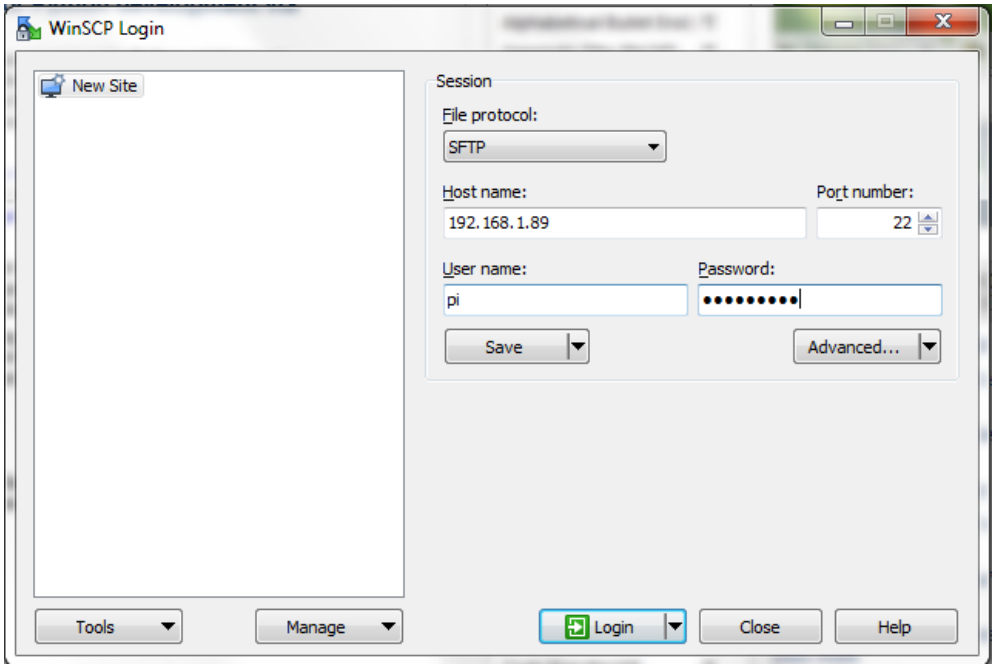
Chapter 12

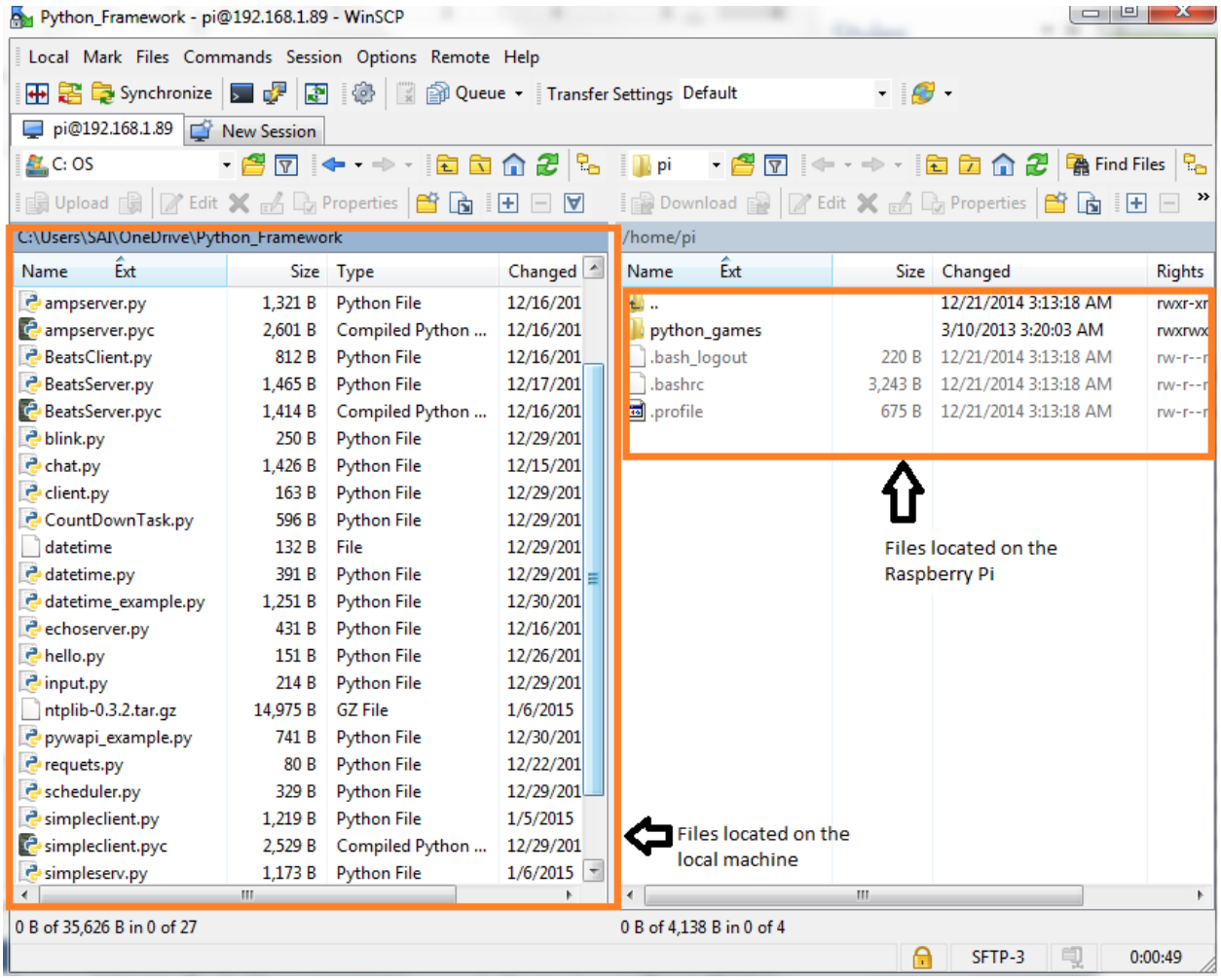

LEARN
COACH
racticing Adding and subtracting polynomials
Simplify the expression.
$(3a^7 - 2a^4 - 3a^3) + (a^5 + 5a^3)$
Answer
Check Answer
Need help?
I'd like another hint (3 hints le
Since we are adding polynomials, we can simply remove the parentheses.
$3a^7 - 2a^4 - 3a^3 + a^5 + 5a^3$

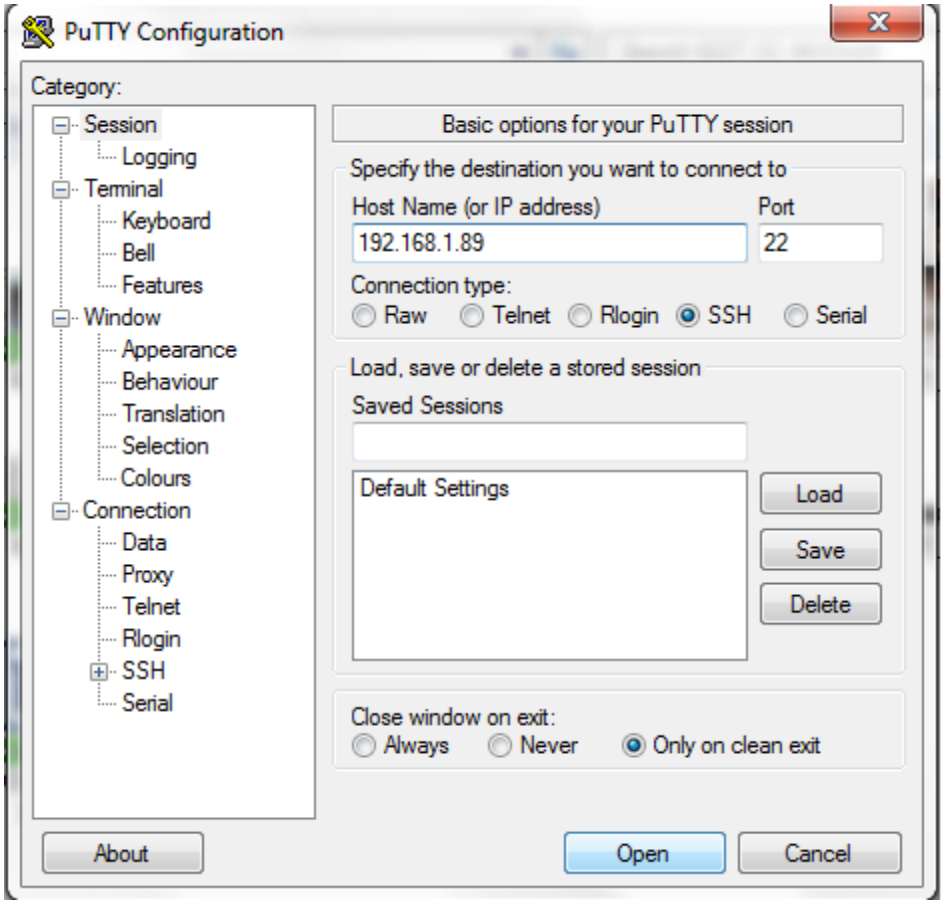


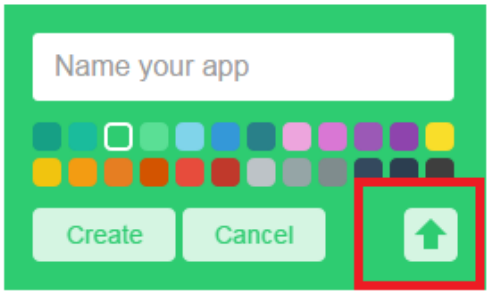

SCLK MOSI #22 #17 #4 SDA0
DNC MISO DNC #21 DNC SCL0 3V3
CE1 #25 #24 DNC RXD GND 5V0
CE0 DNC #23 #18 TXD DNC
Pi Header
fritzing

Chapter 13


WinSCP Login
New Site
Session
File protocol:
SFTP
Host name:
Port number:
192.168.1.89
22
User name:
Password:
pi
Save
Advanced...
Tools
Manage
Login
Close
Help


Python_Framework - pi@192.168.1.89 - WinSCP
Local Mark Files Commands Session Options Remote Help
Synchronize
Queue
Transfer Settings Default
pi@192.168.1.89
New Session
C: OS
pi
Find Files
Upload
Edit
Properties
Download
Edit
Properties
C:\Users\SAI\OneDrive\Python_Framework
/home/pi
Name Ext Size Type Changed
ampserver.py 1,321 B Python File 12/16/201
ampserver.pyc 2,601 B Compiled Python ... 12/16/201
BeatsClient.py 812 B Python File 12/16/201
BeatsServer.py 1,465 B Python File 12/17/201
BeatsServer.pyc 1,414 B Compiled Python ... 12/16/201
blink.py 250 B Python File 12/29/201
chat.py 1,426 B Python File 12/15/201
client.py 163 B Python File 12/29/201
CountDownTask.py 596 B Python File 12/29/201
datetime 132 B File 12/29/201
datetime.py 391 B Python File 12/29/201
datetime_example.py 1,251 B Python File 12/30/201
echoserver.py 431 B Python File 12/16/201
hello.py 151 B Python File 12/26/201
input.py 214 B Python File 12/29/201
ntplib-0.3.2.tar.gz 14,975 B GZ File 1/6/2015
pywapi_example.py 741 B Python File 12/30/201
requets.py 80 B Python File 12/22/201
scheduler.py 329 B Python File 12/29/201
simpleclient.py 1,219 B Python File 1/5/2015
simpleclient.pyc 2,529 B Compiled Python ... 12/29/201
simpleserv.py 1,173 B Python File 1/6/2015
Name Ext Size Changed Rights
.. 12/21/2014 3:13:18 AM rwxr-xr
python_games 3/10/2013 3:20:03 AM rwxrwx
.bash_logout 220 B 12/21/2014 3:13:18 AM rw-r--r
.bashrc 3,243 B 12/21/2014 3:13:18 AM rw-r--r
.profile 675 B 12/21/2014 3:13:18 AM rw-r--r
Files located on the Raspberry Pi
Files located on the local machine
0 B of 35,626 B in 0 of 27
0 B of 4,138 B in 0 of 4
SFTP-3
0:00:49


PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Serial
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
192.168.1.89
22
Connection type:
Raw
Telnet
Rlogin
SSH
Serial
Load, save or delete a stored session
Saved Sessions
Default Settings
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Open
Cancel

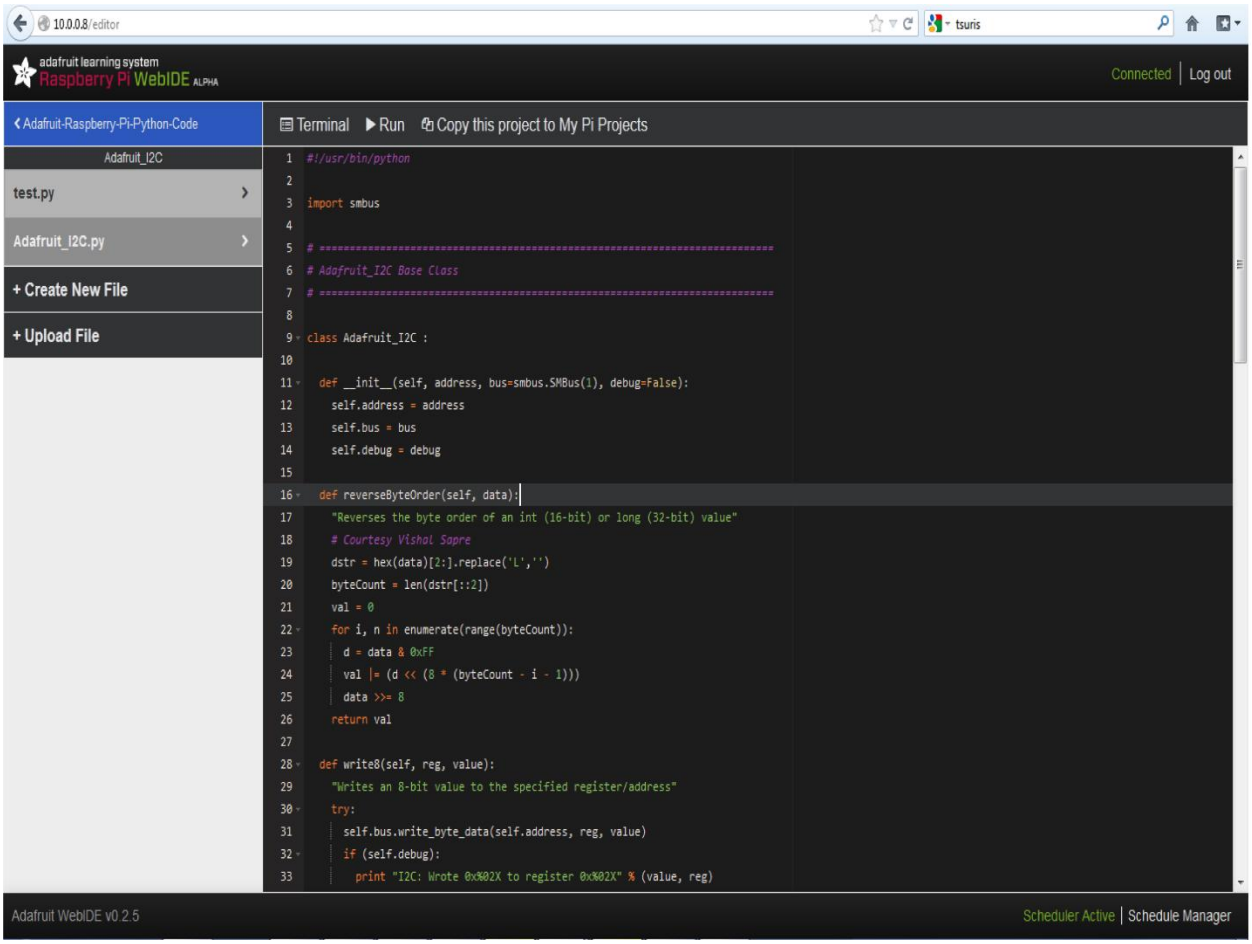


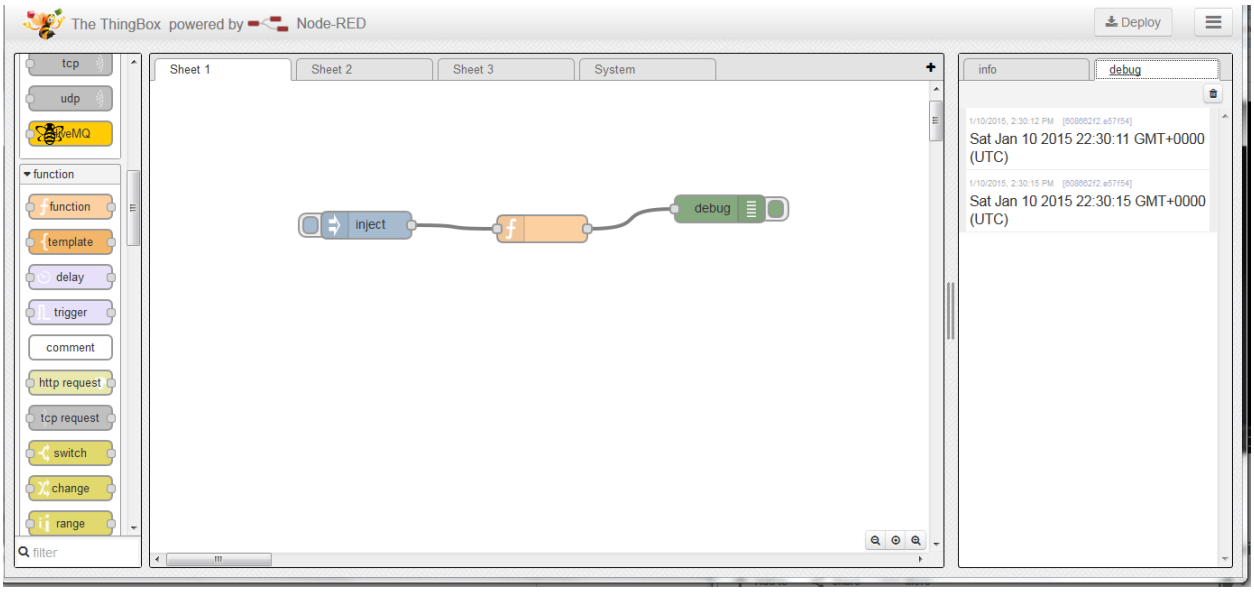
Blinky Lights

Hello Coder

Eyeball

Space Rocks!


10.0.0.8/editor
tsuris
adafruit learning system
Raspberry Pi WebIDE ALPHA
Connected | Log out
Adafruit-Raspberry-Pi-Python-Code
Terminal
Run
Copy this project to My Pi Projects
Adafruit_I2C
test.py
Adafruit_I2C.py
+ Create New File
+ Upload File
#!/usr/bin/python
import smbus
# ===
# Adafruit_I2C Base Class
# ===
class Adafruit_I2C :
def __init__(self, address, bus=smbus.SMBus(1), debug=False):
self.address = address
self.bus = bus
self.debug = debug
def reverseByteOrder(self, data):
"Reverses the byte order of an int (16-bit) or long (32-bit) value"
# Courtesy Vishal Sapre
dstr = hex(data)[2:].replace('L','')
byteCount = len(dstr[::2])
val = 0
for i, n in enumerate(range(byteCount)):
d = data & 0xFF
val |= (d << (8 * (byteCount - i - 1)))
data >>= 8
return val
def write8(self, reg, value):
"Writes an 8-bit value to the specified register/address"
try:
self.bus.write_byte_data(self.address, reg, value)
if (self.debug):
print "I2C: Wrote 0x%02X to register 0x%02X" % (value, reg)
Adafruit WebIDE v0.2.5
Scheduler Active | Schedule Manager


The ThingBox powered by Node-RED
Deploy
tcp
udp
MQTT
function
function
template
delay
trigger
comment
http request
tcp request
switch
change
range
filter
Sheet 1
Sheet 2
Sheet 3
System
inject
debug
info
debug
1/10/2015, 2:30:12 PM [608662f2.e57f54]
Sat Jan 10 2015 22:30:11 GMT+0000 (UTC)
1/10/2015, 2:30:15 PM [608662f2.e57f54]
Sat Jan 10 2015 22:30:15 GMT+0000 (UTC)