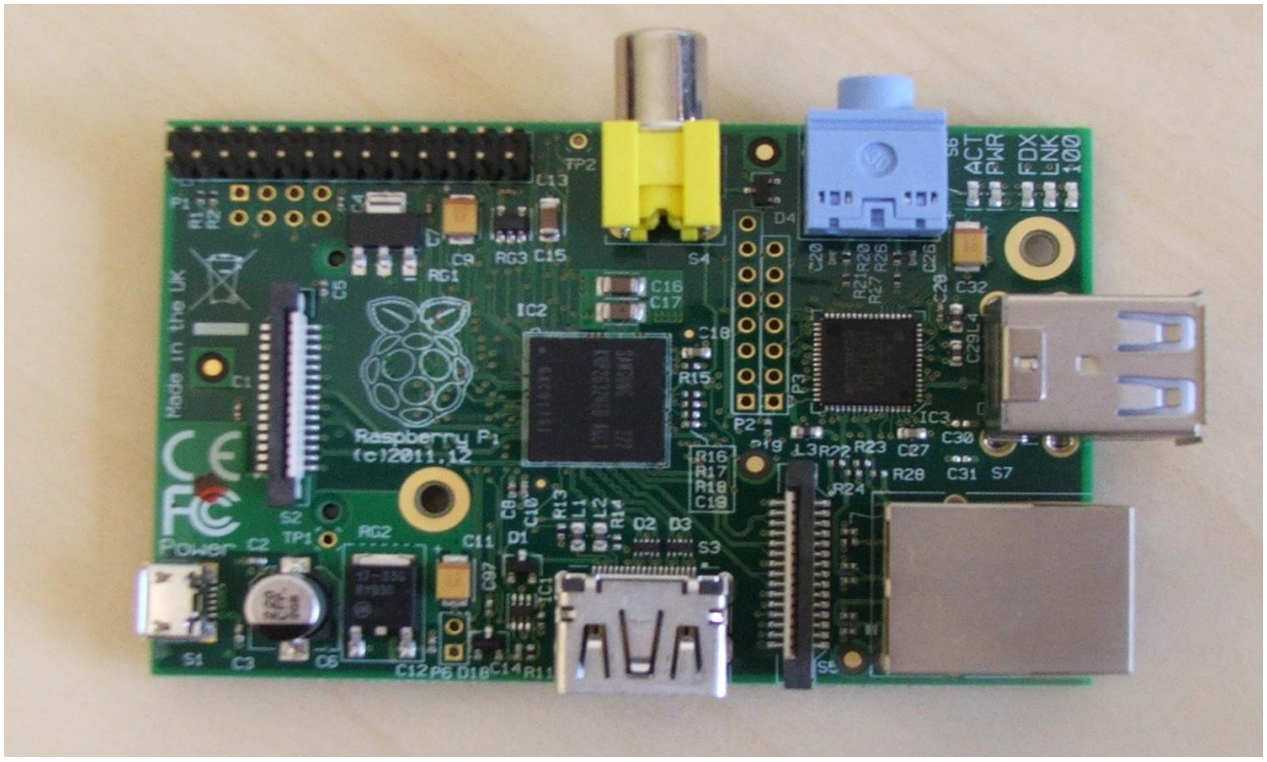
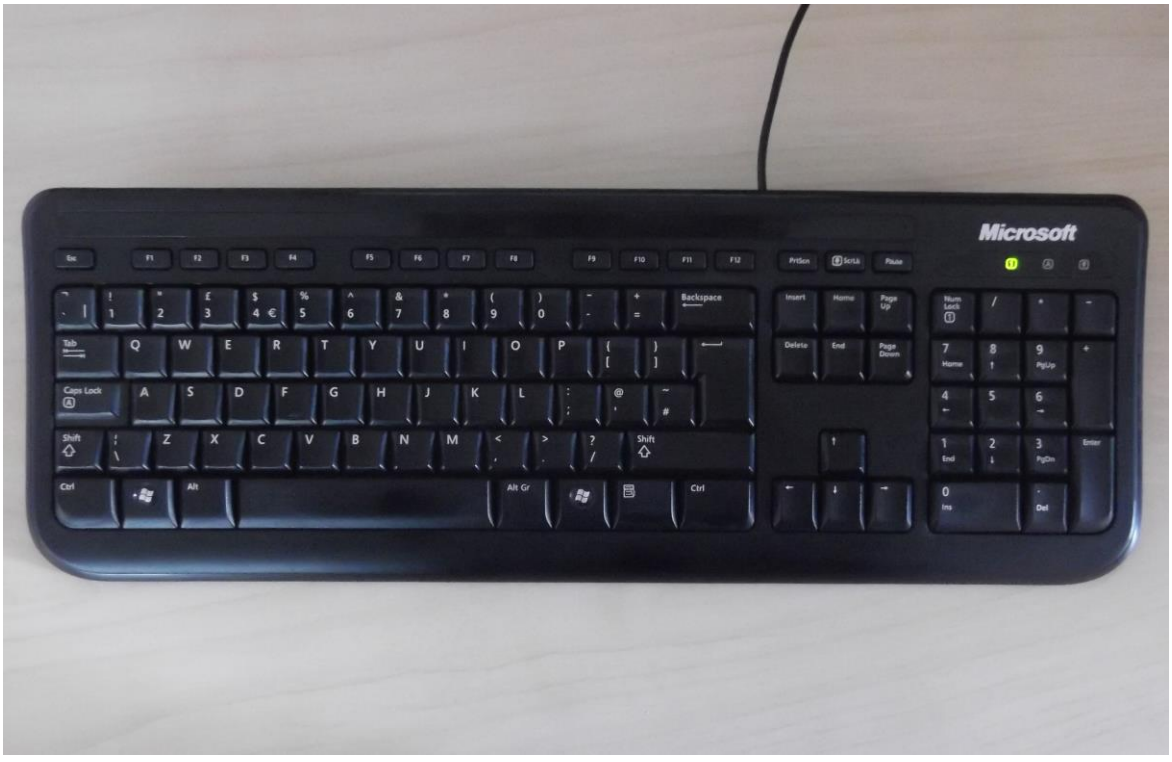
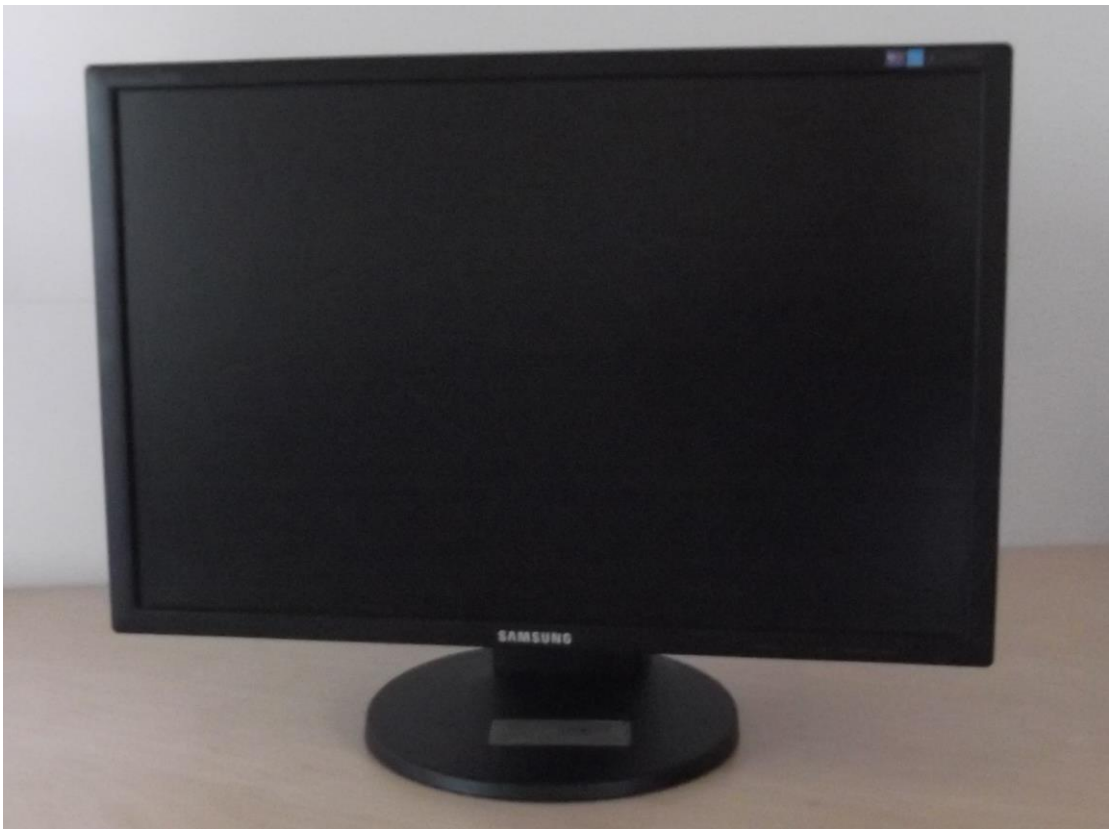
Chapter 1: Getting Started with the Raspberry Pi

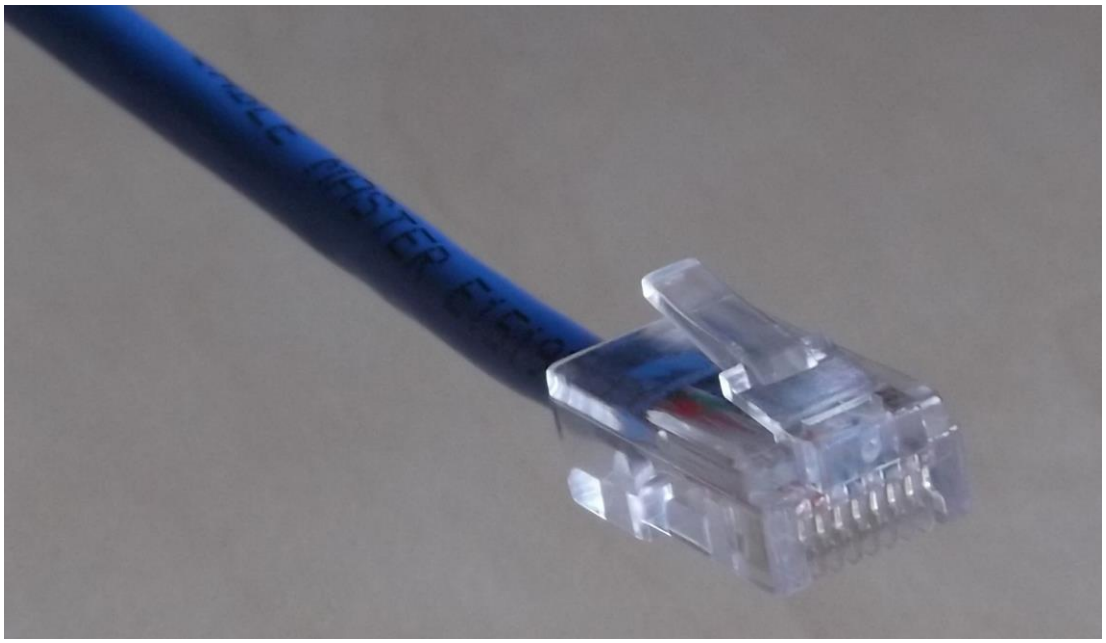


Transcend
LOCK
4GB
terasIC
www.terasic.com

Microsoft

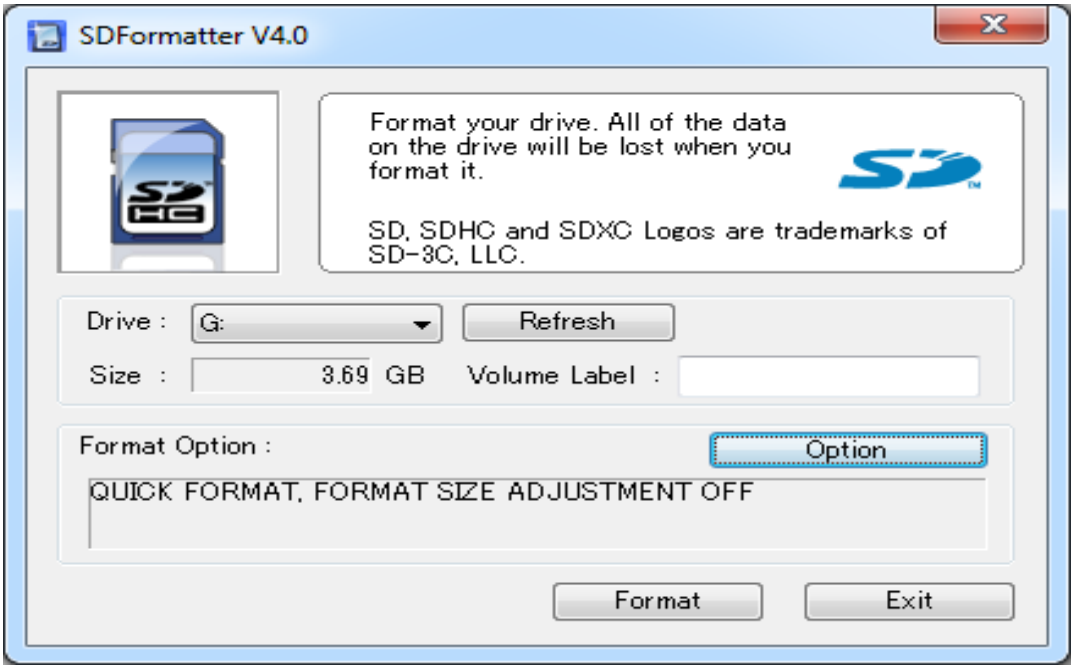

Microsoft


SAMSUNG

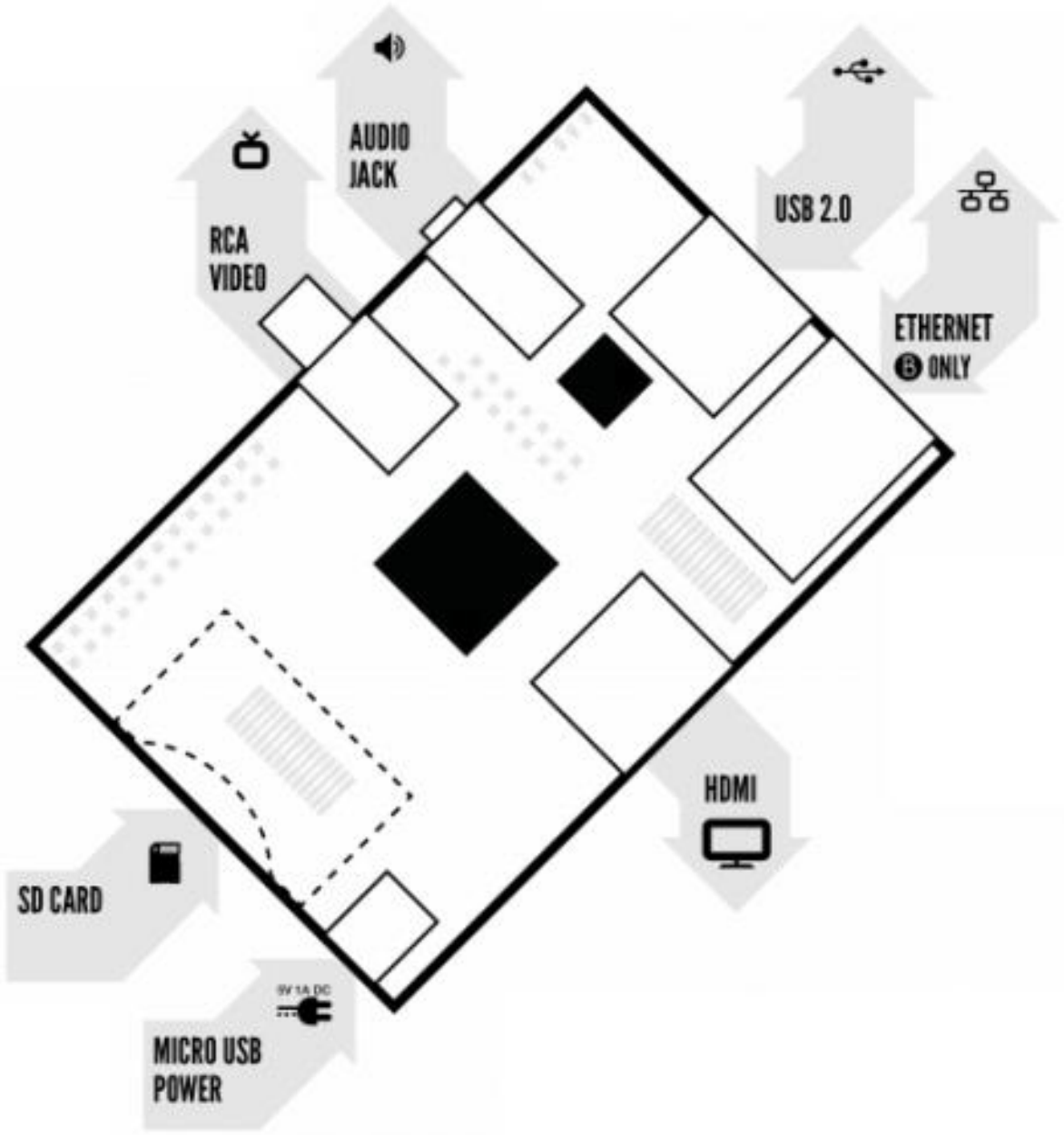


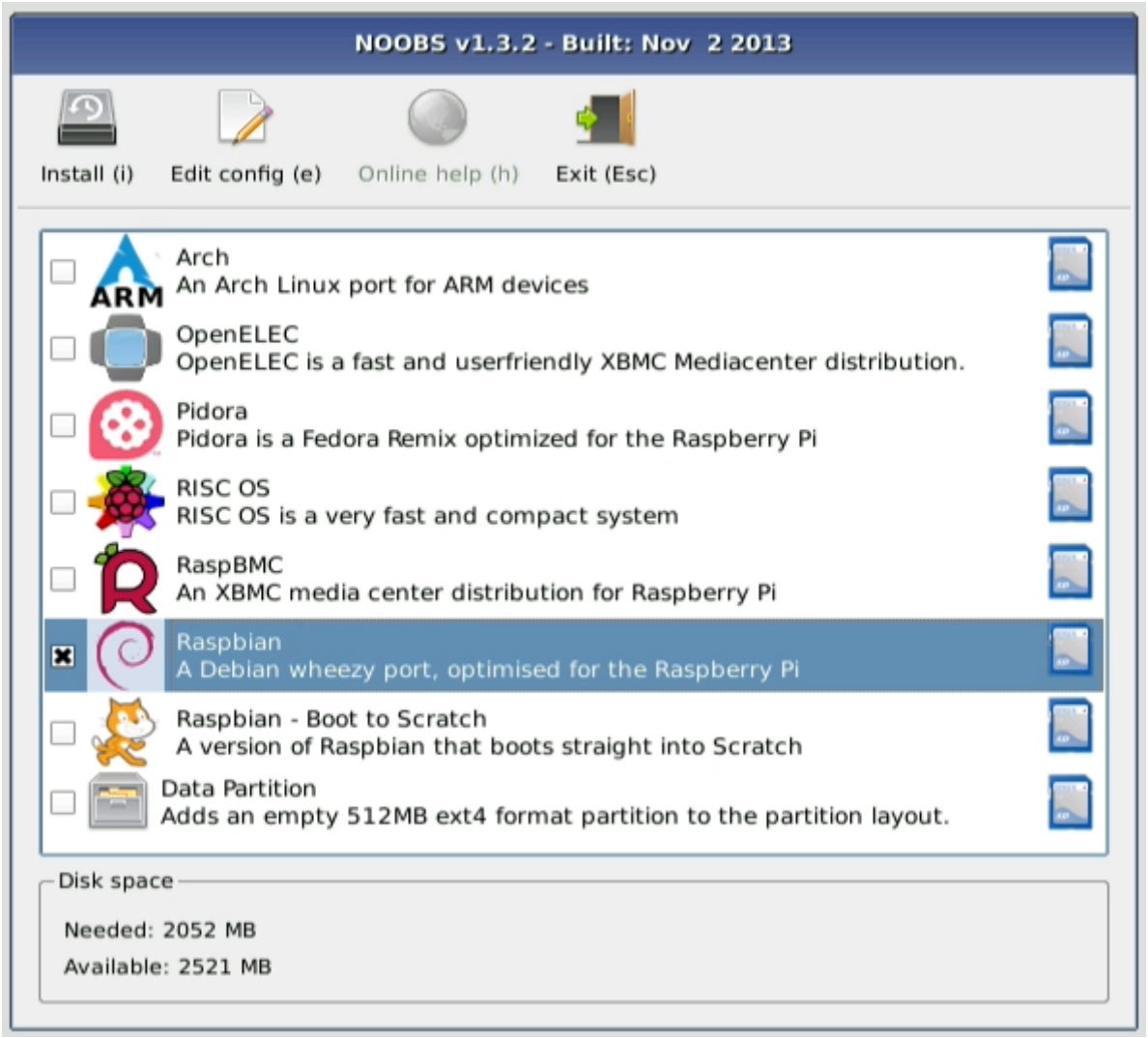
Trust

tux@Linux#

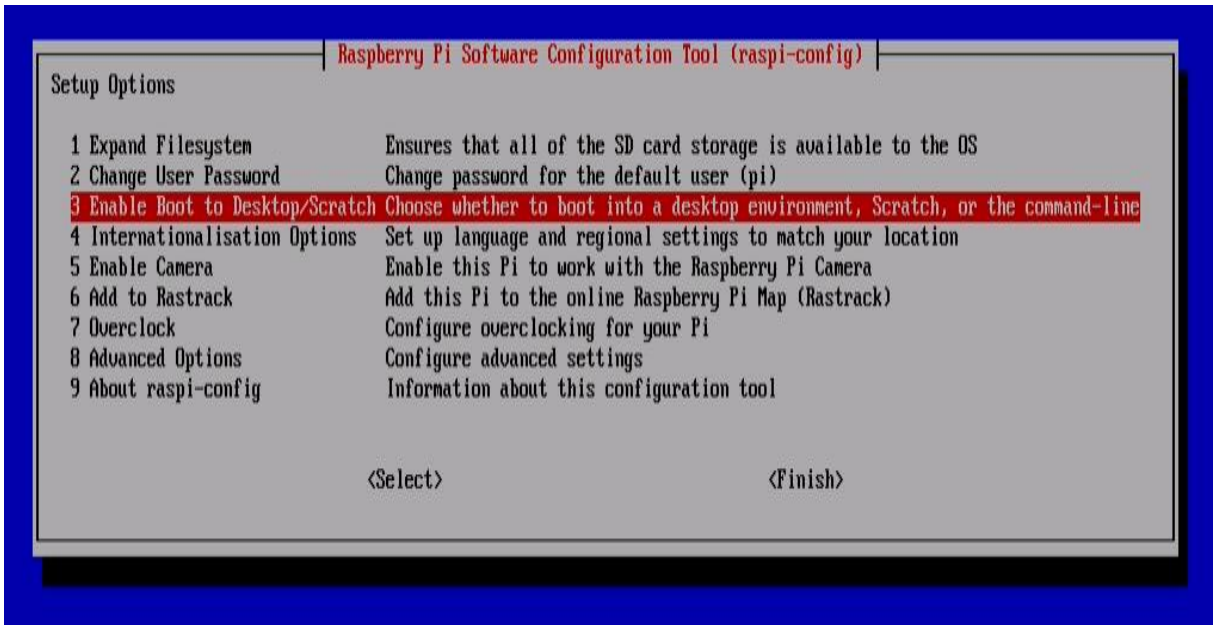

SDFormatter V4.0
Format your drive. All of the data on the drive will be lost when you format it.
SD, SDHC and SDXC Logos are trademarks of SD-3C, LLC.
Drive :
G:
Refresh
Size :
3.69 GB
Volume Label :
Format Option :
Option
QUICK FORMAT, FORMAT SIZE ADJUSTMENT OFF
Format
Exit

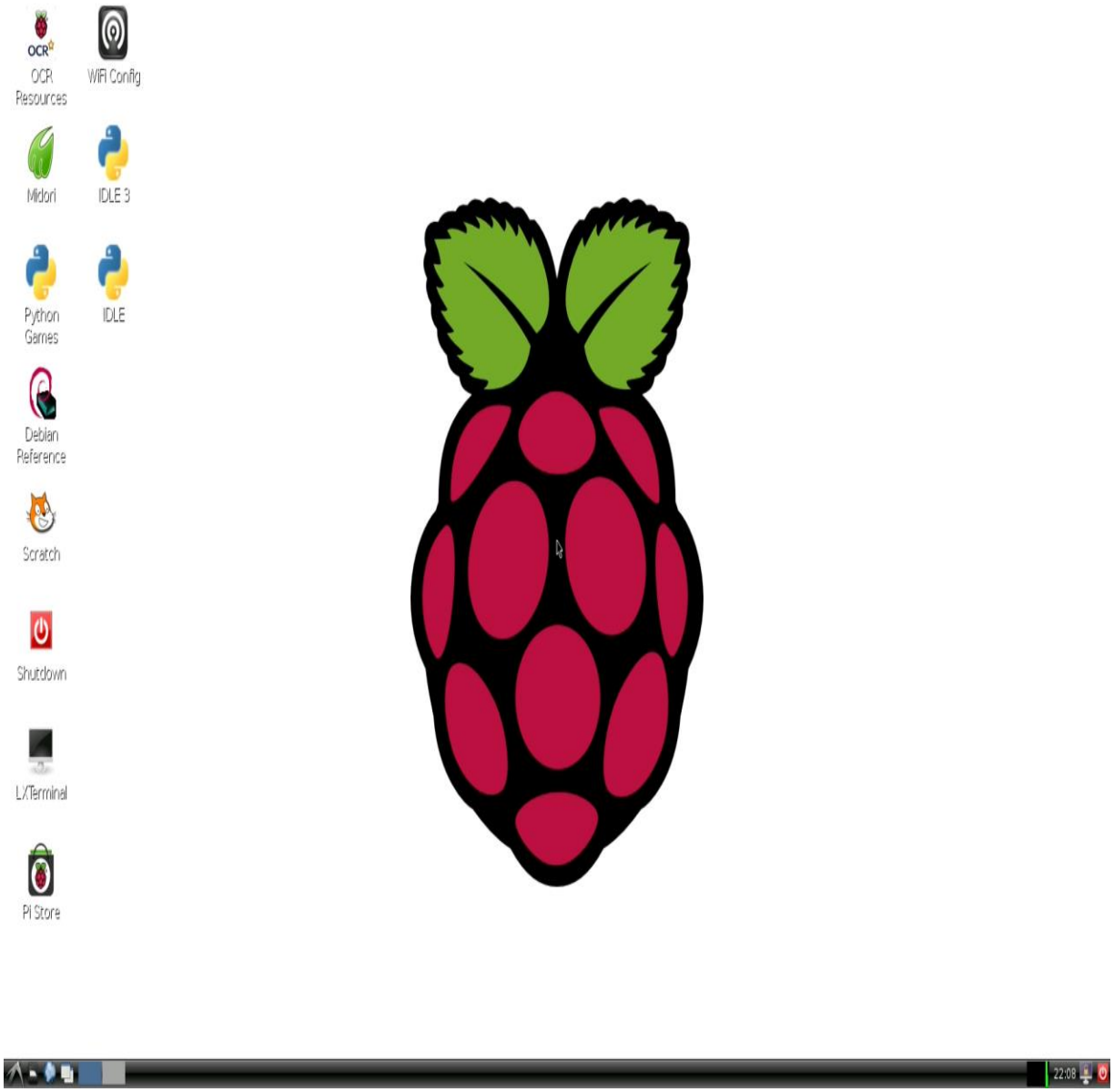
tux@linux#

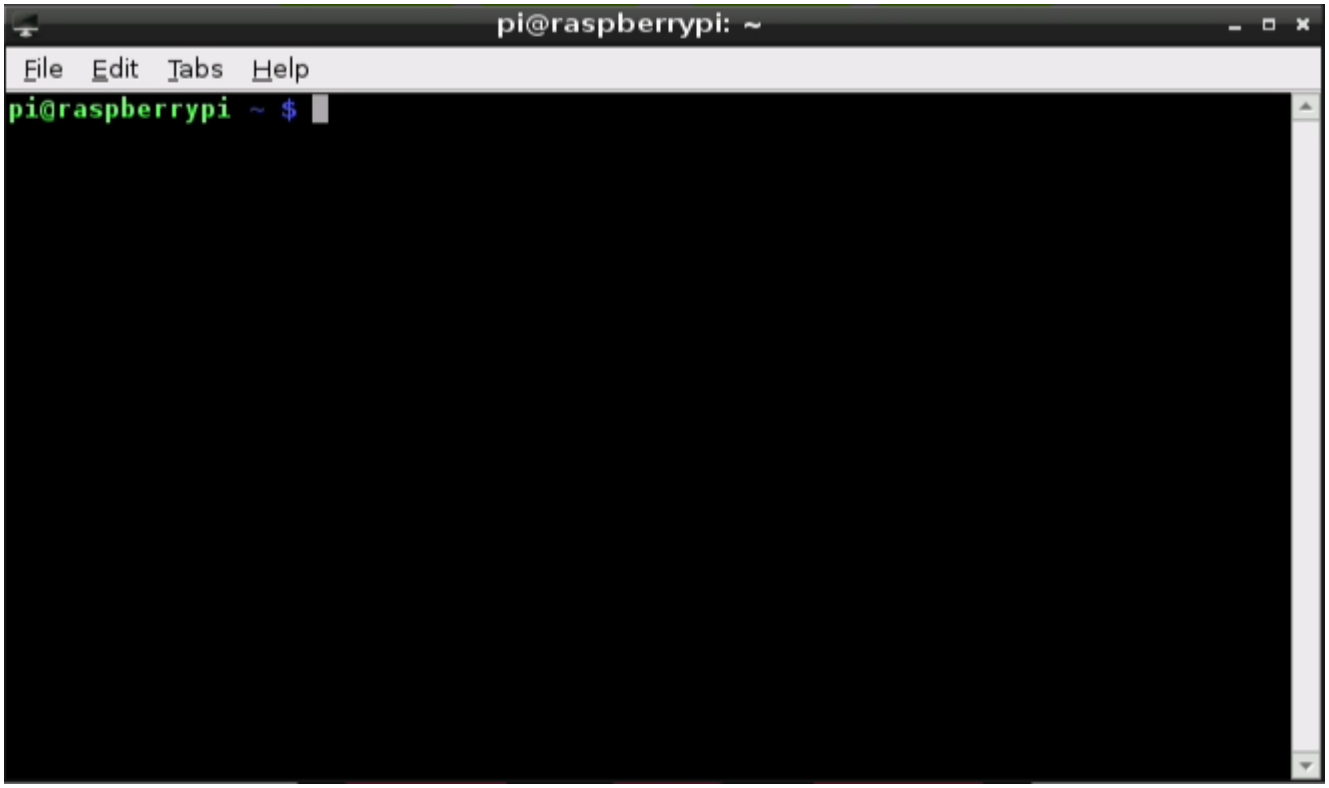

AUDIO
JACK
RCA
VIDEO
USB 2.0
ETHERNET
ONLY
HDMI
SD CARD
9V 1A DC
MICRO USB
POWER

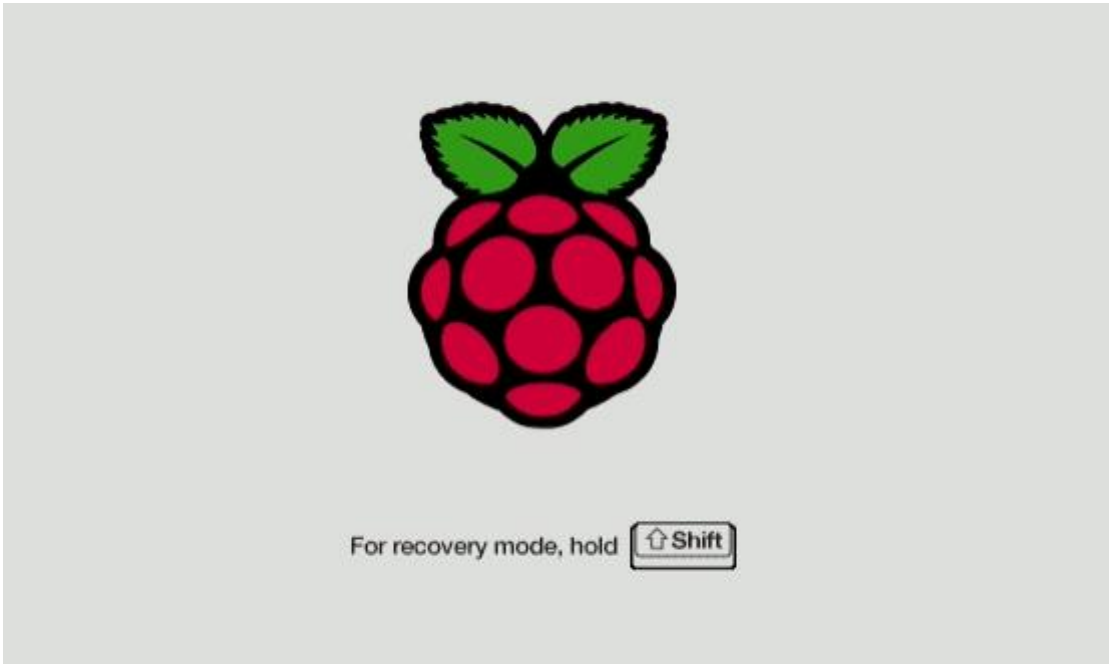

NOOBS v1.3.2 - Built: Nov 2 2013
Install (i)
Edit config (e)
Online help (h)
Exit (Esc)
Arch
An Arch Linux port for ARM devices
OpenELEC
OpenELEC is a fast and userfriendly XBMC Mediacenter distribution.
Pidora
Pidora is a Fedora Remix optimized for the Raspberry Pi
RISC OS
RISC OS is a very fast and compact system
RaspBMC
An XBMC media center distribution for Raspberry Pi
Raspbian
A Debian wheezy port, optimised for the Raspberry Pi
Raspbian - Boot to Scratch
A version of Raspbian that boots straight into Scratch
Data Partition
Adds an empty 512MB ext4 format partition to the partition layout.
Disk space
Needed: 2052 MB
Available: 2521 MB

Raspbian is a free operating system based on Linux and optimised for the Raspberry Pi.
= Raspbian
An operating system is the set of basic programs and utilities that make your Raspberry Pi run.
Raspbian: Extracting filesystem
99%
1625 MB of 1639 MB written (1.9 MB/sec)

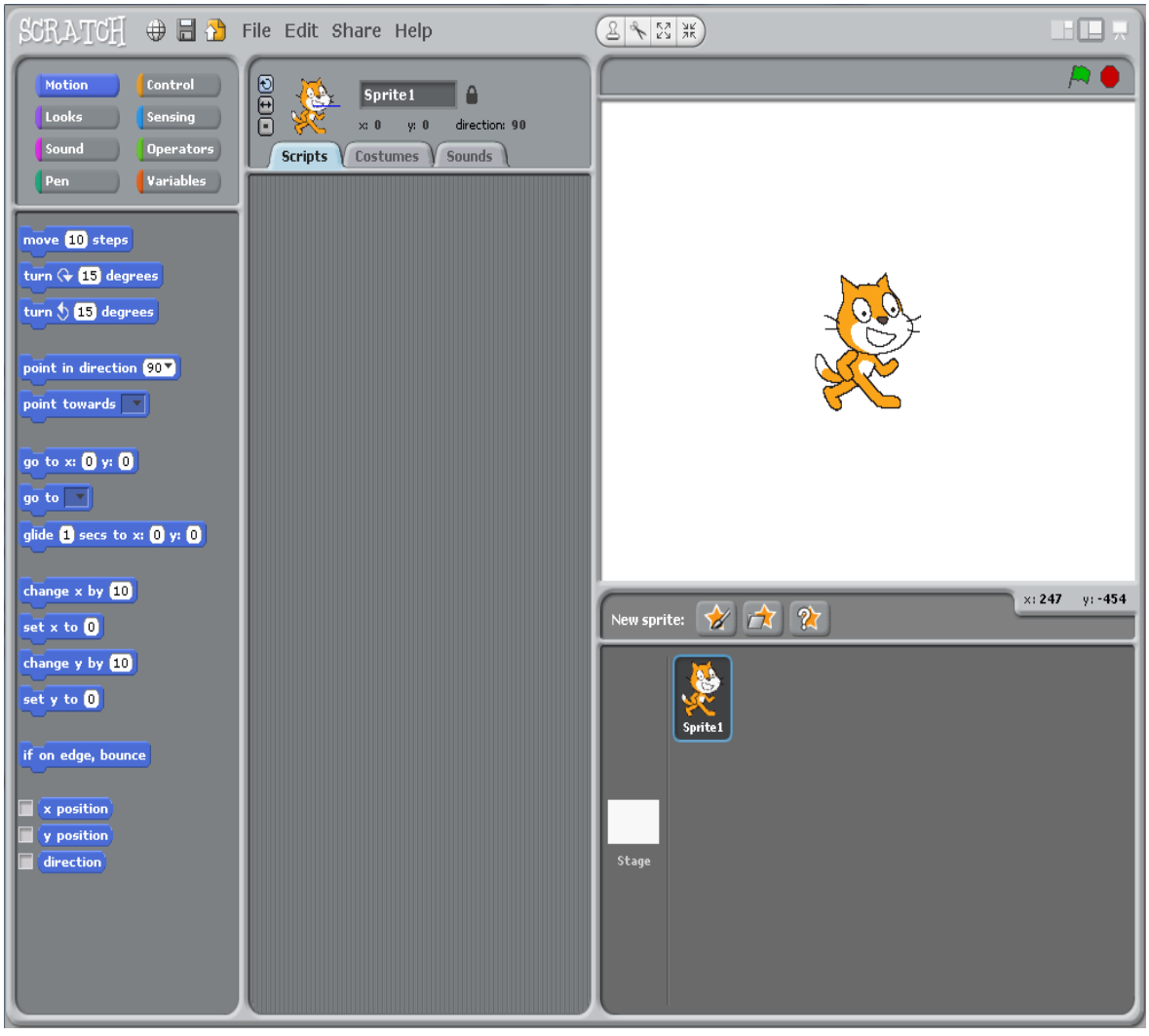

Raspberry Pi Software Configuration Tool (raspi-config)
Setup Options
1 Expand Filesystem Ensures that all of the SD card storage is available to the OS
2 Change User Password Change password for the default user (pi)
3 Enable Boot to Desktop/Scratch Choose whether to boot into a desktop environment, Scratch, or the command-line
4 Internationalisation Options Set up language and regional settings to match your location
5 Enable Camera Enable this Pi to work with the Raspberry Pi Camera
6 Add to Rastrack Add this Pi to the online Raspberry Pi Map (Rastrack)
7 Overclock Configure overclocking for your Pi
8 Advanced Options Configure advanced settings
9 About raspi-config Information about this configuration tool
<Select>
<Finish>


OCR Resources
WiFi Config
Midori
IDLE 3
Python Games
IDLE
Debian Reference
Scratch
Shutdown
LXTerminal
Pi Store
22:08


pi@raspberrypi: ~
File Edit Tabs Help
pi@raspberrypi ~ $

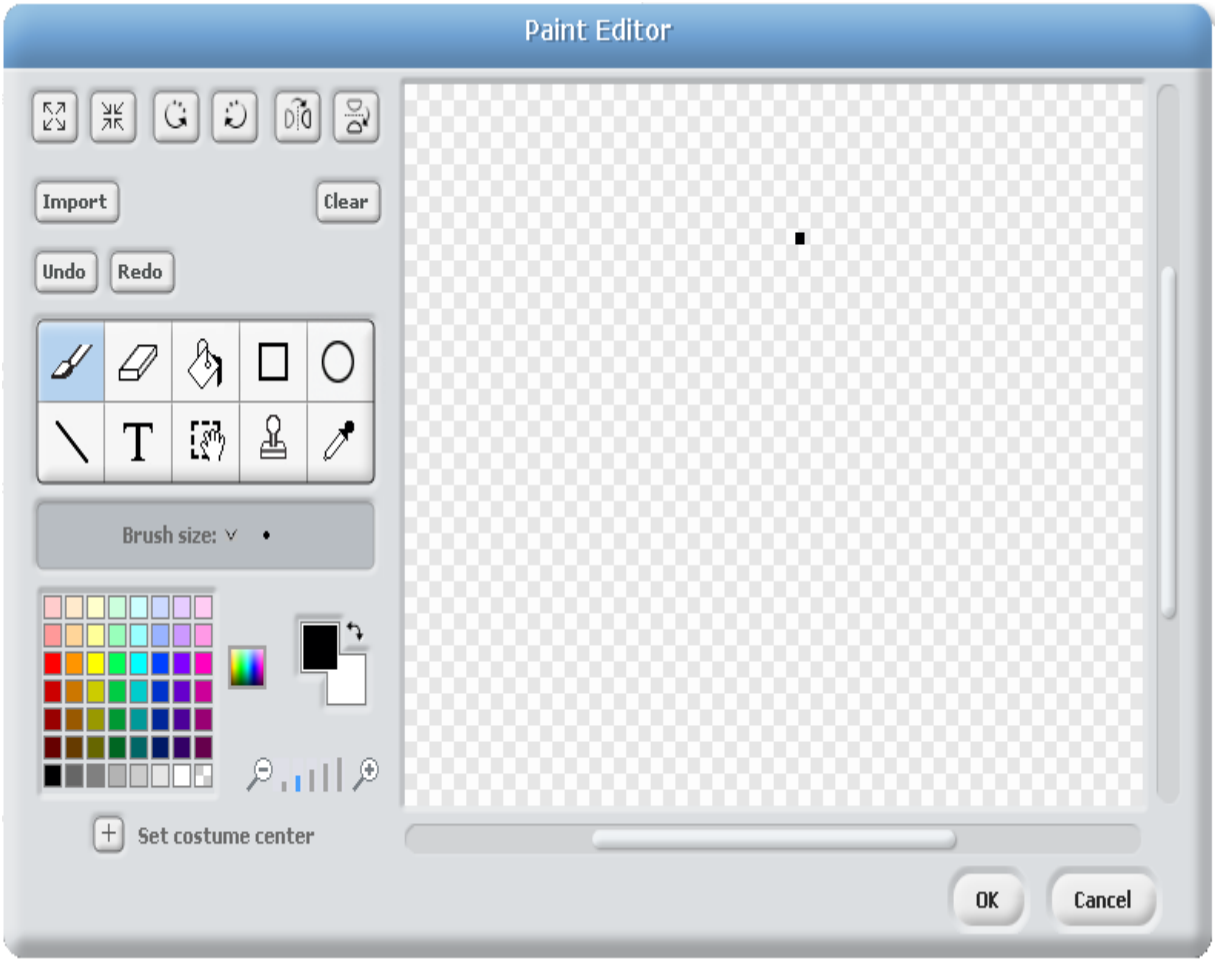

For recovery mode, hold
Shift

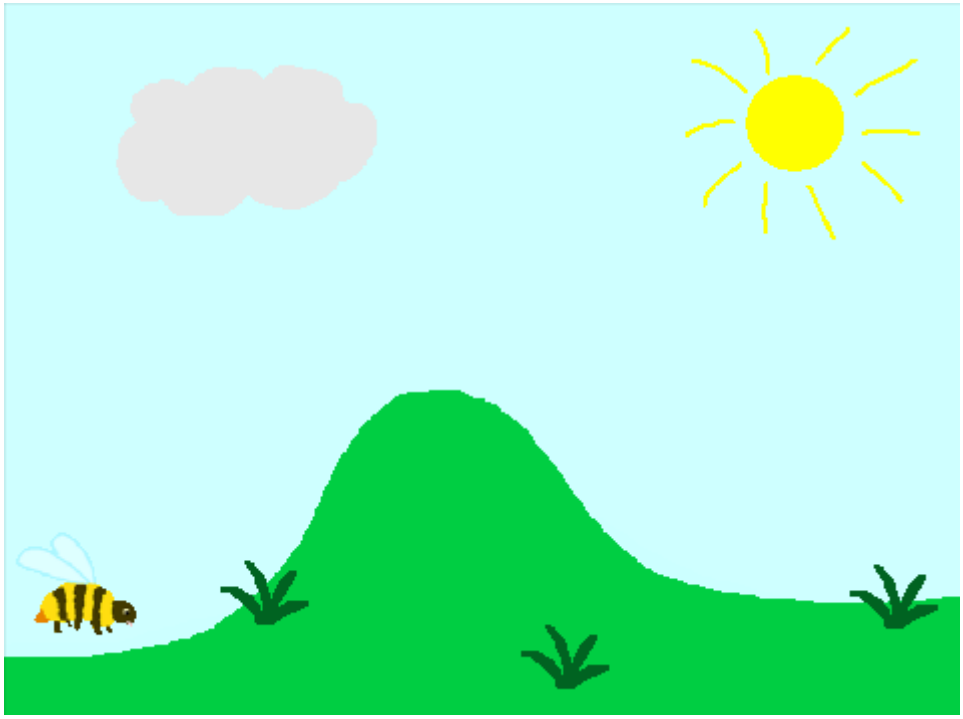
score
0

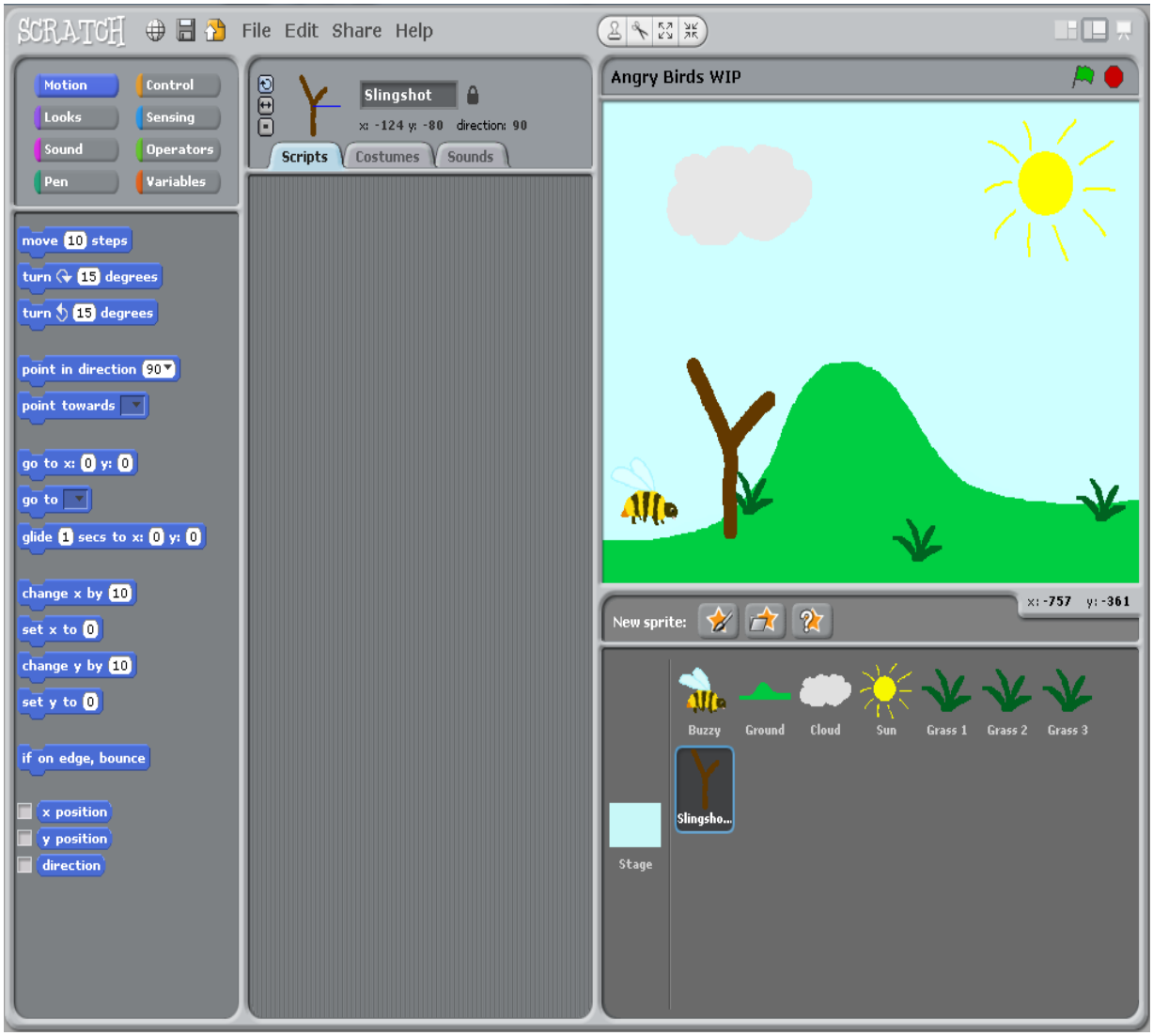

SCRATCH
File Edit Share Help
Motion
Control
Looks
Sensing
Sound
Operators
Pen
Variables
move 10 steps
turn 15 degrees
turn 15 degrees
point in direction 90
point towards
go to x: 0 y: 0
go to
glide 1 secs to x: 0 y: 0
change x by 10
set x to 0
change y by 10
set y to 0
if on edge, bounce
x position
y position
direction
Sprite1
x: 0 y: 0 direction: 90
Scripts
Costumes
Sounds
x: 247 y: -454
New sprite:
Sprite1
Stage

when clicked
forever
turn 15 degrees

New sprite:


Paint Editor
Import
Clear
Undo
Redo
Brush size:
Set costume center
OK
Cancel



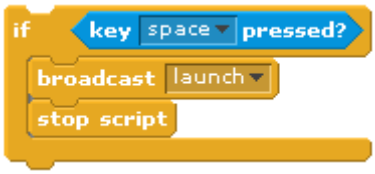

SCRATCH
File Edit Share Help
Motion
Control
Looks
Sensing
Sound
Operators
Pen
Variables
move 10 steps
turn 15 degrees
turn 15 degrees
point in direction 90
point towards
go to x: 0 y: 0
go to
glide 1 secs to x: 0 y: 0
change x by 10
set x to 0
change y by 10
set y to 0
if on edge, bounce
x position
y position
direction
Slingshot
x: -124 y: -80 direction: 90
Scripts
Costumes
Sounds
Angry Birds WIP
New sprite:
x: -757 y: -361
Buzzy
Ground
Cloud
Sun
Grass 1
Grass 2
Grass 3
Slingsho...
Stage

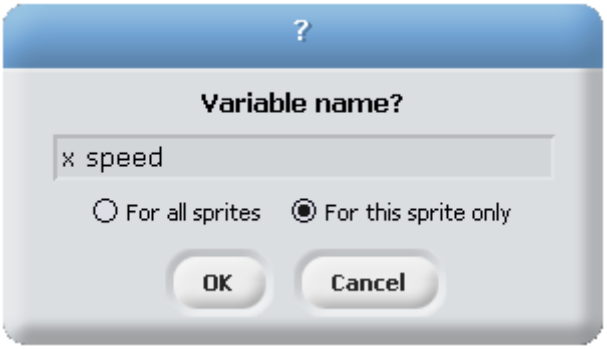
when clicked
go to Slingshot

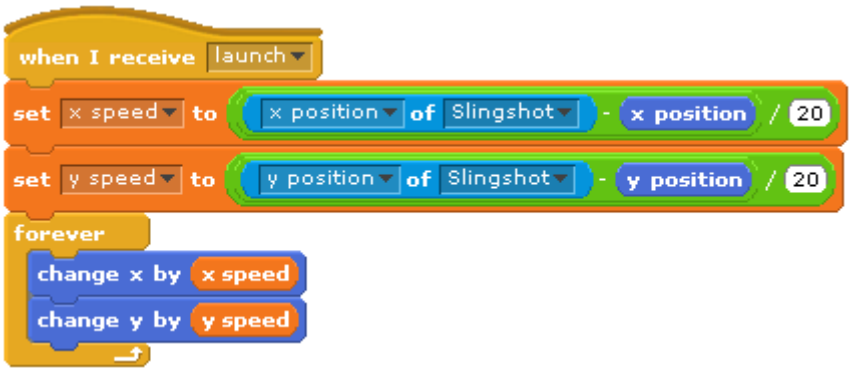
key space pressed?

if key left arrow pressed?
change x by -5

when clicked
go to Slingshot
forever
if key left arrow pressed?
change x by -5
if key right arrow pressed?
change x by 5
if key up arrow pressed?
change y by 5
if key down arrow pressed?
change y by -5


if key space pressed?
broadcast launch
stop script

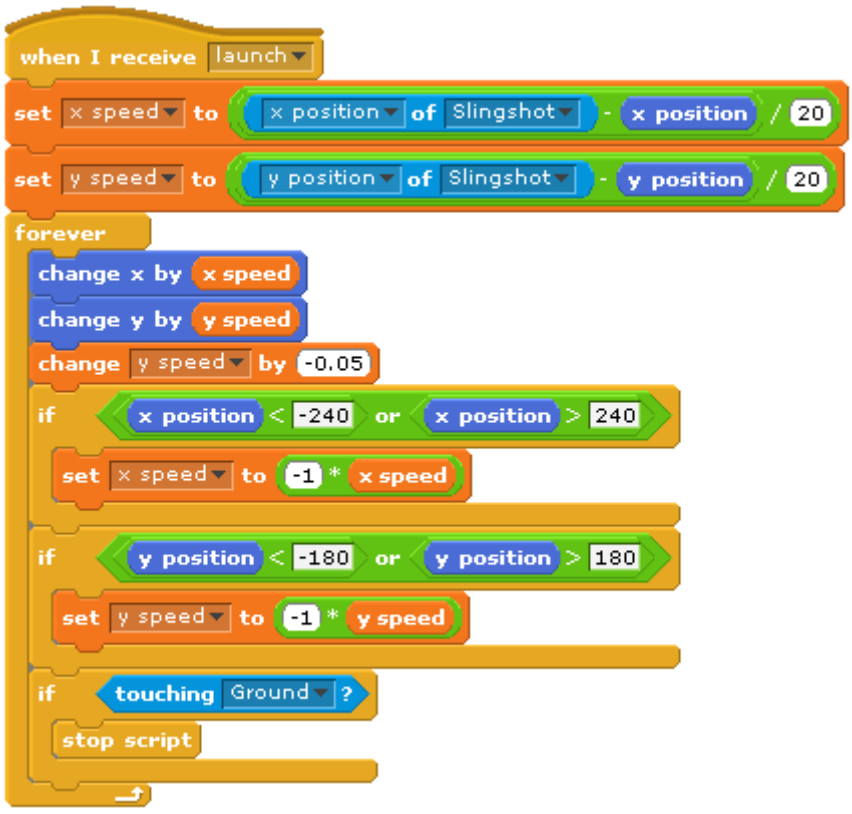

?
Variable name?
x speed
For all sprites
For this sprite only
OK
Cancel


when I receive launch
set x speed to x position of Slingshot - x position / 20
set y speed to y position of Slingshot - y position / 20
forever
change x by x speed
change y by y speed

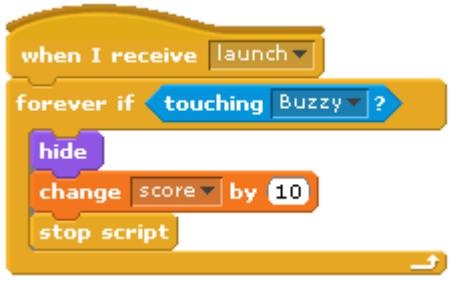
change y speed by -0.05

if x position < -240 or x position > 240
set x speed to -1 * x speed
if y position < -180 or y position > 180
set y speed to -1 * y speed

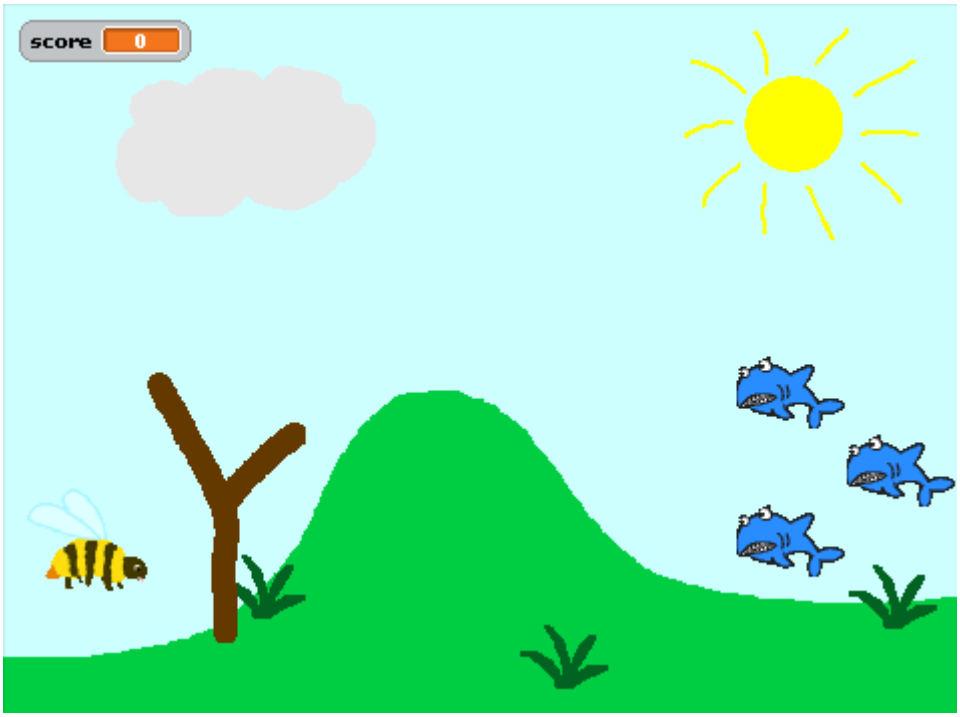
if touching Ground ?
stop script


when I receive launch
set x speed to x position of Slingshot - x position / 20
set y speed to y position of Slingshot - y position / 20
forever
change x by x speed
change y by y speed
change y speed by -0.05
if x position < -240 or x position > 240
set x speed to -1 * x speed
if y position < -180 or y position > 180
set y speed to -1 * y speed
if touching Ground ?
stop script

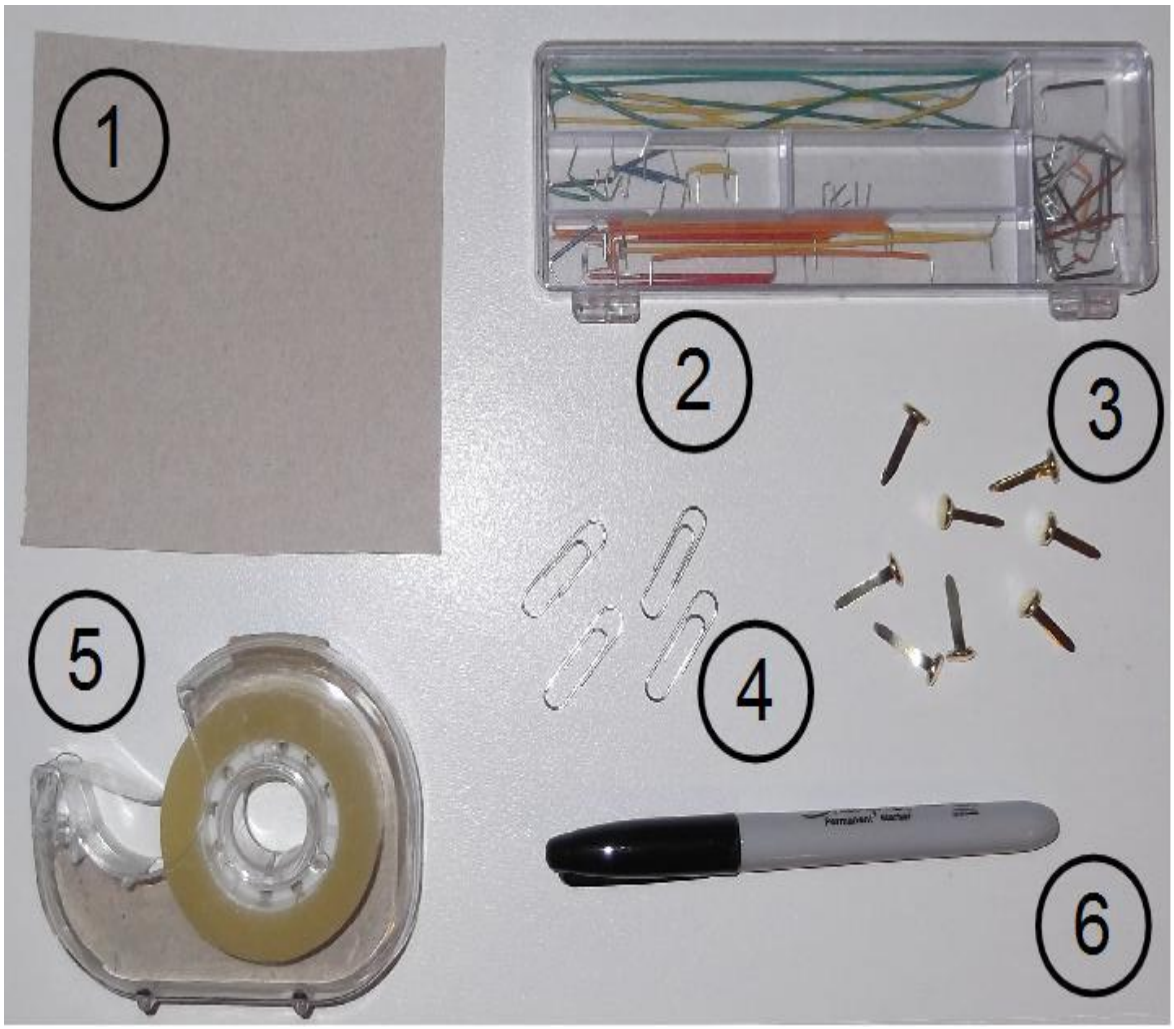
when I receive launch
forever if touching Buzzy ?

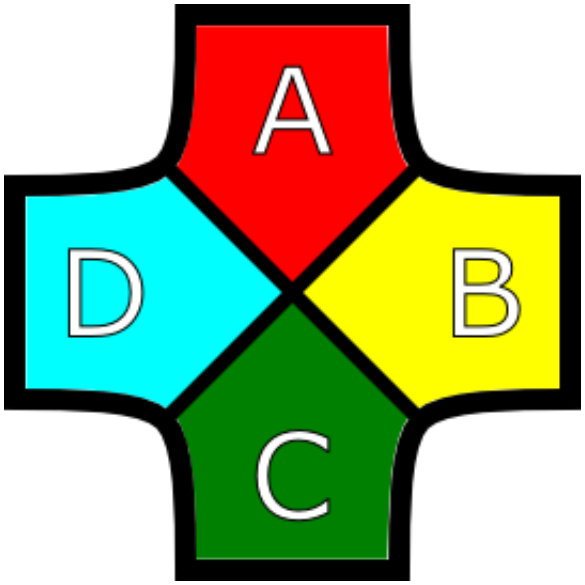

when I receive launch
forever if touching Buzzy ?
hide
change score by 10
stop script

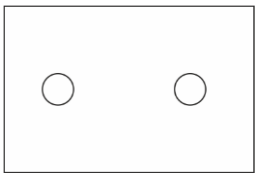
when clicked
show
set score to 0

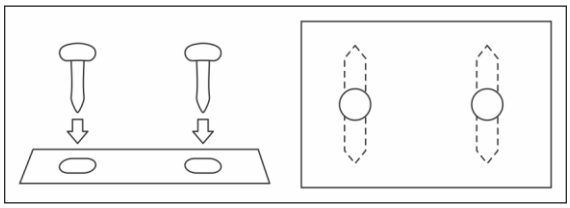

score 0

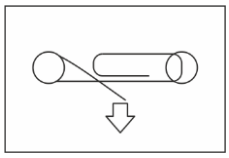
Chapter 3: Testing Your Speed

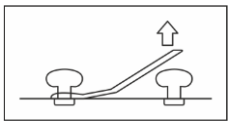

1
2
3
4
5
6

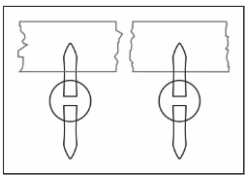

A
D
B
C

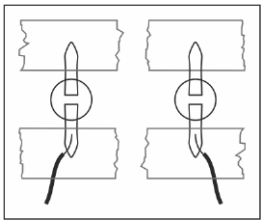


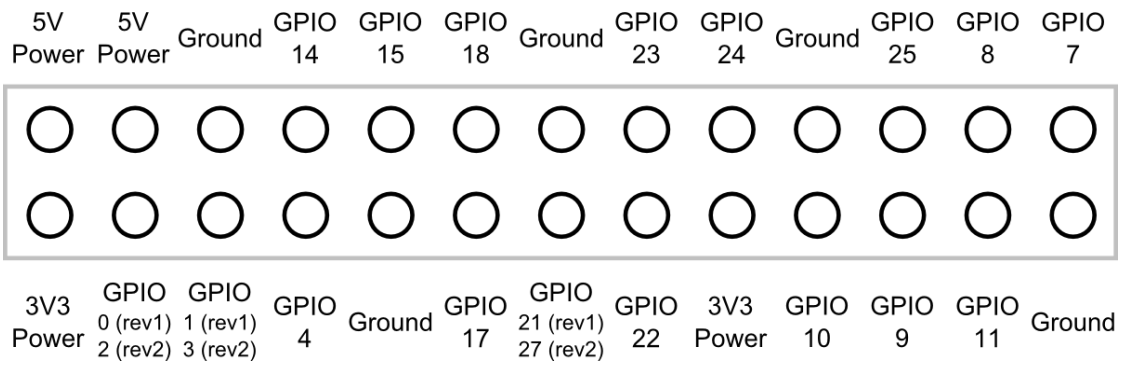


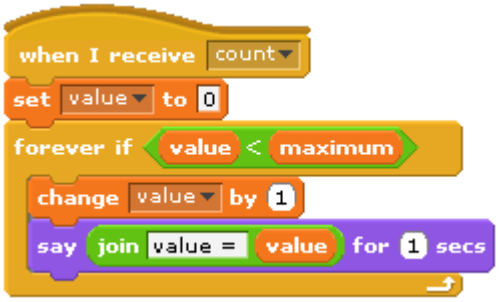


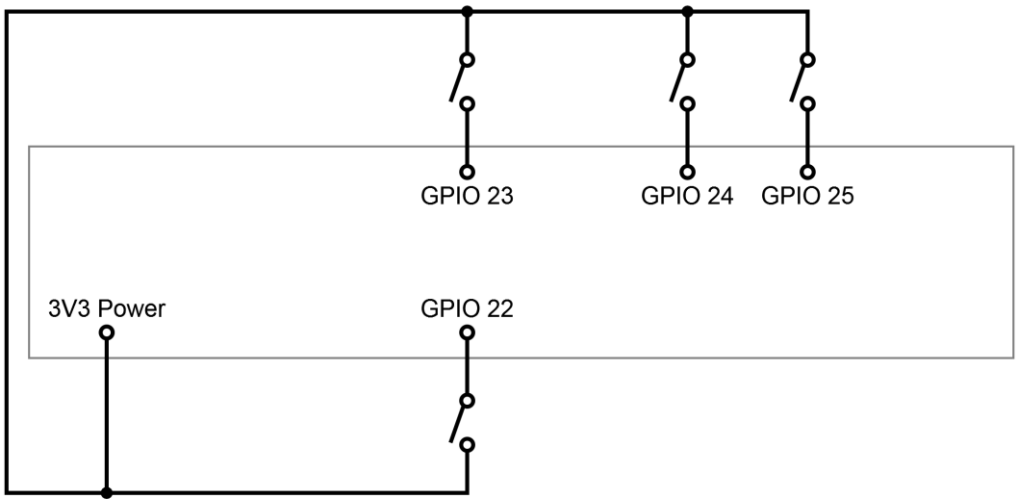


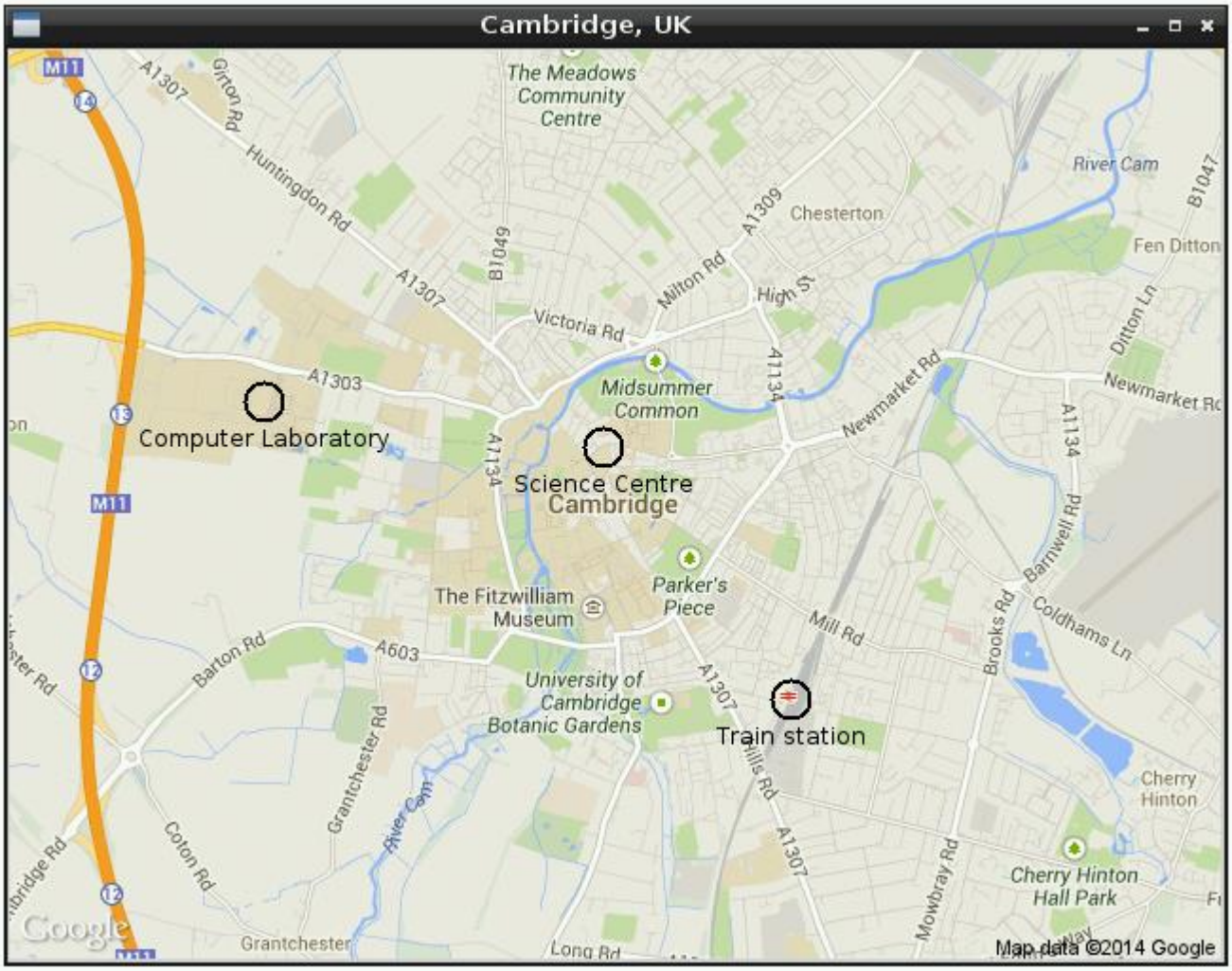




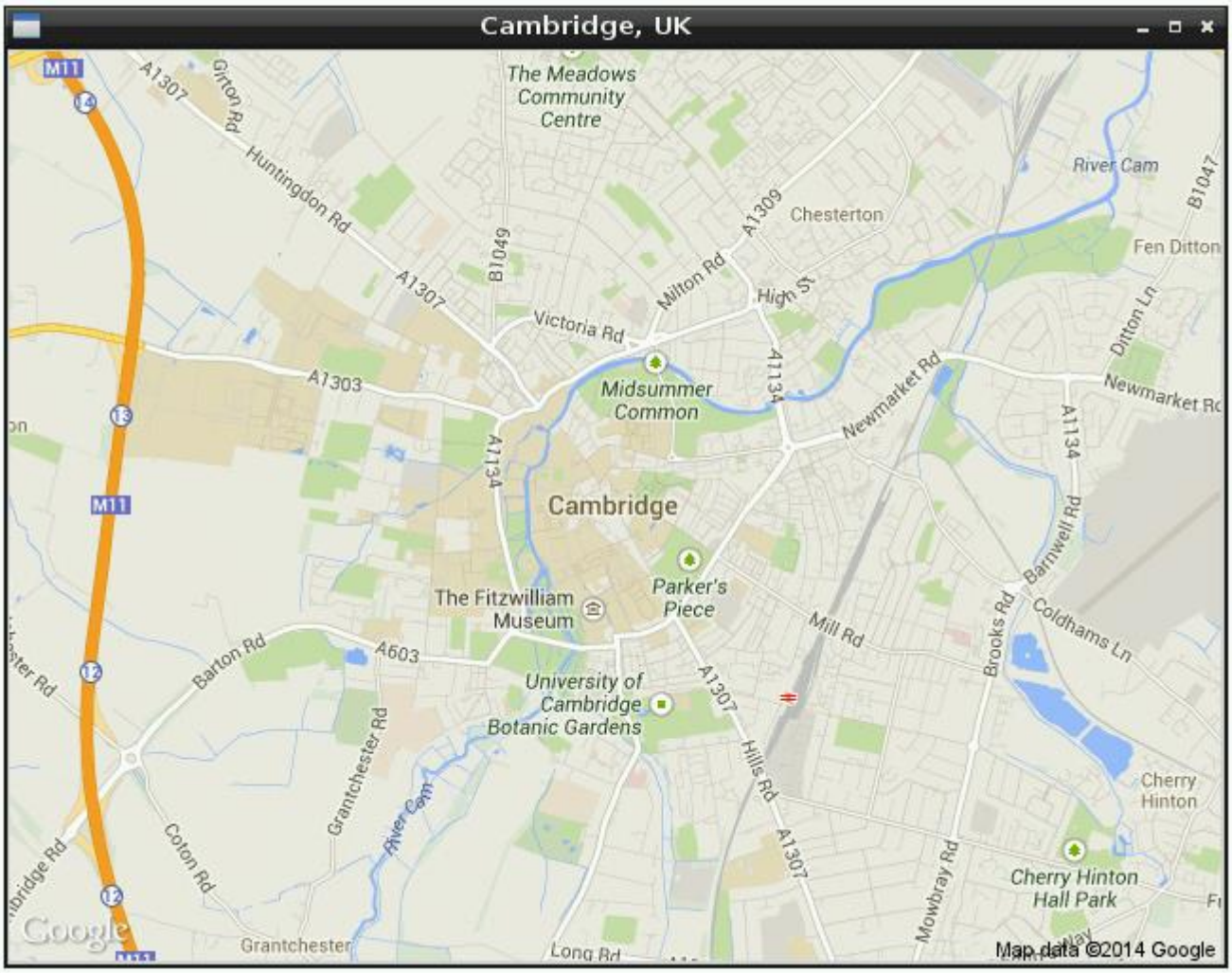

5V Power
5V Power
Ground
GPIO 14
GPIO 15
GPIO 18
Ground
GPIO 23
GPIO 24
Ground
GPIO 25
GPIO 8
GPIO 7
3V3 Power
GPIO 0 (rev1) 2 (rev2)
GPIO 1 (rev1) 3 (rev2)
GPIO 4
Ground
GPIO 17
GPIO 21 (rev1) 27 (rev2)
GPIO 22
3V3 Power
GPIO 10
GPIO 9
GPIO 11
Ground


when I receive count
set value to 0
forever if value < maximum
change value by 1
say join value = value for 1 secs


GPIO 23
GPIO 24
GPIO 25
3V3 Power
GPIO 22


Cambridge, UK
The Meadows Community Centre
River Cam
Chesterton
Fen Ditton
Huntingdon Rd
A1307
Grton Rd
B1049
A1309
B1047
Milton Rd
High St
Victoria Rd
Ditton Ln
A1303
Midsummer Common
A1134
Newmarket Rd
Computer Laboratory
Science Centre Cambridge
M11
The Fitzwilliam Museum
Parker's Piece
Barnwell Rd
Coldhams Ln
Mill Rd
Brooks Rd
Barton Rd
A603
University of Cambridge Botanic Gardens
Train station
Hills Rd
Grantchester Rd
River Cam
Cherry Hinton
Coton Rd
Mowbray Rd
Cherry Hinton Hall Park
Grantchester
Long Rd
Google
Map data ©2014 Google

My map
Hello!


Cambridge, UK
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River Cam
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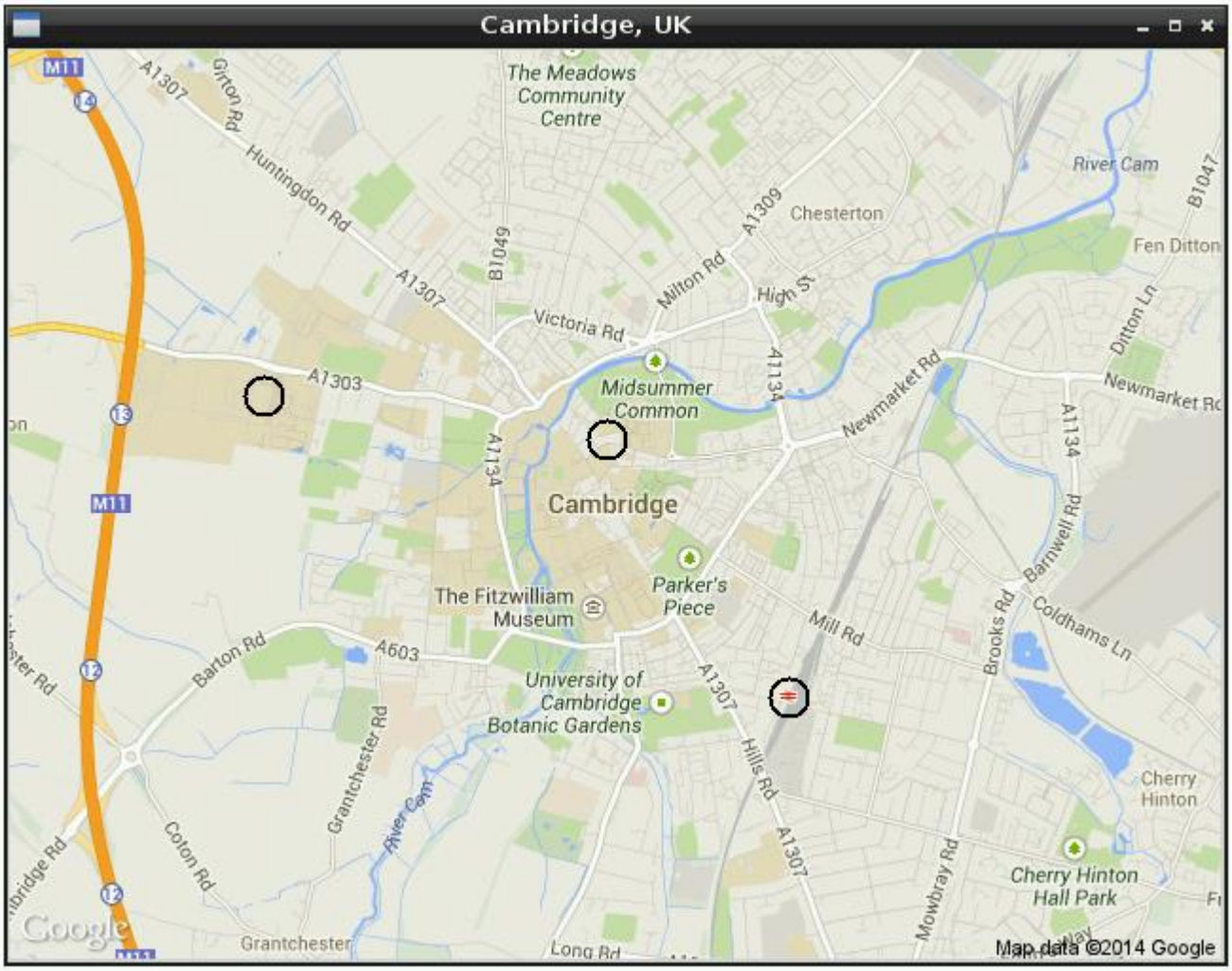
Brooks Rd
Barton Rd
A603
University of Cambridge Botanic Gardens
Hills Rd
Grantchester Rd
River Cam
Cherry Hinton
Cherry Hinton Hall Park
Coton Rd
Mowbray Rd
Grantchester
Long Rd
M11
Google
Map data ©2014 Google


Cambridge, UK
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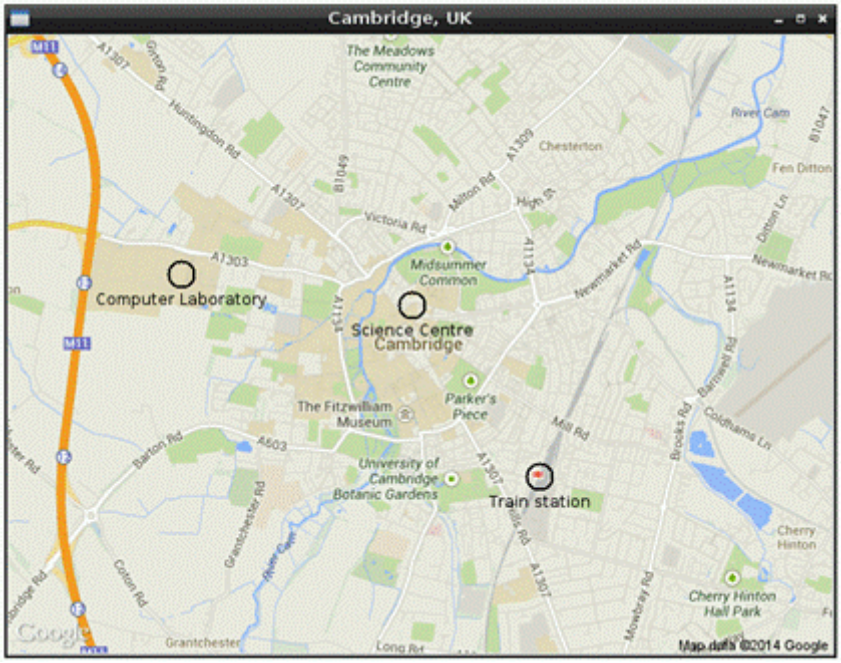
Brooks Rd
Barton Rd
A603
University of Cambridge Botanic Gardens
Hills Rd
Grantchester Rd
River Cam
Cherry Hinton
Cherry Hinton Hall Park
Coton Rd
Grantchester
Long Rd
Mowbray Rd
M11
Google
Map data ©2014 Google

New marker
Please enter a label for your marker
Done


Cambridge, UK
The Meadows Community Centre
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Fen Ditton
Huntingdon Rd
Victoria Rd
Milton Rd
High St
Ditton Ln
Newmarket Rd
Midsummer Common
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The Fitzwilliam Museum
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Brooks Rd
Coldhams Ln
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University of Cambridge Botanic Gardens
Train station
Cherry Hinton
Cherry Hinton Hall Park
Grantchester Rd
Coton Rd
Grantchester
Long Rd
Mowbray Rd
Map data ©2014 Google