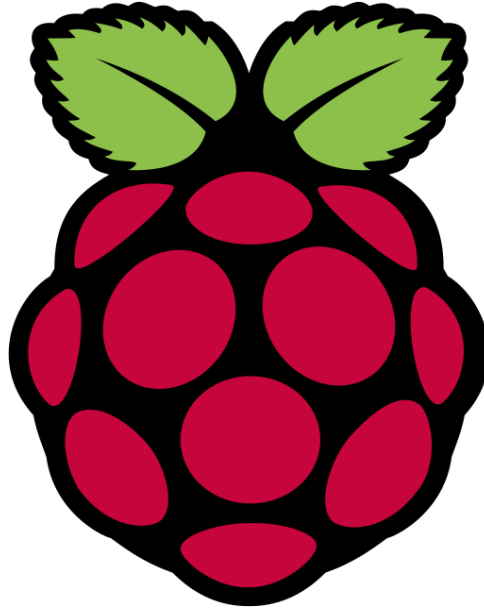
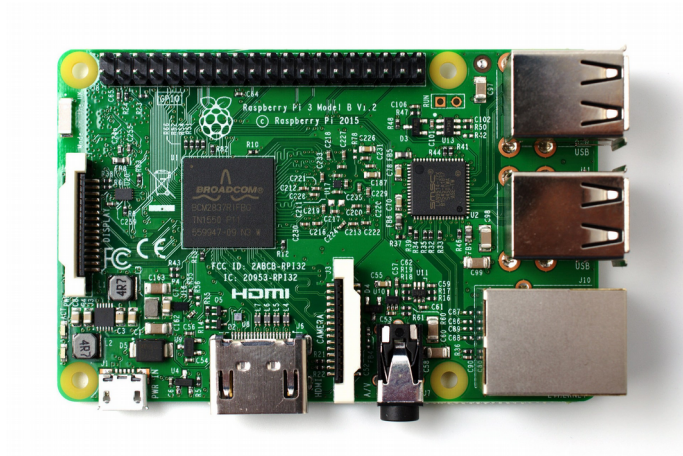
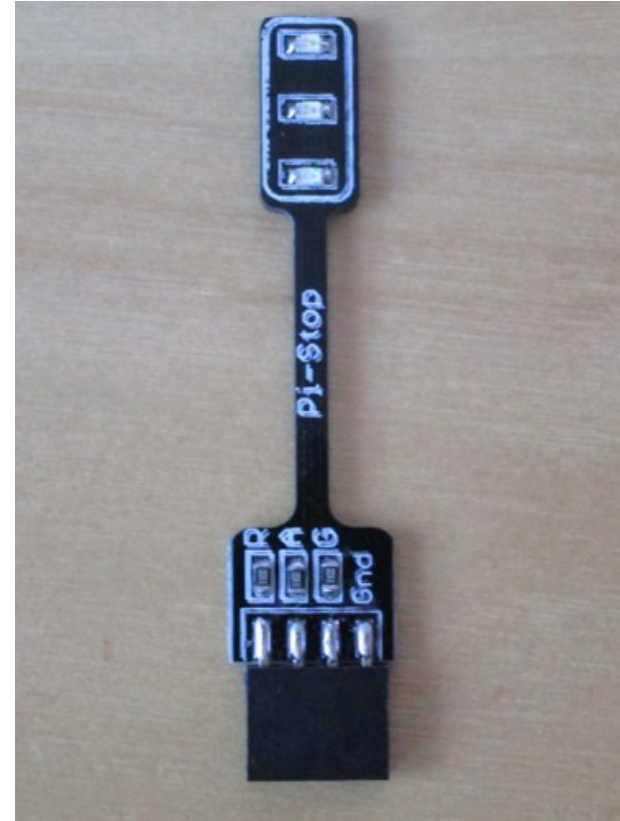


Traffic Lights controller with gpiozero and guizero

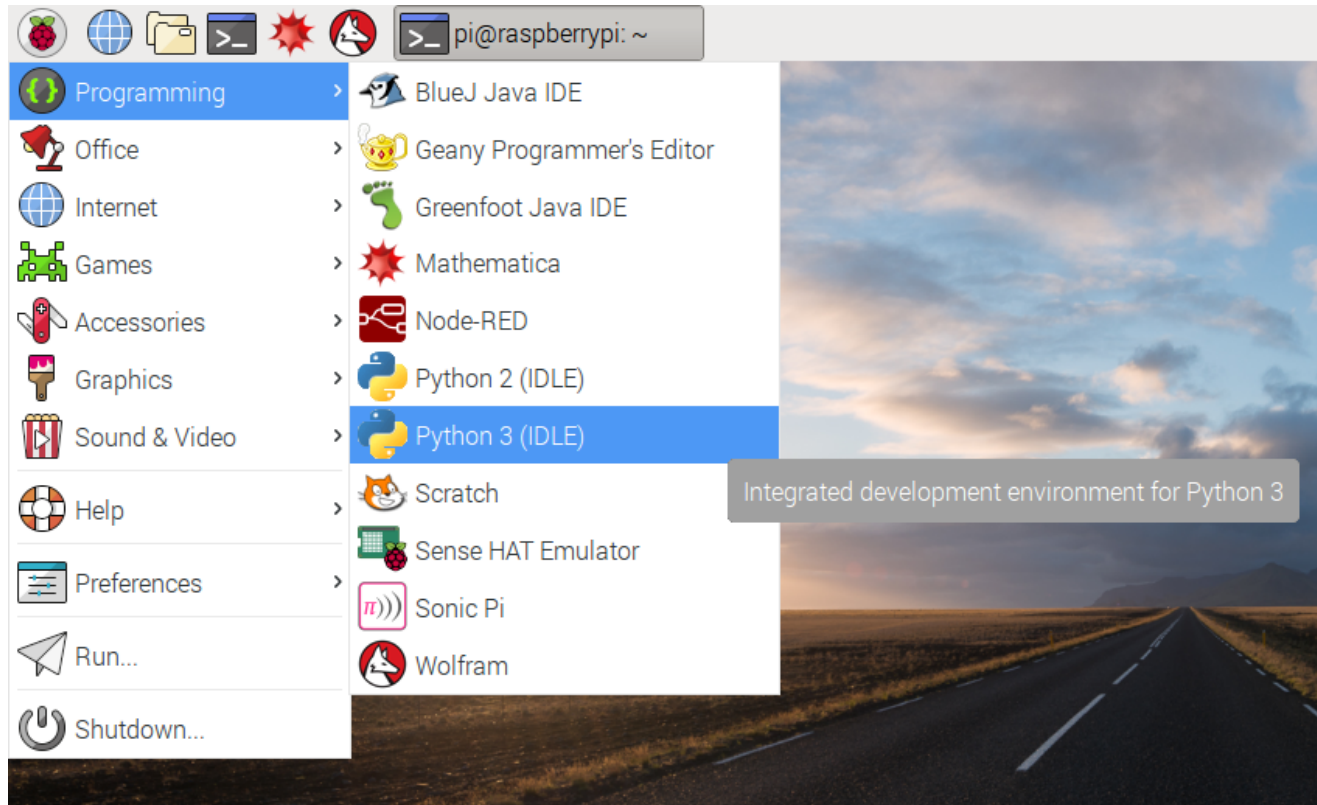


pi-stop

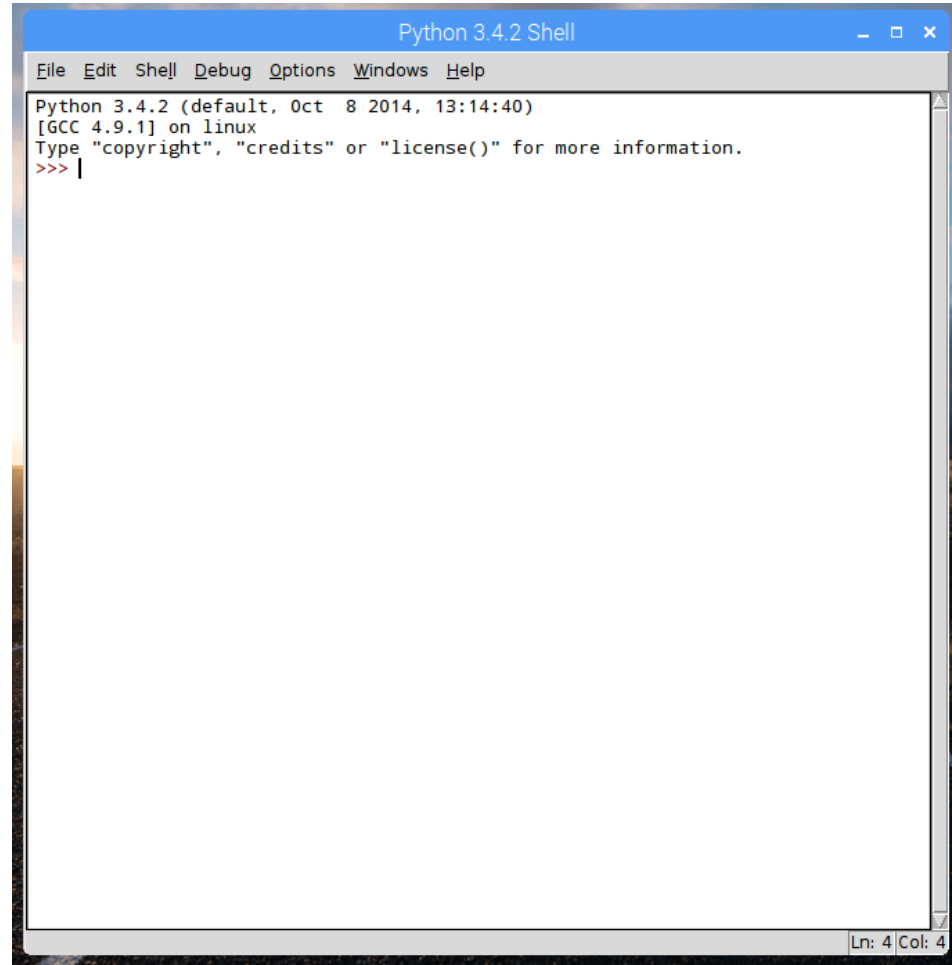
- GND
- GPIO17 (green)
- GPIO27 (amber)
- GPIO22 (red)



Open Python 3



Type into the Python shell



The image shows a screenshot of a Python 3.4.2 Shell window. The window has a blue title bar with the text "Python 3.4.2 Shell" and standard window controls. Below the title bar is a menu bar with options: File, Edit, Shell, Debug, Options, Windows, and Help. The main text area contains the following text: "Python 3.4.2 (default, Oct 8 2014, 13:14:40)", "[GCC 4.9.1] on linux", "Type 'copyright', 'credits' or 'license()' for more information.", and a red prompt ">>>" followed by a vertical cursor. The status bar at the bottom right shows "Ln: 4 Col: 4".

```
Python 3.4.2 (default, Oct 8 2014, 13:14:40)
[GCC 4.9.1] on linux
Type "copyright", "credits" or "license()" for more information.
>>> |
```

gpiozero LED

```
>>> from gpiozero import LED
>>> red = LED(22)
>>> red.on()
>>> red.off()
>>> red.blink()
```

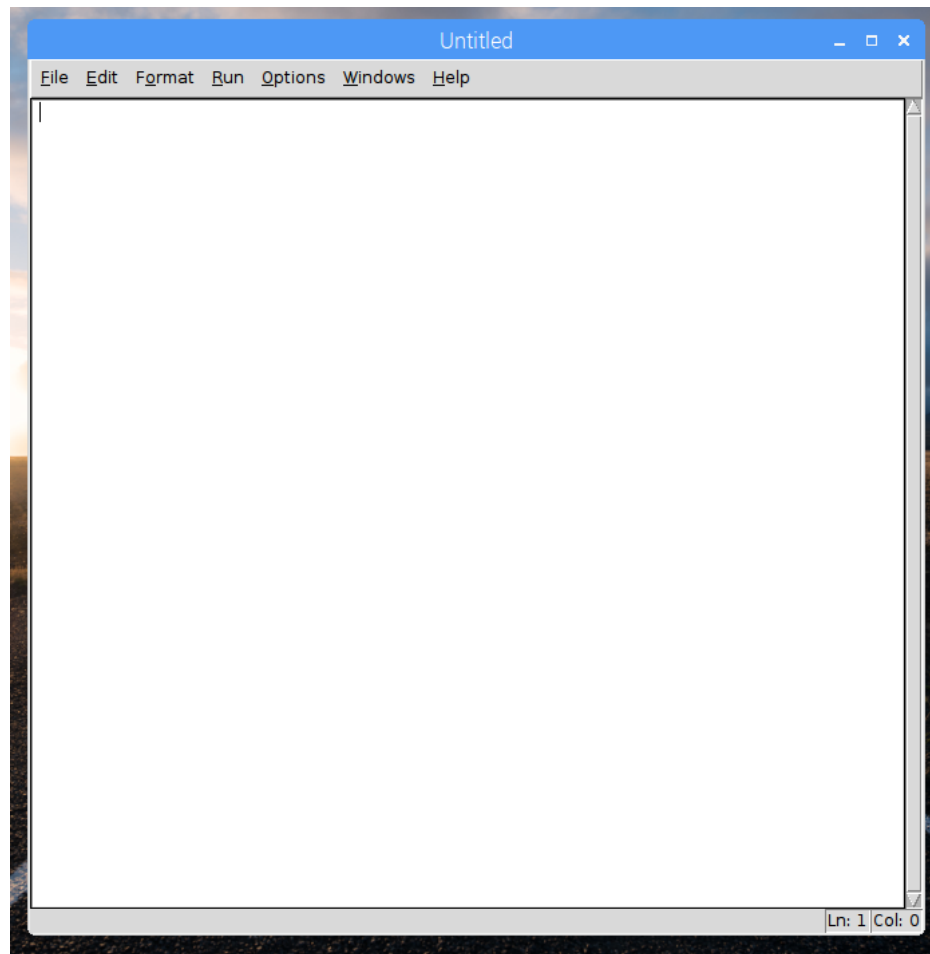
gpiozero LED blink

```
>>> red.blink(2, 2)
```

gpiozero LED blink

```
>>> red.blink(0.1, 0.1)
```

Open a new window



gpiozero Traffic Lights

```
from gpiozero import TrafficLights
```

Note the
capitalisation



```
lights = TrafficLights(22, 27, 17)
```

```
lights.blink()
```

Save and run:

Ctrl + S
F5

gpiozero Traffic Lights

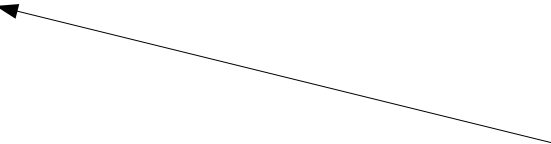
```
from gpiozero import TrafficLights
```

```
lights = TrafficLights(22, 27, 17)
```

```
lights.red.blink(1, 1)
```

```
lights.amber.blink(2, 2)
```

```
lights.green.blink(3, 3)
```



What do these numbers mean?

guizero

```
from gpiozero import TrafficLights
from guizero import App, Text, PushButton

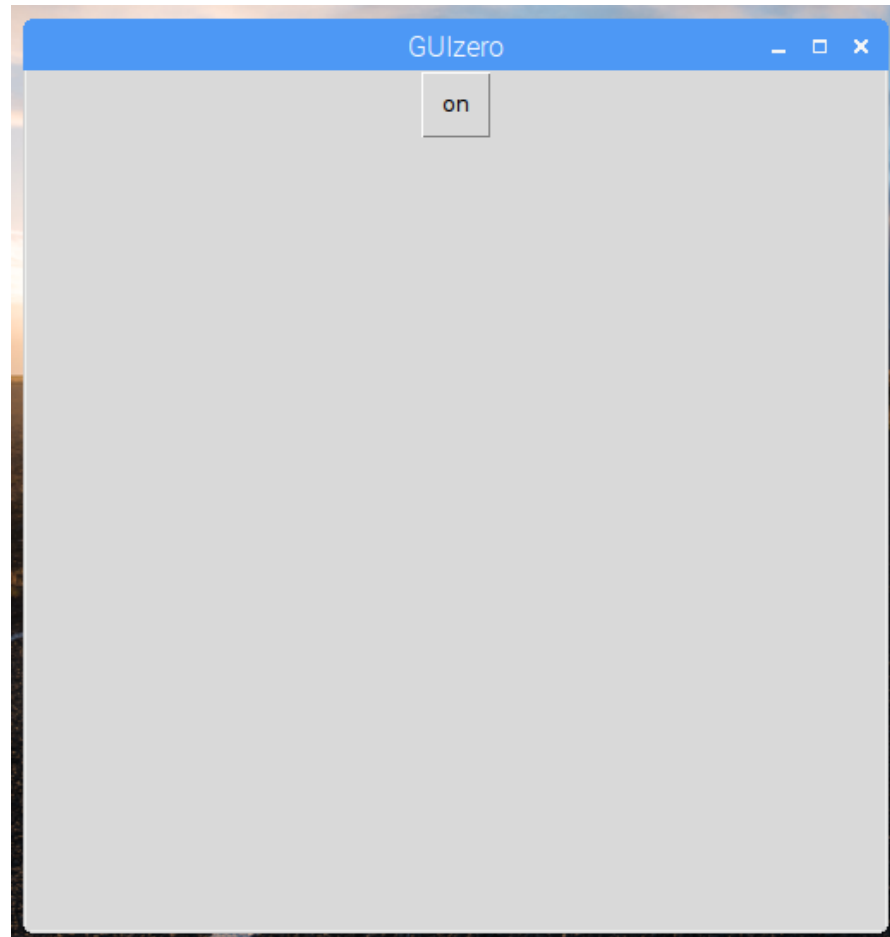
lights = TrafficLights(22, 27, 17)

app = App()

PushButton(app, command=lights.red.on, text="on")

app.display()
```

guizero



guizero buttons

```
app = App()
```

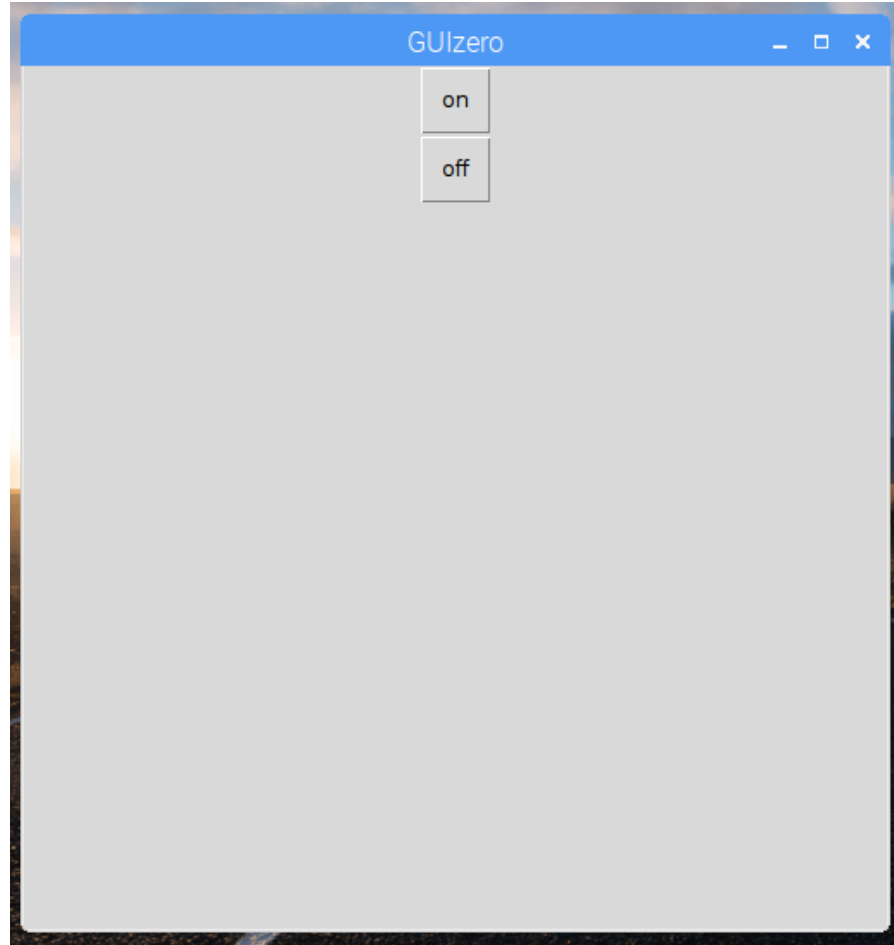
```
Text(app, "Red")
```

```
PushButton(app, command=lights.red.on, text="on")
```

```
PushButton(app, command=lights.red.off, text="off")
```

```
app.display()
```

guizero buttons



guizero grid layout


```
app = App("Traffic Lights controller", layout="grid")
```

```
Text(app, "Red", grid=[0, 0])
```

```
PushButton(app, command=lights.red.on, text="on", grid=[0, 1])
```

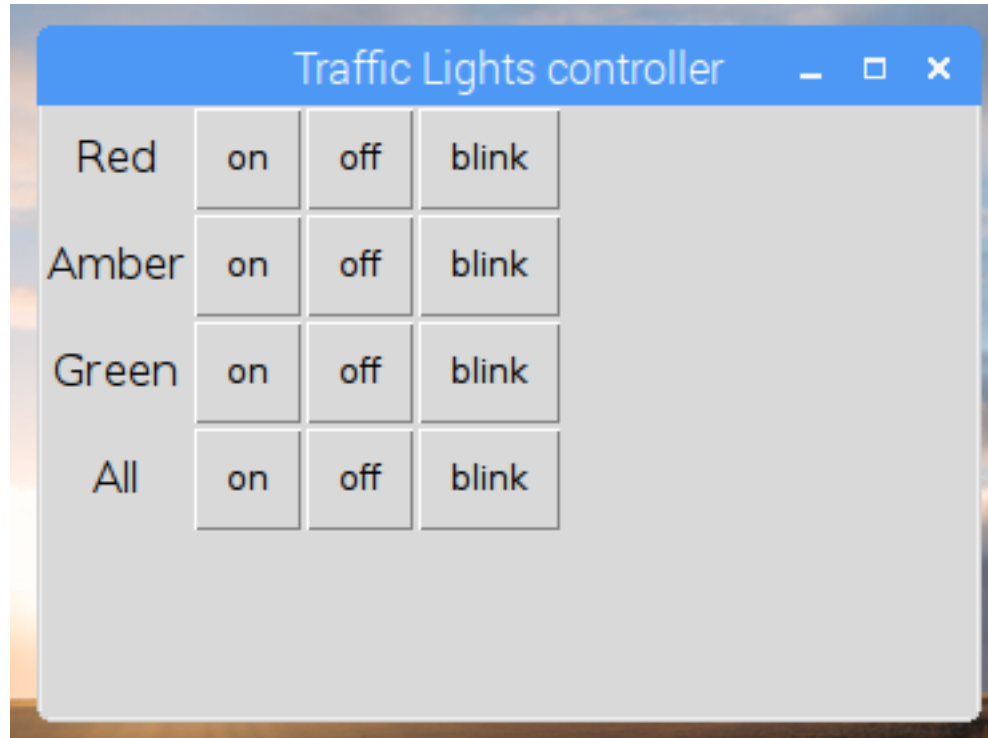
```
PushButton(app, command=lights.red.off, text="off", grid=[0, 2])
```

```
app.display()
```



**This line MUST
go at the end**

Challenge



More challenges

- Can you use a different blink speed?
- Can you make the blink speed variable?
- Can you add a traffic lights sequence button?
- Can you add multiple traffic lights?