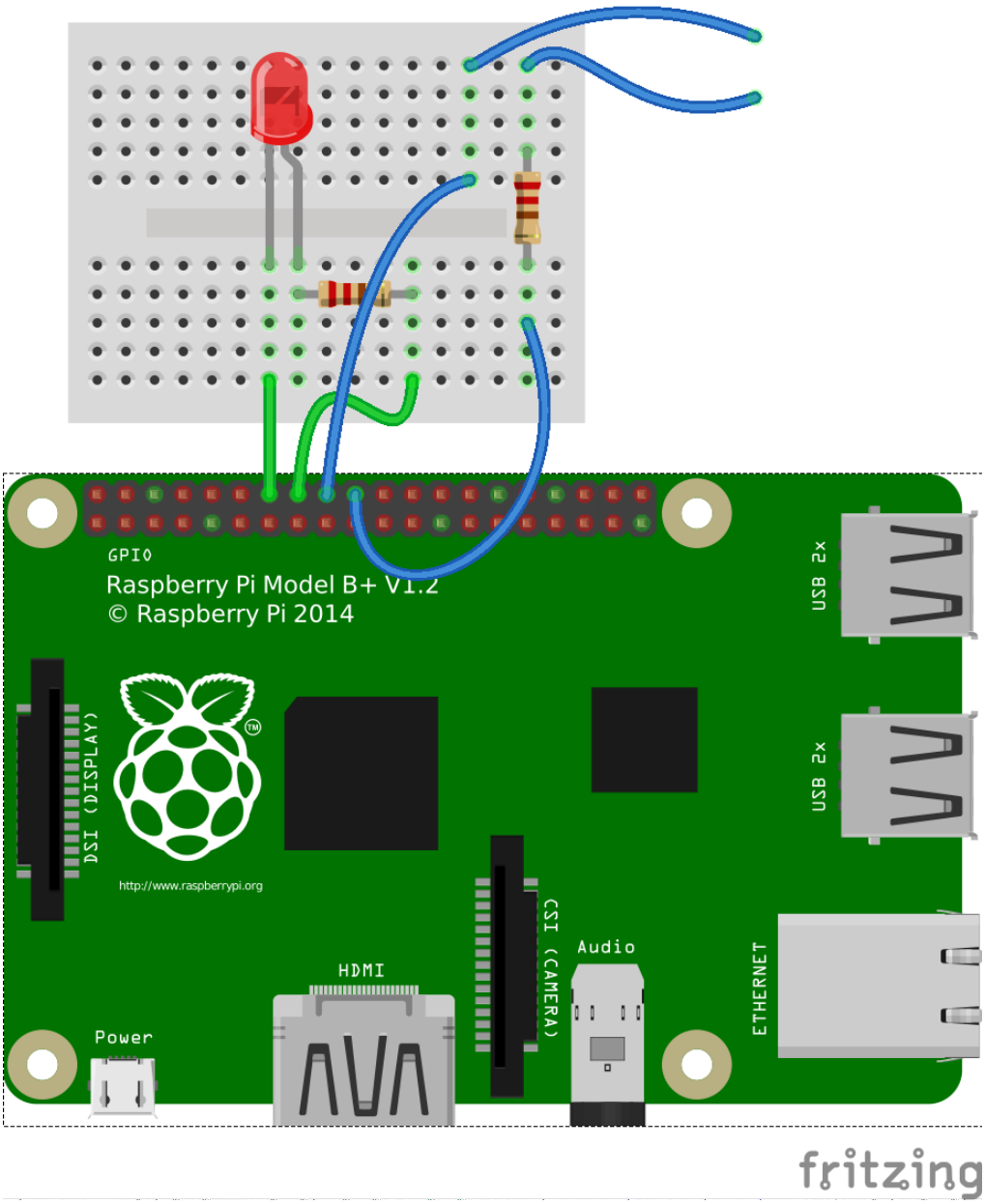
Vypinaní LEDky a podle spinace

BREADBOARD
http://sourceforge.net/p/raspberry-gpio-python/wiki/Examples/
http://raspi.tv/2013/how-to-use-interrupts-with-python-on-the-raspberry-pi-and-rpi-gpio-part-3
http://makezine.com/projects/tutorial-raspberry-pi-gpio-pins-and-python/



RASPI

SPINAC.PY

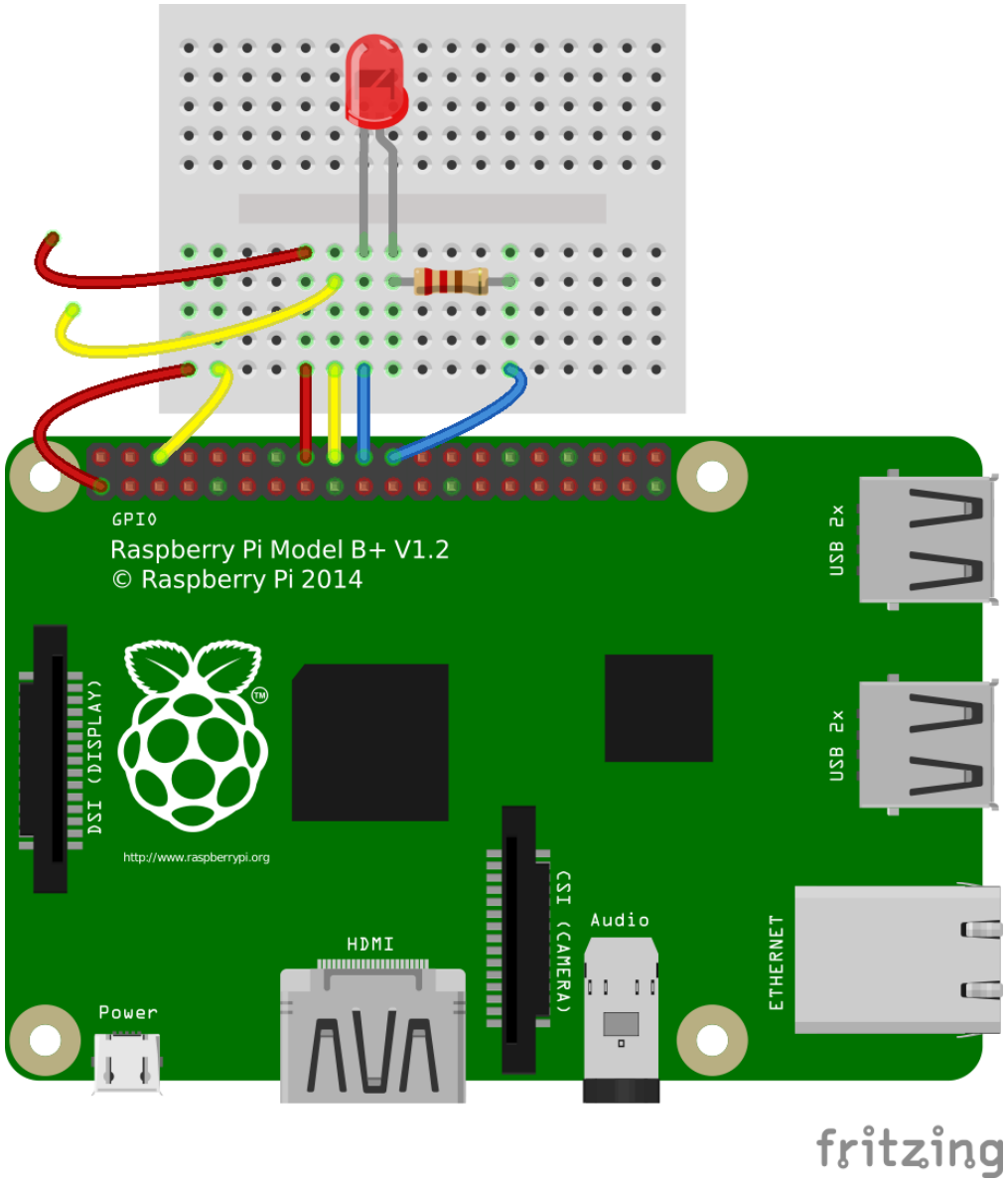
```
import RPi.GPIO as GPIO ## Import GPIO library
import time

GPIO.setmode(GPIO.BOARD) ## Use board pin numbering
GPIO.setup(18, GPIO.IN, pull_up_down=GPIO.PUD_UP)
GPIO.setup(16, GPIO.OUT) ## Setup GPIO Pin 16 to OUT

while 1:
    if GPIO.input(18):
        print "Nic se nedeje"
        GPIO.output(16, False)
        time.sleep(0.2)
    else:
        # When the button switch is not pressed, turn off the LED.
        print "Nekdo prisel, svitime!"
        GPIO.output( 16, True)
        time.sleep(0.2)
```

Ale co víc spínačů?
(žlutej na žlutej!!!! červenej na červenej!!!!)

SPINAC2.PY



```
import RPi.GPIO as GPIO ## Import GPIO library
import time


GPIO.setmode(GPIO.BOARD) ## Use board pin numbering
GPIO.setup(16, GPIO.IN, pull_up_down=GPIO.PUD_DOWN)
#PUD_DOWN = na 3.3V
GPIO.setup(18, GPIO.IN, pull_up_down=GPIO.PUD_UP)
#PU_UP    = na zem
GPIO.setup(22, GPIO.OUT) ## Setup GPIO Pin 22 to OUT

while 1:
 if (GPIO.input(16) == 0):
  print "Nic se nedeje"
  GPIO.output(22, False)
  time.sleep(0.2)
 else:
 # When the button switch is not pressed, turn off the LED.
  print "Nekdo prisel, svitime!"
  GPIO.output(22, True)
  time.sleep(0.2)
 if (GPIO.input(18) == 0):
   print "Osmnactka jede"
   time.sleep(0.2)
```

Ale jak na to, abych hledal změnu stavu? *Ale čekám na to, až se mi - jedna podmínka za druhou splní.... fuj*

SPINAC3.PY

```
import RPi.GPIO as GPIO ## Import GPIO library
import time

GPIO.setmode(GPIO.BOARD) ## Use board pin numbering
GPIO.setup(18, GPIO.IN, pull_up_down=GPIO.PUD_UP)
GPIO.setup(16, GPIO.IN, pull_up_down=GPIO.PUD_DOWN)

while 1:
 GPIO.wait_for_edge(16, GPIO.RISING) # cekam a cekam….
 print("Button 1 Pressed")
 GPIO.wait_for_edge(16, GPIO.FALLING)
 print("Button 1 Released")
 GPIO.wait_for_edge(18, GPIO.FALLING)
 print("Button 2 Pressed")
 GPIO.wait_for_edge(18, GPIO.RISING)
 print("Button 2 Released")

GPIO.cleanup()
```

Ale teď už fakt raději správně:
použijeme callback a bounce time 300ms?

SPINAC4.PY

```
import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BOARD)
GPIO.setup(16, GPIO.IN, pull_up_down = GPIO.PUD_DOWN)
GPIO.setup(18, GPIO.IN, pull_up_down = GPIO.PUD_UP)

def printFunction(channel):
        print("Button 1 pressed")
        print("Note how the bouncetime affects the button press")

GPIO.add_event_detect(16, GPIO.RISING, callback=printFunction,
bouncetime=300)

while True:

        GPIO.wait_for_edge(18, GPIO.FALLING)
        print("Button 2 Pressed")
        GPIO.wait_for_edge(18, GPIO.RISING)
        print("Button 2 Released")


GPIO.cleanup()
```

takže příště:

SPINAC5.PY

```
import RPi.GPIO as GPIO
import time

GPIO.setmode(GPIO.BOARD)
GPIO.setup(16, GPIO.IN, pull_up_down = GPIO.PUD_DOWN)
GPIO.setup(18, GPIO.IN, pull_up_down = GPIO.PUD_UP)

def sestnactka(channel):
        print("Sestnactka - Button "), channel

def osmnactka(channel):
        print("Osmnactka - Button "), channel

GPIO.add_event_detect(16, GPIO.RISING, callback=sestnactka, bouncetime=300)
GPIO.add_event_detect(18, GPIO.FALLING, callback=osmnactka, bouncetime=300)

while True:

        print time.ctime()
        time.sleep(2)

GPIO.cleanup()
```