SoSLUG - GPIO Starter Kit
Software - 2 Traffic Lights

Southend-on-Sea Linux Users Group (SoSLUG)
http://www.soslug.org/

Python Software

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# TWO way traffic lights
#
# for showing the club one idea for the SoSlug BIKE

#  Version 2.0   date 13/10/2014

#  This works on Python ver 3.2

#  Written by Ray Eacott

import RPi.GPIO as GPIO      # import Python GPIO module
import time                  # import time module


# Assign GPIO pins numbers to Lights

GPIO.setmode(GPIO.BOARD) # use board numbers

Red1 = 12
Orange1 = 16
Green1 = 18
Red2 = 11
Orange2 = 13
Green2 = 15

# Delay times in seconds

Orange = 1 # Orange
Traffic = 5  # Traffic flowing through road works
Clear = 2  # clear


# Setup GPIO

GPIO.setup(Red1, GPIO.OUT)      # set pin Red1 to output
GPIO.setup(Orange1, GPIO.OUT)   # set Orange1 to output
GPIO.setup(Green1, GPIO.OUT)    # set Green1 to output

GPIO.setup(Red2, GPIO.OUT)      # set Red2 to output
GPIO.setup(Orange2, GPIO.OUT)   # set Orange22 to output
GPIO.setup(Green2, GPIO.OUT)    # set Green2 to output


# Switch on both Red lights all other lights off

GPIO.output(Red1, True)         # switch on Red1
GPIO.output(Orange1, False)     # switch off Orange1
GPIO.output(Green1, False)      # switch off Green1

GPIO.output(Red2, True)         # switch on Red2
GPIO.output(Orange2, False)     # switch off Orange2
GPIO.output(Green2, False)      # switch off Green2
```

```
# to allow traffic to clear from the road works

time.sleep(Clear)



for lights in range(1,10):        # Repeat 10 times


      GPIO.output(Orange1, True)    # Orange on
      time.sleep(Orange)            # small delay
      GPIO.output(Red1, False)      # Red off
      GPIO.output(Orange1, False)   # Orange off
      GPIO.output(Green1, True)     # Green on

      time.sleep(Traffic)

      GPIO.output(Green1, False)
      GPIO.output(Orange1, True)
      time.sleep(Orange)
      GPIO.output(Orange1, False)
      GPIO.output(Red1, True)
      time.sleep(Clear)             # to allow traffic to clear from
the road works


      GPIO.output(Orange2, True)
      time.sleep(Orange)
      GPIO.output(Red2, False)
      GPIO.output(Orange2, False)
      GPIO.output(Green2, True)

      time.sleep(Traffic)

      GPIO.output(Green2, False)
      GPIO.output(Orange2, True)
      time.sleep(Orange)
      GPIO.output(Orange2, False)
      GPIO.output(Red2, True)
      time.sleep(Clear)            # to allow traffic to clear from
the road works


      next

GPIO.cleanup()
```