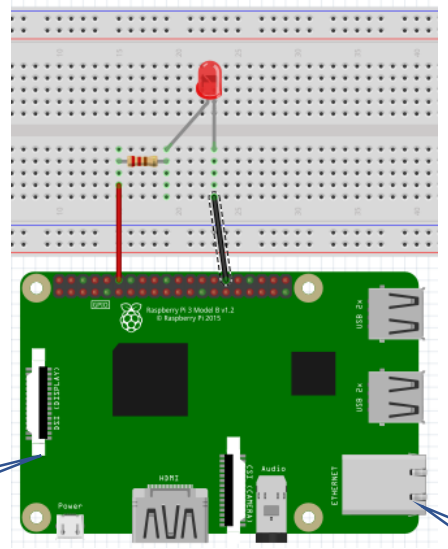
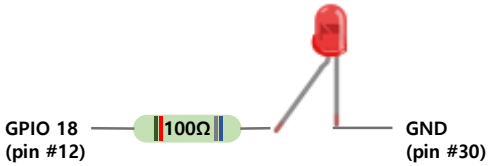
LED 원격 제어 Lab 1

(실습과제 1) LED 원격 제어





클라이언트(client.py)

$ python client.py
cmd : led
led_no : 18
on|off : on

json

{ “cmd” : “led”, “led_no” : 18, “act” : ”on”}

서버(server.py)

GPIO.setmode(GPIO.BCM)
GPIO.setup(led_pin, GPIO.OUT)
GPIO.output(led_pin, True)

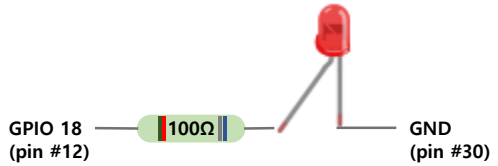
LED 반짝거리기

```
import RPi.GPIO as GPIO
import time

led_pin = 18

try :
    GPIO.setmode(GPIO.BCM)
    GPIO.setup(led_pin, GPIO.OUT)

    while True:
            GPIO.output(led_pin, True)
            time.sleep(0.5)
            GPIO.output(led_pin, False)
            time.sleep(0.5)
finally:
      print('clean up')
      GPIO.cleanup()
```



LED 원격제어 - client

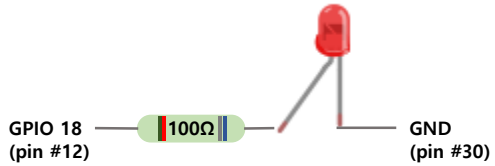
```
import socket
import json

s = socket.socket()
host = '127.0.0.1'
port = 9000

s.connect((host, port))

data = {}
cmd = input('command : ')
led_no = input('led no : ')
act = input('on|off : ')

data['cmd'] = cmd
data['led_no'] = int(led_no)
data['act'] = act
body = json.dumps(data)
s.sendall(bytes(body, 'UTF-8'))
s.close()
```



LED 원격제어 - server

```
import socket
import RPi.GPIO as GPIO
import json

s = socket.socket()
s.setsocketopt(socket.SOL_SOCKET, socket.SO_REUSEADDR, 1)

host = '0.0.0.0'
port = 9000

s.bind((host, port))
s.listen(10)

GPIO.setmode(GPIO.BCM)

while True:
    c. addr = s.accept()
    print('Got connection from', addr)

    data = c.recv(2048)
    msg = json.loads(data.decode())
    print('received data : ', msg)

    if msg['cmd'] == 'led' :
            led_pin = msg['led_no']
            GPIO.setup(led_pin, GPIO.OUT)

            if msg['act'] == 'on' :
                    GPIO.output(led_pin, True)
            elif msg['act'] == 'off' :
                    GPIO.output(led_pin, Flase)
    c.close()
s.close()
```