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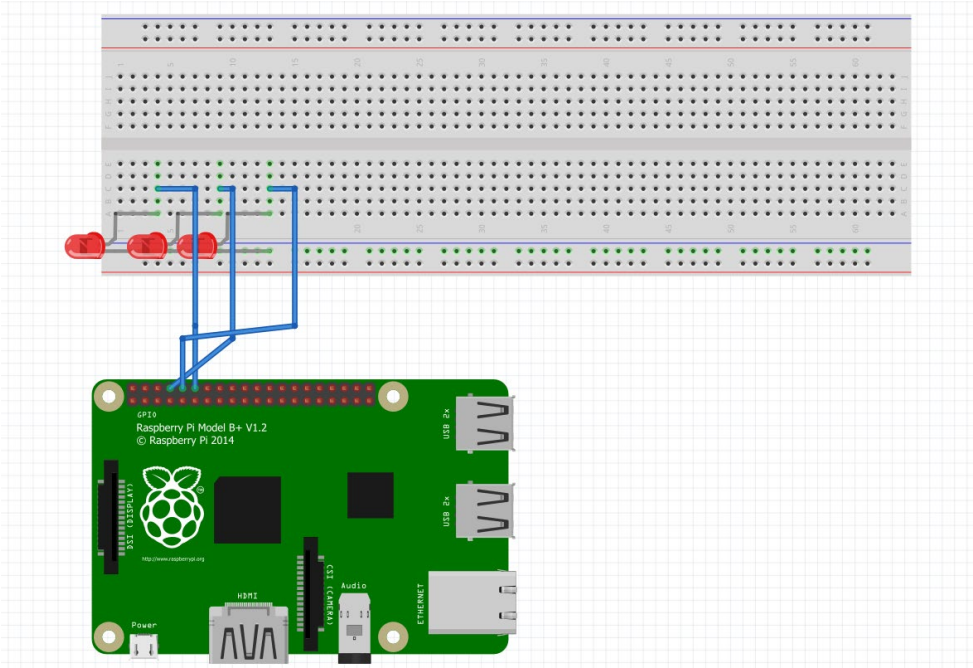
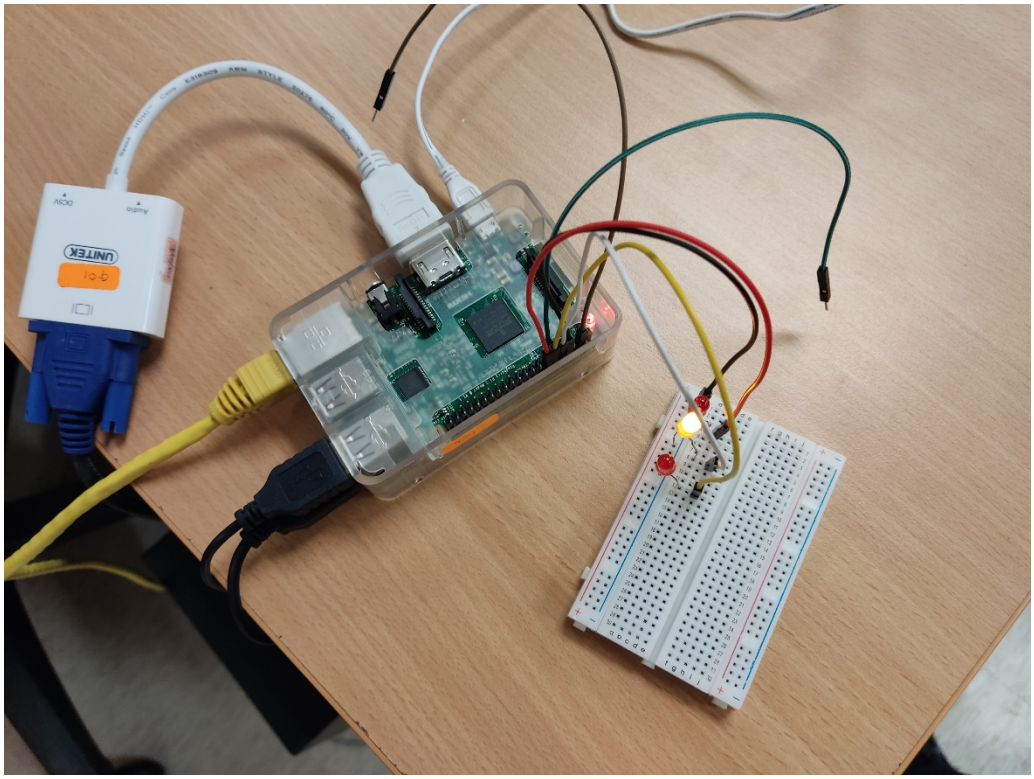
Lab 4 Integrating Input Device using GPIO

1. Steps during hands on.

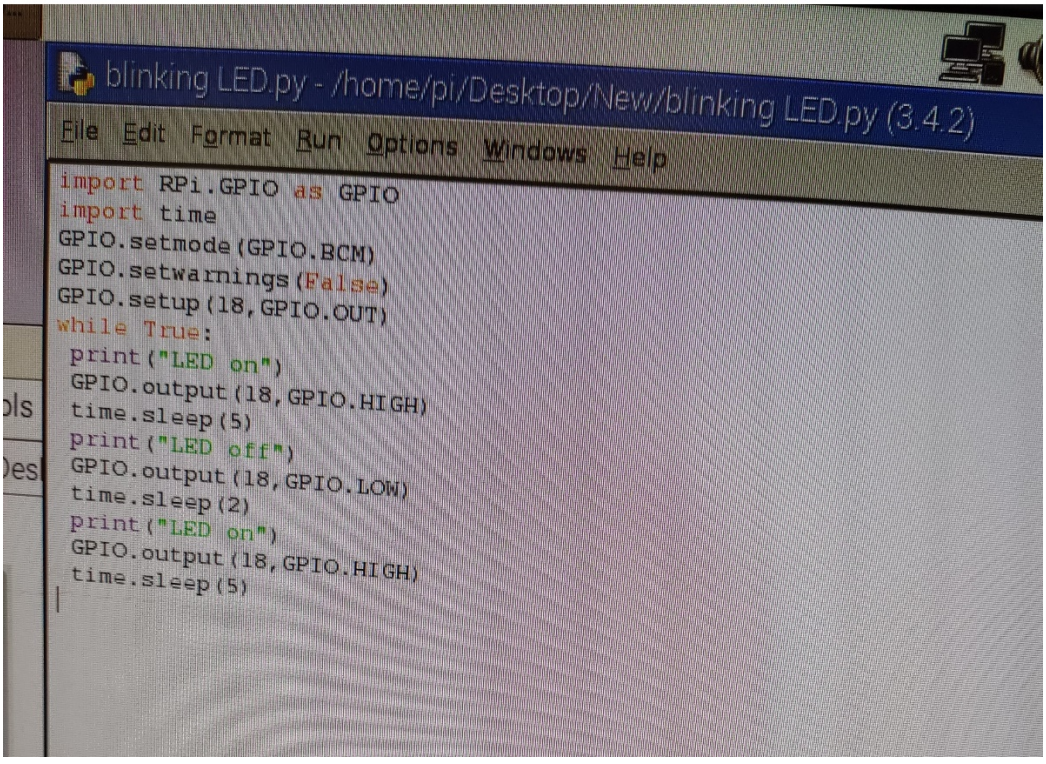
    1. Attach 3 LED using Male-Female jumper wires on Breadboard and connect with GPIO 18, GPIO 14 and GPIO 15.
    2. Attach to negative at breadboard with ground using the jumper wire.
    3. Create new Python File to make LED connected with GPIO 18, GPIO 14 and GPIO 15 blinking in order.
    4. Run the Phyton code

2. GPIO – LED connection design





3. Python Code with explanation



```
import Rpi.GPIO as GPIO  #import GPIO package
import time

#set Raspberry Pi GPIO to GPIO numbering mode
GPIO.setmode(GPIO.BCM)

#disable warnings that the GPIO is in use
GPIO.setwarnings(False)

#set GPIO 18, 14, 15 as an output
GPIO.setup(18,GPIO.OUT)
GPIO.setup(14,GPIO.OUT)
GPIO.setup(15,GPIO.OUT)

while True:  #start loop forever
    print("LED on")
    #set GPIO18 to High/True/turning on
    GPIO.output(18,GPIO.HIGH)
    #suspends for 5 seconds
    time.sleep(5)

    print("LED off")
    #set GPIO18 to Low/False/turning off
    GPIO.output(18,GPIO.LOW)
    #suspends for 2 seconds
    time.sleep(2)

    print("LED on")
    #set GPIO14 to High/True/turning on
    GPIO.output(14,GPIO.HIGH)
    #suspends for 5 seconds
    time.sleep(5)

    print("LED off")
    #set GPIO14 to Low/False/turning off
    GPIO.output(14,GPIO.LOW)
    #suspends for 2 seconds
    time.sleep(2)

    print("LED on")
    #set GPIO15 to High/True/turning on
    GPIO.output(15,GPIO.HIGH)
    #suspends for 5 seconds
    time.sleep(5)

    print("LED off")
    #set GPIO15 to Low/False/turning off
    GPIO.output(15,GPIO.LOW)
```