ASSIGNMENT -3

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TOPIC: Python code for blinking LED ad Traffic lights for Raspberry pi

BLINKING LED

```
import RPi.GPIO as GP from time

import sleep GP.setwarnings(False)

GP.setmode(GP.BOARD)

GP.setup(8,GP.OUT,initial=GP.LOW)

while True: #infinite loop

GP.output(8, GPIO.HIGH) # Turn on

print("The LED is ON") sleep(2) # Sleep for 2 second

GP.output(8, GPIO.LOW) # Turn off

print("The LED is OFF") sleep(2) # Sleep for 2 s
```

output:

```
IDLE Shell 3.9.6                                          —    □    ×
File  Edit  Shell  Debug  Options  Window  Help
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
```

TRAFFIC LIGHT CONTROLLER

```python
from gpiozero import LED
from time import sleep
red= LED(17) #pin numbers connected to Led's
aster=(22)
green=(27)
while True:
red.on() #RED light
print("Red light is ON")
for i in range(100,0,-1):
print("Remaining time: ",i)
sleep(1)
red.off()
aster.on() # ASTER light
print("Yellow light is ON")
for i in range(5,0,-1):
print("Remaining time: ",i)
sleep(1)
aster.off()
green.on #GREEN light
print("Green light is ON")
for i in range(30,0,-1):
print("Remaining time: ",i)
sleep(1)
green.off()
```

OUTPUT:

```python
import RPi.GPIO as GPIO
import time
import signal
import sys
#setup
GPIO.setmode(GPIO.BCM)
GPIO.setup(9, GPIO.OUT)
GPIO.setup(10, GPIO.OUT)
GPIO.setup(11, GPIO.OUT)
#Turn off all lights
def allLightOff(signal, frame):
    GPIO.output(9,False)
    GPIO.output(10,False)
    GPIO.output(11,False)
    GPIO.cleanup()
    sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)
#Forever Loop
while True:
    #Red
    GPIO.output(9, True)
    time.sleep(3)
    GPIO.output(10, True)
    time.sleep(1)
    #Green
    GPIO.output(9,False)
    GPIO.output(10,False)
    GPIO.output(11,True)
    time.sleep(5)
    #Amber
    GPIO.output(11,False)
    GPIO.output(10,True)
    time.sleep(2)
    #Amber off
    GPIO.output(10,False)
```