Assignment -3

Assignment Date	05 October 2022
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Maximum Marks	2 Marks

Question-1

Write python code for linking LED and Traffic light for Raspberry pi. Only python code is enough, no need to execute in raspberry pi.

Python Code for Blinking LED

```
import RPi.GPIO as GPIO    #Import Raspberry Pi GPIO library
from time import sleep #Import the sleep function from the time module

GPIO.setwarnings(False) #Ignore warning for now
GPIO.setmode(GPIO.BOARD) #Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) #Set pin 8 to be an output pin and set initial value to low (off)


While True: #Run forever
GPIO.output(8, GPIO.HIGH) # True on
Sleep(1) # Sleep for 1 second
GPIO.output(8, GPIO.low) # True off
Sleep(1) # Sleep for 1 second
```

Python Code for Traffic Light

```
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 when user ends demo
def allLightsOff(signal, frame):
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, False)
    GPIO.cleanup()
    sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)

# Loop forever
While True:
    # Red
    GPIO.output(9, True)
    Time.sleep(3)
    # Red and amber
    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 (red comes on at top of loop)
GPIO.output(10, False)
```