

ASSIGNMENT-3  
Python Programming

Assignment Date	02 October 2022
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Maximum Marks	2

**Question:**

Write python code for blinking LED and Traffic lights for Raspberry pi.

**Blinking LED:**

```
import time
import RPi.GPIO as GPIO    ## Import GPIO library
GPIO.setmode(GPIO.BOARD)  ## Use board pin numbering
GPIO.setup(11, GPIO.OUT)   ## Setup GPIO Pin 11 to OUT
while True:
    GPIO.output(11,True) ## Turn on Led
    time.sleep(1)        ## Wait for one second
    GPIO.output(11,False) ## Turn off Led
    time.sleep(1)        ## Wait for one second
```

**Traffic Lights:**

**# 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)