

### Assignment -3

#### Python Programming

Assignment Date	5 October 2022
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Maximum Marks	2 Marks

#### Question-1:

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

#### Program for blinking LED:

```
import RPi.GPIO as GPIO
GPIO library
from time import sleep
from the time module
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)
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:
    GPIO.output(8,GPIO.HIGH)
    sleep(1)
    GPIO.output(8,GPIO.LOW)
    sleep(1)
```

## For Traffic Lights:

```
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,framer):
    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)
```