

ASSIGNMENT-3

Python Programming

Assignment Date	02 October 2022
Student Name	Mark Gerald
Student Roll Number	311119106028
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)
```