

Assignment -3
Python assignment

Assignment Date	07 October 2022
Student Name	Mr. A. NANDHAGOPAL VIGNESH
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Maximum Marks	2 Marks

Question-1:

Write a Python code for Blinking LED and Traffic Light for Raspberry Pi

Solution:

Blinking Of an LED For Raspberry Pi

```
import time

#assign numbering for the GPIO using BCM
GPIO.setmode(GPIO.BCM)

#assignn number for the GPIO using Board
#GPIO.setmode(GPIO.BOARD)

cnt = 0

MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds

RED_LED = 4

GPIO.setup(RED_LED, GPIO.OUT)

while True:

    if cnt == 0 :

        GPIO.output(RED_LED, False)

        cnt = 1

    else:

        GPIO.output(RED_LED, True)

        cnt = 0

    time.sleep(MAIL_CHECK_FREQ)

GPIO.cleanup()
```

Traffic Light for Raspberry Pi

```
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)
```