

IBM ASSIGNMENT – 3

Python Programming

Assignment Date	07 October 2022
Student Name	NAVEEN KUMAR T
Student Roll Number	710019106302

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

1.CODE FOR BLINKING LED:

```
import RPi.GPIO as GPIO

import time

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

#assign 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()
```

2.CODE FOR TRAFFIC LIGHTS:

```
from gpio zero import Button, Traffic Lights, Buzzer  
from time import sleep  
buzzer = Buzzer(15)  
button = Button(21)  
lights = Traffic Lights(25, 8, 7)  
while True:  
    button.wait_for_press()  
    buzzer.on()  
    light.green.on()  
    sleep(1)  
    lights.amber.on()  
    sleep(1)
```

lights.red.on()

sleep(1)

lights.off()

buzzer.off()