

## IBM IoT Assignment – 3

1. Write python code for blinking LED and Traffic lights for Raspberry pi. Only python code is enough, no need to execute in raspberry pi. (Note: you are allowed to use web search and complete the assignment.)

### Python code:

```
import time

import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BOARD)

GPIO.setup(11, GPIO.OUT) while True: GPIO.output(11,True)

time.sleep(1)

GPIO.output(11,False)

time.sleep(1)

from gpiozero import Button, TrafficLights, Buzzer buzzer = Buzzer(15)

button = Button(21)

lights = TrafficLights(25, 8, 7) while True: button.wait_for_press()

light.green.on()

sleep(1)

lights.amber.on()

sleep(1)

lights.red.on()

sleep(1)

lights.off() while True:

lights.on()

buzzer.off()
```

```
button.wait_for_press()
lights.off()
buzzer.on()
button.wait_for_release() while True:
lights.blink()
buzzer.beep()
button.wait_for_press()
lights.off()
buzzer.off()
button.wait_for_release()
```

### **Python Code for Separate Function:**

```
//Code for Blinking LED//

import RPi.GPIO as GPIO
import time

LED = 40

GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)
GPIO.setup(LED, GPIO.OUT)

while True:

    GPIO.output(LED,GPIO.HIGH)
    time.sleep(1)
    GPIO.output(LED,GPIO.LOW)
    time.sleep(1)
```

```
//Code for Traffic Light System//
```

```
from gpiozero import Button, TrafficLights, Buzzer
```

```
from time import sleep
```

```
buzzer = Buzzer(15)
```

```
button = Button(21)
```

```
lights = TrafficLights(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()
```