

Assignment -3

Python Programming

Question-1:

Write python code for blinking led and traffic lights for raspberry pi.

Solution:

For blinking led :

```
import RPi.GPIO as GPIO
import time

ledPin = 22

def setup():
    GPIO.setmode(GPIO.BOARD)
    GPIO.setup(ledPin, GPIO.OUT)
    GPIO.output(ledPin, GPIO.LOW)

def loop():
    while True:
        print 'LED on'
        GPIO.output(ledPin, GPIO.HIGH)
        time.sleep(1.0)
        print 'LED off'
        GPIO.output(ledPin, GPIO.LOW)
        time.sleep(1.0)

def endprogram():

    GPIO.output(ledPin, GPIO.LOW)
    GPIO.cleanup()

if __name__ == '__main__':
    setup()
    try:
        loop()
    except KeyboardInterrupt:
        endprogram()
```

For traffic light :

```
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()
```