

Assignment -3
Python Programming for Raspberry pi

Assignment Date	13October 2022
Student Name	DHIYANESHWARAN R
Student Roll Number	312419106033
Team ID	PNT2022TMID28230
Maximum Marks	2 Marks

Question-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.

SOLUTION :

PYTHON CODE FOR BLINKING LED FOR RASPBERRY PI

```
#blinking with gpiozero library
From gpiozero import LED
From time import sleep
Led = LED(23)
While True:
    Led.on()
    Print('LED ON')
    Sleep(1)
    Led.off()
    Print('LED OFF')
    Sleep(1)
```

PYTHON CODE FOR TRAFFIC LIGHTS FOR RASPBERRY PI

```
import RPi.GPIO as GPIO
import time
GPIO.setmode( GPIO.BOARD)
GPIO.setup(7, GPIO.OUT)# Green LED
```

```

GPIO.setup(11,GPIO.OUT)#Yellow LED
GPIO.setup(13,GPIO.OUT)#Red LED
GPIO.setup(15, GPIO.IN, pull_up_down=GPIO.PUD UP) #Button

def turn on (pin,seconds):
def GPIO.output (pin, GPIO . HIGH)
time.sleep(pin, seconds)

def trun of(pin, seconds)
GPIO.output (pin, GPIO .LOW)
time.sleep(seconds)

try:
while True:
    Button State= GPIO.input(15)
If button State= True:
    turn on(13,2)
    turn off(13,.1)
    turn on (7,4)
    turn off(7, .1)
    turn on(11,1)
    turn off(11,.1)
else:
    if button state = False:
        GPIO.output(7,GPIO.LOW)
        GPIO.output(11,GPIO.LOW)
        GPIO.output(13,GPIO.LOW)
        time.sleep(.1)
except Keyboard Interrupt:
    GPIO.cleanup()

```