

Assignment - 3

Python Programming

Assignment Date	01 October 2022
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Maximum Marks	2 Marks

Question :

Write a python code for Blinking LED and Traffic Lights for Raspberry Pi

Solution :

Blinking LED for Raspberry Pi using Python :

```
import RPi.GPIO as GPIO
```

```
from time import sleep
```

```
GPIO.setwarnings(False)
```

```
GPIO.setmode(GPIO.BOARD)
```

```
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW)
```

```
while True :
```

```
    GPIO.output(8, GPIO.HIGH)
```

```
    sleep(1)
```

```
    GPIO.output(8, GPIO.LOW)
```

```
    sleep(1)
```

Traffic Light Concept for Raspberry Pi using Python :

```
import RPi.GPIO as GPIO
```

```
import time
```

```
GPIO.setmode(GPIO.BOARD)
```

```
GPIO.setup(7, GPIO.OUT)
```

```

GPIO.setup(11, GPIO.OUT)

GPIO.setup(13, GPIO.OUT)


GPIO.setup(15, GPIO.IN, pull_up_down=GPIO.PUD_UP)

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

def turn_off (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)
            tum_off(13,1)
            turn_on(7,4)
            turn_off(7,11)
            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 KeyboardInterrupt :
    GPIO.cleanup()

    print("Traffic Light Operation Completed")

```