

Assignment -3
Python Programming

Assignment Date	08 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:

// Code for Blinking LED

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

```
import time
```

```
LED_PIN = 17
```

```
GPIO.setmode(GPIO.BCM)
```

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

```
try:
```

```
    while True:
```

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

```
        time.sleep(1)
```

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

```
        time.sleep(1)
```

```
except KeyboardInterrupt:
```

```
    GPIO.cleanup()
```

// Code for Traffic Lights

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

```
import time
```

```
import signal
```

```
import sys
```

```
GPIO.setmode(GPIO.BCM)
```

```
GPIO.setup(9, GPIO.OUT)
```

```
GPIO.setup(10, GPIO.OUT)
GPIO.setup(11, GPIO.OUT)
def allLightsOff(signal, frame):
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, False)
    GPIO.cleanup()
    sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)
while True:
    # Red
    GPIO.output(9, True)
    time.sleep(3)
    # Red and amber
    GPIO.output(10, True)
    time.sleep(1)
    # Green
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, True)
    time.sleep(5)
    # Amber
    GPIO.output(11, False)
    GPIO.output(10, True)
    time.sleep(2)
    # Amber off (red comes on at top of loop)
    GPIO.output(10, False)
```