

IOT ASSIGNMENT 3

TOPIC: Write Python code for blinking LED and Traffic lights for Raspberry pi.

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GitHub ID: <https://github.com/IBM-EPBL/IBM-Project-24229-1659940305>

Code to make LED blink:

```
import RPi.GPIO as GPIO
import time
LED_PIN = 17
GPIO.setmode(GPIO.BCM)
GPIO.setup(LED_PIN, GPIO.OUT)
while True:
    GPIO.output(LED_PIN, GPIO.HIGH)
    time.sleep(1)
    GPIO.output(LED_PIN, GPIO.LOW)
    time.sleep(1)
GPIO.cleanup()
```

Code to blink Traffic lights for Raspberry pi:

```
import RPi.GPIO as GPIO
import time
import signal
import sys
```

```
# Setup
GPIO.setmode(GPIO.BCM)
GPIO.setup(9, GPIO.OUT)
GPIO.setup(10, GPIO.OUT)
GPIO.setup(11, GPIO.OUT)
```

```
# Turn off all lights when user ends demo
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)
```

```
# Loop forever
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)
```