

### Assignment -3

Assignment Date	29-September-2022
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Maximum marks	2 Marks

Question 1)Write A Python Code For Blinking Led For Raspberry Pi.

Solution:

```
import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library
from time import sleep # Import the sleep function from the time module
GPIO.setwarnings(False) # Ignore warning for now
GPIO.setmode(GPIO.BOARD) # Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and
set initial value to low (off)
while True: # Run forever
    GPIO.output(8, GPIO.HIGH) # Turn on
    sleep(1) # Sleep for 1 second
    GPIO.output(8, GPIO.LOW) # Turn off
    sleep(1) # Sleep for 1 second
```

Question 2)Write A Python Code For Traffic Lights For Raspberry Pi.

## Solution:

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

```
import time
```

```
try:
```

```
def lightTraffic(led1, led2, led3, delay ):
```

```
    GPIO.output(led1, 1)
```

```
    time.sleep(delay)
```

```
    GPIO.output(led1, 0)
```

```
    GPIO.output(led2, 1)
```

```
    time.sleep(delay)
```

```
    GPIO.output(led2, 0)
```

```
    GPIO.output(led3, 1)
```

```
    time.sleep(delay)
```

```
    GPIO.output(led3, 0)
```

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

```
button = 19
```

```
GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
```

```
ledGreen = 16
```

```
ledYellow = 12
```

```
ledRed = 23
```

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

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

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

```
while True:
    input_state = GPIO.input(button)
    if input_state == False:
        print('Button Pressed')
        lightTraffic(ledGreen, ledYellow, ledRed, 1)
    else:
        GPIO.output(ledGreen, 0)
        GPIO.output(ledYellow, 0)
        GPIO.output(ledRed, 0)
except KeyboardInterrupt:
    print "You've exited the program"
finally:
    GPIO.cleanup()
```