

### 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()
```