

IOT ASSIGNMENT 3

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

Code to make LED blink:

```
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
```

Code to blink Traffic lights for Raspberry pi:

```
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()