## Assignment -3

**Python code for blinking LED and Traffic lights for Raspberry pi.**

|  |  |
| --- | --- |
| **Assignment Date** | **5 October 2022** |
| **Student Name** | **Hariharan V** |
| **Student Roll Number** | **511919106003** |
| **Team ID** | **PNT2022TMID40124** |

# Question

Write python code for blinking LED and Traffic lights for Raspberry pi.

Only python code is enough, no need to execute in raspberry pi.

**Solution:**

import time

import RPi.GPIO as GPIO ## Import GPIO library

GPIO.setmode(GPIO.BOARD) ## Use board pin numbering

GPIO.setup(12, GPIO.OUT) ## Setup GPIO Pin 11 to OUT

while True:

GPIO.output(12,True) ## Turn on Led

time.sleep(1) ## Wait for one second

GPIO.output(12,False) ## Turn off Led

time.sleep(1) ## Wait for one second

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 = 17

GPIO.setup(button, GPIO.IN, pull\_up\_down=GPIO.PUD\_UP)

ledGreen = 14

ledYellow = 10

ledRed = 21

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()