**ASSIGNMENT 3**

**DOMAIN:** IOT – Internet of Things.

**Team ID: PNT2022TMID00940**

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**Question:**

WRITE A PYTHON CODE FOR BLINKING LED .

**Python Code:**

import RPi.GPIO as GPIO  
import time  
#assign numbering for the GPIO using BCM  
GPIO.setmode(GPIO.BCM)  
#assign number for the GPIO using Board  
cnt = 0  
MAIL\_CHECK\_FREQ = 1  
# change LED status every 1 seconds  
RED\_LED = 4  
GPIO.setup(RED\_LED, GPIO.OUT) while  
True:  
if cnt == 0 :  
GPIO.output(RED\_LED, False)  
cnt = 1  
else:  
GPIO.output(RED\_LED, True)  
cnt = 0  
time.sleep(MAIL\_CHECK\_FREQ)  
GPIO.cleanup()

**Question:**

WRITE A PYTHON CODE FOR TRAFFIC LIGHTS USING RASPBERY PI

**Python Code:**

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()