ASSIGNMENT 3

DOMAIN: IOT

TEAM ID: PNT2022TMID29745

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QUESTION:

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

CODE FOR BLINKING LED:

```
import RPi.GPIO as GPIO

import time

#assign numbering for the GPIO using BCM

GPIO.setmode(GPIO.BCM)

#assingn number for the GPIO using Board

#GPIO.setmode(GPIO.BOARD)


cnt = 0

MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds

RED_LED = 4

GPIO.setup(RED_LED, GPIO.OUT)

while True:

ifcnt == 0 :

GPIO.output(RED_LED, False)

cnt = 1

else:

GPIO.output(RED_LED, True)

cnt = 0


time.sleep(MAIL_CHECK_FREQ)

GPIO.cleanup()
```

CODE FOR TRAFFIC LIGHTS:

```
import RPi.GPIO as GPIO
import time
import signal
import sys
# Setup
GPIO.setmode(GPIO.BCM)
GPIO.setup(9, GPIO.OUT)
GPIO.setup(10, GPIO.OUT)
GPIO.setup(11, GPIO.OUT)
# Turn off all lights when user ends demo
def allLightsOff(signal, frame):
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, False)
    GPIO.cleanup()
    sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)
# Loop forever
while True:
    # Red
    GPIO.output(9, True)
    time.sleep(3)
    # Red and amber
    GPIO.output(10, True)
    time.sleep(1)
    # Green
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, True)
    time.sleep(5)
    # Amber
```

```
GPIO.output(11, False)
GPIO.output(10, True)
time.sleep(2)
# Amber off (red comes on at top of loop)
GPIO.output(10, False)
```