Assignment -3

Python Assignment

Assignment Date	07 October 2022
Student Name	Mr. L. Dhinakar
Student Roll Number	611219106014
Maximum Marks	2 Marks

Question-1:

Write a Python code for Blinking LED and Traffic Light for Raspberry Pi

Solution:

Blinking LED for Raspberry pi

```
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
#GPIO.setmode(GPIO.BOARD)
tms = 0
MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds
RED_LED = 4
GPIO.setup(RED_LED, GPIO.OUT)
while True:
iftms == 0 :
GPIO.output(RED_LED, False)
tms = 1
else:
GPIO.output(RED_LED, True)
tms = 0
 time.sleep(MAIL_CHECK_FREQ)
GPIO.cleanup()
```

Traffic Lights for Raspberry pi

```
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)
```