ASSIGNMENT 3
Python Programming

Assignment Date	5 oct 2022
Student Name	A.Mageshwari
Student Roll Number	422419104019
Maximum Marks	2 marks

Question -1:

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

Solution:

Code For Blinking LED

```
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 For Traffic Light

```
import RPi.GPIO as GPIO
import time
```

```python
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)
```