ASSIGNMENT -3

Assignment date	08 October 2022
Student name	S.Kaileshwaran
Student Roll Number	710419106012
Maximum Marks	2 Marks

QUESTION:

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

Solution:

PYTHON 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
```

PYTHON CODE FOR TRAFFIC LIGHT

```
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)
```