Assignment -3

Assignment Date	26 October 2022
Student Name	Akil sashya. A
Student Roll Number	501906
Maximum Marks	2 Marks

write python code for blinking led and traffic light for raspberry pi.

LED Blink:

```
import RPi.GPIO as IO          # calling header file for GPIO's of PI

import time                    # calling for time to provide delays in program

IO.setmode (IO.BOARD)          # programming the GPIO by BOARD pin numbers, GPIO21 is
called as PIN40

IO.setup(40,IO.OUT)            # initialize digital pin40 as an output.

IO.output(40,1)                # turn the LED on (making the voltage level HIGH)

time.sleep(1)                  # sleep for a second

IO.cleanup()                   # turn the LED off (making all the output pins LOW)

time.sleep(1)                  #sleep for a second

#loop is executed second time

IO.setmode (IO.BOARD)

IO.setup(40,IO.OUT)

IO.output(40,1)

time.sleep(1)

IO.cleanup()

time.sleep(1)
```

```
#loop is executed third time

IO.setmode (IO.BOARD)

IO.setup(40,IO.OUT)

IO.output(40,1)

time.sleep(1)

IO.cleanup()

time.sleep(1)
```

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)
```