Assignment -3

Assignment Date	4 October 2022
Student Name	Mr. Premal Raj Vellaisamy
Student Roll Number	2019503032
Maximum Marks	2 Marks

Question-1:

Write python code for blinking LED for Rasberry Pi.

Solution:

Source Code:

```
import RPi.GPIO as GPIOimport
timeledPin = 22          # pin22
def setup():
    GPIO.setmode(GPIO.BOARD)
    GPIO.setup(ledPin, GPIO.OUT)
    GPIO.output(ledPin, GPIO.LOW) # Set ledPin to LOW to turn Off the LED

def loop():
    while True:
        print 'LED on'
        GPIO.output(ledPin, GPIO.HIGH) # LED On
        time.sleep(1.0)                # wait 1 sec print
        'LED off'
        GPIO.output(ledPin, GPIO.LOW) # LED Off
        time.sleep(1.0)                # wait 1 sec

def endprogram():
    GPIO.output(ledPin, GPIO.LOW)  # LED Off GPIO.cleanup()
                                   # Release resources

if _name_ == '_main_':

setup()
```

```
try:
    loop()
except KeyboardInterrupt

  endprogram()
```

Question-2:

Write python code for traffic lights using Rasberry Pi.

Solution:

Source Code:

```
import RPi.GPIO as GPIOimport
time
import signal
import sys
GPIO.setmode(GPIO.BCM)
GPIO.setup(9, GPIO.OUT)
GPIO.setup(10, GPIO.OUT)
GPIO.setup(11, GPIO.OUT)
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)
while True:
    # Red Colour
    GPIO.output(9, True)
    time.sleep(3)
    # Red and amber
    GPIO.output(10, True)
    time.sleep(1)
    # Green colour
    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)
```