Assignment -3

Python Programming

Assignment Date	05 October 2022
Student Name	Ms. Swetha P
Student Roll Number	113119UG03106
Maximum Marks	2 Marks

Question-1:

Write python code for blinking LED for Raspberry pi.

Solution:

```
import RPi.GPIO as GPIO
from time import sleep
GPIO.setmode(GPIO.BOARD)
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW)

while True:
GPIO.output(8, GPIO.HIGH)
sleep(1)
GPIO.output(8, GPIO.LOW)
sleep(1)
```

Question-2:

Write python code for Traffic lights for Raspberry pi.

Solution:

```
import RPi.GPIO as GPIO
import 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()
```

```python
    sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)


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)
```