Assignment 3

Code for led blinking using Raspberry pi

```
!pip install RPi.GPIO        #installing the library

import sys

import time

import RPi.GPIO as GPIO          #importing GPIO library

LED_PIN = 17

GPIO.setmode(GPIO.BCM)

GPIO.setup(LED_PIN, GPIO.OUT)

while True:

    GPIO.output(LED_PIN, GPIO.HIGH) #turning ON LED

    time.sleep(0.5)          #waiting for 0.5 seconds

    GPIO.output(LED_PIN, GPIO.LOW)  #turning OFF LED

    time.sleep(0.5)          #waiting for 0.5 seconds

    GPIO.cleanup()
```

Code for traffic light blinking using Raspberry pi

```
!pip install RPi.GPIO

import sys

import time

import signal

import RPi.GPIO as GPIO

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)
```

```python
    GPIO.output(11, False)

    GPIO.cleanup()

    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)
```