Assignment 3

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

1) Code for Blinking an LED with Raspberry Pi

```
#!/usr/bin/env python
import RPi.GPIO as GPIO # RPi.GPIO can be referred as GPIO from now
import time

ledPin = 22    # pin22

def setup():
	GPIO.setmode(GPIO.BOARD)       # GPIO Numbering of Pins
	GPIO.setup(ledPin, GPIO.OUT)   # Set ledPin as output
	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__':        # Program starts from here
	setup()
	try:
		loop()
	except KeyboardInterrupt:  # When 'Ctrl+C' is pressed, the destroy() will be
executed.
		endprogram()
```

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)
```