Assignment -3

Python Programming

Question-1:

Write a Python code for Blinking LED and Traffic Light for Raspberry Pi

Solution:

Blinking Of an LED For Raspberry Pi

```
import RPi.GPIO as GPIO import time
#assign numbering for the GPIO using BCM GPIO.setmode(GPIO.BCM)
#assingn number for the GPIO using Board #GPIO.setmode(GPIO.BOARD)

cnt = 0
MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds RED_LED
= 4 GPIO.setup(RED_LED, GPIO.OUT) while True:

ifcnt == 0 : GPIO.output(RED_LED, False) cnt = 1
else: GPIO.output(RED_LED, True) cnt = 0

time.sleep(MAIL_CHECK_FREQ) GPIO.cleanup()
```

Traffic Light for Raspberry Pi

```
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)
```