Assignment -3

Python Programming

Assignment Date	07 October 2022
Student Name	PAVITHRA M
Student Roll Number	917719IT105
Maximum Marks	2 Marks

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 GPIOimport time
#assign numbering for the GPIO using BCMGPIO.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 secondsRED_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 GPIOimport time
import signalimport 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 demodef 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 foreverwhile 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)
```