Assignment -3
Python Programming

Assignment Date	30 September 2022
Student Name	B Abhinav
Student Roll Number	19D003
Maximum Marks	2 Marks

Question-1:

Write python code for blinking LED and Traffic lights for Raspberry pi. Only python code is enough, no need to execute in raspberry pi. Note: You are allowed to use web search and complete the assignment.

Solution:

```python
#blink leds


import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

from time import sleep # Import the sleep function from the time module

from gpiozero import Button, TrafficLights, Buzzer

from time import sleep


def blink_led():

    GPIO.setwarnings(False) # Ignore warning for now

    GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

    GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value to low (off)

    while True: # Run forever

     GPIO.output(8, GPIO.HIGH) # Turn on

     sleep(1) # Sleep for 1 second

     GPIO.output(8, GPIO.LOW) # Turn off

     sleep(1) # Sleep for 1 second


#traffic light



def traffic_light():
```

```python
    buzzer = Buzzer(15)

    button = Button(21)

    lights = TrafficLights(25, 8, 7)


    while True:

        button.wait_for_press()

        buzzer.on()

        lights.green.on()

        sleep(1)

        lights.amber.on()

        sleep(1)

        lights.red.on()

        sleep(1)

        lights.off()

        buzzer.off()


def main():
    a=input("Enter 1 to run blink_led code or 2 to run traffic light led code!")
    if a==1:
        blink_led()
    elif a==2:
        traffic_light()
main()
```