Assignment -3
Python
Programming

Assignment Date	12 October 2022
Student Name	VIGNESH V
Student Roll Number	1914192
Maximum Marks	2 Marks

Question-1:

Write a python code for blinking LED and Traffic lights for Raspberry Pi.
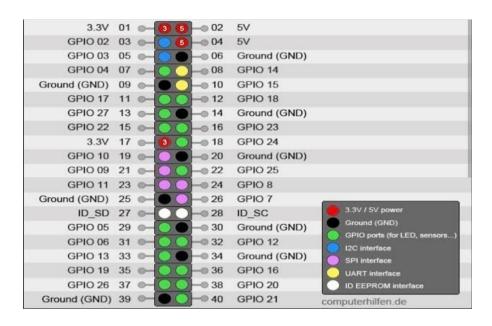
Solution:

PYTHON CODE:

```
from gpiozero import Button, TrafficLights,

Buzzer from time import sleep


buzzer=Buzzer(15)

button=Button(21)

lights=TrafficLights(25,8,7)


while True:
        button.wait_for_press
        () buzzer.on()
        light.red.on()
        sleep(1)
        lights.amber.on(
        ) sleep(1)
        lights.green.on()
        sleep(1)
        lights.off()
        buzzer.off()
```

GPIO PIN DIAGRAM

3.3V	01	🔴 🔴	02	5V
GPIO 02	03	🔵 🔴	04	5V
GPIO 03	05	🔵 ⚫	06	Ground (GND)
GPIO 04	07	🟢 🟡	08	GPIO 14
Ground (GND)	09	⚫ 🟡	10	GPIO 15
GPIO 17	11	🟢 🟢	12	GPIO 18
GPIO 27	13	🟢 ⚫	14	Ground (GND)
GPIO 22	15	🟢 🟢	16	GPIO 23
3.3V	17	🔴 🟢	18	GPIO 24
GPIO 10	19	🟣 ⚫	20	Ground (GND)
GPIO 09	21	🟣 🟢	22	GPIO 25
GPIO 11	23	🟣 🟣	24	GPIO 8
Ground (GND)	25	⚫ 🟣	26	GPIO 7
ID_SD	27	⚪ ⚪	28	ID_SC
GPIO 05	29	🟢 ⚫	30	Ground (GND)
GPIO 06	31	🟢 🟢	32	GPIO 12
GPIO 13	33	🟢 ⚫	34	Ground (GND)
GPIO 19	35	🟢 🟢	36	GPIO 16
GPIO 26	37	🟢 🟢	38	GPIO 20
Ground (GND)	39	⚫ 🟢	40	GPIO 21

Legend:
- 🔴 3.3V / 5V power
- ⚫ Ground (GND)
- 🟢 GPIO ports (for LED, sensors...)
- 🔵 I2C interface
- 🟣 SPI interface
- 🟡 UART interface
- ⚪ ID EEPROM interface

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GPIO PINS USED:

- GP 21-BUTTON
- GP 15-BUZZER
- GP 25- RED LED
- GP 8- YELLOW LED
- GP 7- GREEN LED