

Assignment -3

Assignment Date	15 October 2022
Student Name	Mr.W.Stephenraj
Student Roll Number	821919104027
Maximum Marks	2 Marks

Question-1:

Write a python code for blinking LED and Traffic lights for Raspberry pi. Only python code is enough, no need to execute in raspberry pi.

1.LED Blinking:

Solution:

```
1. #-----
2. import RPi.GPIO as GPIO
3. import time
4. #assign numbering for the GPIO using BCM
5. GPIO.setmode(GPIO.BCM)
6. #assign number for the GPIO using Board
7. #GPIO.setmode(GPIO.BOARD)
8. #-----
9. cnt = 0
10. MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds
11. RED_LED = 4
12. GPIO.setup(RED_LED, GPIO.OUT)
13. while True:
14. if cnt == 0 :
15. GPIO.output(RED_LED, False)
16. cnt = 1
17. else:
18. GPIO.output(RED_LED, True)
```

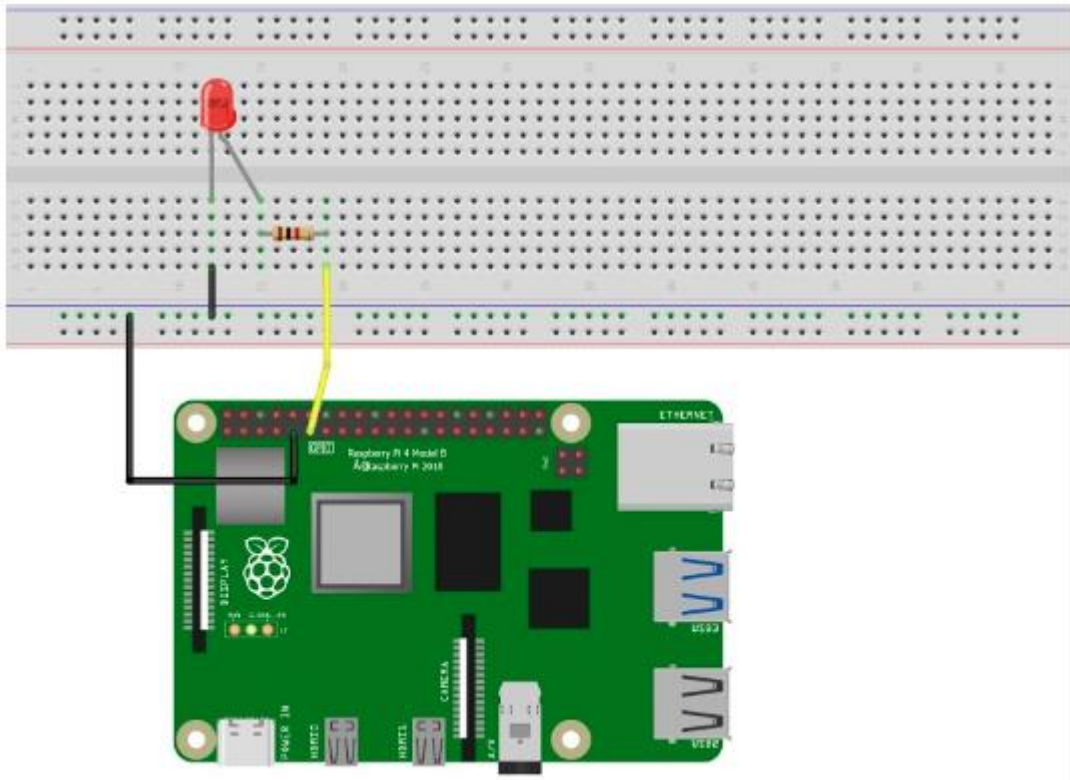
19.cnt = 0

20.

21.time.sleep(MAIL_CHECK_FREQ)

22.GPIO.cleanup()

Circuit Diagram/Output:



(The LED will blink)

2.Traffic Lights:

Solution:

1. from gpiozero import Button, TrafficLights, Buzzer
2. from time import sleep
- 3.
4. buzzer = Buzzer(15)
5. button = Button(21)
6. lights = TrafficLights(25, 8, 7)

- 7.
8. while True:
9. button.wait_for_press()
10. buzzer.on()
11. light.green.on()
12. sleep(1)
13. lights.amber.on()
14. sleep(1)
15. lights.red.on()
16. sleep(1)
17. lights.off()
18. buzzer.off()

Circuit Diagram/Output:

