Assignment -3

Assignment Date	15 October 2022
Student Name	Mr.W.Merunraj
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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:

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1. #------------------
2. import RPi.GPIO as GPIO
3. **import** time
4. #assign numbering for the GPIO using BCM
5. GPIO.setmode(GPIO.BCM)
6. #assingn 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. ifcnt == 0 :
15. GPIO.output(RED_LED, False)
16. cnt = 1
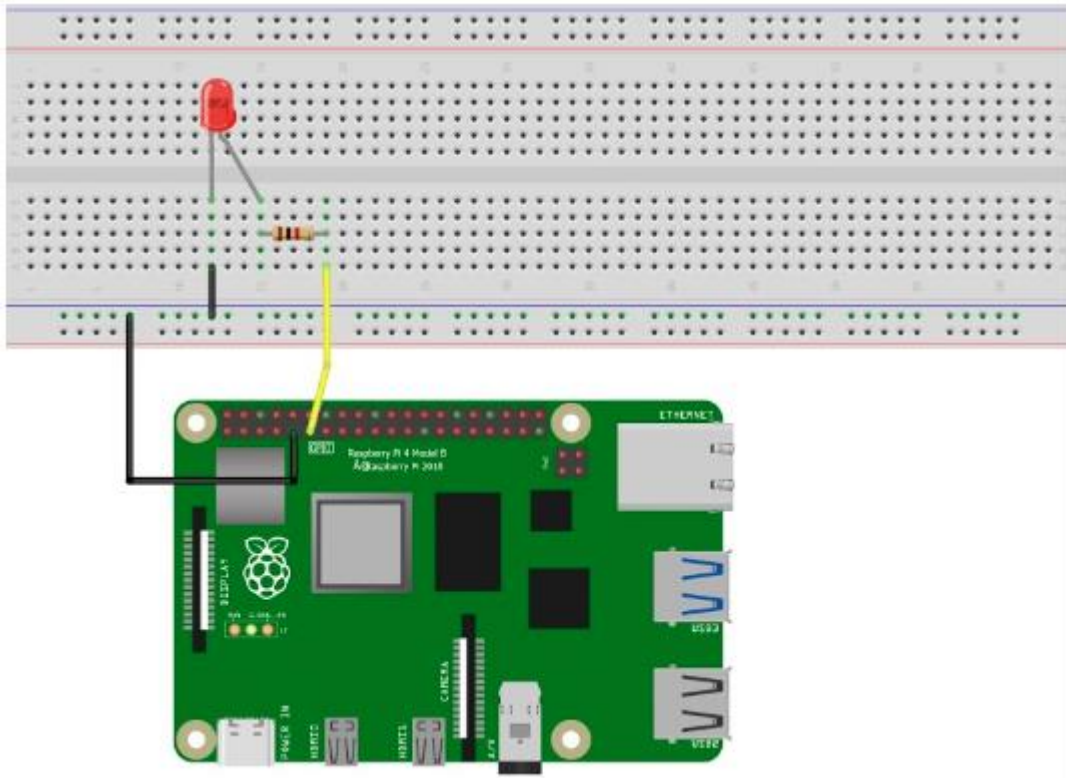17. **else**:
18. GPIO.output(RED_LED, True)

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: