Assignment-3

Assignment Date	2 October. 2022
Student Name	Akhilesh Chandra
Student Roll Number	2019504611
Maximum Marks	2 Marks

Question :

Write a python code for Blinking LED for raspberry pi.

Solution:

```
import RPi.GPIO as GPIO     # Import Raspberry Pi GPIO library
from time import sleep      # Import the sleep function from the time module
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
```

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```
import RPi.GPIO as GPIO                    # Import Raspberry Pi GPIO library
from time import sleep                     # Import the sleep function from the time module
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
```

Question :

Write a python code for Traffic lights for Raspberry pi.

Solution:

```
from gpiozero import Button, TrafficLights #Import button and traffic lights from gpio python library
from time import sleep          #Import the sleep function from the time module
button = Button(21)      #Button-GPIO 21
lights = TrafficLights(25, 8, 7)              #Red LED-GPIO 25,Amber LED-GPIO 8,Green LED-GPIO 7
while True: #Run forever
        button.wait_for_press() #Wait for the button to be pressed
        lights.green.on()       #Turn on Green LED for 90 seconds
        sleep(90)
        lights.amber.on()       #Turn on Amber LED for 10 seconds
        sleep(10)
        lights.red.on()    #Turn on Red LED for 45 seconds
        sleep(45)
        lights.red.on()    #Turn on Red and Amber for 10 seconds
        lights.amber.on()
        sleep(10)
```

```
File  Edit  Format  Run  Options  Window  Help
from gpiozero import Button, TrafficLights  #Import button and traffic lights from gpiozero python library
from time import sleep                      #Import the sleep function from the time module
button = Button(21)                         #Button-GPIO 21
lights = TrafficLights(25, 8, 7)            #Red LED-GPIO 25,Amber LED-GPIO 8,Green LED-GPIO 7
while True:                                 #Run forever
    button.wait_for_press()                 #Wait for the button to be pressed
    light.green.on()                        #Turn on Green LED for 90 seconds
    sleep(90)
    lights.amber.on()                       #Turn on Amber LED for 10 seconds
    sleep(10)
    lights.red.on()                         #Turn on Red LED for 45 seconds
    sleep(45)
    lights.red.on()                         #Turn on Red and Amber for 10 seconds
    lights.amber.on()
    sleep(10)
```