

Assignment -3
Python Programming for Raspberry Pi

Assignment Date	1 September 2022
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Maximum Marks	2 Marks

Question-1:

Write python code for Blinking LED for Raspberry Pi.

```
import RPi.GPIO as GPIO
import time

ledPin = 17

def setup():
    GPIO.setmode(GPIO.BOARD)      # Numbering of Pins
    GPIO.setup(ledPin, GPIO.OUT)   # Set ledPin as output
    GPIO.output(ledPin, GPIO.LOW)  # Set ledPin to LOW to turn Off the
LED

def loop():
    while True:
        print 'LED on'
        GPIO.output(ledPin, GPIO.HIGH)  # LED On
        time.sleep(3.0)                  # wait 3 sec
        print 'LED off'
        GPIO.output(ledPin, GPIO.LOW)    # LED Off
        time.sleep(3.0)                  # wait 3 sec

def endprogram():
    GPIO.output(ledPin, GPIO.LOW)        # LED Off
    GPIO.cleanup()

if __name__ == '__main__':
    setup()
    try:
        loop()
    except KeyboardInterrupt:  #'Ctrl+C' is pressed, the destroy() will
be    executed.
        endprogram()
```

Question-2:

Write python code for Traffic Lights Simulation for Raspberry Pi.

Traffic Light Simulation - Python Code for Raspberry Pi.

```
from gpiozero import Button, TrafficLights, Buzzer
from time import sleep

buzzer = Buzzer(17)
button = Button(21)
lights = TrafficLights(26, 9, 5)

while True:
    button.wait_for_press()
    buzzer.on()
    light.green.on()
    sleep(3)
    lights.amber.on()
    sleep(3)
    lights.red.on()
    sleep(3)
    lights.off()
    buzzer.off()
```