

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.

Blinking LED - Python Code for Raspberry Pi

```
import RPi.GPIO as GPIO # Importing Raspberry Pi GPIO library
from time import sleep # Importing the sleep function from the time module
GPIO.setwarnings(False) # Ignoring the warning
GPIO.setmode(GPIO.BOARD) # Using physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Setting pin 8 to be an output pin and set initial
value to low i.e., off

while True: # Run forever
    GPIO.output(8, GPIO.HIGH) # Turn on the LED
    sleep(1) # Sleep for 1 second
    GPIO.output(8, GPIO.LOW) # Turn off the LED
    sleep(1) # Sleep for 1 second
```

Question-2:

Write python code for Traffic Lights Simulation for Raspberry Pi.

Traffic Light Simulation - Python Code for Raspberry Pi

```
from gpiozero import LED # Importing LED object from gpiozero module
```

```
from time import sleep # Importing sleep function from time module
```

```
red = LED(17) # Setting pin 17 for red led
```

```
amber = LED(22) # Setting pin 22 for amber led
```

```
green = LED(27) # Setting pin 27 for green led
```

```
while True:
```

```
    red.on() # Turning on Red Signal
```

```
    sleep(90) # Red stays for 90 Seconds
```

```
    red.off() # Turning off Red Signal
```

```
    amber.on() # Turning on Amber Signal
```

```
    sleep(5) # Amber stays for 5 Seconds
```

```
    amber.off() # Turning off Amber Signal
```

```
    green.on() # Turning on Green Signal
```

```
    sleep(30) # Green stays for 30 Seconds
```

```
    green.off() # Turning off Green Signal
```