

Assignment -3
Python Programming

Assignment Date	02 October 2022
Student Name	Mr.S. Aslam Basha
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Maximum Marks	2 Marks

Question-1:

Write a python code for led blinking in 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
```

```
File Edit Format Run Options Window Help
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-2:

Write a python code for traffic light in raspberry pi

SOLUTION:

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

```
buzzer = Buzzer(15)
```

```
button = Button(21)
```

```
lights = TrafficLights(25, 8, 7)
```

```
while True:
```

```
    button.wait_for_press()
```

```
    buzzer.on()
```

```
    light.green.on()
```

```
    sleep(1)
```

```
    lights.amber.on()
```


```
    sleep(1)
```

```
    lights.red.on()
```

```
    sleep(1)
```

```
    lights.off()
```

```
    buzzer.off()
```

A screenshot of a Python IDE window. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. Below the menu bar is a toolbar with icons for file operations and execution. The main text area contains the Python code for the traffic light simulation, which is the same code shown in the previous blocks. The code is color-coded: keywords like 'from', 'while', 'True', 'def', and 'import' are in orange, comments are in grey, and other code elements are in black. The code is as follows:

```
from gpiozero import Button, TrafficLights, Buzzer  
from time import sleep  
  
buzzer = Buzzer(15)  
button = Button(21)  
lights = TrafficLights(25, 8, 7)  
  
while True:  
    button.wait_for_press()  
    buzzer.on()  
    light.green.on()  
    sleep(1)  
    lights.amber.on()  
    sleep(1)  
    lights.red.on()  
    sleep(1)  
    lights.off()  
    buzzer.off()
```