

## Assignment – 3

### Python Programming – 2

Assignment Date	03 October 2022
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Maximum Marks	2 Marks

#### Question – 1

Write Python code for Blinking LED and Traffic Lights for Raspberry Pi. Only the Python code is enough and need not to execute it in the board.

#### Solution

##### Blinking of an LED

```
main.py
1 import RPi.GPIO as GPIO
2 import Button, LED, Buzzer
3 led = LED(11)
4 button = Button(21)
5 buzzer = Buzzer(25)
6 while True:
7     button.wait_for_press()
8     led.blink(1,1)
9     buzzer.on()
10    button.wait_for_release()
11    led.off()
12    buzzer.off()
```

## Traffic Lights – With In-built Function

```
main.py
1 import RPi.GPIO as GPIO
2 from time import sleep
3 signal = TrafficLights(18,8,11)
4 button = Button(13)
5 while True:
6     button.wait_for_press()
7     signal.red.on()
8     sleep(2)
9     signal.amber.on()
10    sleep(2)
11    signal.green.on()
12    sleep(2)
13    signal.off()
```

## Traffic Lights – Without In-built Function

```
main.py
1 import RPi.GPIO as GPIO
2 from time import sleep
3 button = Button(13)
4 red = LED(18)
5 amber = LED(8)
6 green = LED(11)
7 while True:
8     button.wait_for_press()
9     red.on()
10    button.wait_for_release()
11    red.off()
12    sleep(2)
13    button.wait_for_press()
14    amber.on()
15    button.wait_for_release()
16    amber.off()
17    sleep(2)
18    button.wait_for_press()
19    green.on()
20    button.wait_for_release()
21    green.off()
22    sleep(2)
```