Assignment – 3

Python Programming – 2

Assignment Date	03 October 2022
Student Roll. No	718019L126
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Maximum Marks	2 Marks

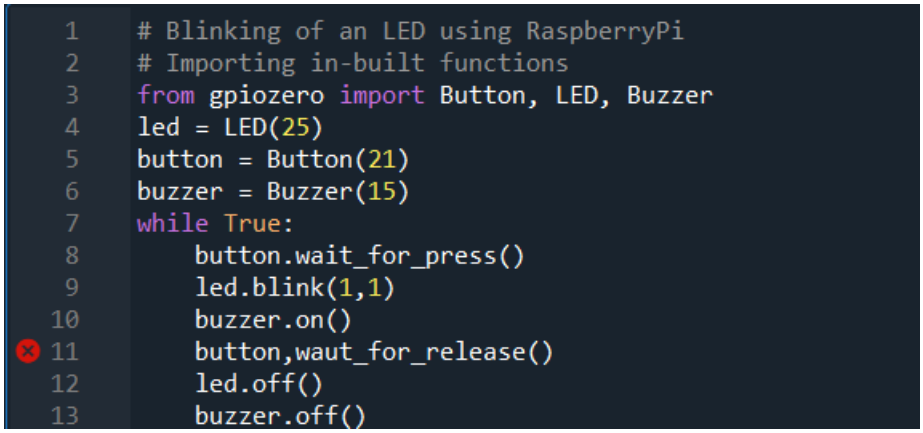
Question – 1

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

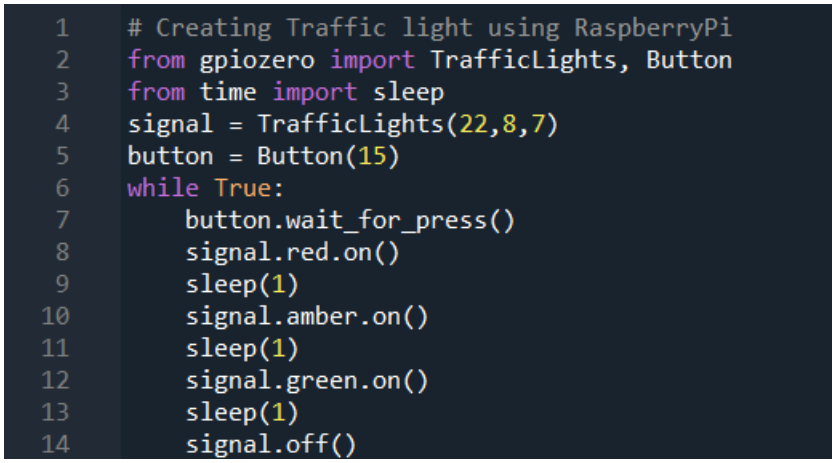
Blinking of an LED

```
# Blinking of an LED using RaspberryPi
# Importing in-built functions
from gpiozero import Button, LED, Buzzer
led = LED(25)
button = Button(21)
buzzer = Buzzer(15)
while True:
   button.wait_for_press()
   led.blink(1,1)
   buzzer.on()
   button,waut_for_release()
   led.off()
   buzzer.off()
```



Traffic Lights – With In-built Function

```
# Creating Traffic light using RaspberryPi
from gpiozero import TrafficLights, Button
from time import sleep
signal = TrafficLights(22,8,7)
button = Button(15)
while True:
   button.wait_for_press()
   signal.red.on()
   sleep(1)
   signal.amber.on()
   sleep(1)
   signal.green.on()
   sleep(1)
   signal.off()
```



Traffic Lights – Without In-built Function

```
from gpiozero import Button, LED
from time import sleep
button = Button(15)
red = LED(22)
amber = LED(8)
green = LED(7)
while True:
   button.wait_for_press()
   red.on()
   button.wait_for_release()
   red.off()
```

sleep(1)
button.wait_for_press()
amber.on()
button.wait_for_release()
amber.off()
sleep(1)
button.wait_for_press()
green.on()
button.wait_for_release()
green.off()
sleep(1)

```
from gpiozero import Button, LED
from time import sleep
button = Button(15)
red = LED(22)
amber = LED(8)
green = LED(7)
while True:
    button.wait_for_press()
    red.on()
    button.wait_for_release()
    red.off()
    sleep(1)
    button.wait_for_press()
    amber.on()
    button.wait_for_release()
    amber.off()
    sleep(1)
    button.wait_for_press()
    green.on()
    button.wait_for_release()
    green.off()
    sleep(1)
```