**Assignment -3**

Raspberry Pi

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| Assignment Date | 29 September 2022 |
| Student Name | R.V.Rohinth Ram |
| Student Roll Number | 2019504571 |
| Maximum Marks | 2 Marks |

**Question - 1:**

Write a python code for blinking LED for Raspberry Pi. (Only Python Code)

**Solution:**

```
import RPi.GPIO as GPIO # raspberry pi gipo module
from time import sleep

GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)

"""
Simple LED Interfacing
LED at Pin 8
Expected Output : Blinking LED ; 1s delay
"""

ledPin = 8

GPIO.setup(ledPin, GPIO.OUT, initial=GPIO.LOW) # pin 8 - out ; initial - low
while True:
   GPIO.output(ledPin, GPIO.HIGH)
   sleep(1)
   GPIO.output(ledPin, GPIO.LOW)
   sleep(1)
```

**Question - 2:**

Write a python code for Traffic Lights for Raspberry Pi (Only Python Code)

**Solution:**

```
import RPi.GPIO as GPIO # raspberry pi gipo module
from time import sleep

GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)
"""
Traffic Light Interfacing
```

```
LEDs - Pin ; RED - 11 ; YELLOW - 13 ; GREEN - 15
Expected Output : 2 Seconds RED and 1 Seconds GREEN with 0.5 Seconds YELLOW transition
"""

red = 11
yellow = 13
green = 15

GPIO.setup(red, GPIO.OUT, initial=GPIO.LOW)
GPIO.setup(yellow, GPIO.OUT, initial=GPIO.LOW)
GPIO.setup(green, GPIO.OUT, initial=GPIO.LOW)

while 1:
   GPIO.output(red, GPIO.HIGH)
   sleep(2)
   GPIO.output(red, GPIO.LOW)
   GPIO.output(yellow, GPIO.HIGH)
   sleep(0.5)
   GPIO.output(yellow, GPIO.LOW)
   GPIO.output(green, GPIO.HIGH)
   sleep(1)
   GPIO.output(green, GPIO.LOW)
   GPIO.output(yellow, GPIO.HIGH)
   sleep(0.5)
```

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