**Assignment -3**

Python Programming

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| Assignment Date | 08 October 2022 |
| Student Name | Darsini B |
| Student Roll Number | 611219106010 |
| Maximum Marks | 2 Marks |

**Question-1:**

Write a Python code for Blinking LED and Traffic Light for Raspberry Pi

**Solution:**

# Blinking Of an LED For Raspberry

```
import RPi.GPIO as GPIO

import time

#assign numbering for the GPIO using BCM

GPIO.setmode(GPIO.BCM)

#assingn number for the GPIO using Board

#GPIO.setmode(GPIO.BOARD)

cnt = 0

MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds

RED_LED = 4

GPIO.setup(RED_LED, GPIO.OUT)

while True:

ifcnt == 0 :

GPIO.output(RED_LED, False)

cnt = 1

else:
```

```
GPIO.output(RED_LED, True)

cnt = 0

time.sleep(MAIL_CHECK_FREQ)

GPIO.cleanup()
```

# Traffic Light for Raspberry Pi

```
import RPi.GPIO as GPIO
import time

try:
  def lightTraffic(led1, led2, led3, delay ):
    GPIO.output(led1, 1)
    time.sleep(delay)
    GPIO.output(led1, 0)
    GPIO.output(led2, 1)
    time.sleep(delay)
    GPIO.output(led2, 0)
    GPIO.output(led3, 1)
    time.sleep(delay)
    GPIO.output(led3, 0)
  GPIO.setmode(GPIO.BCM)
  button = 19
  GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
  ledGreen = 16
  ledYellow = 12
  ledRed = 23
  GPIO.setup(ledGreen, GPIO.OUT)
  GPIO.setup(ledYellow, GPIO.OUT)
  GPIO.setup(ledRed, GPIO.OUT)
  while True:
    input_state = GPIO.input(button)
    if input_state == False:
      print('Button Pressed')
      lightTraffic(ledGreen, ledYellow, ledRed, 1)
```

```
    else:
      GPIO.output(ledGreen, 0)
      GPIO.output(ledYellow, 0)
      GPIO.output(ledRed, 0)
except KeyboardInterrupt:
  print "You've exited the program"
finally:
  GPIO.cleanup()
```