

ASSIGNMENT – 3

PYTHON PROGRAMMING

Assignment Date	3-10-2022
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Student Roll Number	2019105508 2019105529 2019105539 2019105579
Maximum Marks	2 Marks

QUESTION 1:

Write the python code for blinking the LED for Raspberry Pi

SOLUTION:

```
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()
```

QUESTION 2:

Write a python code Traffic lights for Raspberry Pi

SOLUTION:

```
import RP1.GPIO as GPIO  
  
import time  
  
GPIO.setwarnings(False)  
  
# set up variables  
  
green=11  
  
yellow=10  
  
red=9  
  
# Set up the numbering scheme GPIO.setmode(GPIO.BCM)  
  
# set the mode on the pins to OUT  
  
GPIO.setup(red, GPIO.OUT)  
  
GPIO.setup(green, GPIO.OUT)  
  
GPIO.setup(yellow, GPIO.OUT)
```

#initially turn the lights off

GPIO.output(green, False)

GPIO.output (yellow, False) GPIO.output (red, False)

turn green on for 3 seconds

GPIO.output(green, True)

time.sleep(3)

turn yellow on for 3 seconds

GPIO.output (green, False)

GPIO.output (yellow, True)

time.sleep(3)

turn green on for 3 seconds

GPIO.output(green, True)

time.sleep(3)

turn yellow on for 3 seconds

GPIO.output (green, False)

GPIO.output (yellow, True)

time.sleep(3)

turn red on

GPIO.output (yellow, False)

GPIO.output(red, True)

time.sleep(10)