**VELAMMAL ENGINEERING COLLEGE**

**SMART SOLUTION FOR RAILWAYS**

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| Assignment Date | 07 October 2022 |
| Student Name | SWETHA.G |
| Student Roll Number | 113219071121 |
| Maximum Marks | 2 Marks |

**Question:**

Write python code for blinking LED and Traffic lights for Raspberry pi.

**CODE 1:**

**LED BLINKING**

import RPi.GPIO as GPIO

import time

GPIO.setmode(GPIO.BCM)

cnt = 0

MAIL\_CHECK\_FREQ = 1

RED\_LED = 4

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(MAIL\_CHECK\_FREQ)

GPIO.cleanup()

**CODE 2:**

**TRAFFIC LIGHTS 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()