**Assignment - 3**

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| Assignment Date | 27 September 2022 |
| Student Name | PREETHI R |
| Student Roll Number | 311119205038 |
| Maximum Marks | 2 Marks |

**Question-1:**

Build a python code for blinking LED and traffic lights for Raspberry pi

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**Solution:**

**BLINKING LED:**

import RPi.GPIO as GPIO

from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW)

while True:

GPIO.output(8, GPIO.HIGH)

sleep(1)

GPIO.output(8, GPIO.LOW)

sleep(1)

**TRAFFIC LIGHTS:**

import RPi.GPIO as GPIO

import time

import signal

import sys

**# Setup**

GPIO.setmode(GPIO.BCM)

GPIO.setup(9, GPIO.OUT)

GPIO.setup(10, GPIO.OUT)

GPIO.setup(11, GPIO.OUT)

**# Turn off all lights when user ends demo**

def allLightsOff(signal, frame):

GPIO.output(9, False)

GPIO.output(10, False)

GPIO.output(11, False)

GPIO.cleanup()

sys.exit(0)

signal.signal(signal.SIGINT, allLightsOff)

# Loop forever

while True:

**# Red**

GPIO.output(9, True)

time.sleep(3)

**# Red and amber**

GPIO.output(10, True)

time.sleep(1)

**# Green**

GPIO.output(9, False)

GPIO.output(10, False)

GPIO.output(11, True)

time.sleep(5)

**# Amber**

GPIO.output(11, False)

GPIO.output(10, True)

time.sleep(2)

**# Amber off (red comes on at top of loop)**

GPIO.output(10, False)