**ASSIGNMENT-3**

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| Date | 19 September 2022 |
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| Project Name | Project – Real-Time River Water Quality  Monitoring and Control System |

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

CODE:

1. PYTHON CODE FOR BLINKING LED

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

from time import sleep # Import the sleep function from the time module GPIO.setwarnings(False) # Ignore warning for now GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value to low

(off)

while True: # Run forever GPIO.output(8, GPIO.HIGH) # Turn on sleep(1) # Sleep for 1 second

**1. PYTHON CODE FOR TRAFFIC LIGHT**

GPIO.output(8, GPIO.LOW) # Turn off Sleep (1) # Sleep for 1 second

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)