Assignment -3

Date	19 September 2022
Team ID	PNT2022TMID24427
Project Name	Industry-specific intelligent fire management system
Maximum Marks	2 Marks

Question :

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

Solution:

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
```

2) 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)
```