SNS COLLEGE OF TECHNOLOGY – COIMBATORE

DEPARTMENT OF ECE

Team ID PNT2022TMID17702

Project Name Industry-specific intelligent fire management system

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.

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)