ASSIGNMENT-3

PYTHON CODE FOR BLINKING LED AND TRAFFIC LIGHTS FOR RASPBERRY PI

**For LED:**

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

from time import sleep #Import 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

GPIO.output(8,GPIO.LOW) #Turn off

sleep(1) #Sleep for 1 second

**For 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,framer):

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)