

Assignment 3

Python code for blinking LED and Traffic lights for Raspberry pi.

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Question:

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

Only python code is enough, no need to execute in raspberry pi.

Solution :

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)
GPIO.setup(7, GPIO.OUT, initial=GPIO.LOW) # Set pin 7 to be an output pin and set initial
value to low
(off)
while True:
GPIO.output(8, GPIO.HIGH)
sleep(1) # Sleep for 1 second
GPIO.output(8, GPIO.LOW)
sleep(1) # Sleep for 1 second
```

PYTHON CODE FOR TRAFFIC LIGHT

```
import RPi.GPIO as GPIO

import time

import signal

import sys

# Setup

GPIO.setmode(GPIO.BCM)

GPIO.setup(8, GPIO.OUT)

GPIO.setup(9, GPIO.OUT)

GPIO.setup(10, GPIO.OUT)

# Turn off all lights when user ends demo

def all LightsOff(signal, frame):

    GPIO.output(8, False)

    GPIO.output(9, False)

    GPIO.output(10, False)

    GPIO.cleanup()

    sys.exit(0)

signal.signal(signal.SIGINT, all LightsOff)

# Loop forever

while True:

    # Red

    GPIO.output(8, True)

    time.sleep(3)

    # Red and amber

    GPIO.output(9, True)

    time.sleep(1)

    # Green
```

```
GPIO.output(8, False)
GPIO.output(9, False)
GPIO.output(10, True)
time.sleep(5)
# Amber
GPIO.output(10, False)
GPIO.output(9, True)
time.sleep(2)
# Amber off (red comes on at top of loop)
GPIO.output(9, False)
```