ASSIGNMENT-3

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Question:

PYTHON CODE FOR BLINKING LED AND TRAFFIC LIGHTS FOR RASPBERRY PI.

Solution:

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. SIGINT, all Lights Off) \\
#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)