**ASSIGNMENT -3**

**Python Programming**

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**Question:**

Write a python code for blinking LED and Traffic lights for Raspberry Pi.

**PROGRAM:**

import RPi.GPIO as GPIO import time import os import signal import sys

if('TRAFFIC\_LIGHT\_COUNTRY'inos.environ)and(os.environ['TRAFFIC\_LIGHT\_CO UNTRY'] in ['UK', 'USA']):

pattern = os.environ['TRAFFIC\_LIGHT\_COUNTRY'].lower() else:

print('TRAFFIC\_LIGHT\_COUNTRY should be set to UK or USA') sys.exit(1)

# 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 for UK only if (pattern == 'uk'):

GPIO.output(10, True) time.sleep(1)

# Green

GPIO.output(9, False)

GPIO.output(10, False) GPIO.output(11, True) time.sleep(5)

# Amber, longer in US than UK

GPIO.output(11, False) GPIO.output(10, True) if (pattern == 'uk'):

time.sleep(2)

else:

time.sleep(3)

# Amber off (red comes on at top of loop)

GPIO.output(10, False)