ASSINGMENT-3

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PROJECT NAME	Industry-Specific Intelligent Fire management System

Python code for Blinking Led using Raspberry pi

```
#!/usr/bin/python

Import RPi.GPIO
import time
 class
Led(object):
    '''
    Represents a physical LED. It uses the RPi GPIO naming scheme and NOT
Broadcomm's     '''     def
__init__(self, pin_number):
        '''
        Set up the hardware connection
        Params: pin_number of type int - Follow RPi GPIO naming scheme
        '''
        self.pin_number = pin_number
self.__setup_gpio__()
     def
__setup_gpio__(self):
        RPi.GPIO.setmode(RPi.GPIO.BOARD)
        RPi.GPIO.setup(self.pin_number, RPi.GPIO.OUT)
     def
clean_up(self):
        '''
        Reset the GPIO header to its initial state.
        '''
RPi.GPIO.cleanup(self.pin_number)
```

```
        def
on_light(self):
        '''
        Switch on the LED
        '''
        RPi.GPIO.output(self.pin_number, True)
     def
off_light(self):
        '''
        Switch off the LED
        '''
        RPi.GPIO.output(self.pin_number, False)
     def blink(self, drift_time=0.2):
self.on_light()
time.sleep(float(drift_time))
self.off_light()
        time.sleep(float(drift_time))
     def blinkn(self,
number_times):
        '''
        Blink for any number of times
        Param: number_times of type int
        '''         for i in range(0,
int(number_times)):
            self.blink()

    def blink_non_stop(self):
while True:
self.blink()
```

Python Code For Traffic LED using Raspberry pi

```
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)
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)
```