

Assignment 2

Temperature and humidity monitoring using python

RAAHUL PRASATH P(191EC239)

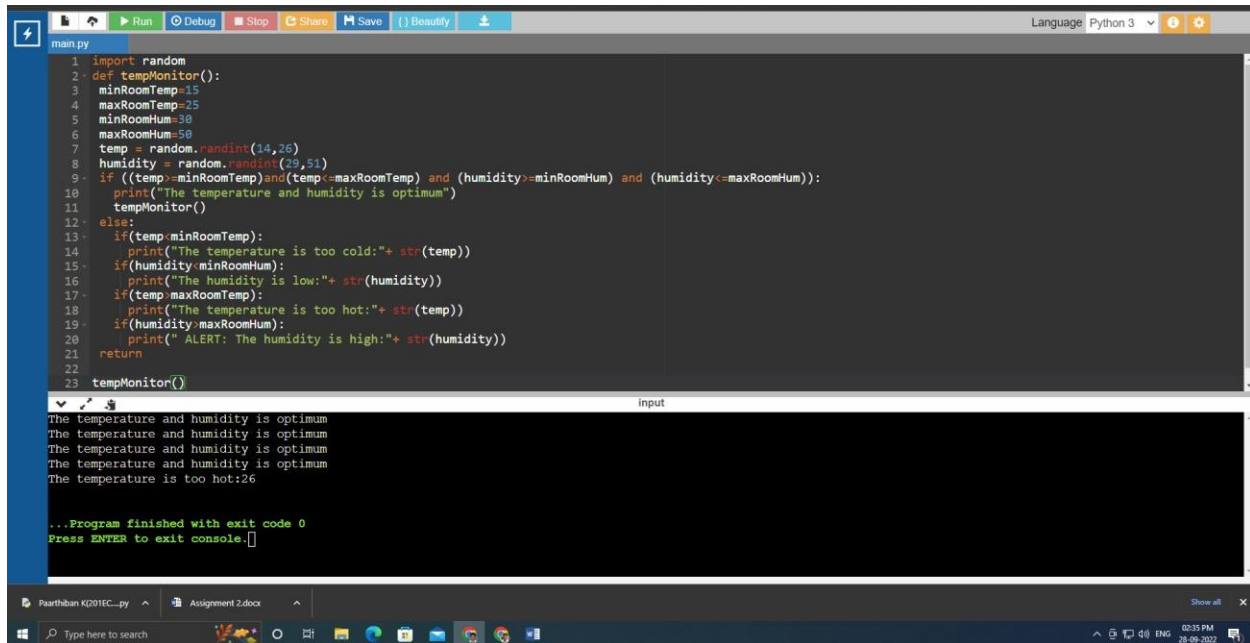
Python code:

```
import random

def tempMonitor():
    minRoomTemp=15
    maxRoomTemp=25
    minRoomHum=30
    maxRoomHum=50
    temp = random.randint(14,26)
    humidity = random.randint(29,51)
    if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and
(humidity<=maxRoomHum)):
        print("The temperature and humidity is optimum")
        tempMonitor()
    else:
        if(temp<minRoomTemp):
            print("The temperature is too cold:"+ str(temp))
        if(humidity<minRoomHum):
            print("The humidity is low:"+ str(humidity))
        if(temp>maxRoomTemp):
            print("The temperature is too hot:"+ str(temp))
        if(humidity>maxRoomHum):
            print(" ALERT: The humidity is high:"+ str(humidity))
    return
```

tempMonitor()

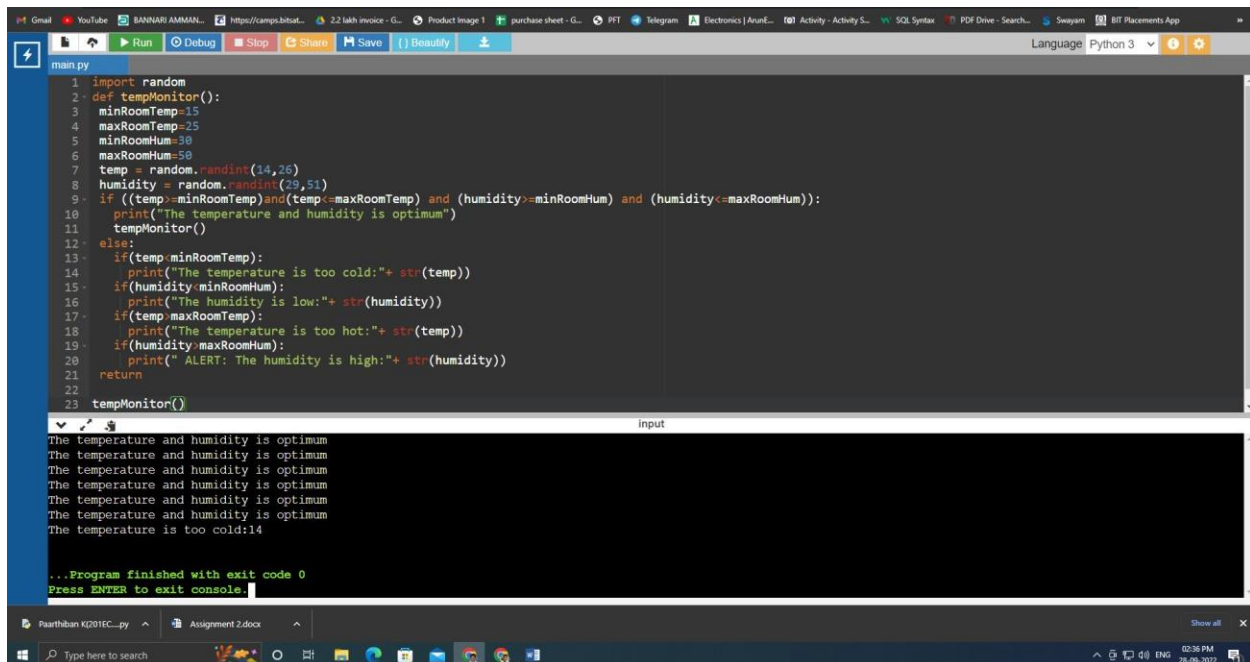
IDLE OUTPUT:



```
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
5     minRoomHum=30
6     maxRoomHum=50
7     temp = random.randint(14,26)
8     humidity = random.randint(20,51)
9     if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
10        print("The temperature and humidity is optimum")
11        tempMonitor()
12    else:
13        if(temp < minRoomTemp):
14            print("The temperature is too cold:"+ str(temp))
15        if(humidity < minRoomHum):
16            print("The humidity is low:"+ str(humidity))
17        if(temp > maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity > maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 tempMonitor()
```

The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature is too hot:26

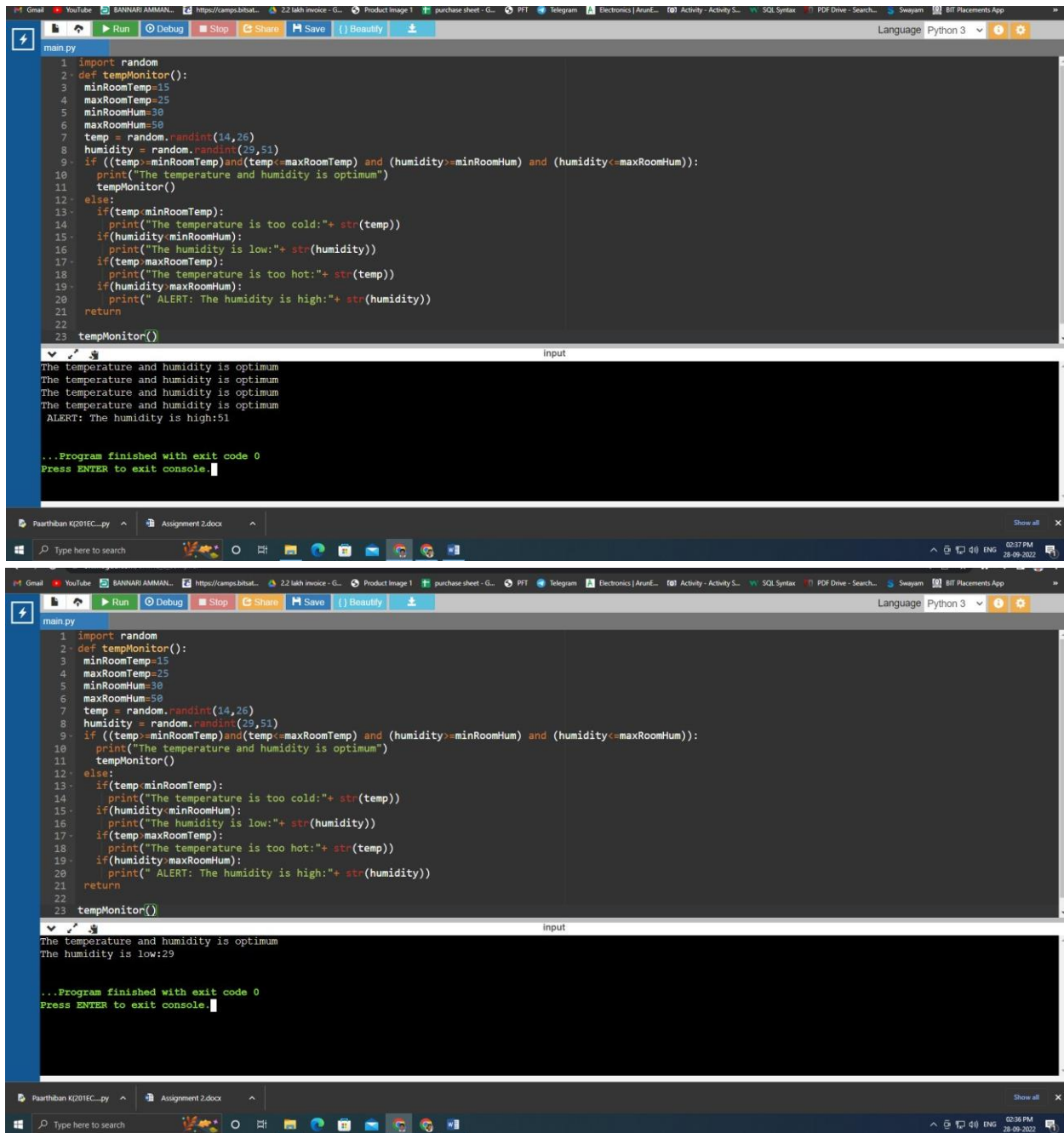
...Program finished with exit code 0
Press ENTER to exit console.



```
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
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17        if(temp > maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity > maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 tempMonitor()
```

The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature is too cold:14

...Program finished with exit code 0
Press ENTER to exit console.



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17        if(temp>maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity>maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 tempMonitor()
```

The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
ALERT: The humidity is high:51

...Program finished with exit code 0
Press ENTER to exit console.

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```
1 import random
2 def tempMonitor():
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12    else:
13        if(temp<minRoomTemp):
14            print("The temperature is too cold:"+ str(temp))
15        if(humidity<minRoomHum):
16            print("The humidity is low:"+ str(humidity))
17        if(temp>maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity>maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 tempMonitor()
```

The temperature and humidity is optimum
The humidity is low:29

...Program finished with exit code 0
Press ENTER to exit console.

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