Assignment 2

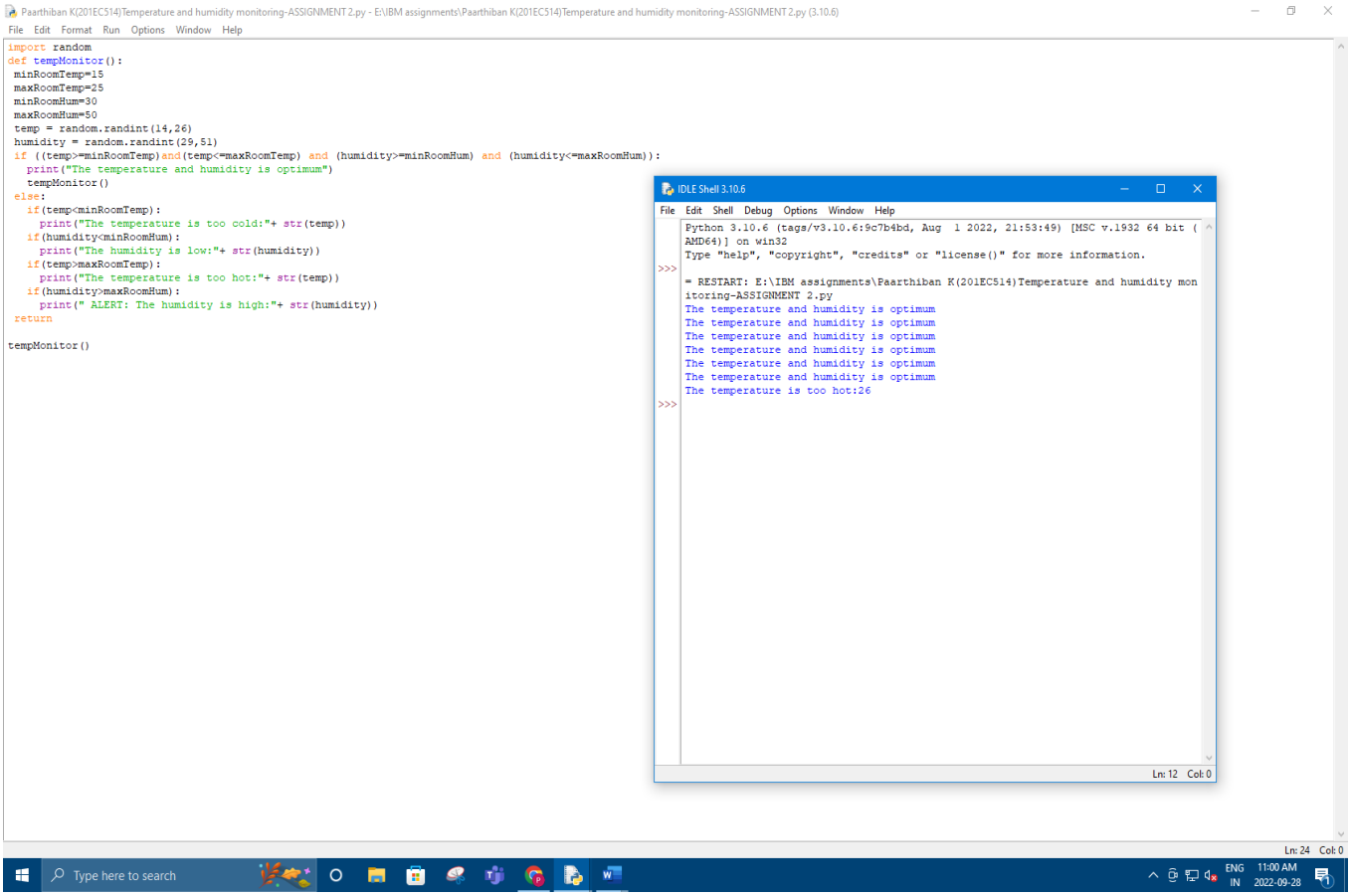
Temperature and humidity monitoring using python

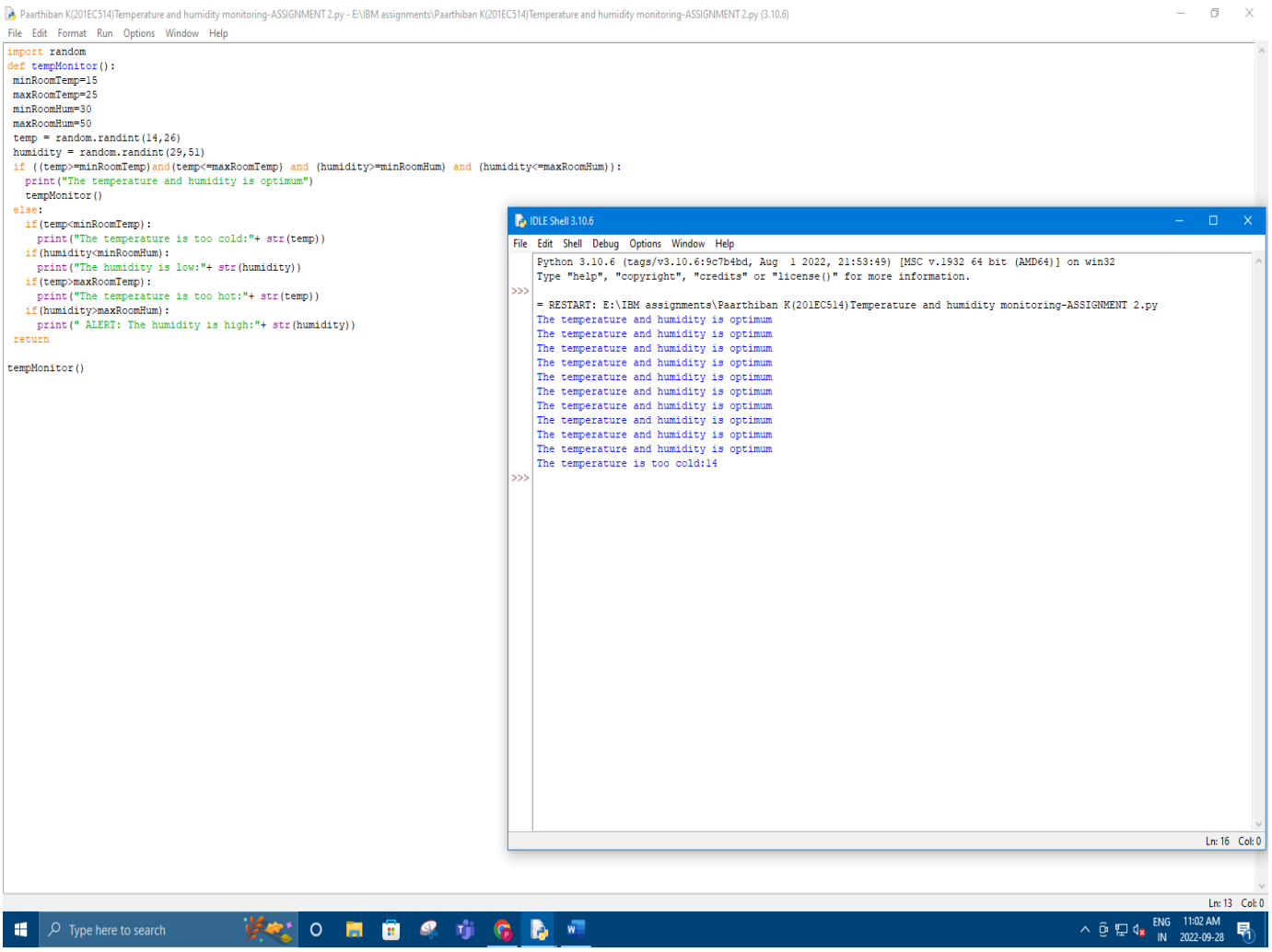
Python code:

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

tempMonitor()

IDLE OUTPUT:




Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py - E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py (3.10.6)
File Edit Format Run Options Window Help
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 Shell 3.10.6
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
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 and humidity is optimum
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 and humidity is optimum
The temperature is too cold:14
>>>
Ln: 16 Col: 0
Ln: 13 Col: 0
Type here to search
ENG
IN
11:02 AM
2022-09-28

Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py - E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py (3.10.6)

File Edit Format Run Options Window Help

```
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()
```

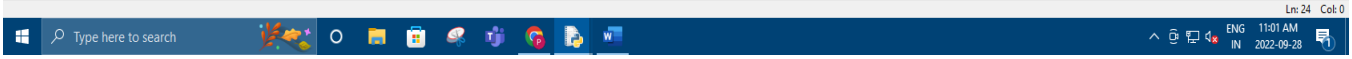
Ln: 24 Col: 0

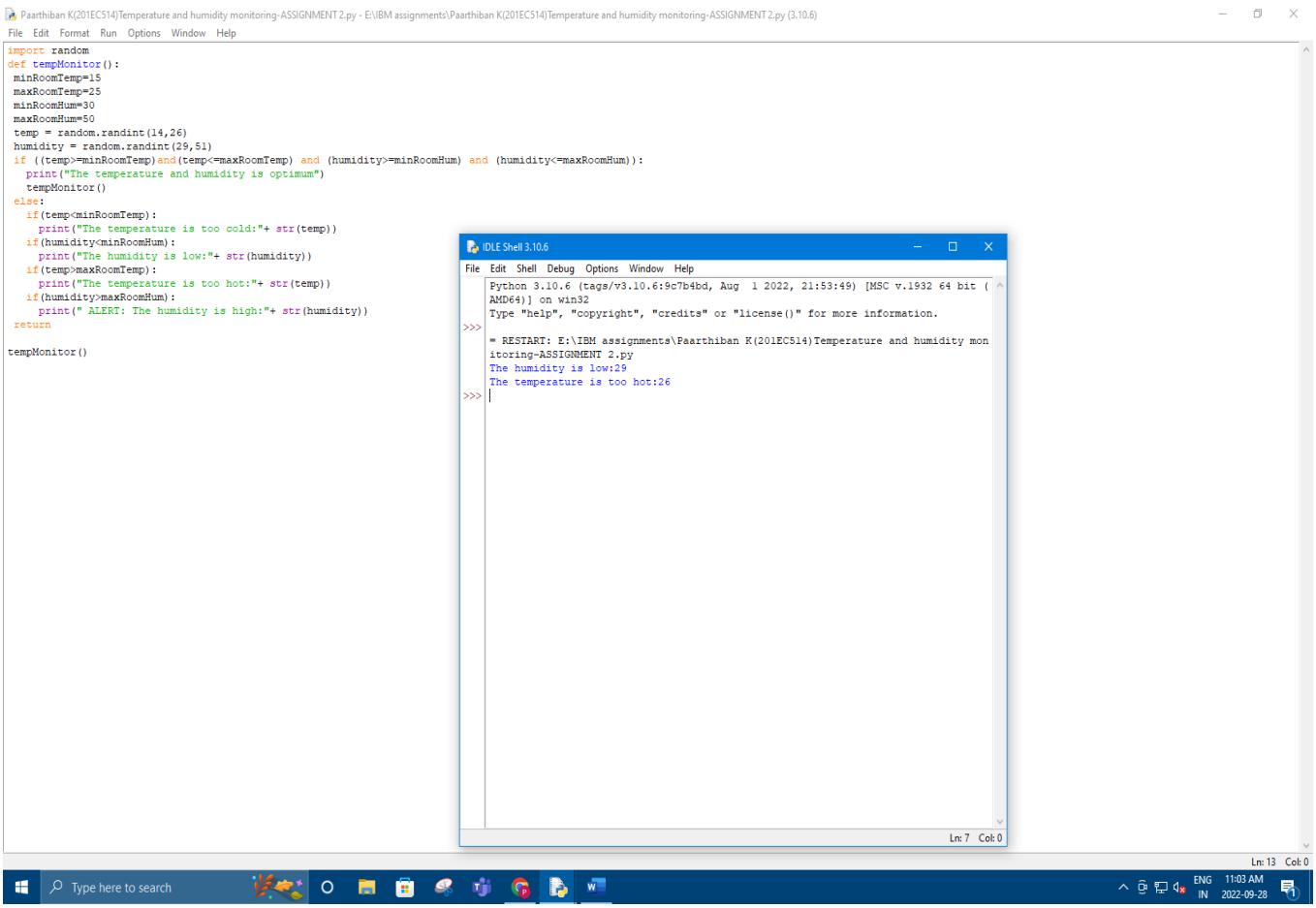
IDLE Shell 3.10.6

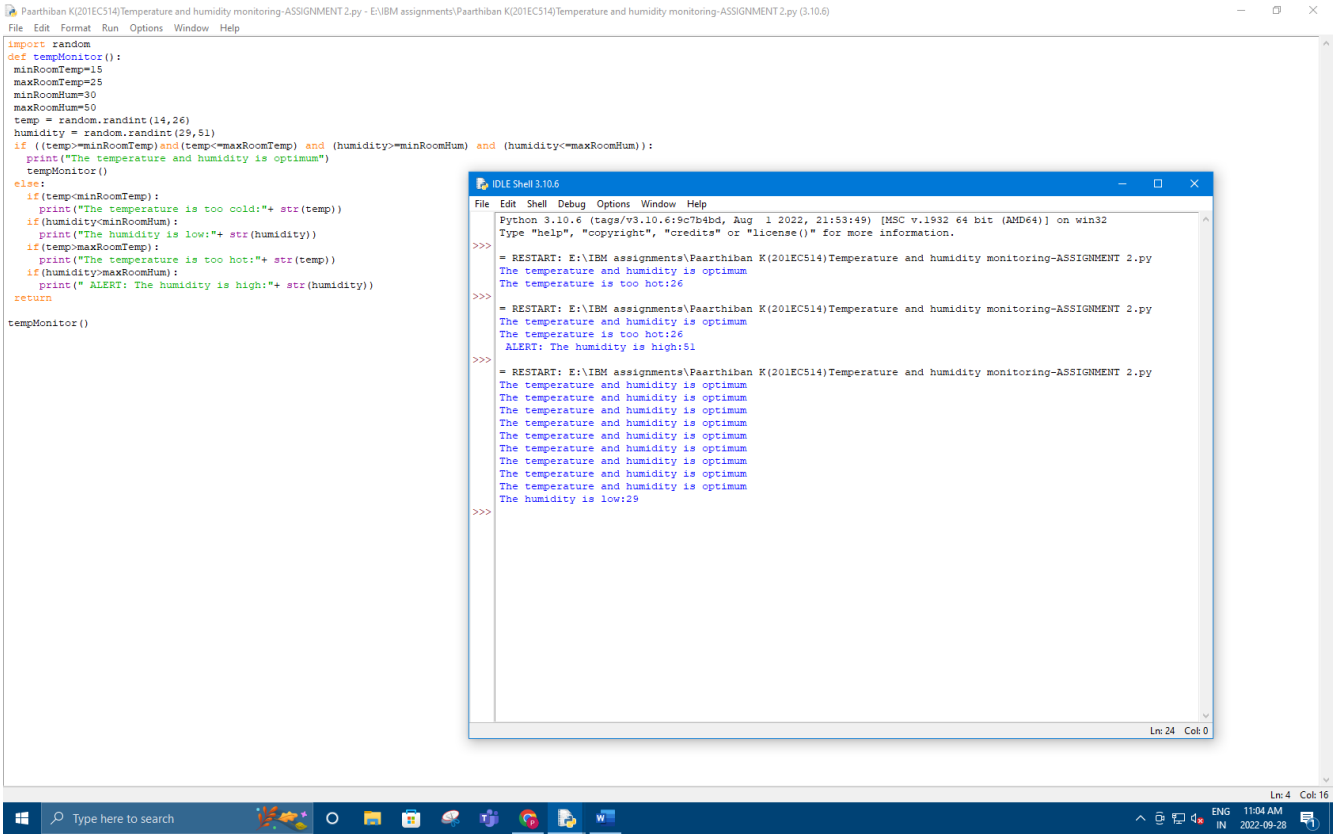
File Edit Shell Debug Options Window Help

```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug  1 2022, 21:53:49) [MSC v.1932 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity mon
itoring-ASSIGNMENT 2.py
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
>>>
```

Ln: 10 Col: 0




Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py - E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py (3.10.6)
File Edit Format Run Options Window Help
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 Shell 3.10.6
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
The humidity is low:29
The temperature is too hot:26
>>>
Ln: 7 Col: 0
Ln: 13 Col: 0
Type here to search
ENG IN
11:03 AM 2022-09-28


Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py - E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py (3.10.6)
File Edit Format Run Options Window Help
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 Shell 3.10.6
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
The temperature and humidity is optimum
The temperature is too hot:26
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
The temperature and humidity is optimum
The temperature is too hot:26
ALERT: The humidity is high:51
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
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 and humidity is optimum
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 humidity is low:29
>>>
Ln: 24 Col: 0
Ln: 4 Col: 16
Type here to search
ENG
IN
11:04 AM
2022-09-28