Assignment 2

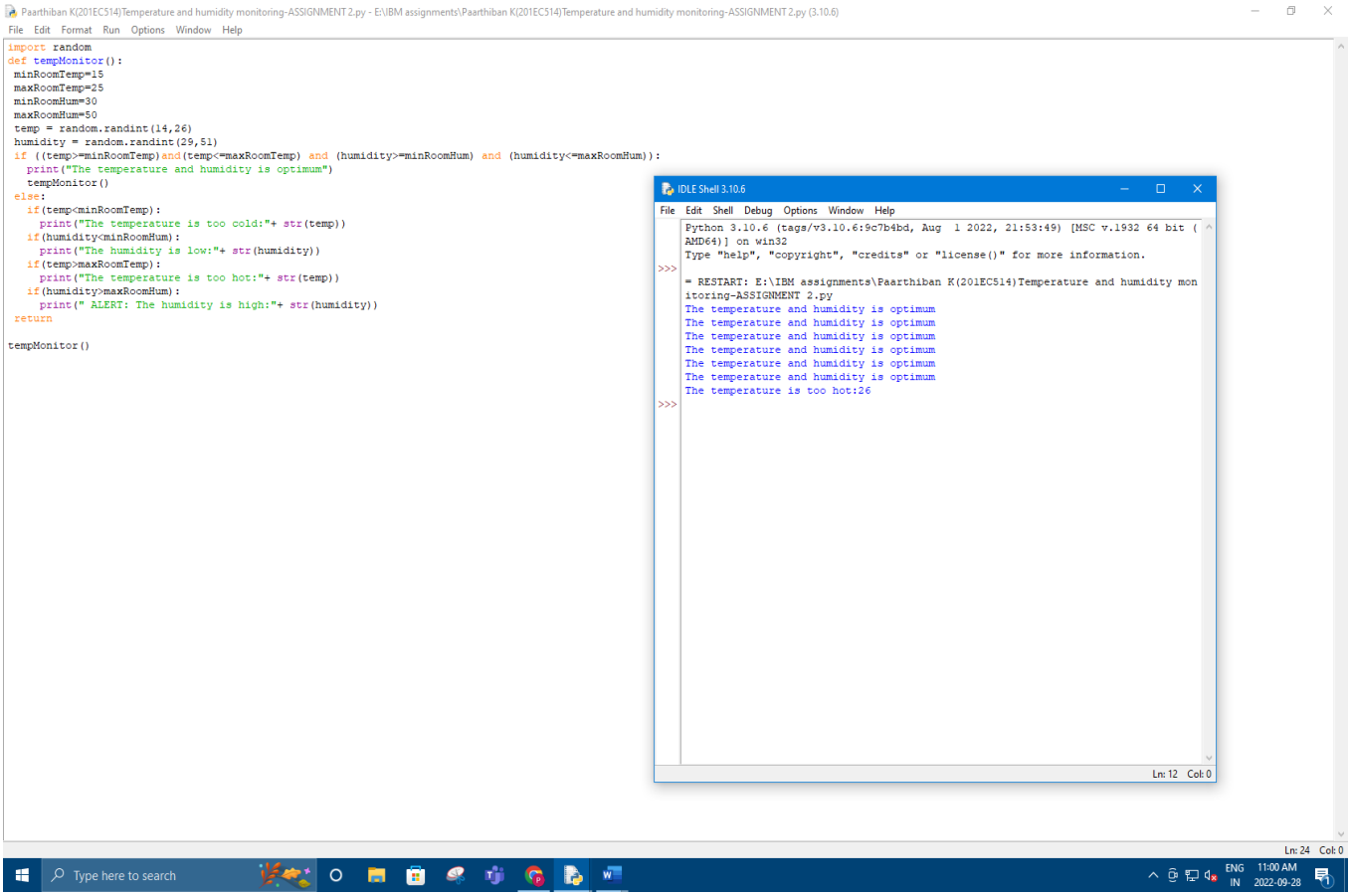
Temperature and humidity monitoring using python

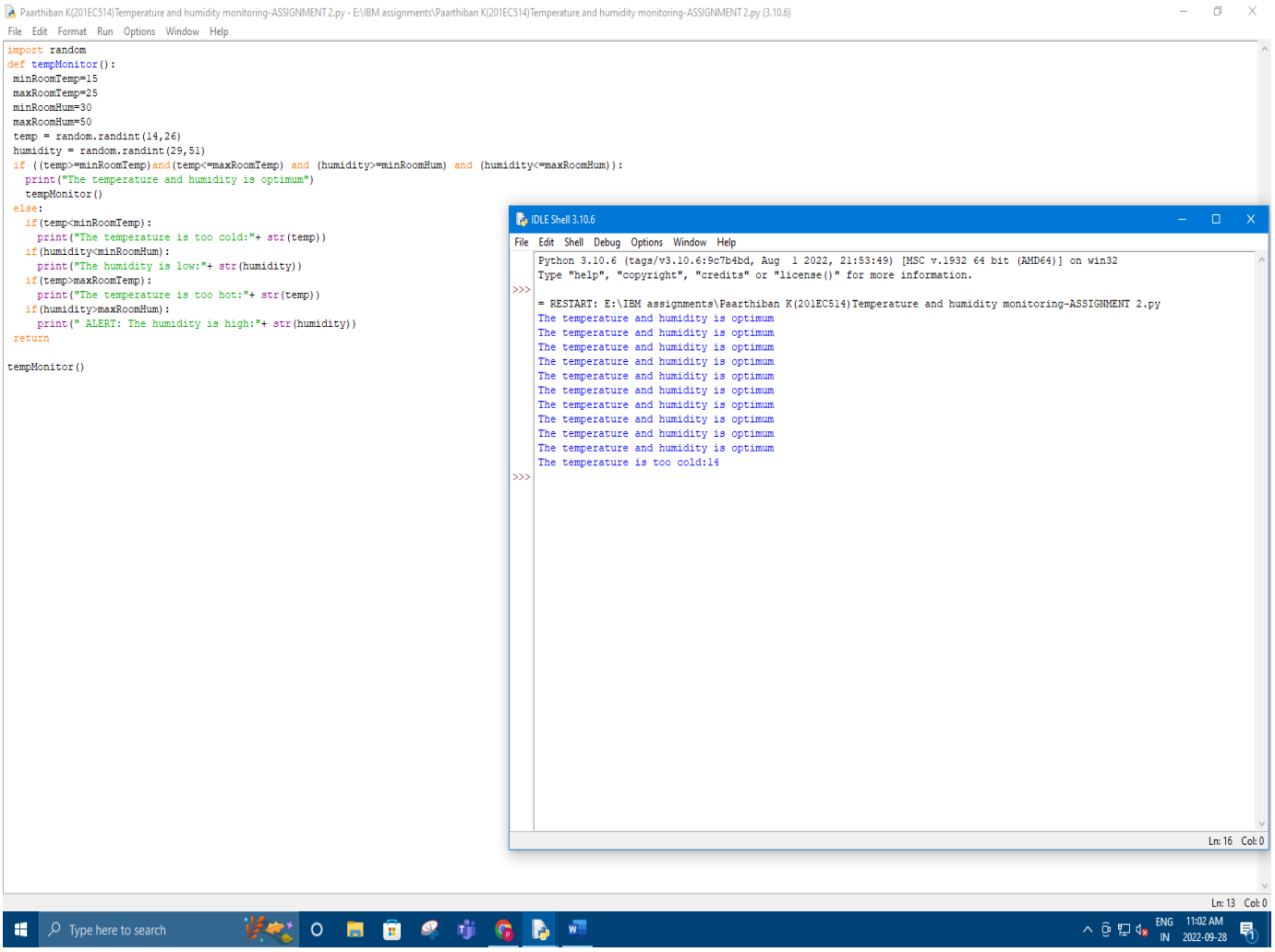
Python code:

```
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:




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
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humidity = random.randint(29,51)
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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
>>>
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Ln: 13 Col: 0
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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

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     print("The temperature is too hot:"+ str(temp))
   if(humidity>maxRoomHum):
     print(" ALERT: The humidity is high:"+ str(humidity))
 return

tempMonitor()
```

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IDLE Shell 3.10.6

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```
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
>>>
```

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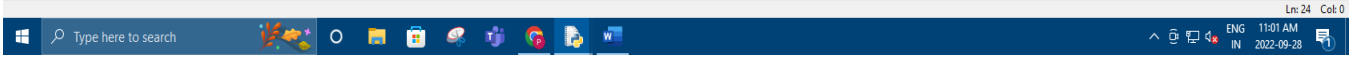

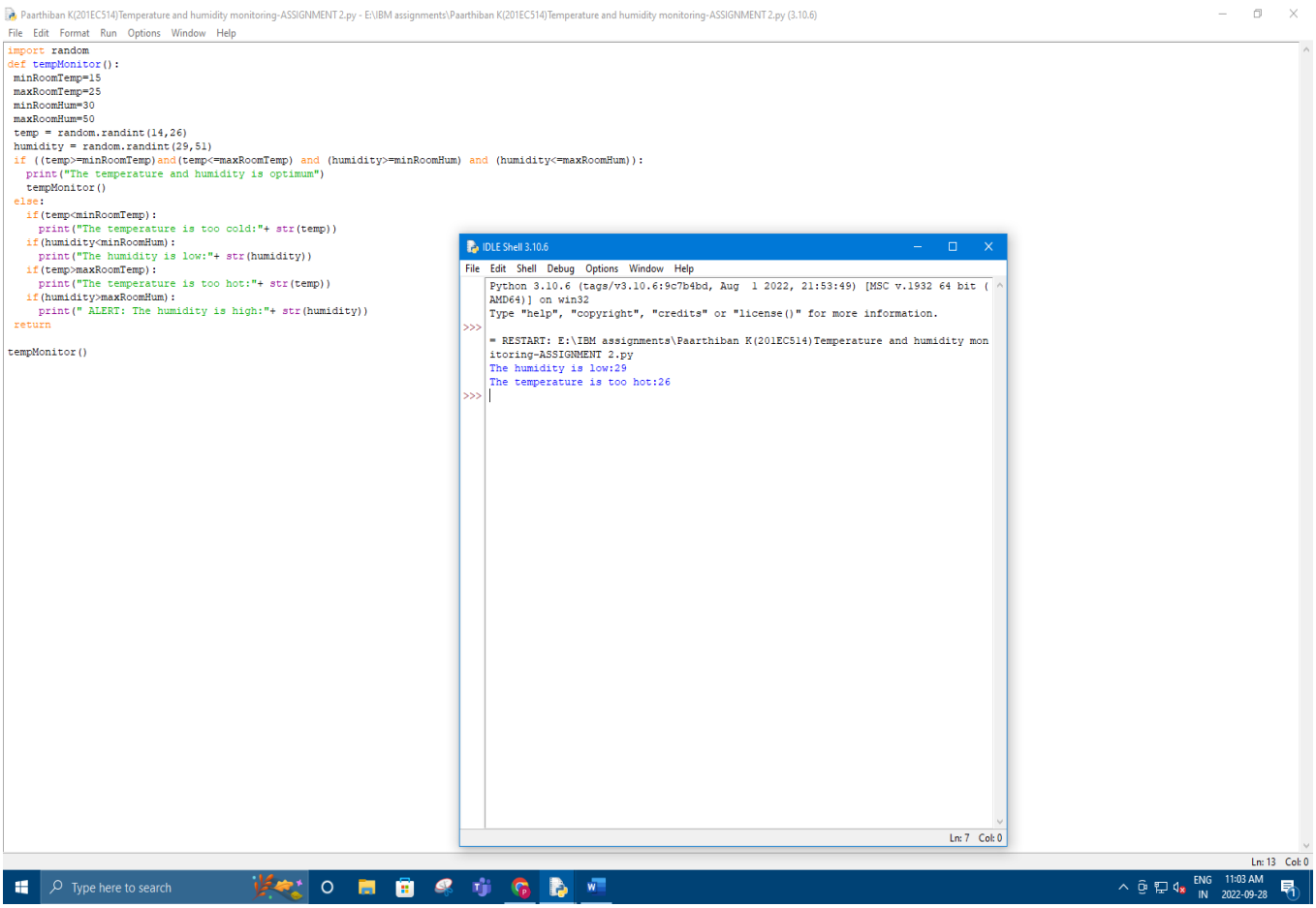
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>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
The humidity is low:29
The temperature is too hot:26
>>>
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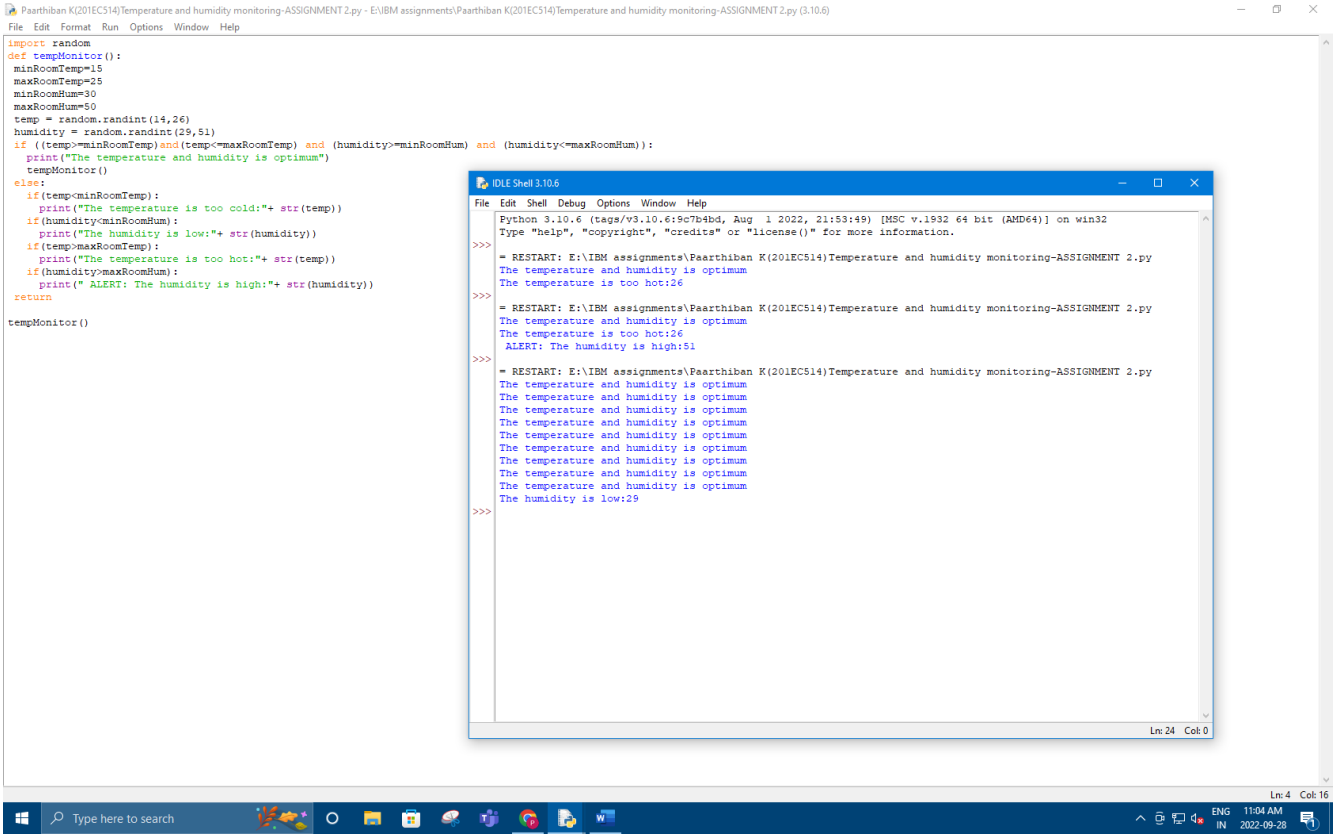
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>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and humidity monitoring-ASSIGNMENT 2.py
The temperature and humidity is optimum
The temperature is too hot:26
>>>
= RESTART: E:\IBM assignments\Paarthiban K(201EC514)Temperature and 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
>>>
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Ln: 4 Col: 16
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