Assignment – 2

Python Programming

Assignment Date	5 October 2022
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Maximum Marks	2 Marks

Question:

Build a python code, Assume u get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature. **Solution:**

```
######## use ( pip install requests )in cmd ############
######## if No module named 'requests' ##########
## Dummy prints used for give space between Outputs ##
import requests
import json
import random
import time
weatherdata =
requests.get('https://api.openweathermap.org/data/2.5/weather?q=Chennai&appid=3942dd61b26410
206c466575e5addfbf')
print(weatherdata.text)
a=weatherdata.text
print()
print()
print(type(a)) # printing Class of weatherdata.text
print()
print()
b=json.loads(a) # Class after import json
```

```
print(type(b))
print()
print()
print("Cordinates of Chennai is :",b["coord"])
print()
c=(b["main"]["temp"]-273.15)
print("Temperature of Chennai is :",c,"Degree celsius")
print()
d=(b["main"]["humidity"])
print("Humidity of Chennai is :",d,"%")
print()
print()
while(True):
  if(c>30):
     print("Alarm is ON due to high temperature of",c,"degree celsius")
     time.sleep(2)
  elif(c<30):
     print("Alarm is OFF due to Normal temperature of",c,"degree celsius")
     time.sleep(2)
  if (d<60):
     print("Alarm is OFF due to Normal humidity of",d,"%")
     time.sleep(2)
  elif(d>60):
     print("Alarm is ON due to High humidity of",d,"%")
     time.sleep(2)
```

```
📄 *IDLE Shell 3.9.8*
```

File Edit Shell Debug Options Window Help

```
== RESTART: E:/Education/Python/IBM sample/weatherdata.py ==
{"coord":{"lon":80.2785,"lat":13.0878},"weather":[{"id":701,"main":"Mist","
":"Rain", "description": "moderate rain", "icon": "10d"}], "base": "stations", "ma
:302.14, "temp max":302.14, "pressure":1004, "humidity":79}, "visibility":3000,
}, "clouds": { "all": 75 }, "dt": 1664931764, "sys": { "type": 1, "id": 9218, "country": "
mezone":19800, "id":1264527, "name": "Chennai", "cod":200}
<class 'str'>
<class 'dict'>
Cordinates of Chennai is: {'lon': 80.2785, 'lat': 13.0878}
Temperature of Chennai is: 28.990000000001 Degree celsius
Humidity of Chennai is: 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
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Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
Alarm is ON due to High humidity of 79 %
Alarm is OFF due to Normal temperature of 28.9900000000001 degree celsius
```