

ASSIGNMENT-2

Python Programming

Assignment Date	25 September 2022
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Maximum Marks	2 Marks

Question-1:

Build a python code, assume you get temperature and humidity valued (generated with random function to a variable) and write a condition detect alarm in case of high temperature.

Solution:

```
import random
```

```
temperature=random.uniform(0,50)
#by using random.uniform function a
random float value will be generated
for temperature for
example:25.718184973594976
print(temperature)
```

```
temperature=round(temperature, 1)
#by using round of function the
decimal points in the temperature will
be reduced for example:25.7
```

```
print(temperature)
```

```
#by using if condtion & elif condition
the temperature level is observed
if(temperature==0):
    print("very cold")
```

```
elif(temperature<=10):
    print("cold")
elif(temperature<=20):
    print("Room temperature")
elif(temperature<=30):
    print("hot")
```

```
elif(temperature>30):
    print("very hot alarm will be on")
```

else:

print("surface of the sun")

humidity=random.randint(0,100)

#by using random.randint function a
random int value will be generated for
humidity for example:55

print (humidity)

#by using if condition & elif condition
the humidity level is observed

if(humidity==0):

print("no humidity")

elif(humidity<=50):

print("humidity will be low")

elif(humidity<50):

print("humidity is medium")

else:

print("humidity is high
alarm will be on")

OUTPUT:

The screenshot shows a Python script in a text editor and its execution in the IDLE Shell. The script defines a temperature variable using random.uniform and rounds it to 1 decimal place. It then uses a series of if and elif statements to categorize the temperature: 'very cold' (0), 'cold' (10), 'room temperature' (20), 'hot' (30), and 'very hot alarm will be on' (30+). The else clause prints 'surface of the sun'. After this, it defines a humidity variable using random.randint(0,100) and uses if and elif statements to categorize it: 'no humidity' (0), 'humidity will be low' (<=50), and 'humidity is medium' (<50). The else clause for humidity is not shown in the output. The IDLE Shell shows the execution of the script, displaying the temperature value 25.497769379557067, the temperature level 'hot', and the humidity level 'humidity will be low'.

```
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user/Downloads/ptt.py =====
25.497769379557067
25.5
hot
42
humidity will be low
>>>
```

