

Assignment -2

Python Programming

Assignment Date	24September 2022
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Maximum Marks	2 Mark

Question-1:

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:

```
import random as rd
```

```
import time as t
```

```
while 1:
```

```
    temperature=rd.randint(0,100)
```

```
    moisture=rd.randint(0,100)
```

```
    if temperature>=60:
```

```
        print("warning!!Detected Temperature:"+str(temperature)+"*c")
```

```
    if moisture>=60:
```

```
        print("warning!!Detected Moisture:"+str(moisture)+"%")
```

```
    if temperature>=60 & moisture>=60:
```

```
        print("warning!!Detected both Temperature and Moisture:"+str(temperature)+"*c  
and"+str(moisture)+"%")
```

```
    elif temperature>=60 & moisture>=60:
```

```
        print("Both temperature and moisture are in normal condition")
```

```
    elif moisture<=60:
```

```
        print("normal moisture condition")
```

```
    elif temperature<=60:
```

```
        print("good temperature")
```

```
    t.sleep(1)
```

```
File Edit Format Run Options Window Help
Python 3.7.4 Shell
# Import random module
import random
# Import time module
import time
# While loop
while True:
    # Generate random temperature
    temperature = random.randint(0, 100)
    # Generate random moisture
    moisture = random.randint(0, 100)
    # Print temperature and moisture
    print("Warning!! Detected Temperature: " + str(temperature) + "°C")
    # If moisture is 60
    if moisture > 60:
        # Print warning!! Detected Moisture: " + str(moisture) + "%")
        print("Warning!! Detected Moisture: " + str(moisture) + "%")
    # If temperature is 60 & moisture is 60
    if temperature > 60 & moisture > 60:
        # Print warning!! Detected both Temperature and Moisture: " + str(temperature) + "°C and " + str(moisture) + "%")
        print("Warning!! Detected both Temperature and Moisture: " + str(temperature) + "°C and " + str(moisture) + "%")
    # If temperature is 60 & moisture is 60
    elif temperature > 60 & moisture > 60:
        # Print both temperature and moisture are in normal condition")
        print("Both temperature and moisture are in normal condition")
    # Else moisture is 60
    else:
        # Print normal moisture condition")
        print("Normal moisture condition")
    # Else temperature is 60
    else:
        # Print good temperature")
        print("Good temperature")
    # Sleep for 1 second
    time.sleep(1)
```

Output

```
File Edit Shell Debug Options Window Help
Python 3.7.4 Shell
Warning!! Detected Temperature: 64°C
Warning!! Detected Moisture: 82%
Warning!! Detected both Temperature and Moisture: 64°C and 82%
good temperature
Warning!! Detected Temperature: 64°C
Warning!! Detected Moisture: 72%
good temperature
Warning!! Detected Temperature: 60°C
Warning!! Detected Moisture: 88%
good temperature
Warning!! Detected Temperature: 81°C
normal moisture condition
Warning!! Detected Temperature: 82°C
normal moisture condition
Warning!! Detected Temperature: 81°C
normal moisture condition
Warning!! Detected Temperature: 100°C
Warning!! Detected Moisture: 70%
good temperature
Warning!! Detected Temperature: 60°C
Warning!! Detected Moisture: 92%
Warning!! Detected Temperature: 77°C
normal moisture condition
good temperature
Warning!! Detected Temperature: 83°C
normal moisture condition
good temperature
Warning!! Detected Temperature: 68°C
normal moisture condition
good temperature
Warning!! Detected Temperature: 76°C
Warning!! Detected Moisture: 100%
Warning!! Detected Temperature: 70°C
normal moisture condition
Warning!! Detected Temperature: 81°C
Warning!! Detected Moisture: 98%
Warning!! Detected Temperature: 64°C
normal moisture condition
good temperature
Warning!! Detected Temperature: 70°C
normal moisture condition
Warning!! Detected Temperature: 61°C
normal moisture condition
good temperature
good temperature
```