

**ASSIGNMENT -2**  
**PYTHON**  
**PROGRAMMING**

Assignment Date	19 September 2022
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Student Roll Number	917719C120
Maximum Marks	2 Marks

**QUESTION-1:**

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

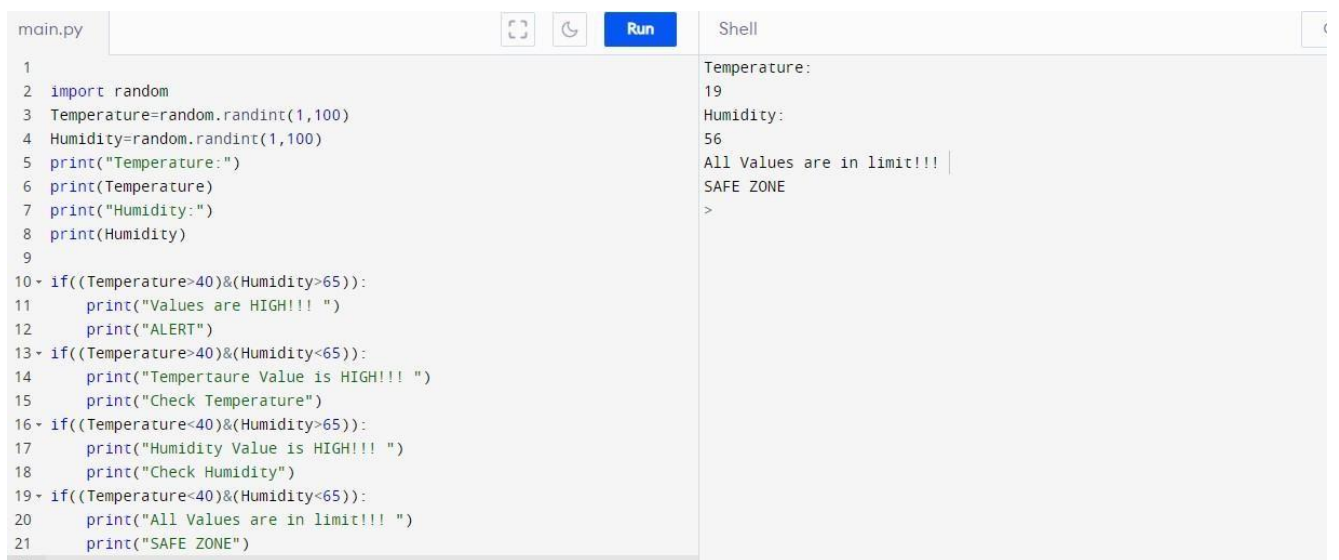
**SOLUTION:**

```
Let us consider normal
temperature=40 Celsius and
normal humidity=65% '''
import random
Temperature=random.randrange(
1,100)
Humidity=random.randint(1,
100) print("Temperature:")
print(Temperature)
print("Humidity:")
print(Humidity)
```

```
if((Temperature>40)&(Humidity>65)):print("Values are
HIGH!!! ") print("ALERT")
elif((Temperature>40)&(Humidity<65)):
print("Temperature Value is
HIGH!!! ") print("Check
Temperature")
if((Temperature<40)&(Humidity>65)):
```

```
print("Humidity Value is  
HIGH!!! ") print("Check  
Humidity")  
if((Temperature<40)&(Humid  
ity<65)):print("All Values are  
in limit!!! ") print("SAFE  
ZONE")
```

## **OUTPUT:**

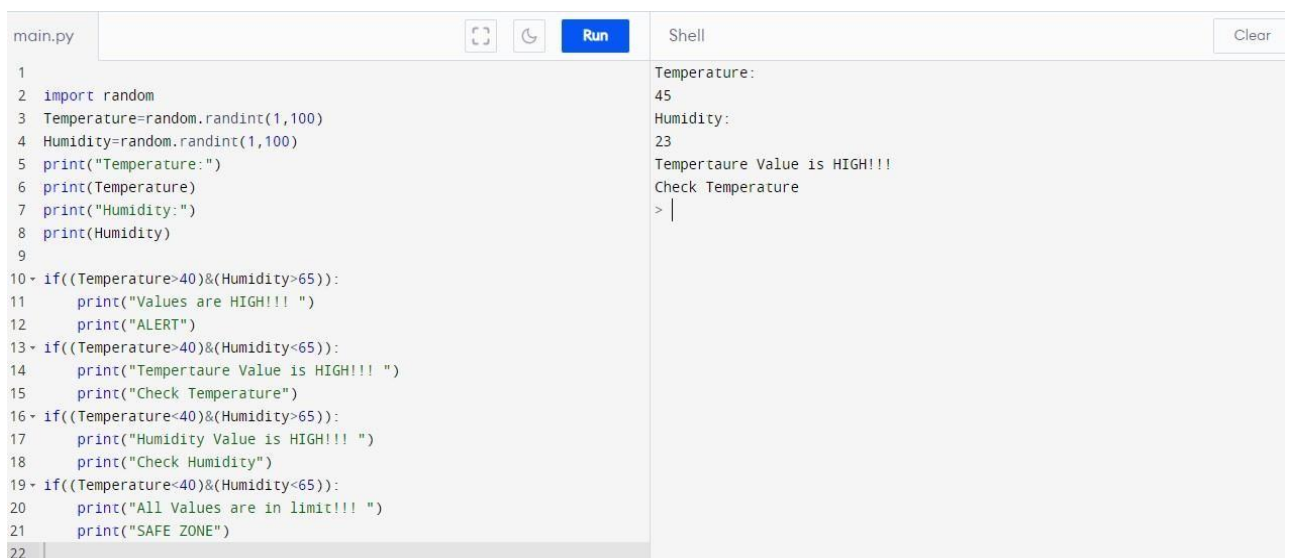


The screenshot shows a code editor with a file named 'main.py'. The code generates random temperature and humidity values and checks if they are within a 'SAFE ZONE'. The output in the shell shows the generated values and the resulting status.

```
main.py  Run  Shell
```

```
1  
2 import random  
3 Temperature=random.randint(1,100)  
4 Humidity=random.randint(1,100)  
5 print("Temperature:")  
6 print(Temperature)  
7 print("Humidity:")  
8 print(Humidity)  
9  
10~ if((Temperature>40)&(Humidity>65)):  
11     print("Values are HIGH!!! ")  
12     print("ALERT")  
13~ if((Temperature>40)&(Humidity<65)):  
14     print("Tempertaure Value is HIGH!!! ")  
15     print("Check Temperature")  
16~ if((Temperature<40)&(Humidity>65)):  
17     print("Humidity Value is HIGH!!! ")  
18     print("Check Humidity")  
19~ if((Temperature<40)&(Humidity<65)):  
20     print("All Values are in limit!!! ")  
21     print("SAFE ZONE")  
22
```

```
Temperature:  
19  
Humidity:  
56  
All Values are in limit!!! |  
SAFE ZONE  
>
```



The screenshot shows the same code editor with 'main.py'. In this run, the generated temperature is 45 and humidity is 23, which triggers the 'Tempertaure Value is HIGH!!!' alert.

```
main.py  Run  Shell  Clear
```

```
1  
2 import random  
3 Temperature=random.randint(1,100)  
4 Humidity=random.randint(1,100)  
5 print("Temperature:")  
6 print(Temperature)  
7 print("Humidity:")  
8 print(Humidity)  
9  
10~ if((Temperature>40)&(Humidity>65)):  
11     print("Values are HIGH!!! ")  
12     print("ALERT")  
13~ if((Temperature>40)&(Humidity<65)):  
14     print("Tempertaure Value is HIGH!!! ")  
15     print("Check Temperature")  
16~ if((Temperature<40)&(Humidity>65)):  
17     print("Humidity Value is HIGH!!! ")  
18     print("Check Humidity")  
19~ if((Temperature<40)&(Humidity<65)):  
20     print("All Values are in limit!!! ")  
21     print("SAFE ZONE")  
22
```

```
Temperature:  
45  
Humidity:  
23  
Tempertaure Value is HIGH!!!  
Check Temperature  
> |
```

main.py	<div>⌂ ⌕ Run</div> <pre>1 2 import random 3 Temperature=random.randint(1,100) 4 Humidity=random.randint(1,100) 5 print("Temperature:") 6 print(Temperature) 7 print("Humidity:") 8 print(Humidity) 9 10 if((Temperature&gt;40)&amp;(Humidity&gt;65)): 11     print("Values are HIGH!!! ") 12     print("ALERT") 13 if((Temperature&gt;40)&amp;(Humidity&lt;65)): 14     print("Tempertaure Value is HIGH!!! ") 15     print("Check Temperature") 16 if((Temperature&lt;40)&amp;(Humidity&gt;65)): 17     print("Humidity Value is HIGH!!! ") 18     print("Check Humidity") 19 if((Temperature&lt;40)&amp;(Humidity&lt;65)): 20     print("All Values are in limit!!! ") 21     print("SAFE ZONE") 22</pre>	Shell
		Temperature: 8 Humidity: 75 Humidity Value is HIGH!!! Check Humidity >

main.py	<div>⌂ ⌕ Run</div> <pre>1 2 import random 3 Temperature=random.randint(1,100) 4 Humidity=random.randint(1,100) 5 print("Temperature:") 6 print(Temperature) 7 print("Humidity:") 8 print(Humidity) 9 10 if((Temperature&gt;40)&amp;(Humidity&gt;65)): 11     print("Values are HIGH!!! ") 12     print("ALERT") 13 if((Temperature&gt;40)&amp;(Humidity&lt;65)): 14     print("Tempertaure Value is HIGH!!! ") 15     print("Check Temperature") 16 if((Temperature&lt;40)&amp;(Humidity&gt;65)): 17     print("Humidity Value is HIGH!!! ") 18     print("Check Humidity") 19 if((Temperature&lt;40)&amp;(Humidity&lt;65)): 20     print("All Values are in limit!!! ") 21     print("SAFE ZONE") 22</pre>	Shell
		Temperature: 91 Humidity: 72 Values are HIGH!!! ALERT > >