Assignment -1

Home automation using Tinker CAD

Assignment Date	21 September 2022
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Maximum Marks	2 Marks

Question-1:

Build a Python code, assume you 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:

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```
import random as rand

print("Welcome to Temperature and Humidity Monitoring Device")
temp = int(rand.randint(-40,125))
humid = int(rand.randint(0,100))
if((temp >= -40) and (temp <=-1)):
    print(f"Temperature: {temp} *C")
    print("Low Temperature, Freezing!")
    print(f"Humidity: {humid}%")
elif((temp >= 1) and (temp <= 20)):
    print(f"Temperature: {temp} *C")
    print("Cold Breeze")
    print(f"Humidity: {humid}%")
elif((temp >= 21) and (temp <= 29)):
    print(f"Temperature: {temp} *C")
    print("Room Temperature")
    print(f"Humidity: {humid}%")
elif((temp >= 30) and (temp <= 54)):
    print(f"Temperature: {temp} *C")
    print("Teamperature is high!\nPlease turn on the Air Conditioner to avoid heatstroke")
    print(f"Humidity: {humid}%")
else:
    print(f"Temperature: {temp} *C")
    print("Warning! Temperature is very High!\nPlease leave the area immediately")
    print(f"Humidity: {humid}%")
```

Output:

```
Welcome to Temperature and Humidity Monitoring Device
Temperature: 49 *C
Temperature is high!
Please turn on the Air Conditioner to avoid heatstroke
Humidity: 21%
```

```
Welcome to Temperature and Humidity Monitoring Device
Temperature: 99 *C
Warning! Temperature is very High!
Please leave the area immediately
Humidity: 63%
```