

ASSIGNMENT-2

```
import random
import winsound

# generate random temperature and humidity values
temperature = random.uniform(20, 40) # in Celsius
humidity = random.uniform(30, 70) # in percentage

# set threshold values for temperature and humidity
temp_threshold = 30 # in Celsius
humidity_threshold = 30 # in percentage

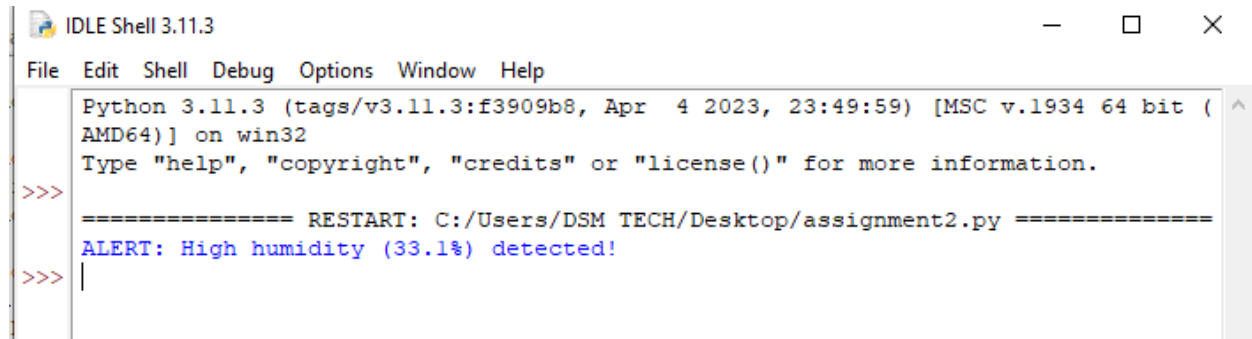
# define frequency and duration for alarm sound
freq = 2500 # in hertz
dur = 1000 # in milliseconds

# check if temperature or humidity exceed threshold values
if temperature > temp_threshold or humidity > humidity_threshold:
    if temperature > temp_threshold and humidity > humidity_threshold:
        print("ALERT: High temperature {:.1f}C and high humidity {:.1f}% detected!".format(temperature,
        humidity))
    elif temperature > temp_threshold:
        print("ALERT: High temperature {:.1f}C detected!".format(temperature))
    else:
        print("ALERT: High humidity {:.1f}% detected!".format(humidity))

    winsound.Beep(freq, dur)
else:
```

```
print("Temperature: {:.1f}C, Humidity: {:.1f}%".format(temperature, humidity))
```

OUTPUT:



```
IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/DSM TECH/Desktop/assignment2.py =====
ALERT: High humidity (33.1%) detected!
>>> |
```