Verify My MAC 🌐

Goal

Develop a Python script that verifies the validity of MAC addresses. Your script will take a MAC address as input from the user and determine if it is a valid MAC address based on a specific format.

Background

A Media Access Control (MAC) address is a unique identifier assigned to a network interface controller (NIC) for use as a network address in communications within a network segment. MAC addresses are typically represented as a sequence of six pairs of hexadecimal digits, separated by colons or hyphens, e.g., `00:11:22:33:44:55` or `00-11-22-33-44-55`.

In this exercise, you'll create a Python script that validates MAC addresses based on the following format:

- The MAC address should consist of six pairs of hexadecimal digits.
- The pairs can be separated by colons (`:`) or hyphens (`-`).
- Each hexadecimal digit can be either uppercase or lowercase.

Instructions

1. Write a Python script that:
    - Prompts the user to enter a MAC address using `input()`.
    - Validates the format of the MAC address using regular expressions or string manipulation methods.
    - Prints a message indicating whether the MAC address is valid or not.

2. The script should consider the following validation rules:
    - The MAC address should have exactly 6 pairs of hexadecimal digits.
    - The pairs can be separated by colons (`:`) or hyphens (`-`), but the separators should be consistent throughout the address.
    - Each hexadecimal digit can be either uppercase (A-F) or lowercase (a-f).
    - The script should handle leading or trailing whitespace in the user input.

Example Output

Here's an example of how the MAC address verifier should work:

Examples of valid scenarios:

```
Enter a MAC address: 00:11:22:33:44:55
The MAC address is valid.
```

```
Enter a MAC address: 00-11-22-33-44-55
The MAC address is valid.
```

Example of invalid scenarios:

```
Enter a MAC address: 00:11:22:33:44
The MAC address is not valid.
```

```
Enter a MAC address: 00:11:22:33:44:GG
The MAC address is not valid.
```

To Submit

Submit your code in a python script named "mac*address*verifier.py".

Sentinel