Please write a python function that accepts two strings as input: a username and password. This function should use the python re library to match the username and password and return if they are both valid entries. The username should be a valid email address of a standard format. The password has several restrictions: It should be at least 12 characters long, it should contain at least 1 special character, at least 1 lower case, at least 1 upper case, and at least 2 numbers.

**ChatGPT said:**

ChatGPT

Here's a Python function that uses the re library to validate the username and password based on the criteria you specified:

python

Copy code

import re

def validate\_credentials(username, password):

    # Validate username as a standard email address

    email\_pattern = r'^[a-zA-Z0-9\_.+-]+@[a-zA-Z0-9-]+\.[a-zA-Z0-9-.]+$'

    if not re.match(email\_pattern, username):

        return "Invalid username: must be a valid email address."

    # Validate password with specified restrictions

    if len(password) < 12:

        return "Invalid password: must be at least 12 characters long."

    if not re.search(r'[!@#$%^&\*(),.?":{}|<>]', password):

        return "Invalid password: must contain at least 1 special character."

    if not re.search(r'[a-z]', password):

        return "Invalid password: must contain at least 1 lowercase letter."

    if not re.search(r'[A-Z]', password):

        return "Invalid password: must contain at least 1 uppercase letter."

    if len(re.findall(r'\d', password)) < 2:

        return "Invalid password: must contain at least 2 numbers."

    return "Both username and password are valid."

# Example usage

print(validate\_credentials("test@example.com", "ValidPass123!"))

**Explanation:**

1. The username is validated using a regular expression that checks for a standard email format.
2. The password is checked to ensure it meets the following criteria:
   * At least 12 characters long.
   * Contains at least 1 special character.
   * Contains at least 1 lowercase letter.
   * Contains at least 1 uppercase letter.
   * Contains at least 2 numbers.

You can adjust the regular expressions or criteria as needed for more specific requirements.