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.

Python

import re

def validate\_credentials(username, password):

    """

    Validates the given username and password.

    Args:

        username (str): The username to validate.

        password (str): The password to validate.

    Returns:

        bool: True if both username and password are valid, False otherwise.

    """

    # Regular expressions for username and password validation

    username\_regex = r"^[^@]+@[^@]+\.[^@]+$"

    password\_regex = r"^(?=.\*[a-z])(?=.\*[A-Z])(?=.\*\d)(?=.\*[@$!%\*?&])[A-Za-z\d@$!%\*?&]{12,}$"

    # Check if username and password match the respective regular expressions

    if re.match(username\_regex, username) and re.match(password\_regex, password):

        return True

    else:

        return False

Use code with caution.

**Explanation:**

1. **Import the re module:** This module provides regular expression matching operations.
2. **Define the validate\_credentials function:** This function takes the username and password as input.
3. **Regular Expressions:**
   * **Username:**
     + ^[^@]+@[^@]+\.[^@]+$: This regex ensures the username is a valid email address, matching the standard format of local-part@domain.
   * **Password:**
     + ^(?=.\*[a-z])(?=.\*[A-Z])(?=.\*\d)(?=.\*[@$!%\*?&])[A-Za-z\d@$!%\*?&]{12,}$: This regex ensures the password meets the following criteria:
       - At least 12 characters long
       - Contains at least one lowercase letter
       - Contains at least one uppercase letter
       - Contains at least one digit
       - Contains at least one special character from the specified set [@$!%\*?&]
4. **Regex Matching:**
   * The re.match() function is used to check if the input strings match the respective regular expressions.
5. **Return Value:**
   * If both the username and password are valid, the function returns True.
   * Otherwise, it returns False.

**Example Usage:**

Python

username = "johndoe@example.com"

password = "Password123@"

if validate\_credentials(username, password):

    print("Valid credentials")

else:

    print("Invalid credentials")

Use code with caution.