Project Title:

CRUD Operations on MY SQL database using Python

Problem Statement:

You are tasked with developing a **User Management System** that simulates the core functionality of login, signup, and user account management typically found in modern web applications.

The system must be built using **Python for backend logic**, **Streamlit for the user interface**, and **MySQL for persistent database storage**.

The final application should allow users to **register with unique credentials**, **log in securely**, **update their information**, or **delete their account**.

Learning Objectives:

By completing this project, students will:

- Understand how to perform **CRUD operations** in a real database.
- Learn how to use **Streamlit** to build multi-page form-based apps.
- Practice implementing **input validation**, **error handling**, and **user feedback**.
- Strengthen understanding of **SQL**, **Python functions**, and **modular programming**.

Project Requirements:

1. Signup Page

- Collect username, password, and re-typed password.
- **Validation**:
    - Username must be at least 5 characters long.
    - Username must be **unique** (check in the database).
    - Password must be **strong** (must include uppercase, lowercase, digit, special character, and be at least 8 characters long).
    - Retyped password must match the original password.
- Show clear **warnings and suggestions** if validation fails.
- On success, store credentials in the database.

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2. Login Page

- Collect username and password.
- Check against credentials stored in the database.
- Display relevant error messages:
  - “Username does not exist”
  - “Incorrect password”
- On successful login, redirect to **Welcome Page**.

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3. Welcome Page

- Display a welcome message.
- Provide options to:
  - **Update Account**:
    - Update username and/or password.
    - Apply the same validation as in the signup page.
  - **Delete Account**:
    - Confirm before deleting the user's account from the database.