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Hosting:https://github.com/HammadAnwarSiddiqui/Application

Title: User Registration for Telephone Directory Application

Description: This segment of the telephone directory application focuses on user registration, leveraging HTML, CSS (via Bootstrap), JavaScript (with jQuery for AJAX calls), PHP for server-side logic, and MySQL for database interaction.

Project Structure:
The project is structured into several files, each serving a distinct role in the application's functionality:

- **index.html**: The front-end interface allowing users to register.
- **register.php:** The server-side script handling the registration process.
- **db.php:** Manages the database connection using PHP Data Objects (PDO).

Technologies Used:
- **HTML & Bootstrap:** Used for designing a responsive user interface.
- **jQuery:** Enhances the form submission process through AJAX, making the user experience smoother by not requiring page reloads.
- **PHP:** Server-side language used for executing the application logic, including user registration and database interaction.
- **MySQL:** Database system used for storing user information securely.
- **PDO (PHP Data Objects):** A database access layer in PHP, providing a standard method for accessing databases in a secure manner.

Functionality:
User Registration: Users can register by providing a username and password. The system encrypts the password before storing it in the database, enhancing security.

Implementation Details:
- **User Interface:**
  The UI is simple and user-friendly, built with Bootstrap for responsiveness. It includes a form for username and password input.

- **AJAX Form Submission:**
  jQuery is used to submit the registration form data to the server without reloading the page. This is achieved by intercepting the form's submit event and using jQuery's $.ajax() method.

- **Backend Logic:**
  - ☐ **register.php** receives the form data, hashes the password using PHP's password_hash() function, and inserts the new user record into the database.
  - ☐ **db.php** establishes a connection to the MySQL database using PDO, which provides a secure and efficient way to interact with the database.

- **Database Interaction:**
  - ☐ The MySQL database contains a `users` table where user credentials are stored.The table is designed to store usernames and hashed passwords.

- **Security Measures:**
  - ☐ **Password Hashing:** Ensures that actual passwords are not stored in the database, protecting against potential data breaches.
  - ☐ **PDO Prepared Statements:** Protects against SQL injection attacks by separating SQL commands from the data.

Deployment Instructions:
- ☐ Ensure a local server environment (like XAMPP) is running.
- ☐ Place the project files in the server's root directory (e.g., `htdocs` for XAMPP).
- ☐ Access the project via a web browser by navigating to the local server's address followed by the project directory.

Conclusion:
This user registration component is a fundamental part of the telephone directory application, designed with a focus on user experience, security, and modern web development practices. It exemplifies how various technologies can be integrated to create a seamless and secure user registration process.