Table of Contents

USER WEB APPLICATION

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Project objective

- **Retrieving the User Details Using the User ID:** Create a servlet-based application that shows a form to enter a user ID. The user ID is then validated, and user details are retrieved from the database and displayed to the user. You need to create a user table in H2 and pre-populate it with data. Use JDBC to do all database processing.
- **Adding a New User in the Database:** Create a servlet-based web application that shows a form to add new users. A H2 database will be created to store user data. The form data will be validated, and a row will be added to the database. All database processing will be done using Hibernate.
- **User Details Portal:** Create a servlet-based web application that shows a form to enter user details. Capture the details in a servlet and then display the data that was entered.
- **Validation of the User Login:** Create a servlet-based web application that shows a login page and validates it. A H2 database will be created to store user data. On successful login, a dashboard page is shown. The dashboard will provide a link for logging out. Incorrect logins need to be handled by showing an error message page.

Background of the problem statement

- **Retrieving the User Details Using the User ID:** As a part of developing an e-commerce web application, the admin backend requires a module that can retrieve user information based on the user ID.
- **Adding a New User in the Database:** As a part of developing an e-commerce web application, you have to create a database table for storing user information. A form is needed to add new users. The form submission is validated, and a new record is created in the user table.
- **User Details Portal:** As a part of developing an ecommerce web application, you have to prototype a form for adding users into the system entered by the users. There is no database involved here, so the product is just captured and displayed without storing it anywhere. (Notes: this requirement is upgraded to store entered information into the database. Hence, this becomes the feature *Adding a New User in the Database* mentioned above.)
- **Validation of the User Login:** As a part of developing an e-commerce web application, you have to prototype a login scenario for the user. A form is needed for users to enter username and password. The form submission is validated, and users are redirected to a welcome page.

Specifications

- **Retrieving the User Details Using the User ID:**
    - There is a JSP page to take in a user ID
    - A servlet that will take the user ID and use JDBC to query the database for the user
    - If the user is found, the servlet will display the user details, otherwise it will show an error message
- **Adding a New User in the Database:**
    - Show an add user form in JSP
    - Handle the form submission in a servlet. Validate it for any missing information
    - Add the user information into the database using Hibernate
    - A Hibernate configuration file is set up using XML for the user table
    - A class is created to store user data. This class will be linked to Hibernate via an hbm.xml file
    - The servlet will put the form data into the user class and then pass the user class into Hibernate to add into the database
- **User Details Portal:** is upgraded to *Adding a New User in the Database*
- **Validation of the User Login:**
    - Show a login form in HTML
    - Handle invalid logins and show appropriate error messages using servlets
    - Show the dashboard page using servlets
    - Handle logouts using servlets

Java Concepts and Data Structures

- H2 database is used for storing user data;
- Servlet and JDBC are used to query the database for the user.
- Hibernate is used for database processing

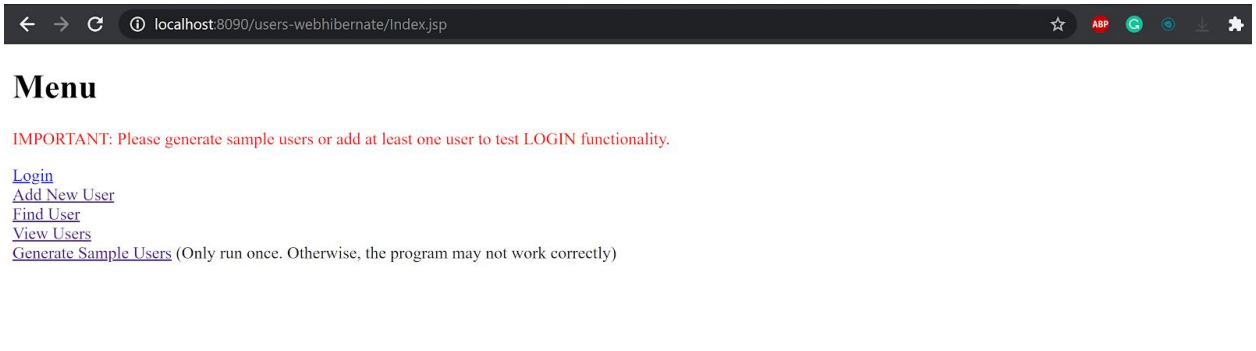
Repository

Source Codes
Technical Documentation (online version)

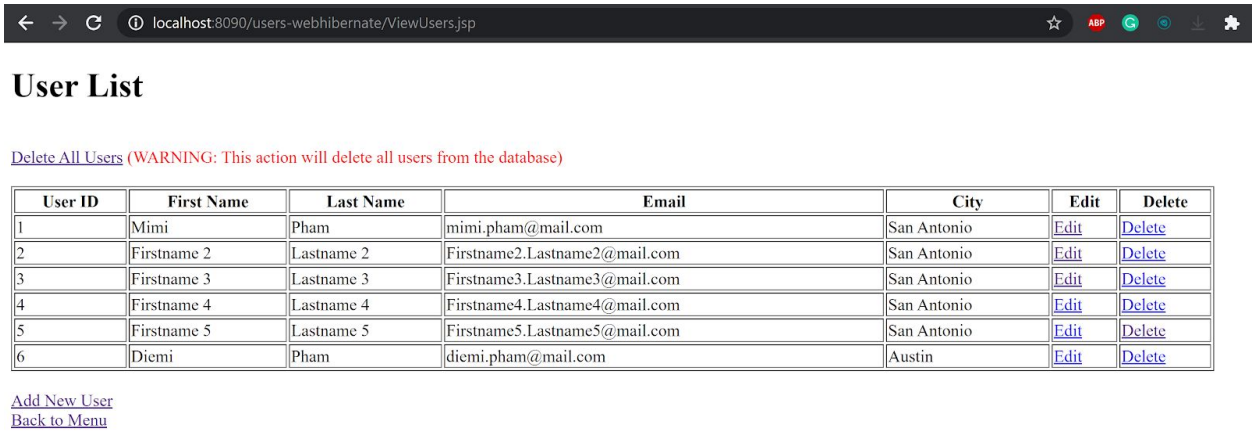
Flow of the application

Screenshots

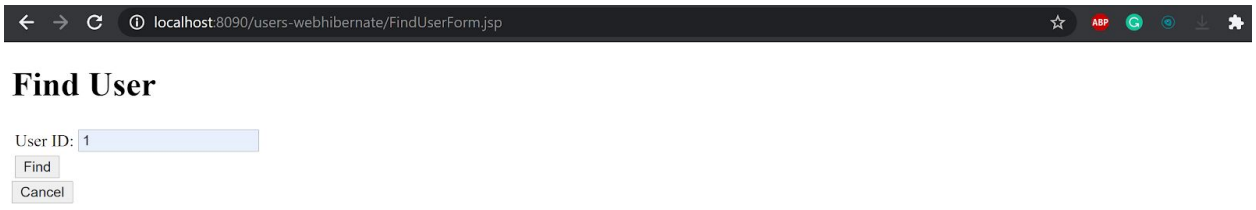
Main Menu (Index page)



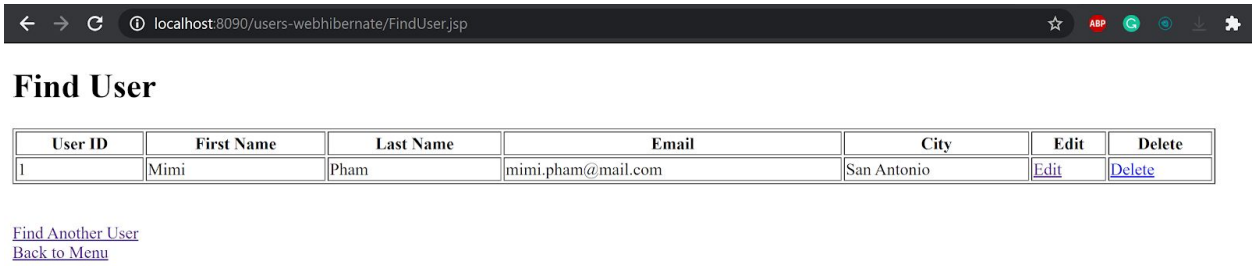
View Users page



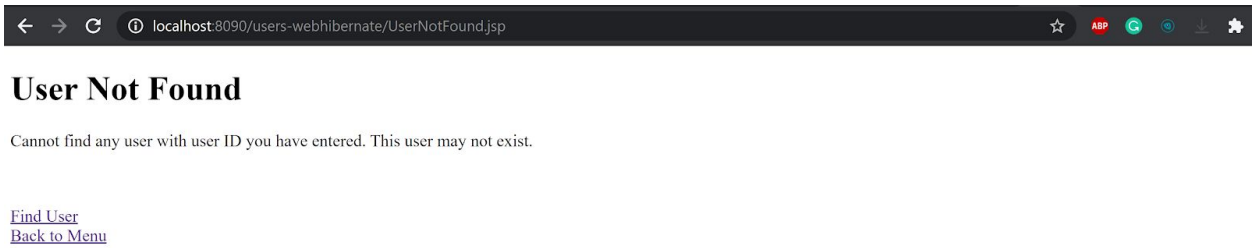
Find User Page



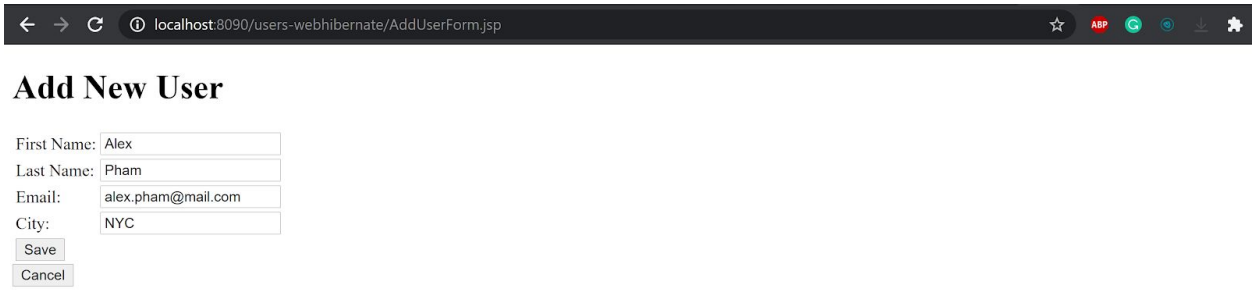
Find User Result - User Found



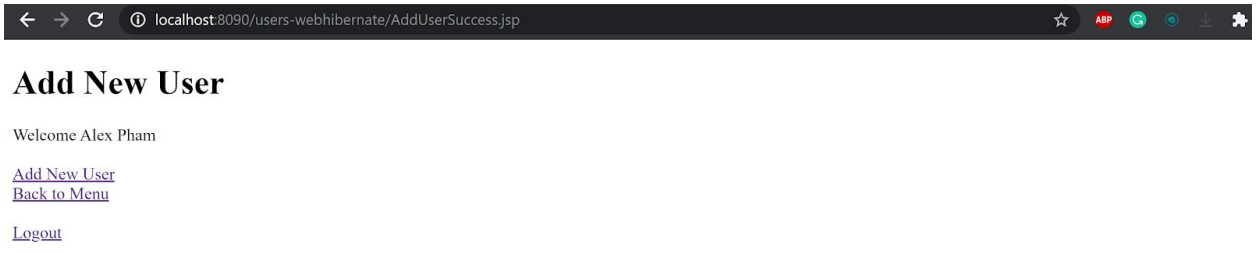
Find User Result - User Not Found



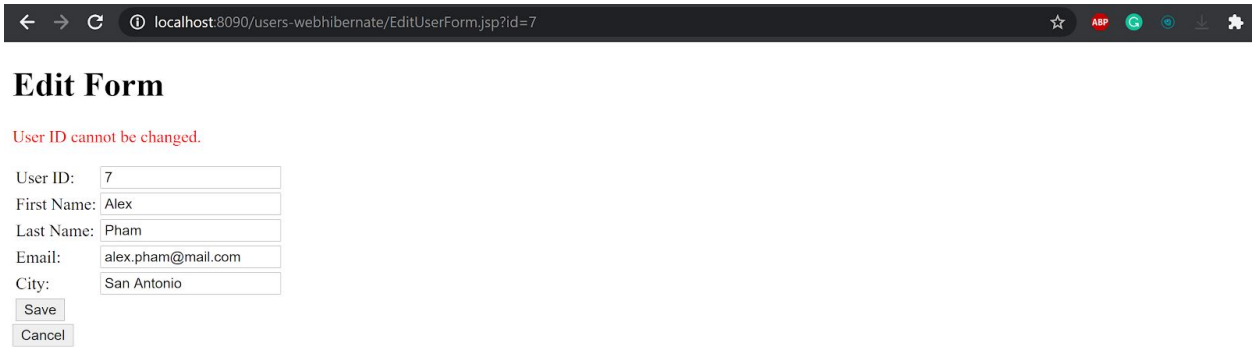
Add New User Page



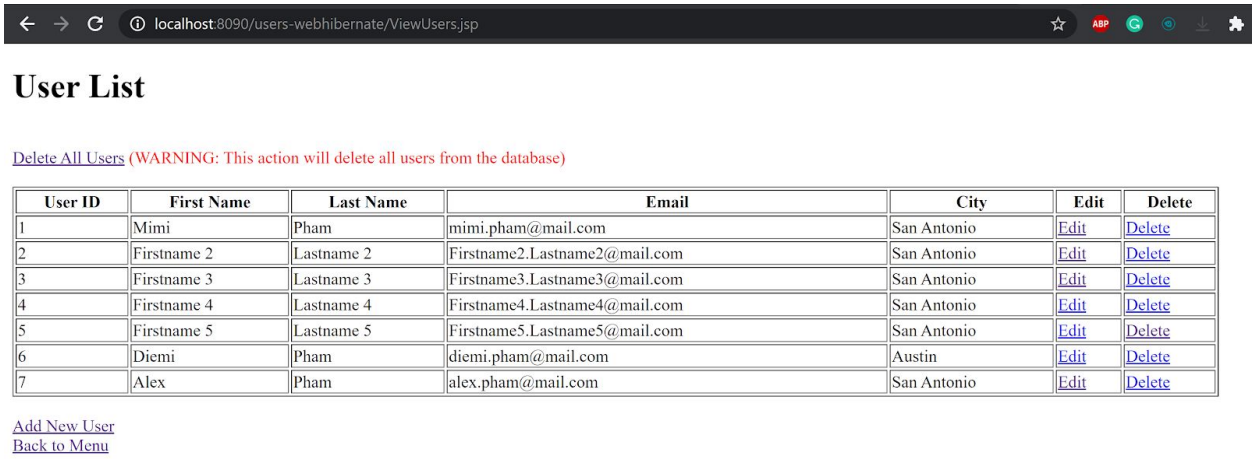
Add New User Success



Edit User Page

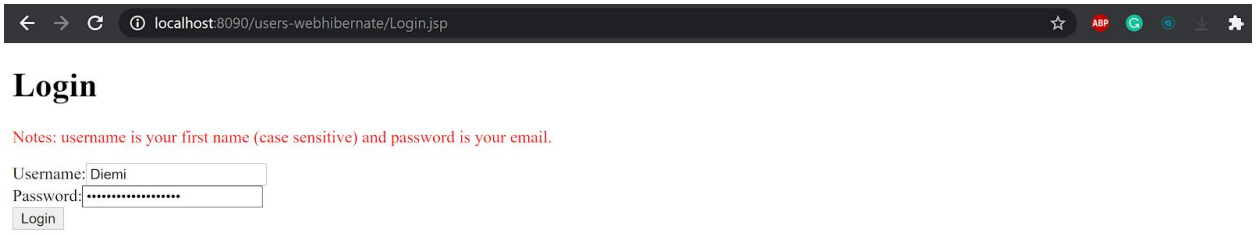


Edit User Success



User ID	First Name	Last Name	Email	City	Edit	Delete
1	Mimi	Pham	mimi.pham@mail.com	San Antonio	Edit	Delete
2	Firstname 2	Lastname 2	Firstname2.Lastname2@mail.com	San Antonio	Edit	Delete
3	Firstname 3	Lastname 3	Firstname3.Lastname3@mail.com	San Antonio	Edit	Delete
4	Firstname 4	Lastname 4	Firstname4.Lastname4@mail.com	San Antonio	Edit	Delete
5	Firstname 5	Lastname 5	Firstname5.Lastname5@mail.com	San Antonio	Edit	Delete
6	Diemi	Pham	diemi.pham@mail.com	Austin	Edit	Delete
7	Alex	Pham	alex.pham@mail.com	San Antonio	Edit	Delete

Login page



Login Success

Welcome

Welcome Diemi

Back to Menu

Logout

Login Failed

Login Failed

Username or password is incorrect. Please try again.

Notes: username is your first name (case insensitive) and password is your email.

Username:
Password:
Login

Back to Menu