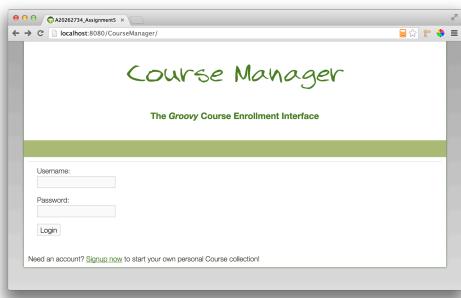
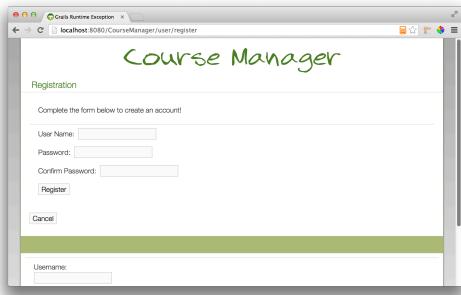


Pre-Requisites:

- JDK 1.7.* or higher-ie 1.8.*
- Grails 2.4.3

Installation:

- 1) Unzip
- 2) Open a command prompt
- 3) Navigate to the root directory (1)
- 4) Enter the command "grails run-app"

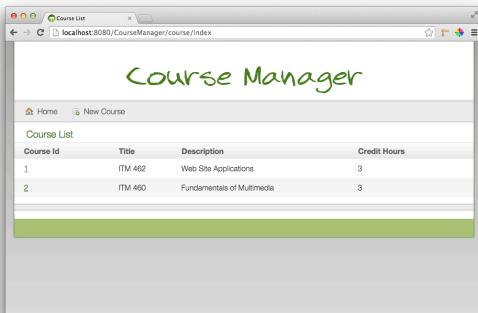
Wireframes / Functionality:**Home****SignUp (Registration)**

Note - Clicking Cancel will return the user to the home page.

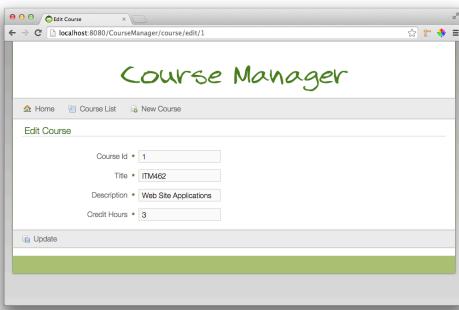
Home (Authenticated User)**Course CRUD – Create****Constraints:**

- All fields are required—cannot be blank
- All fields are non-nullable
- The Course Id and Title field must be unique
- Course Id must be greater than 1
- Credit Hours can be equal to 3 or 4

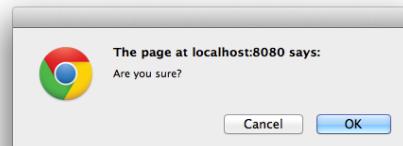
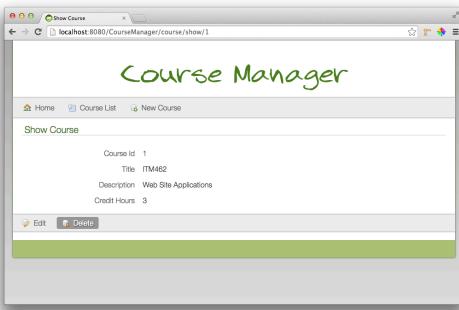
Course CRUD – Read



Course CRUD – Update



Course CRUD – Delete



User CRUD – Create

The screenshot shows a 'Create User' form within a 'Course Manager' application. The URL in the address bar is 'localhost:8080/CourseManager/user/create'. The form has three text input fields: 'User Name' (containing 'bhouse'), 'Password' (containing '33wonder'), and 'User Id' (containing '1'). Below the inputs is a green 'Create' button.

Constraints:

- All fields are required—cannot be blank
- All fields are non-nullable
- UserId cannot be less than 1
- Username and UserId must be unique

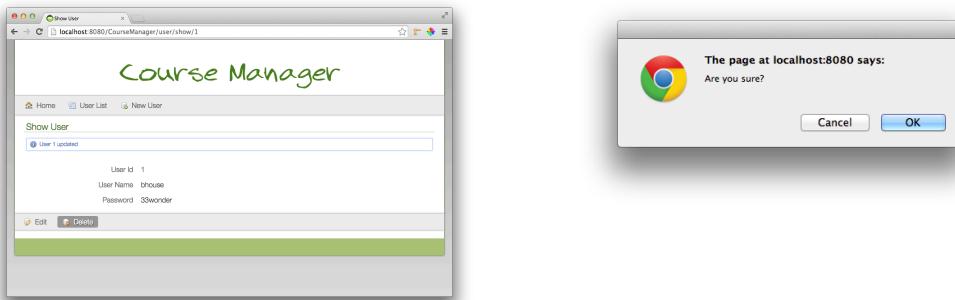
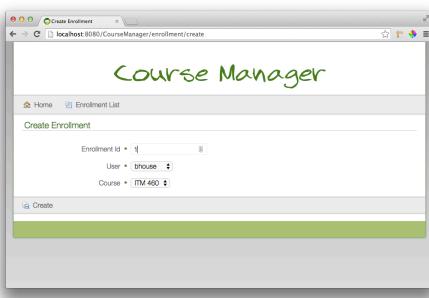
User CRUD – Read

The screenshot shows a 'User List' page within a 'Course Manager' application. The URL in the address bar is 'localhost:8080/CourseManager/user/index'. The table displays two users:

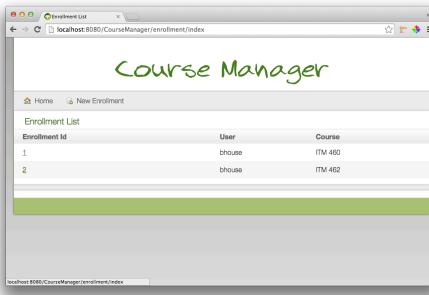
User Id	User Name	Password
1	bhouse	33wonder
2	bbaggins	bitbo1

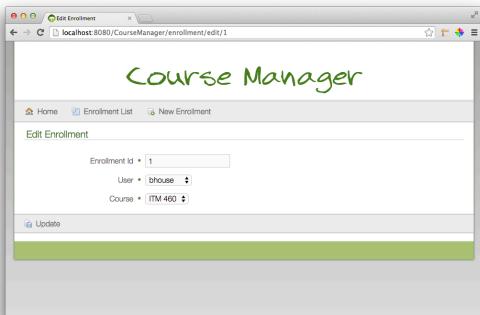
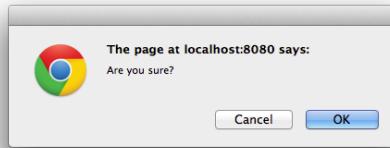
User CRUD – Update

The screenshot shows an 'Edit User' form within a 'Course Manager' application. The URL in the address bar is 'localhost:8080/CourseManager/user/edit/1'. The form displays the user details for User Id 1: User Name 'bhouse' and Password '33wonder'. Below the inputs is a green 'Update' button.

User CRUD – Delete**Enrollment CRUD – Create****Constraints:**

- All fields are required—cannot be blank
- All fields are non-nullable
- Enrollment Id must be unique and greater than 1

Enrollment CRUD – Read

Enrollment CRUD – Update**Enrollment CRUD – Delete****Open Issues (To Do's)**

- Fix Color scheme
- Default (Limit) the enrollment to the `session.user`
- Add User Roles
- Add an Admin / Student Role
- ...
- Alternately, find a text on Grails with-
 - 2.4.4 working examples
 - Provides downloadable source code
 - NOTE – You can't download the textbook's source code from Apress.com. I ended up having to buy a PDF of the text so I could at least cut/paste. Even then, in many cases, their code was buggy or didn't work.