

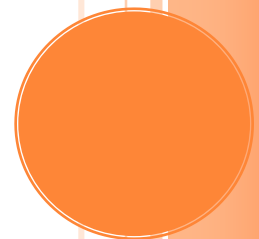
FINAL PROJECT

CECS 640 - Report

CECS 640 sections 1 and 50 -- Spring 2015

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FINAL PROJECT

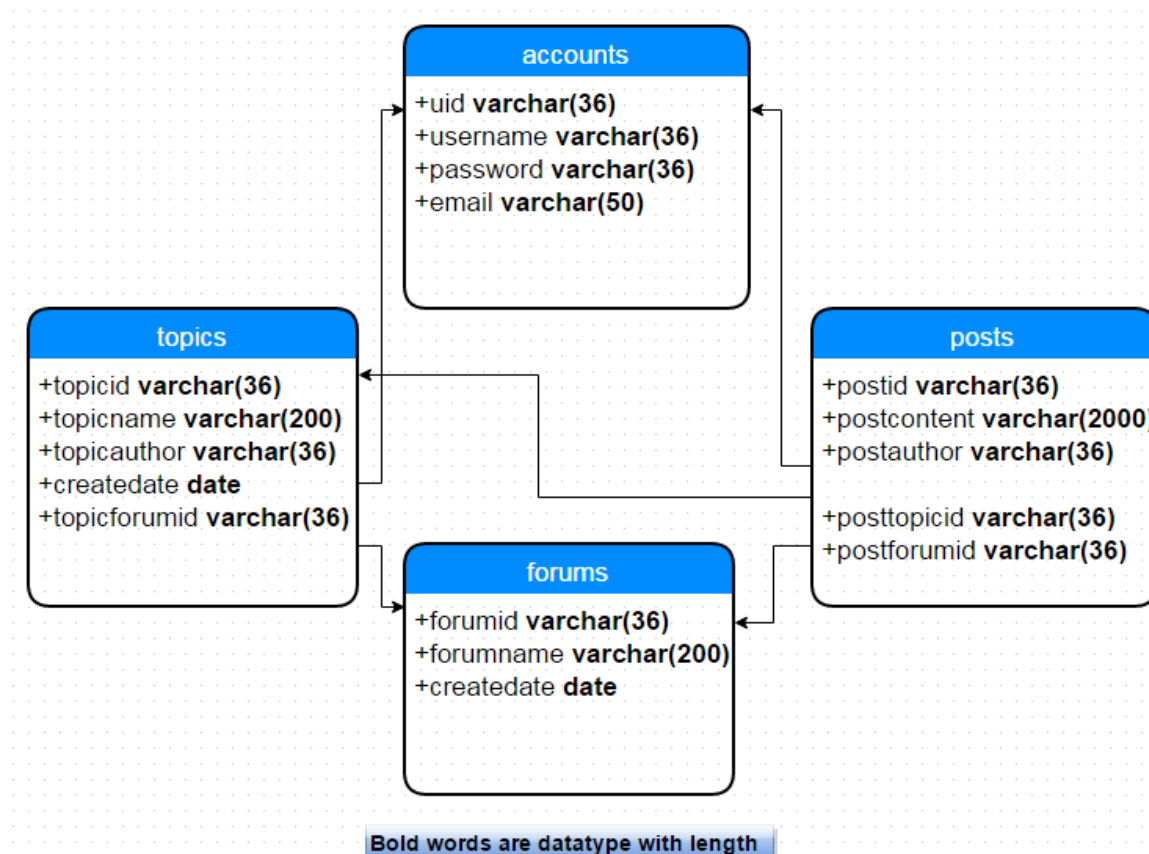
CECS 640 - Report

❖ Description :

- The project is called Viralboards, it is a mini web “forum” that users can use to discuss about something.
- The basic Entities are Forum, Topic, Post, User.
- The application requires a user to register himself with a email ID and username in order to join the forum.

❖ Logic Employed :

▪ Tables / Models :



▪ DB2 Queries:

- SELECT * FROM VRINTW01.Accounts WHERE USERNAME=? OR EMAIL=?
- INSERT INTO VRINTW01.ACCOUNTS (UID, USERNAME, PASSWORD, EMAIL) VALUES (?, ?, ?, ?)

- INSERT INTO VRINTW01.FORUMS (FORUMID, FORUMNAME, CREATEDATE) VALUES (?, ?, ?)
- DELETE FROM VRINTW01.FORUMS WHERE FORUMID = ?
- INSERT INTO VRINTW01.TOPICS (TOPICID, TOPICNAME, CREATEDATE, TOPICFORUMID, TOPICAUTHORID) VALUES (?, ?, ?, ?, ?)
- UPDATE VRINTW01.TOPICS SET TOPICNAME = ? WHERE TOPICID = ?
- DELETE FROM VRINTW01.TOPICS WHERE TOPICID = ?
- INSERT INTO VRINTW01.POSTS (POSTID, POSTCONTENT, CREATEDATE, POSTTOPICID, POSTAUTHORID, POSTFORUMID) VALUES (?, ?, ?, ?, ?, ?)
- DELETE FROM POSTS WHERE POSTID = ?
- SELECT * FROM VRINTW01.Accounts WHERE USERNAME=? AND PASSWORD=?
- SELECT * FROM FORUMS
- UPDATE VRINTW01.FORUMS SET FORUMNAME = ? WHERE FORUMID = ?
- SELECT * FROM Accounts INNER JOIN topics ON topics.topicauthorid=accounts.uid and topics.topicforumid = ?
- SELECT * FROM Accounts INNER JOIN posts ON posts.postauthorid=accounts.uid and posts.posttopicid = ?
- UPDATE VRINTW01.POSTS SET POSTCONTENT = ? WHERE POSTID = ?
- SELECT * FROM VRINTW01.POSTS WHERE POSTTOPICID = ?

▪ **DAO and its Implementation :**

- The data access object has all those four models implemented and all the functions of the application.
- For Database connection it uses a connection pool controller defined under com.viralboards.controller as a separate project.
- The functions of the application includes the following :
- Register a user : A function checks if the username and email are unique and if they are then it creates a new user on the database.
- Logging in : A function checks for the provided username and password and returns true if it finds it.
- Create Forum : Function creates a new forum on the database from the given new forum object. Returns result as boolean.
- Edit Forum : Function edits the name of the forum under the forumid provided. Returns result as boolean.
- Delete Forum : Function deletes the forum under the forumid provided. (Deletes only if it does not have childs). Returns result as boolean.
- Create Topic : Function creates a new topic on the database from the given new topic object. Returns result as boolean.
- Edit Topic : Function edits the name of the topic under the topicid provided. Returns result as boolean.

- Delete Topic : Function deletes the post under the postid provided. (Deletes only if it does not have childs). Returns result as boolean.
- Create Post : Function creates a new post on the database from the given new post object. Returns result as boolean.
- Edit Post : Function edits the content of the post under the postid provided. Returns result as boolean.
- Delete Post : Function deletes the post under the postid provided. Returns result as boolean.

■ **Façade and its implementation :**

- The façade provides a interface to interact with the data layer and the controllers.
- It has the same functions as the DAO but this functions creates an object which is passed to the DAO to perform database operations on them.
- All the “create” functions generates a unique ID for a entity via the Calendar object and add the id as the primary id of the object to be created on the database.
- The Edit and delete functions creates the entity object with their primaryid and send the object with the new entity to the DAO.
- All the fetch functions (getEntity) passes the foreign key id if required to the DAO and gets all the rows from the DAO. Returns a Set.

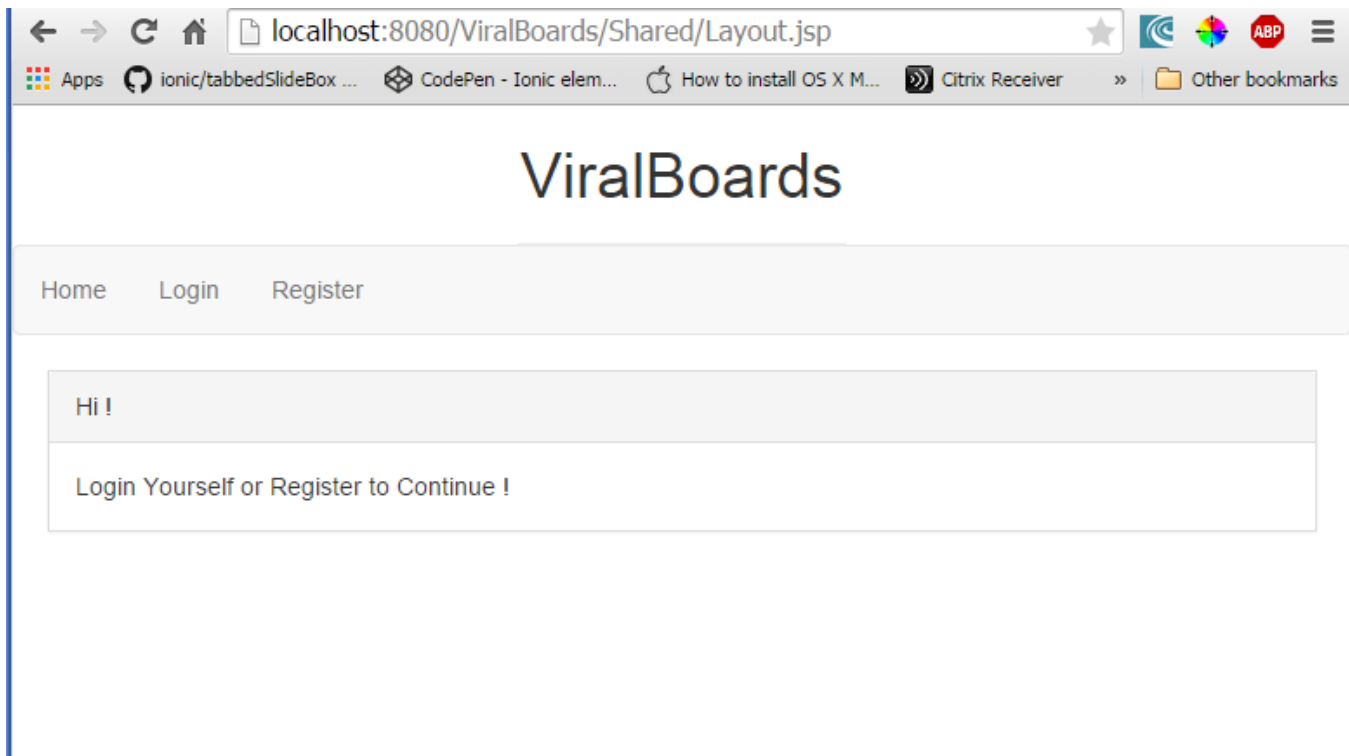
■ **Controllers / Business layer :**

- To Login or Register servlet are used. The Login gets a instance of façade calls the authorize user function with the username and password provided on that instance and forwards the user to either Login or Welcome page.
- The Register servlet calls the register function passing the user information and forwards the user to either the same page with error or to login page if registration is successful.
- Every Servlet checks the session if the user is logged in or not only then it performs further action.
- All the create entity servlets are used to create respective entity which calls the create functions in façade with the information and forwards the user to the list of that entity with a message.
- All the edit and delete servlets passes the primary id to the façade functions and forwards the user to the entity list with a message.
- All the display entity servlets calls the façade getentity functions and gets the set of entity objects.

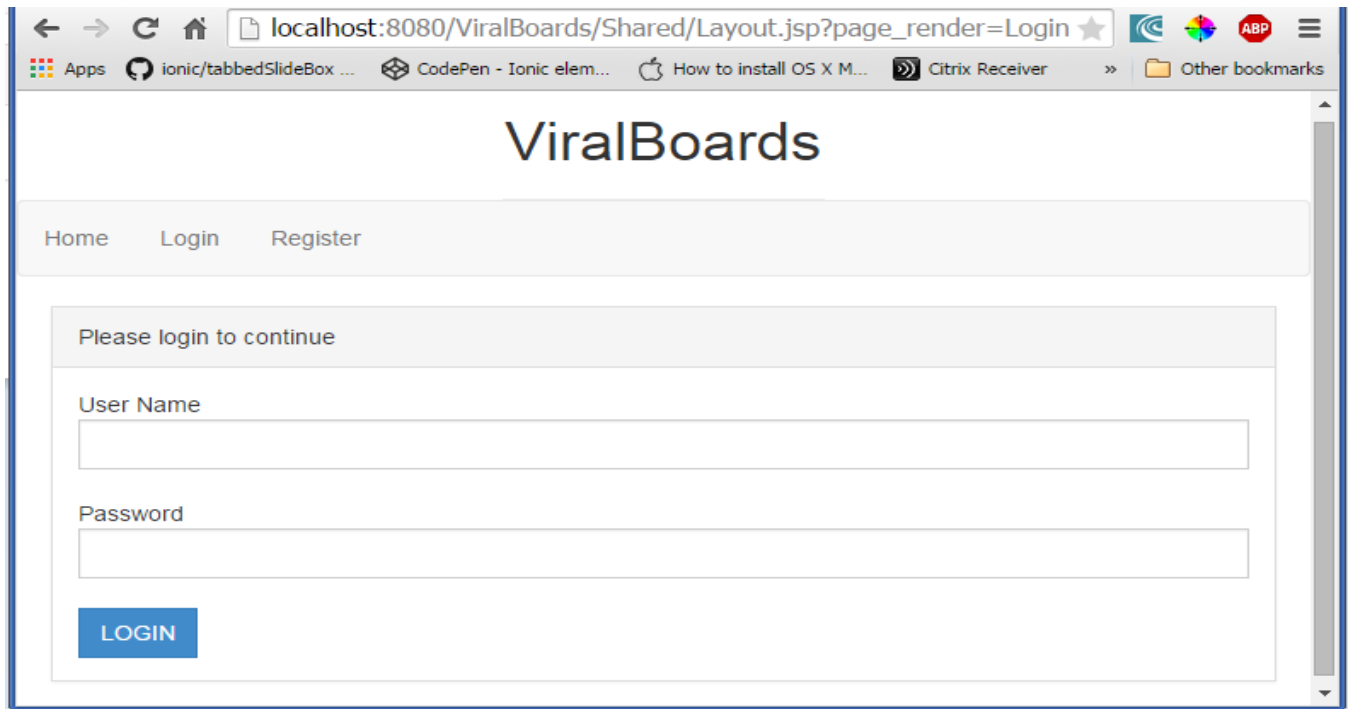
- This set are passed to a utility to create a HTML table to display them.
- **Presentation Layer :**
 - For a consistent layout there is a shared jsp that contains the basic HTML of the application and renders the requested page.
 - All the display jsps contain HTML to display the list given to them.
 - The edit forms jsp are used to display a edit entity form to the user.
 - The Insert forms jsp are used to display the insert entity form to the user.
 - The Login and Register jsp are also forms to display the html for logging and registration html.

❖ Screenshots :

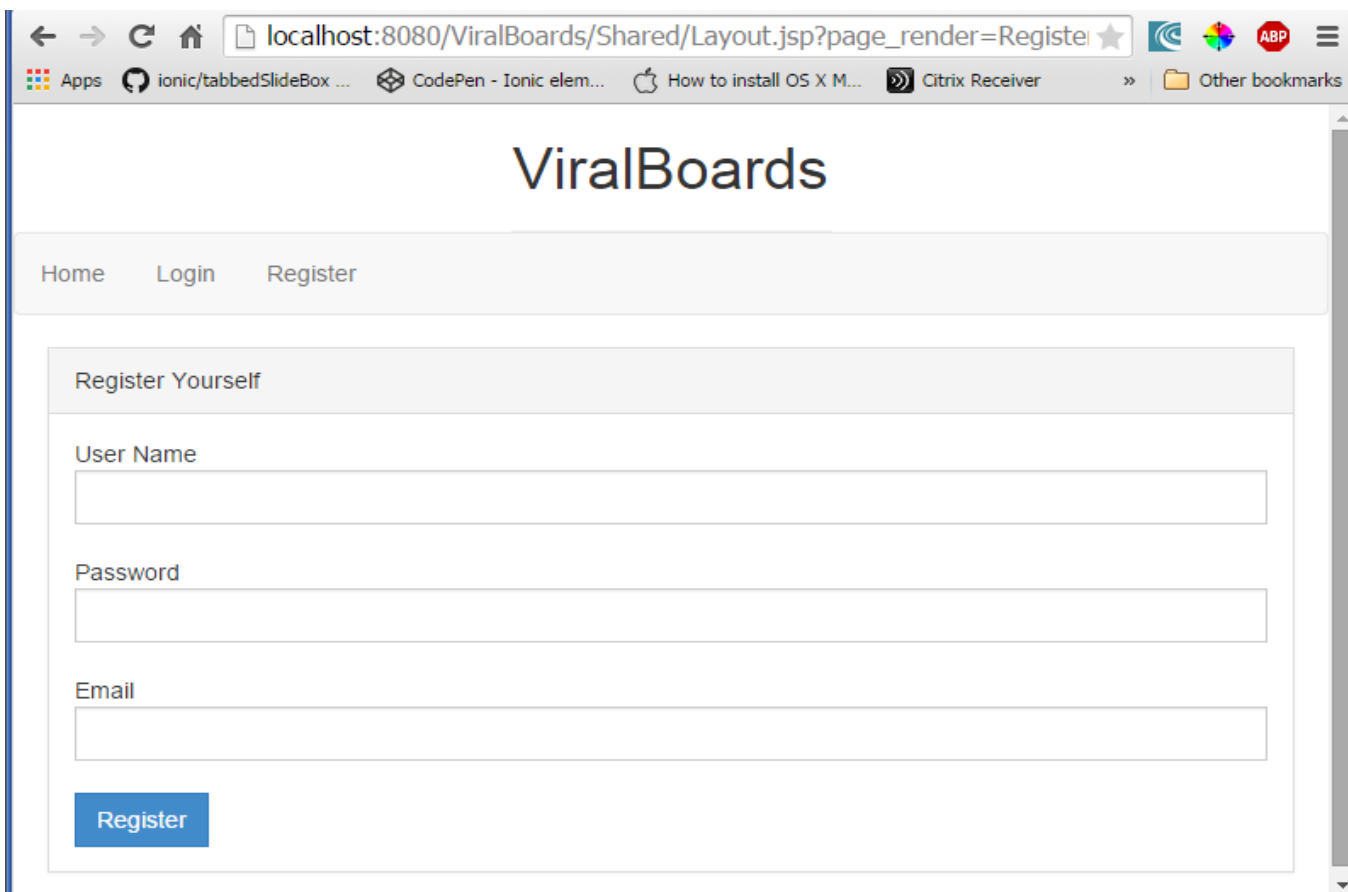
➔ Landing Page:



→ Login / Register Page

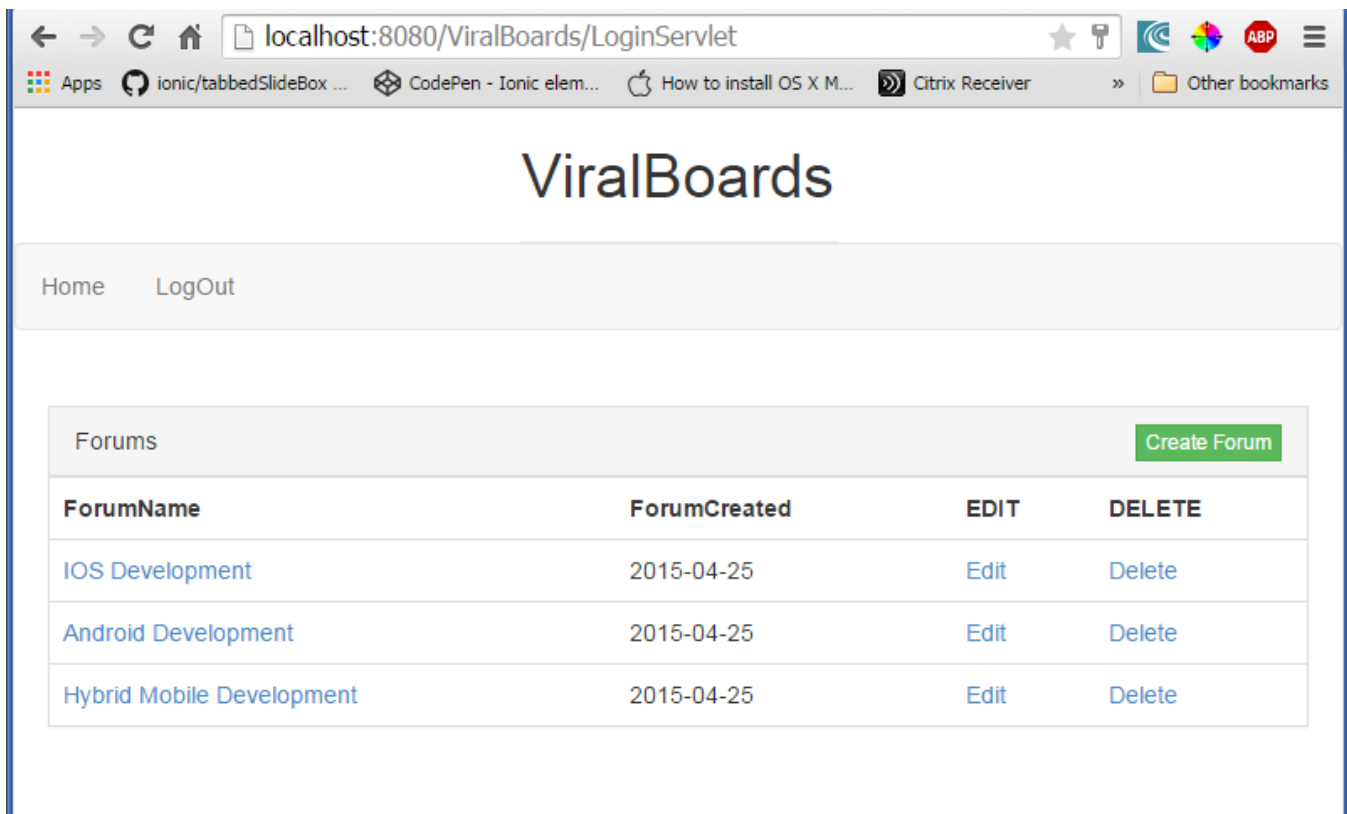


A screenshot of a web browser displaying the login page of a website titled "ViralBoards". The browser's address bar shows the URL "localhost:8080/ViralBoards/Shared/Layout.jsp?page_render=Login". The page has a navigation bar with links for "Home", "Login", and "Register". Below the navigation bar, there is a section titled "Please login to continue". This section contains two input fields: "User Name" and "Password". Below these fields is a blue button labeled "LOGIN".



A screenshot of a web browser displaying the register page of a website titled "ViralBoards". The browser's address bar shows the URL "localhost:8080/ViralBoards/Shared/Layout.jsp?page_render=Register". The page has a navigation bar with links for "Home", "Login", and "Register". Below the navigation bar, there is a section titled "Register Yourself". This section contains three input fields: "User Name", "Password", and "Email". Below these fields is a blue button labeled "Register".

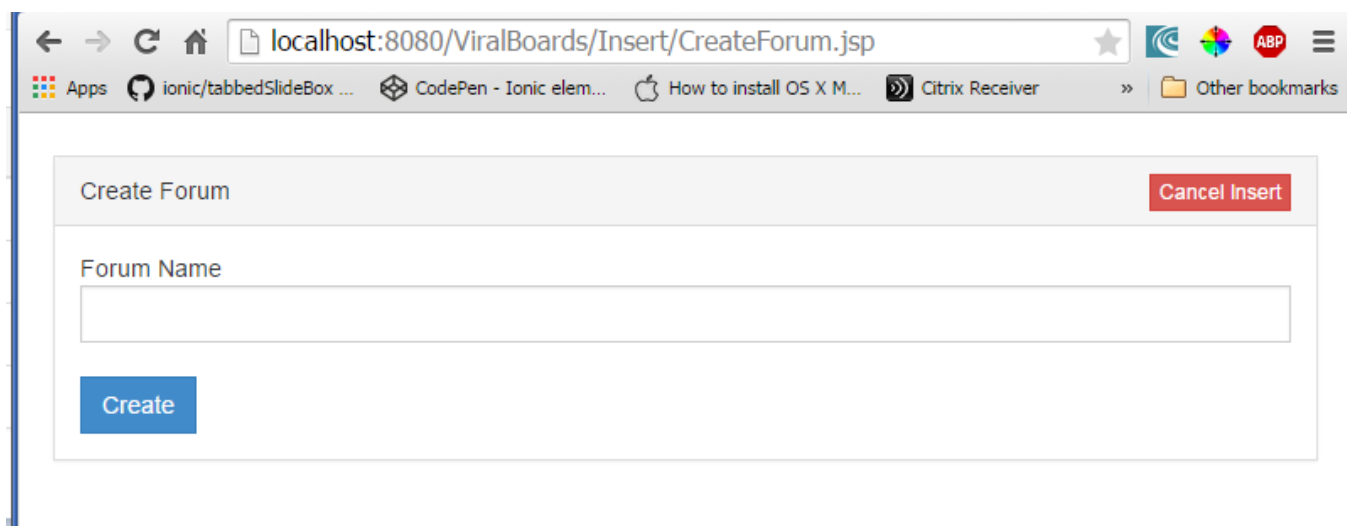
→ Displaying Forums (at successful login)



The screenshot shows a web browser at `localhost:8080/ViralBoards/LoginServlet`. The page title is "ViralBoards". Below the title is a navigation bar with "Home" and "LogOut" links. The main content area displays a table of forums. The table has columns for "ForumName", "ForumCreated", "EDIT", and "DELETE". There are three rows of forum data. A "Create Forum" button is located in the top right corner of the table area.

ForumName	ForumCreated	EDIT	DELETE
IOS Development	2015-04-25	Edit	Delete
Android Development	2015-04-25	Edit	Delete
Hybrid Mobile Development	2015-04-25	Edit	Delete

→ Create, Edit Forum



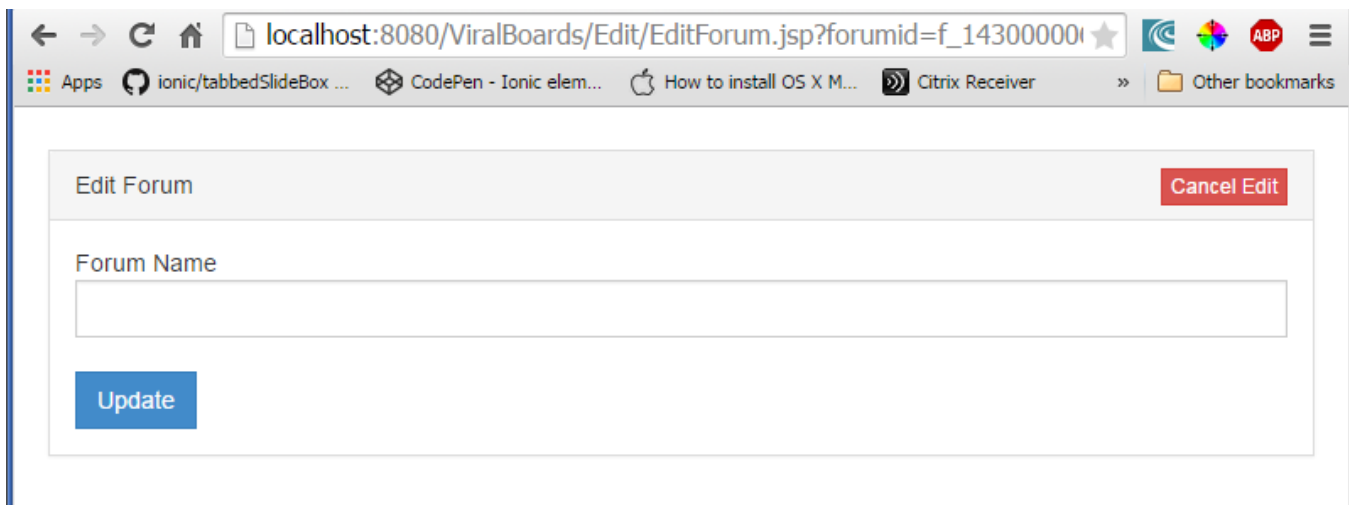
The screenshot shows a web browser at `localhost:8080/ViralBoards/Insert/CreateForum.jsp`. The page title is "Create Forum". Below the title is a "Cancel Insert" button. The main content area contains a form with a "Forum Name" label and a text input field. Below the input field is a "Create" button.

Create Forum

Cancel Insert

Forum Name

Create



localhost:8080/ViralBoards/Edit/EditForum.jsp?forumid=f_14300000

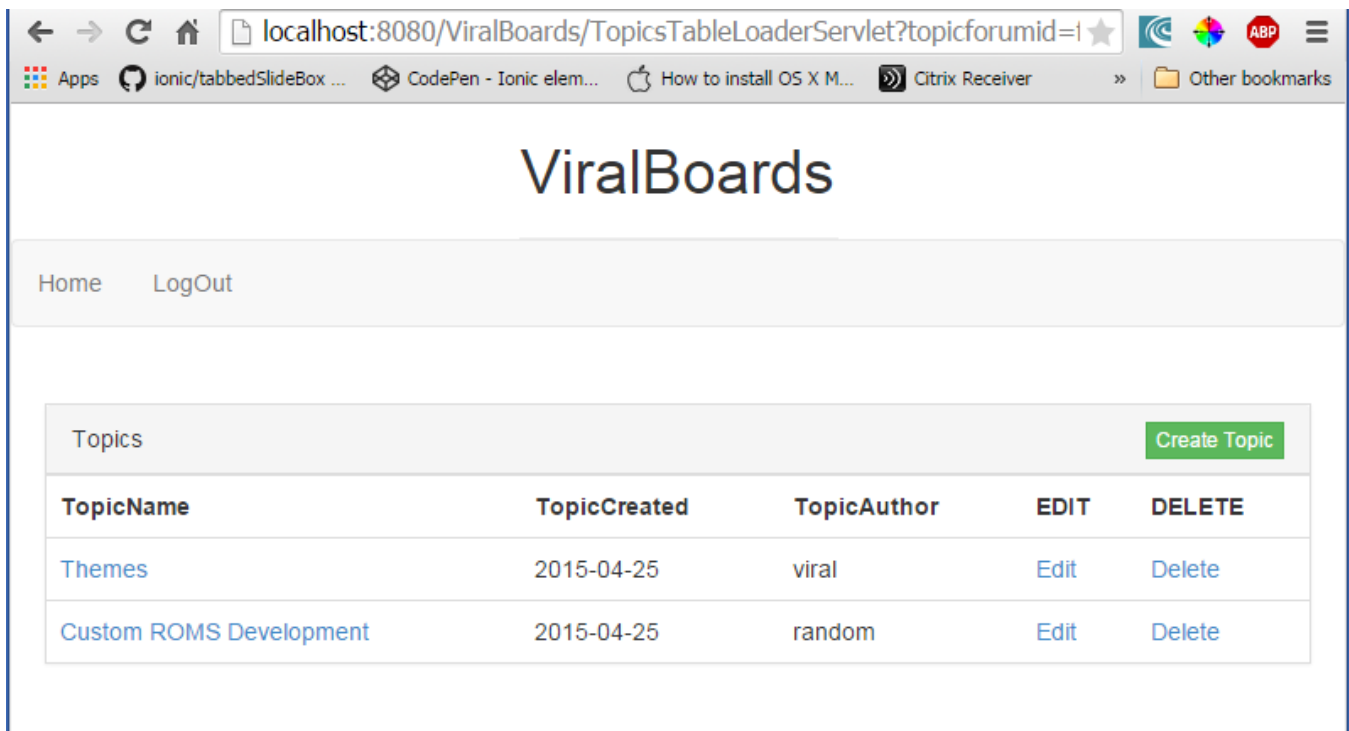
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Edit Forum Cancel Edit

Forum Name

Update

→ Displaying Topics



localhost:8080/ViralBoards/TopicsTableLoaderServlet?topicforumid=1

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ViralBoards

[Home](#) [LogOut](#)

Topics				Create Topic
TopicName	TopicCreated	TopicAuthor	EDIT	DELETE
Themes	2015-04-25	viral	Edit	Delete
Custom ROMS Development	2015-04-25	random	Edit	Delete

→ Create / Edit Topic

The screenshot shows a web browser window with the URL `localhost:8080/ViralBoards/Insert/CreateTopic.jsp?topicforumid=f_1`. The page has a header bar with navigation icons and a menu. The main content area is titled "Create Topic" and contains a text input field for "Topic Name". Below the input field is a blue "Create" button. In the top right corner of the form, there is a red "Cancel Insert" button.

The screenshot shows a web browser window with the URL `localhost:8080/ViralBoards/Edit/EditTopic.jsp?topicid=t_1430000184`. The page has a header bar with navigation icons and a menu. The main content area is titled "Edit Topic" and contains a text input field for "Topic Name". Below the input field is a blue "Update" button. In the top right corner of the form, there is a red "Cancel Edit" button.

→ Displaying Posts

The screenshot shows a web browser window with the URL `localhost:8080/ViralBoards/PostsTableLoaderServlet?posttopicid=t_1`. The page has a header bar with navigation icons and a menu. Below the header, there is a navigation bar with "Home" and "LogOut" links. The main content area is titled "ViralBoards" and contains a table of posts. The table has columns for "Post", "PostCreated", "PostAuthor", "EDIT", and "DELETE". A green "Create Post" button is located in the top right corner of the table.

Post	PostCreated	PostAuthor	EDIT	DELETE
My Color Screen	2015-04-25	viral	Edit	Delete

→ Create / Edit Post

localhost:8080/ViralBoards/Insert/CreatePost.jsp?posttopicid=t_1430

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Create Post Cancel Insert

Post Content

Create

→ Typical Success Message

localhost:8080/ViralBoards/CreateForumServlet

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ViralBoards

Home LogOut

Forum created successfully

Forums			Create Forum
ForumName	ForumCreated	EDIT	DELETE
Hybrid Mobile Development	2015-04-25	Edit	Delete
temp	2015-04-26	Edit	Delete
Android Development	2015-04-25	Edit	Delete
IOS Development	2015-04-25	Edit	Delete

→ Typical Unsuccessful/Error Message

localhost:8080/ViralBoards/DeleteTopicServlet?topicid=t_143000011

ViralBoards

[Home](#) [LogOut](#)

An Error occured while deleting Topic, The topic may contain childs

Topics				Create Topic
TopicName	TopicCreated	TopicAuthor	EDIT	DELETE
Themes	2015-04-25	viral	Edit	Delete
Custom ROMS Development	2015-04-25	random	Edit	Delete

❖ Conclusions :

1. With J2EE we can create web application such that we can define the architecture of the application flexibly.
2. In this project, we have a Forum web application with basic CRUD operations on entities.