



Java Technologies for Web Applications

Project Assignment

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RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	25/Jun/2018	Create a new assignment	Create new	DieuNT1	VinhNV
2	01/Jun/2019	Apply fsoft template Update requirements: split Specification1 and 2 by training day	Update	DieuNT1	VinhNV

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Mark scale :	10



CODE:	JWEB.P.A101 (CMS)
TYPE:	Project Assignment
LOC:	N/A
DURATION:	12 hours (completed in 3 working day)

Project Assignment

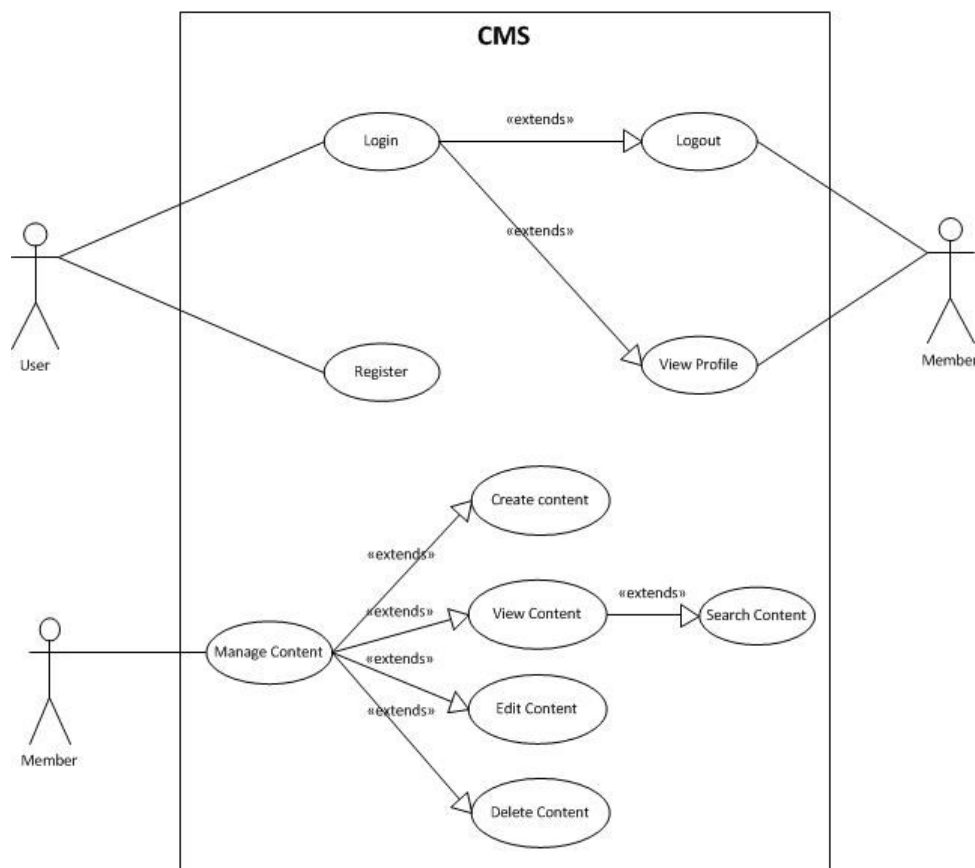
Objectives

- ✓ Understand the basic concepts of web development technologies with java (JSP / Servlet)
- ✓ Able to write servlets using the Java programming language (Java servlets)
- ✓ Create dynamic HTML content with Servlets and JavaServer Pages, using the Expression Language, and the JSP Standard Tag Library (JSTL)
- ✓ Create robust web applications using MVC architecture, session management, filters, and database integration (JDBC) or Hibernate framework
- ✓ Make Servlets and JSP work together cleanly
- ✓ Create secure web applications using the features of the Java EE web container
- ✓ Deploy your project using Apache Tomcat Server

Business needs

Create a Web application based on HTML, CSS, JavaScript, Ajax, JSP/Servlet, JDBC/Hibernate framework to Manage Content System (CMS).

Provide adequate provisions for a special web system. In this assignment, we will learn about a content management system. The use case diagram is described as below:

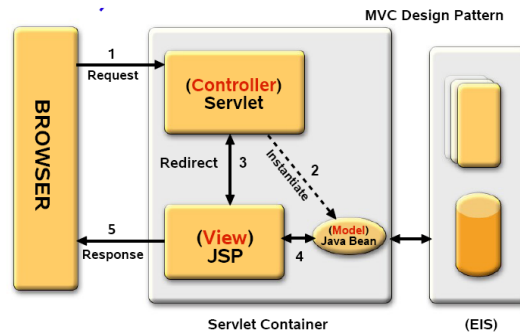


A content management is a computer application that supports the creation and modification of digital content using a simple interface to abstract away low-level details unless required, usually supporting multiple users working in a collaborative environment.

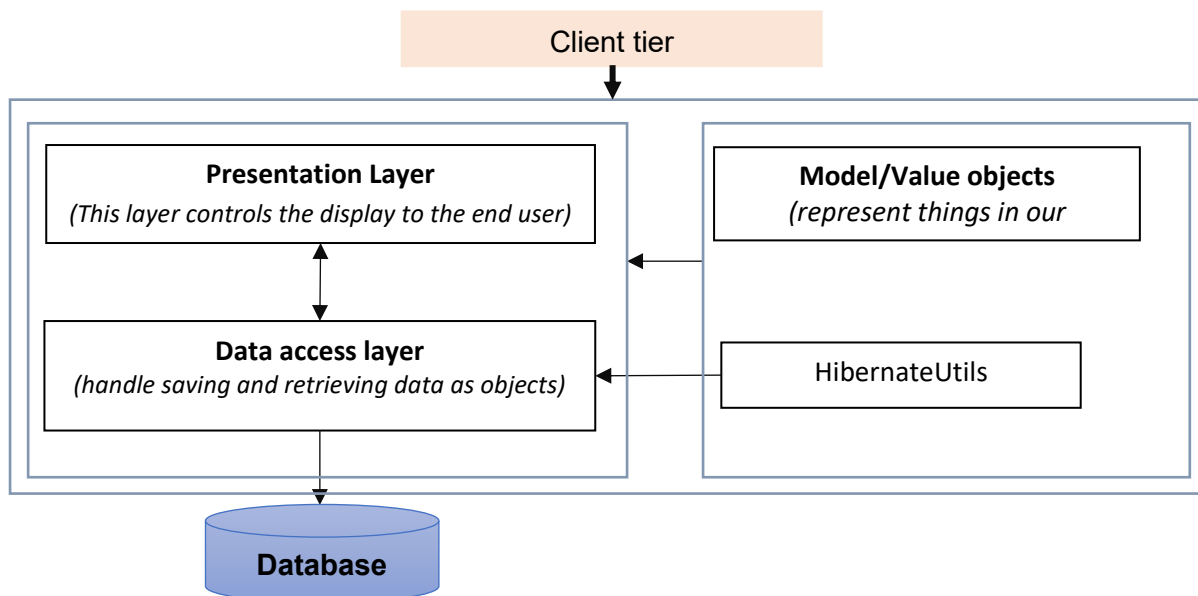
CMS features vary widely. Most CMSes include Web-based publishing, format management, history editing and version control, indexing, search, and retrieval. By their nature, content management systems support the separation of content and presentation.

Product architectures

If you use JDBC to connect to Database, then must use the following architecture:



The architecture with Hibernate framework:



Working requirements

Working environment:

- Eclipse IDE,
- SQL DB Server,
- Apache TomCat 8 or later,
- Internet connection,
- Apache Maven.

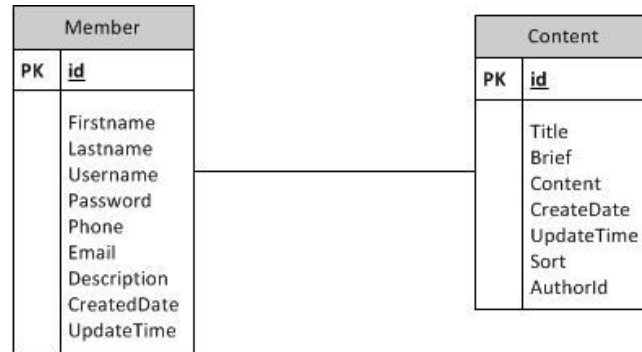
Delivery:

- Source code, deployment and testing evident packaged in a compress archive.

Technical Requirements

- ✓ Must use HTML/CSS, JS/jQuery, JSP/Servlet and JDBC or Hiberate Framework

Database Relationship



- Member stores the user information, including username and password.
- Content stores the post content information. Each comment is associated with a post and mainly consists of the following columns:
 - authorID: required, the author id;
 - Title: required, the title of the content;
 - Brief: required, it is the description of content;
 - Content: required, the comment content in plain text format.
 - Sort: option, it use to other the post in the list.
 - CreateDate, UpdateTime are date time create and update this post.

Specifications 1

You have to create the 5 .jsp pages for a CMS (Content Management System), the design for each page is as below:

✓ Login page

List item definition for Login page:

No	Items	Type	Size
1	Email	Email	50
2	Password	Password	50
3	Remember Me	Checkbox	1
4	Login	Button	NA
5	Click here to Register	Link	NA

✓ **Register page**

The screenshot shows a web browser window with the address bar displaying "/register.html". The main content area contains a registration form with the following elements:

- Register** (Form Title)
-
-
-
-
-
- [Click here to Login](#)

List item definition:

No	Items	Type	Size
1	User name	Text	50
2	Email	Email	50
3	Password	Password	50
4	Re Password	Password	NA
5	Register	Button	NA
6	Click here to Login	Link	NA

✓ **Edit Profile**

The screenshot shows a CMS interface with the following components:

- CMS Header:** Search bar, CMS title, and user profile dropdown (User Profile, Logout).
- Left Sidebar:** View contents, Form content.
- Main Content Area:**
 - Edit Profile** (Section Title)
 - Profile Form Elements** (Form Container):
 - First Name:** Enter the first name
 - Last Name:** Enter the last name
 - Email:** your_email@example.com
 - Phone:** Enter your phone number
 - Description:** (Text area)
 - Buttons:** Submit Button, Reset Button

List item definition:

No	Items	Type	Size
1	First Name	Text	50
2	Last Name	Text	50
3	Email	Email	50
4	Phone	Text	NA
5	Description	Button	NA
6	Submit Button	Button	NA
7	Reset Button	Button	NA

✓ **Form content**

List item definition:

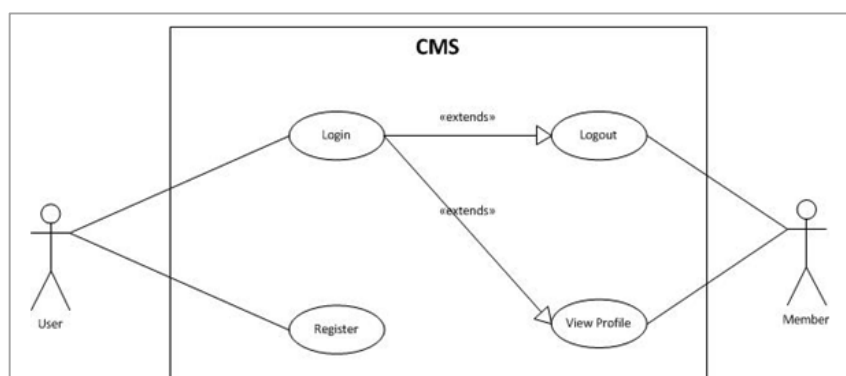
No	Items	Type	Size
1	Title	Text	50
2	Brief	textarea	NA
3	Content	textarea	NA

✓ **View contents**

#	Title	Brief	Created Date
1	Lorem ipsum dolor sit amet	Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	31/08/2016 12:03
2	Vestibulum tincidunt est vitae	Allquam ornare lacus adipiscing, posuere lectus et, fringilla augue.	31/08/2016 13:13
3	Allquam ornare lacus adipiscing	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum tincidunt est vitae ultrices accumsan.	01/09/2016 15:09

Index page will use Ajax/jQuery to load data from servlet.

In this assignment, you must finish the feature in use case as below:



The authentication and authorized user use Case:

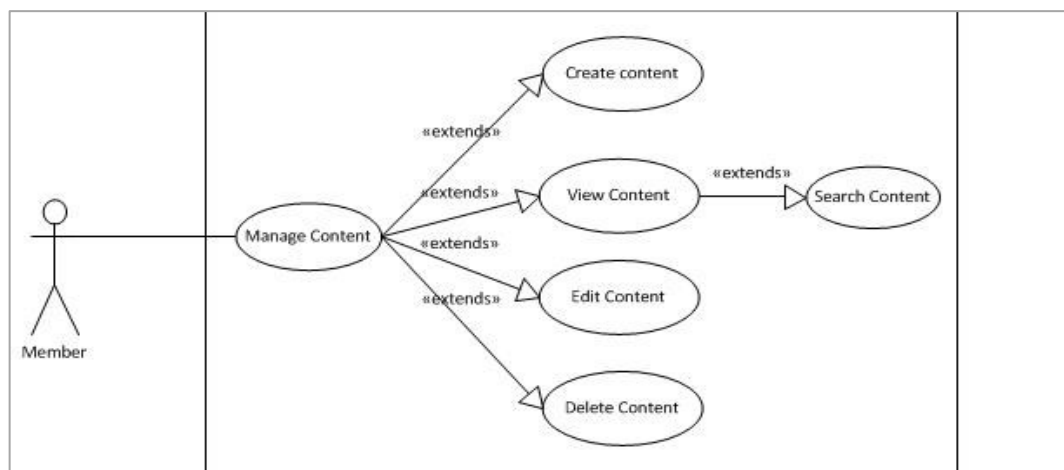
- Use form-based authentication with a basic servlet. With form-based authentication, you can customize the login screen and error pages that are presented to the web client for authentication of their user name and password.
- When a user submits their name and password, the server determines if the user name and password are those of an authorized user and, if authorized, will move the user to the screen view his/her profile.

Request to Answer:

- All pages will run on the Tomcat server.
- In this assignment, you will create a program that allows a user to do the login using user and password if existed account in DB. Otherwise, the user must complete the registration via a Register page.
- In Register Page, you will insert user information to database.
 - ID column is a primary key column
 - The columns "CreateDate" and "UpdateTime" are automatically increases the value by current date and time.
- The registration page should be displayed when a user clicks on the register command button in the login page. After register success, you will navigate to Login Page.
- In Edit Profile Page, you will update some information of user.
- User need use java code to validate data before insert, update user information to database. So that, we was validated data on client by Javascript and you will validate by Java on server.
- Deploy your application into Tomcat server.

Specifications 2

In this specification of assignment, you must to finish all feature in bellow Use case:



You must implement a program that manages Content and it will follow the above use case.

- The columns "CreateDate" and "UpdateTime" are automatically increases the value by current date and time.
- ID column is a primary key column

View Content and Search content page will be use Ajax/jQuery to load data from servlet.

- User need use java code to validate data before insert, update user information to the database. So that, we were validated data on the client by Javascript and you will validate by Java on the server.

Mark scale :

✓ Create project with architectures, Configuration, Mapping : 20%	✓ Specification 2 : 40%
✓ Specification 1 : 30%	✓ Non-Functional, Quality requirements: 10%

-- THE END --