

Learning Management System

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- Team Members :
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What is LMS?

- A learning management system is a robust software application for the administration, documentation, tracking, reporting and delivery of eLearning education courses or online training programs.
- LMSs can range from systems for managing training and educational records to software for delivering online or hybrid college courses.
- In our context LMS is considered as a Q&A web service. It can be described as "mixture between a wiki and forum"

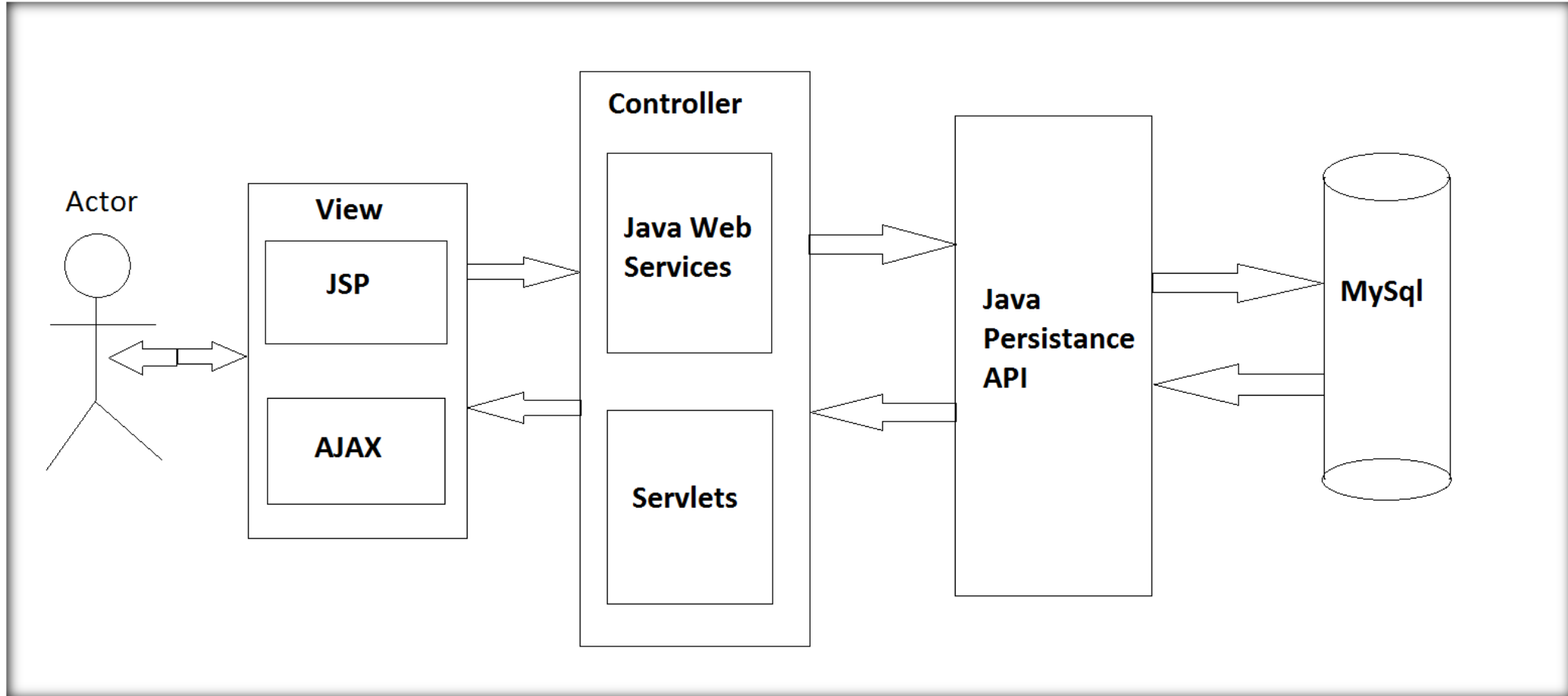
Problem Statement

- No instant and convenient collaboration between learners.
- No means to customize the content for different group of students in different courses.
- No effective communication between tutors and students after the class.

Proposed solution

- An LMS makes it easier to organize groups of learners, enabling class-based discussions, group work and peer support.
- Provides courses using access rights and registration.
- Targets content to the correct individuals or groups.
- Scheduling of course learning events, learners, and resources.
- Keeps tutors and his students engaged in discussion without interruption.

Architecture



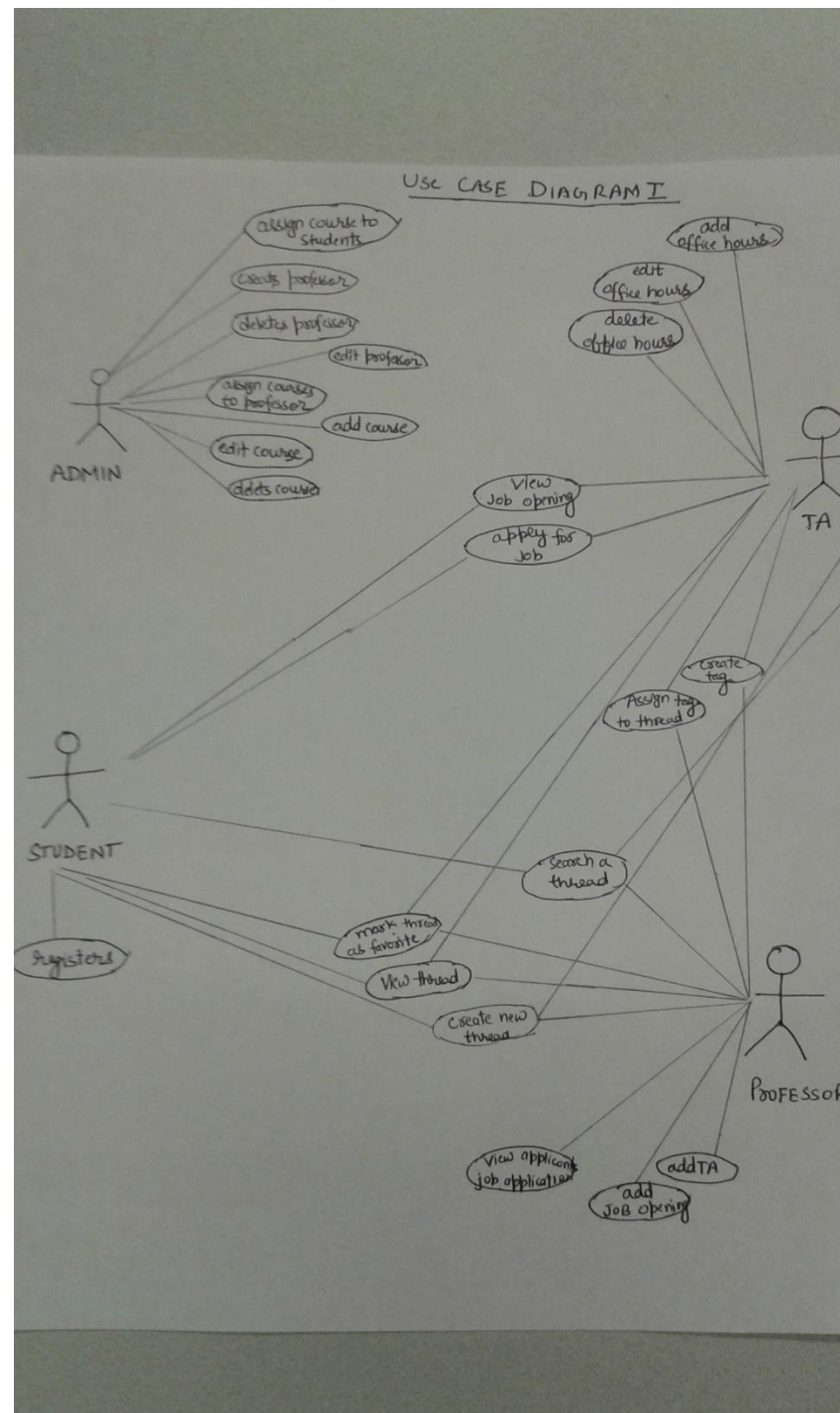
Architecture (contd..)

- In LMS, MySql is used to persist data. This data is accessed using JPA. We have used Eclipselink implementation of JPA which comes standard with Eclipse IDE.
- This data is accessed by Java Web Service and servlets to respond to the requests made by the clients. Jersey is used as the JWS endpoint and Jackson is used to serialize java objects into JSON objects.
- In LMS, AJAX has been used in most places to request data from the server. The response, JSON, is used to render the view on the browser. Rendering of UI is managed using jQuery.
- We have used Twitter Bootstrap for UI.
- This web application is hosted using Apache Tomcat.

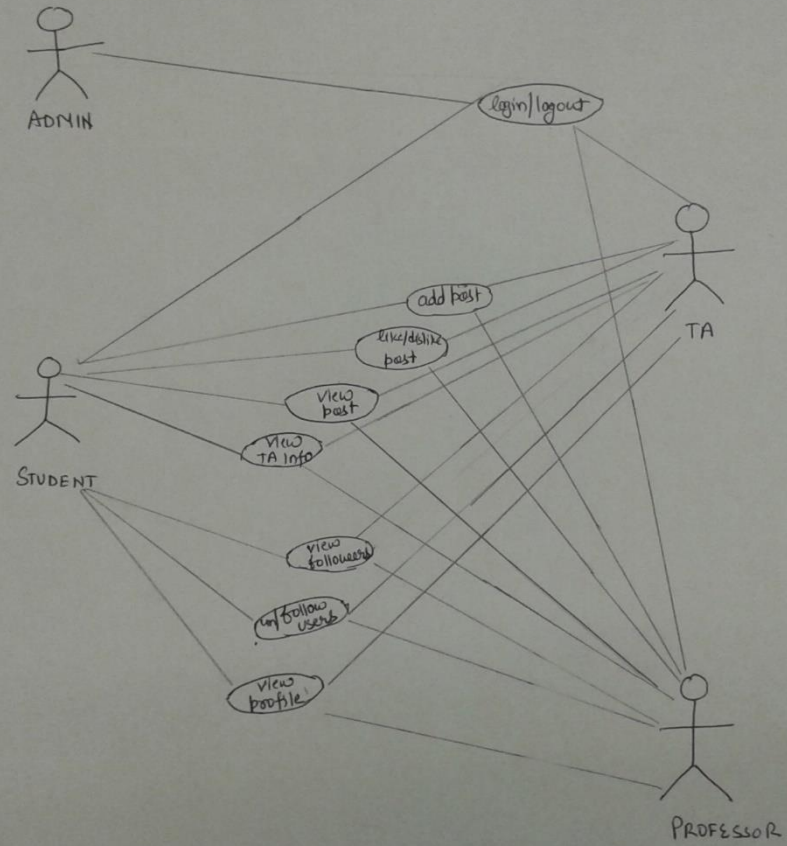
Architecture (contd..)

S.No.	Layer	Technology	Comments
1.	Backend	MySql	Version 5.6
2.	Middle Tier	JPA	EclipseLink 2.5.2
3.	Controller	JWS	Jersey 1.1.8
4.	Controller	Servlet	Dynamic Web Module 3.0
5.	View	JSP	Dynamic Web Module 3.0
6.	View	Ajax	jQuery 1.11.1
7.	Server	Apache Tomcat	Version 7.0.56
8.	Frontend	Bootstrap(css plug in)	

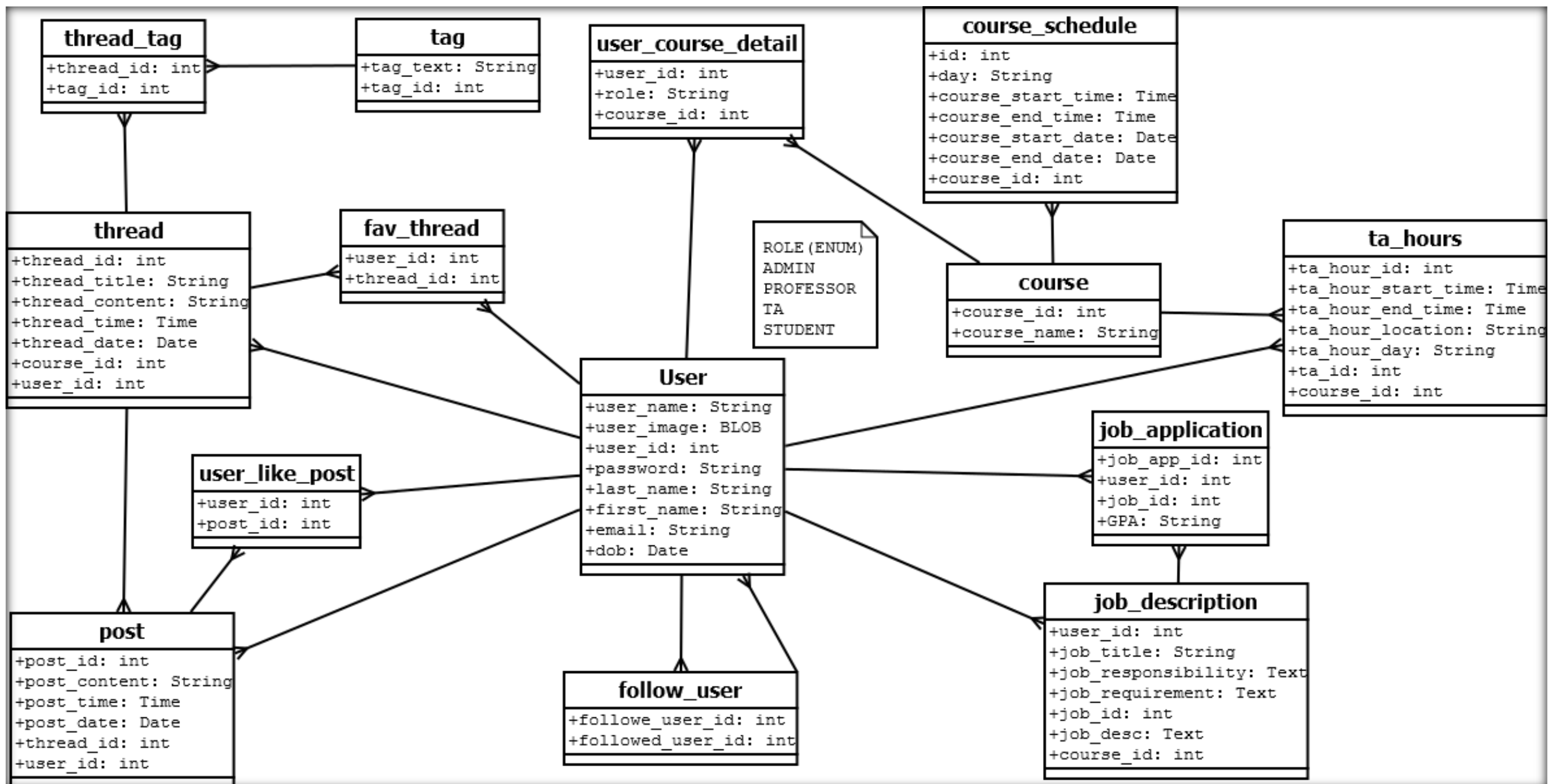
Use Case



USE CASE DIAGRAM 2



Class Diagram



Scope of Improvement

- User should be able to deactivate/delete his account from the system.
- Thread/Post should be editable and deletable.
- Professor should be able to remove student from the list of TA.
- Student should be able to anonymously post questions and answers.

- **Questions ??**

- **Thank you**