

Software Requirements Specification (SRS) Document

Building Custom LMS using Moodle

Team 51

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Brief problem statement

Moodle as an LMS only contains Courses, Teachers that create said Courses and students who can attend them. Our client wishes to build a Custom LMS through either customizing Moodle or any other FOSS tech stack which will have similar features as Moodle but also allow for Teachers to be associated with Organizations and Courses will be created by Organizations instead of the Teachers.

System requirements

MongoDB for Database, Express.js and Node.js as backend, and React as frontend, together comprising the MERN stack.

Users profile

Learners

1. Allows them to freely drift between courses offered by Organizations.
2. Can display their certifications and qualifications more visibly.

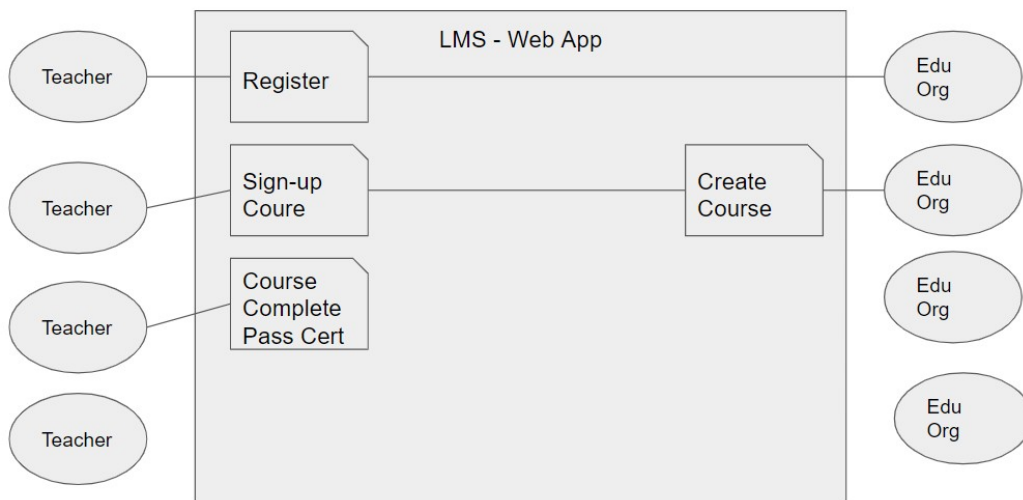
Organizations

1. Allows them to create and have control over courses.
2. Can reassign teachers between courses.

Feature requirements (described using use cases)

No.	User Case Name	Description	Release
1.	Learner Sign Up/Sign In	A page for learners to sign in or register to join LMS	R1
2.	Course Creation	Creation of Course by Organization to teach learners	R1
3.	Course Registration	Learner registering to join a course	R1
4.	Certification Test	Yearly certificate test to prove a learner's credentials	R1
5.	Qualification Display	A dashboard to display certificates and other qualifications of a learner	R2
6.	Course Dashboard	A place for Resources to be shared for learners who joined these courses	R2

Use case diagram



Use case description

Use Case Number:	UC-01
Use Case Name:	Learner Sign Up/Sign In
Overview:	A page for learners to sign in or register to join LMS
Actors:	Learner
Pre condition:	None
Flow:	Main (success) Flow: User signs in/ registers
Post Condition:	User must be logged in

Use Case Number:	UC-02
Use Case Name:	Course Creation
Overview:	Creation of Course by Organization to teach learners
Actors:	Organization
Pre condition:	Existence of an Organization
Flow:	Main (success) Flow: Course must be created
Post Condition:	Course must be created

Use Case Number:	UC-03
Use Case Name:	Course Registration
Overview:	Learner registering to join a course
Actors:	Learner, Course
Pre condition:	Existence of Course, Logged in Learner
Flow:	Main (success) Flow: Learner joins Course
Post Condition:	User be a part of the Course

Use Case Number:	UC-04
Use Case Name:	Certification Test
Overview:	Yearly certification Test to prove Learner's credentials
Actors:	Learner

Pre condition:	Learner joining course
Flow:	Main (success) Flow: Learner passes/fails
Post Condition:	Learner passes/fails

Use Case Number:	UC-05
Use Case Name:	Qualification Display
Overview:	Shows certificates and other achievements attained by learner
Actors:	Learner
Pre condition:	Learner Signed In
Flow:	Main (success) Flow: Certificates must be displayed
Post Condition:	Certificates are displayed

Use Case Number:	UC-06
Use Case Name:	Course Dashboard
Overview:	A place for Resources to be shared for learners who joined these courses
Actors:	Learner, Course
Pre condition:	Existence of Course, Logged in Learner
Flow:	Main (success) Flow: Learner can download resources
Post Condition:	Learner can download resources

Flow Updates

1. Teacher must register organization during registration itself
2. Organization and teacher must have different UI color themes

Test Backlog

We can test the system by using its functionalities as an LMS from all possible positions (learners, organizations). This will provide a through test of the LMS.

X means both teachers and organizations

1. Verify that X can successfully sign up for the LMS.
2. Test the login functionality to ensure that X can access their accounts.
3. Verify that teachers can search for courses and organizations based on different criteria.
4. Test the process of creating and managing organizations, including adding/editing/removing courses and managing members.
5. Verify that course progress is tracked accurately, and that teachers can resume a course where they left off.

6. Test the system for recording performance, including grading and providing feedback.
7. Verify that organizations can generate course completion certificates and that the certificates contain accurate information.
8. Verify that X can change their account settings, including email and password.
9. Test the overall system performance, including page load times and response times for API calls.

User Stories

1. As a learner, I want to be able to enroll in courses offered by organizations so that I can enhance my skills and knowledge.

This user story is focused on the learner persona and their desire to access courses offered by organizations. The user story should include details about how the learner will search for courses, enroll in them, and access the course content.

2. As an organization admin, I want to be able to create and manage courses so that I can offer valuable educational content to learners.

This user story is focused on the organization admin persona and their desire to create and manage courses. The user story should include details about how the admin will create courses, add content, manage enrollment, and track learner progress.

3. As an organization admin, I want to be able to track learner progress so that I can monitor the effectiveness of my courses.

This user story is focused on the organization admin persona and their desire to track learner progress. The user story should include details about what metrics will be tracked, how they will be presented to the admin, and how the admin will use this information to improve the course offerings.

4. As a teacher, I want to be able to generate a certificate upon completion of a course, so that I can have proof of my accomplishment to share with others or use for professional purposes. It should be visible on the dashboard.

Acceptance Criteria:

- The certificate should be customizable with the course name, completion date, and name.
- The certificate should be available for download in a printable format.
- The certificate should be accessible from the course completion page or dashboard.
- The certificate should only be generated if the teacher has completed all the required course activities and assessments.