



Smart Campus Learning Materials Management System (CLMMS)

A PROJECT PROPOSAL SUBMITTED BY

S.T.I.B. Weerakoon
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Pallekele

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Declaration of the student

I declare that this project proposal is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

Name of Student : S.T.I.B.Weerakoon

Signature of Student :

Date : 15.12.2024

Recommendation of the Supervisor:

Name :

Signature:

Date:

Approval of the Head of the Department of IT:

Name

Signature:

Date:

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Chapter 1: Introduction

1.1 Title of the project

Smart Campus Learning Materials Management System (CLMMS)

1.2 Aim of the project

To develop a centralized platform for educational institutions to manage, distribute, and access learning materials efficiently.

1.3 Objectives of the project

- To streamline the management of learning resources across institutions.
- To provide accessible, role-based features for administrators, lecturers, and students.
- To incorporate mobile-first design for better accessibility.
- To integrate AI capabilities for content summaries and recommendations.

1.4 Project motivation

The motivation stems from the inefficiencies in traditional learning material management, such as the lack of centralized platforms, accessibility barriers, and challenges in collaboration. By addressing these gaps, the project aims to improve educational workflows and user experience.

1.5 Business needs

Educational institutions often struggle with inefficient manual systems for managing learning materials. A centralized, accessible platform is needed to simplify material distribution, reduce administrative overhead, and enhance the student learning experience.

1.6 System capabilities

- Upload, manage, and distribute learning materials.
- Search, filter, and recommend materials.
- Role-based access for administrators, lecturers, and students.
- Real-time notifications for updates.

1.7 System benefits

- Streamlined material management for educators.
- Better access and engagement for students.
- Reduced redundancy and improved version control.
- Enhanced collaboration between lecturers and students.

Chapter 2: Background and Requirement Analysis

2.1 Drawbacks of Existing System

- Dependency on physical copies of materials.
- Limited accessibility and sharing options.
- Lack of organized archival systems leading to data loss.

2.2 Requirement Analysis

- User Interviews and Surveys.
- Study of existing manual processes and pain points.
- Identification of system requirements based on institutional needs.

2.3 Functional and Non-Functional Requirements

Functional Requirements:

- Role-based access control.
- Material upload/download features.
- Notification system.

Non-Functional Requirements:

- High system availability.
- User-friendly interface.
- Security compliance.

Chapter 3: Literature Review

3.1. Similar Projects

- Moodle: A widely used LMS platform.
- Blackboard: A robust system for managing courses and materials.
- Khan Academy: A free, online learning platform providing comprehensive courses and resources across various disciplines, focusing on accessibility and personalized learning paths.
- Udemy: A global marketplace for learning and teaching, offering a wide range of professional and personal development courses.
- Coursera: A platform providing online courses from top universities and companies, enabling users to achieve certifications and degrees.
- edX: An open-source learning platform offering high-quality courses from leading institutions, emphasizing professional and lifelong learning.
- Skillshare: An online learning community focused on creative and entrepreneurial skills with interactive project-based courses.

3.2. Differences Between Proposed Solution and Similar Systems

- Focus on mobile-first design for better accessibility.
- Customization for specific institutional needs.
- Enhanced offline functionality.

3.3. Gains from Similar Projects

- Insights into user expectations.
- Best practices for system scalability and performance.

Chapter 4: Aim and Objectives

4.1. Aims

To create a centralized, user-friendly platform that enables seamless management and access to learning materials across devices.

4.2. Objectives of the System

- To provide an intuitive platform for managing and sharing learning resources.
- To integrate AI for content recommendations and summaries.
- To enable offline access and cross-platform functionality.

4.3. Scope of the System

The system will cater to the needs of administrators, lecturers, and students within educational institutions. The mobile app will enhance accessibility for remote users.

Chapter 5: Proposed Methodology

5.1. Approach

- **Agile Development:** Iterative development with user feedback loops.
- **Modular Design:** Component-based architecture for scalability.

5.2. Design and Development

- **Technology Stack:** Laravel (Backend), ReactJS (Frontend for web app) React Native (Mobile App), MySQL (Database).
- **Tools:** Figma for UI/UX design, Postman for API testing.

5.3. Testing

- Unit Testing for individual modules.
- Integration Testing to ensure components work seamlessly.
- User Acceptance Testing (UAT).

5.4. Deployment and System Requirements

- Deployment on cloud platform (AWS lightsail).
- System Requirements: PHP 8.2 ,Minimum 4GB RAM, 10GB storage for local hosting.

Chapter 6: Work Plan

6.1. List of Tasks

1. Requirement Gathering.
2. System Design.
3. Development.
4. Testing.
5. Deployment.

6.2. Tasks and Milestones

Task	October	November	December	January	February	March	April	May
Requirements Gathering								
System Design								
Development Phase 1								
Development Phase 2								
Testing								
Deployment Preparation								
Final Deployment								
Project Review & Handover								

6.3. Deliverables

- Fully functional web platform and mobile app.
- User documentation.
- System deployment on a cloud server.

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