Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

Project Kit

Title of the Project

E-Learning Resource Management System

Abstract of the project

The E-Learning Resource Management project aims to develop a comprehensive platform for the efficient management, organization, and distribution of digital educational resources in an online learning environment. As e-learning continues to grow, educators and institutions face challenges in effectively curating, categorizing, and delivering diverse resources such as videos, documents, quizzes, and interactive modules. This project proposes an integrated system that leverages advanced technologies to streamline these tasks, enabling educators to focus more on teaching and less on administrative duties.

The system will include a centralized repository for storing educational content, an intelligent search feature for easy resource discovery, and tools for content tagging, categorization, and recommendation. It will also feature role-based access control, ensuring appropriate permissions for administrators, instructors, and learners. Additionally, analytics will be incorporated to track resource usage, learner engagement, and content effectiveness, helping educators optimize their teaching strategies.

By providing a user-friendly interface and powerful backend tools, this platform will improve resource accessibility, enhance the learner experience, and promote the efficient use of educational materials. Ultimately, the project aims to contribute to the growth of high-quality, scalable, and adaptive e-learning ecosystems in educational institutions and beyond.

Keywords

Generic Keywords

- Learning management system(LMS)
- Study resources
- Digital classroom
- Course management
- Remote learning
- Education platform
- User-friendly interface
- Student engagement
- Resource sharing

- Multi-user platform
- Role-based access
- Educational tools

Specific Technology Keywords
HTML, CSS, JavaScript, PHP
Project Type keywords

- Web application
- Educational platform
- E-Learning resource management system (LMS)
- Student-teacher portal
- Admin dashboard
- CRUD application
- Role-based web app
- Online content delivery system

Functional components of the project

The **E-Learning Resource Management System** includes the following key functional components:

1. **User Role Management**
   Separate panels for Admin, Teachers (Users), and Students, each with role-specific access and capabilities for efficient workflow and secure data handling.
2. **Course and Content Management**
   Allows admins and educators to create, upload, organize, and update study materials including videos, PDFs, assignments, and quizzes.
3. **Student Dashboard**
   Provides personalized access to enrolled courses, study materials, progress tracking, notifications, and assessment results.
4. **Admin Panel**
   Enables administrators to manage users, monitor platform activity, approve content, generate reports, and control access permissions.
5. **Secure Authentication System**
   Ensures secure login and data access using password protection and role-based authorization.
6. **Feedback**
   Supports communication between students and teachers through feedback forms, Q&A sections, or messaging tools.
7. **Data Privacy and Security Compliance**
   Implements safeguards to protect user data and ensure compliance with privacy regulations.

Users of the system: Authorized User and Admin panel the users of this system.

Functionality

A breakdown of the core functionalities of the **E-Learning Resource Management System**, including login/sign-up, content access, communication, and an admin interface:

1. Login and Sign-Up Page

- **User Authentication:**
- **Login:**
  Allows students, teachers, and administrators to securely log in using their registered credentials (email/username and password).
- **Sign-Up:**
  Enables new students or teachers to register by providing required details such as full name, email, password, role (student or teacher), and accepting the terms and conditions.
- **Role-Based Access:**
  Once authenticated, users are redirected to their respective dashboards based on their roles (Admin, Teacher, Student), ensuring personalized experiences and access control.

1. Genre Selection

- **User Preferences**:
  Once logged in, authorized users (students or teachers) can select from a variety of available courses or subjects (e.g., Mathematics, Science, History, Computer Science). The system adapts to these selections and customizes the dashboard, learning materials, and notifications based on the user's chosen academic interests.
- **Course Personalization**:
  Users can update their course preferences at any time through their profile settings. The system dynamically adjusts content delivery — such as recommended study materials, quizzes, or announcements — to align with the updated preferences.
  Over time, the system learns from user interactions (e.g., frequently accessed materials or completed topics) and fine-tunes the content suggestions and reminders to enhance learning efficiency**.**

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2. Feedback Page

- **User Feedback Collection**:
  After receiving notifications, users can provide feedback on each notification (e.g., "Helpful", "Not Interested", "Dismiss").
  Users can rate notifications or content (e.g., thumbs up/down, star ratings).
- **Feedback Submission**:
  Users can submit detailed feedback on content (e.g., suggestions for improvement, complaints, or feature requests).
- **User Satisfaction Monitoring**:
  The system tracks user feedback and adjusts the agent's decision-making to improve future notifications.

3. Admin Page

- **User Activity Monitoring**:
  Admins can view detailed of user activities, including login history, interactions, and feedback submissions.
  Admins can track the effectiveness of course notifications by monitoring user engagement metrics.
- **Feedback Review**:
  Admins can review and categorize user feedback to identify common issues or areas for improvement.
  Admins can reply to user feedback or provide updates on issues that have been addressed.
- **User Management**:
  Admins can manage user accounts (e.g. reset passwords).
- **Analytics Dashboard**:
  Provides insights into user engagement, user popularity, notification performance, and user feedback trends.

4. Summary of User Flow:

- **User Login/Sign-Up**: Users authenticate themselves via the login/sign-up page.
- **Feedback**: After receiving notifications, users provide feedback to fine-tune the content delivery.
- **Admin Monitoring**: Admins use the admin page to monitor user activity, manage content, and respond to user feedback.

Steps to start-off the project:

Microsoft platform: The system is developed using Active Server Pages as the front end HTML, CSS and PHP, XAMPP as the back end.

The following steps will be helpful to start off the project :-

1. Get a firm grasp on the above technology.
2. Get the domain knowledge.
3. Using PHP, MySQL
4. Decide on the number of users and their profile
5. Help should be very user friendly.
6. UI should include good content and have a constant look and feel throughout the application.

Requirements :-

Hardware requirements –

Number	Description	Alternatives (If available)
1	Processor 1.6 GHz or Faster Processor	Not Applicable
2	RAM 4GB	Not Applicable
3	Disk Space, 10 GB of Available Hard Disk	Not applicable
4	Graphics DirectX 9-Capable Video Card	Not Applicable
5	Display 1024 X 768 or Higher Resolution	Not Applicable

Software requirements -

Number	Description	Alternatives (If available)
1	Operating System Windows 10	Not Applicable
2	Front End HTML, CSS, Javascript	Not Applicable
3	Back End PHP	Not Applicable
4	Library/ Framework Bootstrap,	Not Applicable
5	Plugins Owl Carousel	Not Applicable
6	Code Editor Visual Studio Code 1.33	Not Applicable
7	Database MySQL	Not Applicable
8	Web Server Apache	Not Applicable
9	Web Browser Google Chrome	Not Applicable
10	Payment Gateway Paytm	Not Applicable
11	Drawing Tools Graph Editor StarUML	Not Applicable

Manpower requirements

2 students can complete this in 4 – 6 months if they work fulltime on it.

Milestones and Timelines

Number	Milestone Name	Milestone Description	Timeline Week no. from the Start of the project	Remarks
1	Requirements Specification	User authentication, genre selection, push notifications, feedback system, admin dashboard, real-time processing, security, scalability, responsive design.	2-3	Attempt should be made to add some more relevant functionalities other than those that are listed in this document.
2	Technology familiarization	A Cube Tech is developed using HTML, CSS, JavaScript for the front end, and PHP with	4-5	The presentation should be from the point of view of being able to apply it to the project, rather than from a theoretical perspective.

		MySQL for the back end. It uses Bootstrap for responsive design, Paytm for payments, and tools like Visual Studio Code and yEd Graph Editor for development and diagramming.		
3	Database creation	Design schema, create tables, store user data, feedback, preferences.	5-7	It is important to finalize on the database at this stage itself so that development and testing can proceed with the actual database itself.

Guidelines and References

https://www.w3schools.com/php/ (PHP tutorial)
https://javascript.info/ (Javascript tutorial)
https://www.w3schools.com/sql/sql_server.asp (SQL-server tutorial)