**EduResource Hub(ONKAA)**

**Overview:**

EduResource Hub is a web-based platform designed to help students access, upload, and download educational resources such as past papers, videos, and audio files related to their subjects or courses. The system will also include features like discussion forums, progress tracking, and notifications to enhance the learning experience.

**Key Features:**

1. **User Authentication:**
   * Students can register and log in using their email or student ID.
   * Password recovery and two-factor authentication (2FA) for security.
2. **Resource Management:**
   * Upload and download past papers, videos, and audio files.
   * Categorize resources by subject, course, or year.
   * Search and filter functionality for easy access to resources.
3. **Discussion Forum:**
   * Students can ask questions, share insights, and discuss topics related to their subjects.
   * Moderators (teachers or admins) can manage discussions.
4. **Notifications:**
   * Notify students about new resources, upcoming exams, or forum replies.
   * Email and in-app notifications.
5. **Admin Dashboard:**
   * Admins can manage users, resources, and forum content.
   * Analytics to track resource downloads, user activity, and system performance.
6. **Mobile Responsiveness:**
   * The system should be accessible on both desktop and mobile devices.
7. **Monetization (Optional):**
   * Premium features like exclusive resources or ad-free experience can be offered for a fee.

**Requirements:**

**Functional Requirements:**

1. **User Roles:**
   * Student: Can upload, download, and discuss resources.
   * Admin: Manages users, resources, and system settings.
2. **Resource Upload/Download:**
   * File size limits (e.g., 100MB per file).
   * Supported formats: PDF, MP4, MP3, etc.
3. **Search and Filter:**
   * Search by subject, course, year, or resource type.
   * Filter by most downloaded, recent, or rating.
4. **Security:**
   * Secure file storage and transfer (SSL/TLS encryption).
   * Regular backups and data recovery plans.

**Non-Functional Requirements:**

1. **Performance:**
   * Fast loading times (under 3 seconds).
   * Support for at least 1,000 concurrent users.
2. **Scalability:**
   * Ability to scale resources (storage, bandwidth) as the user base grows.
3. **Usability:**
   * Intuitive and user-friendly interface.
   * Accessible to users with disabilities (WCAG compliance).
4. **Compatibility:**
   * Works on all major browsers (Chrome, Firefox, Safari, Edge).
   * Mobile-friendly design.

**Additional Modifications:**

1. **Gamification:**
   * Add badges, points, or leaderboards to encourage student engagement.
2. **AI-Powered Recommendations:**
   * Use AI to recommend resources based on a student’s progress or interests.
3. **Offline Access:**
   * Allow students to download resources for offline use.
4. **Collaboration Tools:**
   * Add group study features like shared notes or collaborative projects.
5. **Integration with LMS:**
   * Integrate with existing Learning Management Systems (LMS) used by schools or universities.
6. **Multilingual Support:**
   * Support multiple languages to cater to a diverse student population.
7. **Monetization Options:**
   * Offer premium subscriptions for exclusive resources or ad-free browsing.

**Timeline:**

1. **Requirement Gathering and Planning:** 2-3 weeks
2. **Design and Prototyping:** 3-4 weeks
3. **Development:** 8-12 weeks
4. **Testing and Debugging:** 4-6 weeks
5. **Deployment and Launch:** 2-3 weeks

**Conclusion:**

EduResource Hub is a comprehensive platform that addresses the needs of students by providing easy access to educational resources. With a well-planned budget and timeline, this system can be developed and deployed successfully, offering significant value to its users. Additional features like gamification, AI recommendations, and collaboration tools can further enhance the platform’s appeal and functionality.

New chat