**Project Title: E-Learning Platform**

Team name: **EduEvolvers**

**Project Date:**18/09/2023

**Team Leader & Project Manager:** Kirtpreet Kaur

**Key members:**

* ARYAMAN **(21BCS3853)**
* DAKSH SHUKLA **(21BCS6432)**
* KIRTPREET KAUR **(21BCS3531)**
* JASLEEN KAUR **(21BCS11176)**
* SHUBHANSHU PANDEY **(21BCS3854)**
* SNEH SAGAR SUBEDI **(21CBS1048)**

**Target Audience**

* **Students:** Individuals seeking online education and skill development.
* **Instructors:** Educators and subject matter experts interested in creating and delivering courses.
* **Administrators:** Platform administrators responsible for system management and content moderation.

**Requirement Analysis:**

Education is the most powerful weapon you can use to change the world and the next is the Internet. The era of coronavirus broke the long-time practice of conventional education in only classrooms and we got introduced to e-Learning platforms. Today we have many e-learning platforms like moodle, one of Chandigarh University’s own LMS, etc. The education industry is evolving and what it needs is an efficient e-learning platform to provide distance education as well as maintain the interest of students and keep them motivated and at the same time maintain quality of education. It should be flexible and must offer a wide variety of courses on a single platform without having to get into the hassle of traveling and is hence cost-effective.

**What are we going to do?**

· Create a web application for online and distance learning.

· Develop an onboarding process for new users (both instructors and students) to familiarize them with the platform's features and functionalities.

· Provide training materials or resources to help users make the most of the platform.

· Provide content in the form of PPTs, videos, audio, lecture notes, or other documents.

· Inclusion of gamification elements, such as badges, leaderboards, etc. to enhance user engagement and motivation.

· Establish a data backup and recovery strategy to prevent data loss and ensure business continuity.

· Include feedback mechanisms within the platform for users to report issues, suggest improvements, or seek assistance.

**What are the critical factors we need to accomplish? (Ranked by priority)**

1. **User Authentication and Authorization:** Develop authentication processes to verify user identifies during login, implement role-based access control.
2. **Course Catalogue and Enrolment:** Create a user-friendly course catalogue displaying available courses, Enable Users to browse search, and filter courses, and implement a seamless enrolment process.
3. **Content Management System (CMS):** Create a CMS for instructors to upload and manage course content, implement version control easily.
4. **User Profiles:** Develop user profiles where learners and instructors can manage their information, Include features like bio description.
5. **Quiz and Assignment Management:** Build a system for creating, grading, and managing quizzes and assignments, including auto and manual grading.
6. **Progress Tracking**: Develop Tracking mechanisms to monitor learner's progress within courses, Provide visual representations of progress such as progress bars and completion percentages.
7. **Analytics and Reporting:** Implement analytics to track user behavior, such as course completion rates, quiz performance, and time spent on the platform, and generate reports for both learners and instructors.
8. **Weekly Goals and Rewards:** Reminders to set and accomplish weekly goals and badges and leaderboards for keeping user engaged and motivated.
9. **Discussion Forums:** Develop an interaction log for students to interact and discuss on with their problems and can solve among themselves.
10. **Feedback and Improvement:** Collect feedback from learners as well as tutors to continuously improve platform performance.

**Key Personas**

* **Student Persona:** Pursuing higher education or professional development.

Goals and Motivations: Access high-quality educational content, engage in interactive learning, improve skills and knowledge, obtain certifications.

Challenges: Limited time, need for a flexible learning schedule, desire for clear progress tracking and feedback.

Behaviour and Preferences: Prefers mobile-friendly interface, values peer interaction and collaboration, appreciates clear navigation and intuitive design.

* **Instructor Persona:** A seasoned academic or industry expert.

Goals and Motivations: Share expertise, create engaging courses, track student progress, provide constructive feedback, and facilitate effective learning.

Challenges: Need for an easy-to-use platform, desire for comprehensive analytics, time constraints due to teaching commitments.

Behaviour and Preferences: Values a simple course creation process, appreciates real-time analytics on student performance, and seeks a platform that minimizes administrative tasks.

* **Administrator Persona:** A technical administrator responsible for managing and supervising the working of the platform.

Goals and Motivations: Ensure platform reliability, scalability, and security, optimize performance, manage user data, and provide technical support.

Challenges: Balancing performance with scalability, ensuring data privacy and security, and responding to technical support requests.

Behavior and Preferences: Values a robust and secure technical infrastructure, appreciates a clear and efficient user management system, and seeks easy integration and maintenance.

**Functional Specs:**

* Ria is a college student who is pursuing BBA but wants to learn about psychology so she goes on to an e-learning platform and enrols herself into this course. She sets weekly reminders to complete her course, and keeps track of the work done by the progress bar. She’ll have to complete assignments and quizzes to complete her course. She is motivated to achieve her goals by the certificate she’ll achieve in the end as it will add a bonus to her resume as well.
* While completing her course Ria forgot about an assignment which was due that night. She had a lot of college work which made her forget about her deadline. But thankfully she got a reminder that her due date had arrived and she completed her assignment on time.
* When Ria was going through the lecture notes she was confused about a topic. She tried to google it but still could not understand. Then she discovered the doubt clearing section. She uploaded her doubt and Mukesh (her instructor) cleared it.
* Mukesh is a 30-year-old educator who is a seasoned industry expert in psychology. He wants to add a secondary income to his old boring school job. He thinks he is much more capable than just teaching 12th grade students, so he goes onto an e-learning platform and uploads his videos, presentations, notes and assignments. His first student is Ria so he assesses her assignments and grades.

**Success Metrics:**

* **User Enrolment Rate:**

Measure the success of your platform's adoption by tracking the number of users enrolling in courses.

Target: Achieve a steady increase in enrolments, aiming for sustained growth.

* **User Retention Rate:**

Assess the platform's success in retaining users over time.

Target: Maintain a user retention rate of at least 70% on a quarterly basis.

* **Course Completion Rate:**

Determine the effectiveness of your courses by monitoring the percentage of enrolled students who successfully complete them.

Target: Maintain a course completion rate of 60% or higher for all courses.

* **Instructor Satisfaction:**

Evaluate the platform's ability to attract and retain instructors by measuring their satisfaction with course creation and delivery tools.

Target: Maintain an instructor satisfaction rating of at least 85%.

**System Overview:**

**Performance Constraints:**

* **User Support Response Time:**

Target: Respond to 95% of user inquiries within 4 hours or less, with 100% resolution of inquiries within 24 hours.

* **Content Quality:**

Target: Maintain an average content quality rating of 4.7 on a 5-point scale, as assessed by user ratings and feedback.

* **User Enrolment Rate:**

Target: Achieve a minimum of 5000 new course enrolments per month within the first year of operation.

* **User Retention Rate:**

Target: Maintain a quarterly user retention rate of 80% or higher, indicating strong user engagement and satisfaction.

* **Course Completion Rate:**

Target: Ensure that at least 70% of enrolled students successfully complete their courses, demonstrating course effectiveness and user commitment.

**Open Issues:**

* Incorporation of WCAG.
* Creation of Classroom.
* Utilization Elastic Cloud.
* Making Chatbot.
* Personalised Learning

**External Interface Specification for EduLearn:**

**i. User Interfaces:**

* EduLearn provides a web-based user interface accessible via popular web browsers such as Chrome, Firefox, and Safari.

**ii. User Authentication:**

* EduLearn supports various authentication methods, including manual username/password, email-based self-registration, and integration with external authentication sources (e.g., OAuth).

**iii. API Integrations:**

* EduLearn supports integration with external systems through APIs, allowing for single sign-on (SSO), content integration, and reporting.

**iv. Authentication and Single Sign-On (SSO) :**

* just like apple id

**v. Payment:**

* Incorporation of payment gateways.

**vi. Google analytics and custom analytics**

**vii. Messaging**:

* Real-time notifications.