Software Requirement Specification

E-Learning App

AI&DS, Vishwakarma Institute of Information Technology

Authored by: Urvi Shah

1. **Introduction :**

   (i) Purpose of this Document – The purpose of this document is to clearly define the requirements and specifications for the development of an e-learning app. This document serves as a guide for the development team, providing them with a clear understanding of the project objectives, requirements, and constraints. It also serves as a reference for stakeholders, ensuring that their expectations are met and that the final product meets their needs.

   (ii) Scope of this document – The scope of this document encompasses the development of an e-learning app that provides users with access to educational content such as courses, lectures, videos, and quizzes. The app will provide a user-friendly interface that allows users to browse, search, and enroll in courses, as well as track their progress and receive certifications upon completion. The app will also incorporate features such as social networking, discussion forums, and in-app messaging to facilitate interaction and collaboration between users and instructors. The development cost and time required will be outlined in this document, along with any constraints that may impact the development process.

   (iii) Overview – The e-learning app is a mobile application that provides users with access to educational content from a variety of subjects and disciplines. The app will be designed to offer a personalized learning experience, where users can choose the courses and content that are most relevant to their interests and goals. The app will also incorporate features such as social networking, discussion forums, and in-app messaging to facilitate interaction and collaboration between users and instructors. The app will be available on both iOS and Android platforms, providing a wide reach for users. Additionally, the document will outline the development cost, time required, and any constraints that may impact the development process.

2. **General description:** The e-learning app is a mobile application designed to provide users with a flexible and accessible learning experience. It offers a user-friendly interface, access to a wide range of courses and educational content, real-time progress tracking, and support from instructors and peers. Users can learn at their own pace, interact with others to enhance their learning experience, and acquire new skills and knowledge regardless of their location or schedule. The app caters to modern users who value flexibility and accessibility when it comes to learning.

3. **Functional Requirements:** Functional Requirements for the E learning App are as follows:
   - Course Catalog: The app should have a course catalog that allows users to browse and search for courses based on different categories such as subject, level, and duration.
   - User Profiles: The app should allow users to create profiles that store their personal information, such as name, email address, and learning preferences.
   - Course Progress Tracking: The app should allow users to track their progress through a course, including completed and pending tasks, quizzes, and assessments.
   - Interactive Learning Content: The app should offer various types of learning content, such as videos, text-based materials, and interactive quizzes, to engage learners and cater to different learning styles.
   - Discussion Forums: The app should provide discussion forums that allow learners to interact with other learners and instructors, ask questions, and share their knowledge and experience.
   - Certification and Accreditation: The app should provide certification and accreditation options to recognize learners' achievements and enhance their credentials.
   - Payment Gateway: The app should have a secure payment gateway that allows users to pay for courses and related services using various payment options.
   - Customer Support: The app should provide customer support services to assist users with any technical issues, billing queries, or other concerns they may have.

4. **Interface Requirements:** The e-learning app needs a user-friendly interface for easy navigation. Instructors need an interface to manage and update course content, including videos, presentations, and assignments. Communication interface is necessary for learners to interact with instructors and peers, participate in group discussions, and receive feedback on their work. User management interface should be included to allow administrators to manage user profiles, access, and permissions. Integration with other software systems, such as Learning Management Systems (LMS), should ensure seamless communication and data exchange.

5. **Performance Requirements:** The e-learning app must provide a quick and responsive user experience. The maximum response time should be 2 seconds. The app must handle a large volume of concurrent users without any performance degradation. Course content should load quickly, with a maximum loading time of 5 seconds. Memory usage must be optimized to ensure efficient use of system resources. The maximum error rate should be less than 1% to ensure a reliable and error-free user experience. These performance requirements are critical to ensure a smooth and efficient learning experience, even during peak usage hours.

6. **Design Constraints:** The e-learning app must be designed with certain constraints in mind, including:
   - Platform Compatibility: The app should be compatible with various platforms such as web, mobile and tablet, and the design should be optimized for each platform.
   - Device Limitations: The app's design should consider device limitations such as the processing power, screen size, and memory capacity of various devices.
   - Security: The app must comply with industry-standard security protocols to protect user data and ensure secure payment processing.
   - Scalability: The app must be designed to handle a large amount of data, including user information, course content, and progress tracking.
   - Localization: The app should support multiple languages and currencies, to cater to a global user base. This feature is important for users who are non-native English speakers.

7. **Non-Functional Attributes:** The e-Learning App has several non-functional attribute requirements, including accessibility, usability, reliability, scalability, security, and performance. The app must be designed to ensure accessibility for

users with different abilities, including those with disabilities. The app's interface should be user-friendly, intuitive, and easy to navigate, to ensure usability. The app should also provide reliable performance, with minimal downtime or system failures, to ensure a seamless learning experience.

8. **Preliminary Schedule and Budget:** The e-learning app project's preliminary schedule and budget are critical for effective resource management, risk minimization, and timely delivery of a high-quality product. The project timeline includes an initial development phase of 9 months, followed by 3 months for testing and refinement. The budget for the project is estimated at Rs 7,00,000, which includes costs associated with development, testing, and deployment. Accurately estimating the schedule and budget for the project is essential for successful project completion.

9. **Appendices:** The Appendices section of the e-learning app document provides supplementary information that is important for a thorough understanding of the project. The section includes a list of references used during the development process, which may include research papers, case studies, and industry reports. The Glossary provides definitions of specific terms and concepts that are relevant to the app development process, such as user interface/user experience (UI/UX), application programming interface (API), and database management. Additionally, the section may include acronyms and abbreviations used throughout the document to clarify technical terminology for readers. The Appendices section serves as a valuable resource for readers to reference additional information related to the project.

Uses of SRS document:

1. The development team requires it for developing products according to the need.

2. Test plans are generated by a testing group based on the described external behavior.

3. Maintenance and support staff need to understand what the software product is supposed to do.

4. The project manager bases their plans and estimates of schedule, effort, and resources on it.

5. Customers rely on it to know what products they can expect.