Software Requirements Specification (SRS) for Online Learning Management System (LMS)

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed set of requirements for the development of an Online Learning Management System (LMS). This LMS aims to facilitate the management and delivery of educational courses and training programs online.

1.2 Scope

The LMS will support course creation, student enrollment, content delivery, assessments, and reporting. The system will be accessible via web browsers and mobile applications.

1.3 Definitions, Acronyms, and Abbreviations

LMS: Learning Management System

UI: User Interface

API: Application Programming Interface

1.4 References

Company’s e-learning standards document

Industry best practices for LMS systems

2. Overall Description

2.1 Product Perspective

The LMS will integrate with existing systems such as HR systems for employee training and third-party content providers for additional course material.

2.2 Product Functions

The primary functions of the LMS include:

User Management

Course Management

Content Delivery

Assessments and Quizzes

Reporting and Analytics

2.3 User Characteristics

Users of the LMS will include:

Students: To enroll in and complete courses

Instructors: To create and manage courses

Administrators: To oversee the system and manage users

Managers: To track employee progress and performance

2.4 Constraints

The system must comply with educational data protection regulations.

The system should support scalability to handle up to 50,000 concurrent users.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 User Management

The LMS should manage user information and roles. It should allow registration, profile management, and role-based access control.

3.1.2 Course Management

The LMS should support the creation, updating, and deletion of courses. Each course should include a title, description, syllabus, and associated materials. Instructors should be able to organize courses into modules and lessons.

3.1.3 Content Delivery

The LMS should deliver course content in various formats, including videos, documents, and interactive materials. It should support streaming and downloading of content.

3.1.4 Assessments and Quizzes

The LMS should facilitate the creation and management of assessments and quizzes. Each assessment should have a unique identifier, associated course, questions, and scoring criteria. The system should automatically grade quizzes and provide feedback to students.

3.1.5 Reporting and Analytics

The LMS should provide reporting capabilities for tracking student progress, course completion rates, and assessment scores. Reports should include details such as report type, generation date, and data points for analysis.

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

The system should ensure a response time of less than 2 seconds for 95% of user interactions.

3.2.2 Security Requirements

Data must be encrypted in transit and at rest.

The system must support multi-factor authentication for all users.

3.2.3 Usability Requirements

The user interface should be intuitive and follow standard usability guidelines to ensure ease of use for all users.

4. Appendices

4.1 Glossary

Course: A structured program of study offered by the LMS.

Student: A user who enrolls in courses to learn and complete assessments.

Instructor: A user who creates and manages courses and assessments.

Assessment: A test or quiz used to evaluate student learning.