Software Requirements Specification

for

Online Examination Preparation Assistant (OEPA)

Version 1.0 approved

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# **1. Introduction**

## **1.1. Purpose**

The purpose of this Software Requirements Specification (SRS) document is to define the functional and non-functional requirements for the Online Examination Preparation Assistant system. This system will assist users in preparing for various examinations by providing access to practice exams, and progress tracking.

## **1.2. Scope**

The Online Examination Preparation Assistant will cater to both users and administrators. Users can register, access study materials, take practice exams, and monitor their progress. Administrators will manage course content, user accounts, and monitor system performance.

## **1.3. Definitions, Acronyms, and Abbreviations**

- **SRS:** Software Requirements Specification

- **UI:** User Interface

## **1.4. References**

* Signe Schack Noesgaard1,2 and Rikke Ørngreen(The Effectiveness of E-Learning: An Explorative and Integrative Review of the Definitions, Methodologies and Factors that Promote e-Learning Effectiveness)
* Angeli, C. (2005) ‘Transforming a teacher education method course through technology: Effects on preservice teachers’ technology competency’, Computers & Education, vol. 45, no. 4, pp. 383–398.
* Alinier, G., Hunt, B., Gordon, R. and Harwood, C. (2006) 'Issues and innovations in nursing education: Effectiveness of intermediate-fidelity simulation training technology in undergraduate nursing education', Journal of Advanced Nursing, vol. 54, no. 3, pp. 359–369.
* Armatas, C., Holt, D. and Rice, M. (2003) 'Impacts of an online-supported, resource-based learning environment: Does one size fit all?' Distance Education, vol. 24, no. 2, pp. 141–158.
* <https://nevonprojects.com/online-examination-system-with-ai>
* <https://projectworlds.in/free-projects/php-projects/online-examination>

## **1.5. Overview**

This document will outline the functional and non-functional requirements for the Online Examination Preparation Assistant system, ensuring a comprehensive understanding of its features and capabilities.

# **2. Functional Requirements**

## **2.1. User Registration**

* Users can create an account by providing a valid email address and password.
* Registration should include user profile information, including name, contact information, and educational background.
* Users must verify their email addresses during the registration process.

## **2.2. User Login**

* Registered users can log in with their email and password.
* User authentication should be secure and protect against unauthorized access.

## **2.3. Course Selection**

* Users can browse and select from a list of available courses.
* Courses should be categorized by subject or exam type.
* Users can view course details, including syllabus, study materials, and instructors.

## **2.4. Practice Exams**

* Users can access practice exams related to the selected course.
* Practice exams should simulate real exam conditions and provide immediate feedback on performance.
* Users can review their past practice exam results and answers.

## **2.5. Progress Tracking**

* Users can view their progress within a course, including completed sections and quizzes.
* The system should generate reports summarizing user progress.

## **2.6. User Profile Management**

* Users can update their profile information, including name, contact details, and password.
* Users can reset their password if forgotten, following a secure verification process.
* Users can delete their account, which should result in data removal.

## **2.7. Admin Functions**

* Administrators can manage course content, including adding, editing, or deleting courses and study materials.
* Administrators can view user accounts, reset passwords, and suspend or delete accounts when necessary.
* Administrators can generate system performance reports.

# **3. Non-Functional Requirements**

## **3.1. Performance**

* The system should respond to user interactions within 2 seconds.
* The system should support a minimum of 1000 concurrent users.
* Backups of user data should be performed daily.

## **3.2. Security**

* User data should be encrypted during transmission and storage.
* Passwords should be securely hashed and salted.
* The system should have role-based access control, ensuring data privacy.

## **3.3. Usability**

* The user interface should be intuitive and responsive.
* The system should be accessible to users with disabilities.
* The system should support multiple languages.

## **3.4. Reliability**

* The system should have an uptime of at least 99.9%.
* Regular maintenance and updates should not disrupt user access.
* Error handling should provide meaningful messages to users.

This Software Requirements Specification document provides a detailed overview of the functional and non-functional requirements for the Online Examination Preparation Assistant system. It serves as a reference for system development, testing, and validation. Any changes or updates to these requirements should be documented and tracked throughout the project's lifecycle.