Software Requirements Specification

for

Online Course Enrollment System

Version 1.0 approved

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

## Purpose

The functional and nonfunctional requirements for an online course enrollment system are described in this Software Requirements Specification (SRS) document. The system will allow students to examine course offerings, maintain their profiles, register for courses, and enroll or waitlist in courses according to availability.

## Document Conventions

This document adheres to IEEE 830–1998 conventions, with standard section numbering and the inclusion of requirement identifiers for traceability.

## Intended Audience and Reading Suggestions

Project managers, software developers, and other participants in the course enrollment project are the target audience for this SRS. While managers may give Sections 1 and 2 priority in order to comprehend the project's goals and scope, developers should concentrate on Sections 3 and 4 for particular functional and interface needs.

## Project Scope

The goal of this project is to provide an online platform that will let students manage their enrollment in classes each semester. With features including user registration, profile management, course browsing, enrollment, and waitlist capabilities, it offers a safe and effective way to handle student registrations.

## References

Database Star. (2023, November 28). Database design for an online course website [Video]. YouTube. <https://www.youtube.com/watch?v=FZVHZTaot1E>

Expertsminds. (n.d.). Build an enrollment system assignment help. <https://www.expertsminds.com/content/sample-paper/build-an-enrollment-system-assignment-help-12481.html>.

GeeksforGeeks. (2024, March 5). How to design a database for online learning platform <https://www.geeksforgeeks.org/how-to-design-a-database-for-online-learning-platform/>

# Overall Description

## Product Perspective

## *A stand-alone program called the Online Course Enrollment System was created with the goal of expediting the enrollment and registration procedures for courses in educational institutions. To handle user data, course information, and enrollment statuses, the system will communicate with a database.*

## Product Features

 Setting up a profile and registering a new user with a unique ID.

 The listing of courses is determined by semester availability.

 Management of enrollment with each course's maximum capacity.

 Waitlist management for full courses.

 Profile management for user data updates.

## User Classes and Characteristics

 **Students**: Able to view courses, register, enroll, and manage their profiles.

 **Administrators**: Control the system, establish enrollment caps, and manage course information.

 **Instructors**: Access course enrollment lists, without the ability to manage registrations..>

## Operating Environment

The system will be a web-based application, accessible via standard web browsers on desktops and mobile devices, utilizing HTTPS protocols for secure communications.

## Design and Implementation Constraints

Regulatory compliance for data protection, time limits for project completion, and financial limitations are examples of design constraints. The system must be able to manage high enrollment volumes without experiencing appreciable performance drops.

## User Documentation

User documentation will include a user guide with instructions on account registration, course enrollment, waitlist management, and profile updates.

## Assumptions and Dependencies

The availability of backend database infrastructure and dependable internet connection for consumers are among the presumptions.

# System Features

## System Feature 1: User Registration

3.1.1 Description and Priority

Students will be able to register on the system using secure passwords and distinct user IDs. This feature, which gives access to the system, is quite important.

3.1.2 Functional Requirements

REQ-1: For new users, the system will show a registration form.

REQ-2: Each user shall create a unique ID with a secure password.

REQ-3: When creating a profile, users must enter personal information such as their name, email address, and phone number.

## System Feature 2: Course Enrollment and Listing

3.2.1 Description and Priority

Each semester's courses are available for students to peruse and register for. This feature is necessary for the system's main operation.

3.2.2 Functional Requirements

REQ-4: The system shall display a list of available courses for each semester.

REQ-5: For every course, the system will impose a maximum enrollment cap.

REQ-6: Enrollment in courses with available seats will be an option for students.

## System Feature 2: Waitlist Management

3.3.1 Description and Priority

Students can sign up for a waitlist when a course is full. Because it is only utilized when classes are full, this feature has a medium priority.

3.3.2 Functional Requirements

REQ-7: If a course is full, students will be able to sign up for a waitlist through the system.

REQ-8: The first student on the waitlist will be notified by the system when a seat becomes available.

## System Feature 2: Waitlist Management

3.4.1 Description and Priority

After registering, students have the ability to access and edit their profile information, guaranteeing data quality and flexibility.

3.4.2 Functional Requirements

REQ-9: Users will be able to access and modify profile information through the system.

REQ-10: Modifications to profile information must be recorded and reflected across the system.

# External Interface Requirements

## User Interfaces

Registration, course browsing, enrollment, waitlist, and profile management sections will all be part of the user experience. It will have consistent design elements and be responsive to both desktop and mobile devices.

## Hardware Interfaces

Standard desktop and mobile devices can run the system, therefore no special hardware is needed.

## Software Interfaces

User information, course details, and enrollment records will be stored and managed by the system through an interface with a backend database.

## Communications Interfaces

All client-server communications will be secured by the system using HTTPS, guaranteeing data security and privacy.

# Other Nonfunctional Requirements

## Performance Requirements

## *Up to 500 concurrent users will be supported by the system with little latency, particularly during periods of high enrollment.*

## Safety Requirements

Unauthorized access to student data, including personal and enrollment data, will be prevented by the system.

## Security Requirements

All passwords shall be encrypted, and the system shall enforce authentication protocols to protect user data.

## Software Quality Attributes

Long-term usability and adaptability are ensured by the system's dependability, maintainability, and ease of use.

# Other Requirements

Appendix A: Glossary

Appendix B: Analysis Models

Appendix C: Issues List