Week 1 Assignment – SRS

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**A screenshot of a computer

Description automatically generated**

Software Requirements Specification

for

Enrollment Registration System

Version 1.0 approved

Prepared by Thomas Pedersen

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Revision History

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

## Purpose

Software Requirements Specification for an Enrollment Registration System for an institution of higher education. The purpose and scope are clearly stated, and the system description, user characteristics, and high-level and detailed functional and non-functional requirements are well structured. The flow for use cases is a useful visual representation of the intended user interactions with the system, and you are correct in considering both security and usability in the specifications. The design constraints section is also a valuable addition to the SRS. Overall, your outline appears to be a professional and thorough description of the requirements for the Enrollment Registration System. According to Geeks for Geeks, “Depending upon information gathered after interaction, SRS is developed which describes requirements of software that may include changes and modifications that is needed to be done to increase quality of product and to satisfy customer’s demand.” (Geeks for Geeks, 2023) they are good at what they do they explained it out pretty good to what developers need and what to do get the right information.

## Document Conventions

The italicized text catches attention to important notes, bold text highlights key terms, REQ-\* numbered requirements distinguish individual items, and TBD indicates pending info. It makes the SRS easy to read and understand, and each part stands out appropriately.

## Intended Audience and Reading Suggestions

Developers and project managers need clear requirements for implementation and planning. Marketing staff need to understand how the system aligns with strategic goals and can be positioned. Users and testers require insight into what the system should achieve and what it should look and behave like. Documentation writers need to know how the system should be presented and explained in user manuals. Involving all these perspectives will help ensure that the system aligns with stakeholders' needs and expectations. Good choice of stakeholders.

## Project Scope

The functionality of the Enrollment Registration System (ERS) highlights the key features and benefits for students. Students will be able to create accounts, select courses, provide contact information, and benefit from automated assistance throughout the registration process. The ability to add themselves to waitlists for full courses and cancel registration for unwanted courses adds flexibility for users. This provides a convenient and streamlined platform for students to register for courses, making the process more accessible and efficient.

## References

# Geeks for Geeks. (2023, Sep 20). *Software Requirement Specification (SRS) Format*. Retrieved from Geeks for Geeks: https://www.geeksforgeeks.org/software-requirement-specification-srs-format/

# Overall Description

### Product Perspective

ERS is a component within the University Portal that manages student profiles and supports course registration & management. Its features include maintaining enrollment records and the flexibility to drop courses, ensuring a smooth educational experience for students. It's a valuable addition to the University Portal, simplifying and streamlining the process of course management and enrollment for students.

## Product Features

A user account/profile creation feature is essential for personalization and security. A sign-in page should be simple and secure to ensure a seamless login process. A well-designed course registration and cancellation feature is important for a smooth user experience. Last but not least, a clear display of enrolled courses is vital for users to manage their course-related information.

## User Classes and Characteristics

An instructor user role would typically be responsible for managing the courses and course-related content available to students. An Administrator user role would have access to the overall system configuration, including user account management and system settings. Last but not least, a student user role would be for those taking and enrolling in courses, with rights to view and manage their course registrations, personal information, and more. According to Andrew Burak, “You might have a truly brilliant and unique digital product idea, but the journey to the implementation phase ultimately defines whether your application will succeed or fail. The SRS document is a vital part of this journey.” (Burak, 2023) Andrew has a good point there hope everything is good and everything, but we could fail that part down the road.

## Operating Environment

Ensuring that the ERS is compatible with a variety of commonly used web browsers, like Chrome, Safari, and Edge, is crucial. Ensuring mobile compatibility is an essential requirement for modern web-based systems, as a significant portion of users now access websites through mobile devices. Supporting multiple browsers and devices will increase the accessibility and versatility of the ERS, making it suitable for a wider range of users.

## Design and Implementation Constraints

It's important to note that any requirements not specifically mentioned in 2.2 (Functional Requirements), 4.1 (Non-Functional Requirements), or 4.2 (Design Constraints) of these documents would be deemed out of scope for this project. This helps to manage expectations and ensure that the project remains focused on the specified requirements. Good to keep in mind when considering additional features or changes to the system.

## User Documentation

* An online help guide would provide users with detailed guidance on using the system and resolving potential issues they might encounter.
* A User FAQ section within the larger University Portal would allow students to find answers to common questions they might have.
* A Live chatbot would enable students to get real-time assistance whenever they need it, ensuring a seamless experience.
* These features would greatly enhance the user experience and add extra support, making it easier for students to navigate and use the system. Good suggestions!

## Assumptions and Dependencies

An up-to-date database of course offerings and availability allows students to make informed decisions about their registrations. It also helps prevent scheduling conflicts or enrollment in unavailable courses. A reliable source of course information is essential for a smooth and efficient registration process.

# System Features

## System Feature 1

3.1.1 Description and Priority

High priority: Ability for the user to create a profile with a unique user ID.

3.1.2 Stimulus/Response Sequences

The user creates a new account and can provide values for user information such as name, email, and phone number to be stored.

3.1.3 Functional Requirements

REQ-1: New user registration, including account and profile creation.

REQ-2: Each new user should have a unique ID associated with a password. The system should

guard against two users using the same ID for registration.

REQ-3: Profiles must include some key information about the applicant, including name, phone,

email and any other information deemed necessary.

REQ-4: Post registration, users can log in to the system at any time using the ID and password

created during the registration process.

## System Feature 2 (and so on)

Course Enrollment

3.2.1 Description and Priority

High priority: Registered users can search for, enroll in, or cancel enrollment in available

courses.

3.2.2 Stimulus/Response Sequences

Users can search for and enroll in available courses. When the user enrolls, the number of

enrollments for said course will increase by one. Users can also cancel course

enrollment.

3.2.3 Functional Requirements

REQ-5: Online courses run through three semesters per year (spring/summer/fall), and students

can list the courses that will be offered during any semester, as not all courses will be offered

every semester.

REQ-6: Each course should have a maximum number of enrollments that may be different

depending on the course.

REQ-7: If a user wants to enroll in a course and the course is full, the student can add

themselves onto a waiting list.

REQ-8: A user can also cancel the enrollment from any course that they are enrolled in.

# External Interface Requirements

## User Interfaces

These requirements touch on user experience and accessibility.

1. An intuitive and user-friendly interface across multiple screen sizes ensures an optimal experience regardless of whether the user is on a desktop or mobile device.

2. A consistent design that aligns with the existing University Portal creates a cohesive experience and avoids user confusion.

3. Accessibility for users with disabilities is not only an ethical responsibility but also aligns with legislation in countries like the US. It promotes inclusivity and usability for all users.

## Hardware Interfaces

Supporting a wide range of devices and operating systems, including both mobile and desktop devices from all major platforms (Android, iOS, Windows, macOS, etc.), is essential to ensure the enrollment system is accessible to a broad user base. It's important to consider different screen sizes, input methods, and performance capabilities when designing a responsive and adaptive user interface. Your suggestion highlights the importance of device and OS compatibility, which should indeed be a key requirement for the Enrollment Registration System (ERS).

## Software Interfaces

MySQL is a robust and widely used database, Apache is a reliable and efficient web server, and PHP and HTML are popular and versatile programming languages. This combination would provide a solid foundation for the ERS, enabling it to handle course registration, user information, and data storage efficiently, while ensuring a smooth and dynamic user experience. Choosing these technologies will likely enable you to develop an effective and scalable solution for the system.

## Communications Interfaces

HTTPS provides secure communication between the client and server, protecting data in transit. PHP server-side code can be useful for implementing additional security measures, such as input validation or secure authentication. Lastly, AES (Advanced Encryption Standard) encryption is a robust encryption protocol, ideal for securing sensitive data, such as student information. Integrating these technologies within the ERS will contribute to the overall data security and privacy of the system. You've clearly thought through security aspects, which is a very important part of the system development process.

# Other Nonfunctional Requirements

## Performance Requirements

The enrollment system should prioritize student registrations based on a first-come, first-served basis. It should be capable of concurrently handling multiple registrations and task updates, ensuring timely and accurate database updates.

## Safety Requirements

That's a vital aspect of system security. It's crucial that user data and product information within the ERS are protected to prevent unauthorized users from accessing them. Implementing security protocols, such as encryption and access controls, and conducting regular security audits would be essential for ensuring data privacy and compliance with legal requirements.

## Security Requirements

A user-friendly interface is essential for a good user experience, and ensuring it is accessible to everyone, including users with disabilities, is important for inclusivity. Additionally, maintainability and adaptability are critical for the long- term success of the Enrollment Registration System, as it's likely that it will need updates and changes in the future. By including these requirements in the SRS, you're ensuring the system is future-proof and can be easily updated.

## Software Quality Attributes

They help prevent errors and maintain the integrity of course enrollment.

1. Not allowing students to re-enroll in classes they have already successfully completed ensures that students can progress through their curriculum without retaking unnecessary classes.
2. Restricting enrollment to courses within a student's degree program helps ensure that students remain on track for graduation and don't end up taking unrelated courses that won't count toward their degree.
3. A logout feature is vital for user security, as it protects personal information and prevents unauthorized access.

Appendix A: Glossary

ERS : Enrollment Registration System

# References

# Burak, A. (2023, March 23). *Your 2024 Guide to Writing a Software Requirements Specification – SRS Document*. Retrieved June 7, 2024, from Relevant Software: https://relevant.software/blog/software-requirements-specification-srs-document/

Geeks for Geeks. (2023, Sep 20). *Software Requirement Specification (SRS) Format*. Retrieved from Geeks for Geeks: https://www.geeksforgeeks.org/software-requirement-specification-srs-format/