Software Requirements Specification

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CST499: Capstone for Computer Software Technology

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September 13, 2021

Software Requirements Specification

for

Online Course Registration

Version 1.0 approved

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ABC University

16 August 2021

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Revision History

Name	Date	Reason For Changes	Version
Robert Barquin	8/16/21	Document creation.	1.0
Robert Barquin	9/13/21	Document updates.	2.0

1. Introduction

1.1 Purpose

The ABC University online course registration web-based application is a platform that enasbles students to register for courses using an online interface. It will allow students to browse through the course registry and signup for courses or be added to a waiting list without having to visit the physical campus.

1.2 Document Conventions

- Documents must be justified.
- Main Title:
  - Font: Times New Roman
  - Style: Bold
  - Size: 12
- Sub-Title:
  - Font: Times New Roman
  - Style: Bold
  - Size: 12
- Body:
  - Font: Times New Roman
  - Style: Normal
  - Size: 12

1.3 Intended Audience and Reading Suggestions

- Stakeholders

- Development Team

1.4 Product Scope

- Registration and profile managment for students.

- Course enrollment and course management for students

- Sufficient search processing for course browsing.

1.5 References

- PHP: - https://www.php.net/

- HTML: - https://www.w3schools.com/html/

- CSS: - https://www.w3schools.com/css/

- JavaScript: - https://www.w3schools.com/js/

2. Overall Description

2.1 Product Perspective

ABC University web application aims to connect students to all available courses provided by ABC University. It should be able to do so through a robust and user-friendly interface. It is intended as a stand-alone web application. It must run on Windows, MacOS, Chrome OS, and Linux.

2.2 Product Functions

- The main purpose of the project is to provide an online resource for course registration for students through ABC University web application.

- Browse course availability.

- Enroll in courses.

- Registered users can view enrollment status and subscribe to a waiting list updates.

- Students enrolled in courses can manage courses to add or drop courses.

2.3 User Classes and Characteristics

- Users should be familiar with course registration terminology, i.e., register, semester, departments, courses.

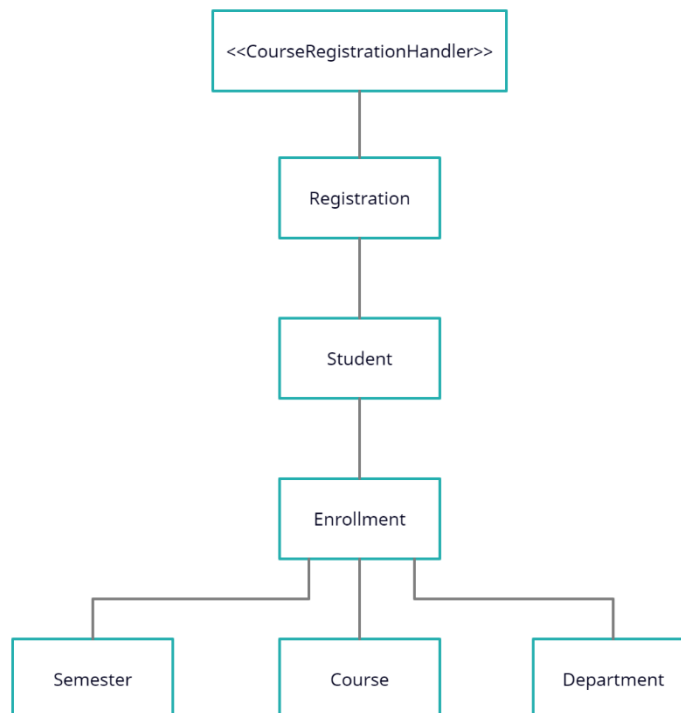- Users should be familiar with using a web browser.
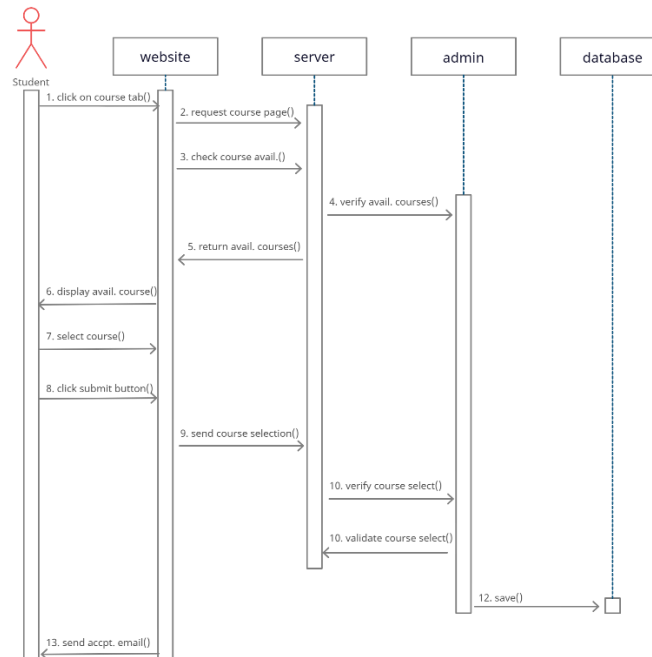

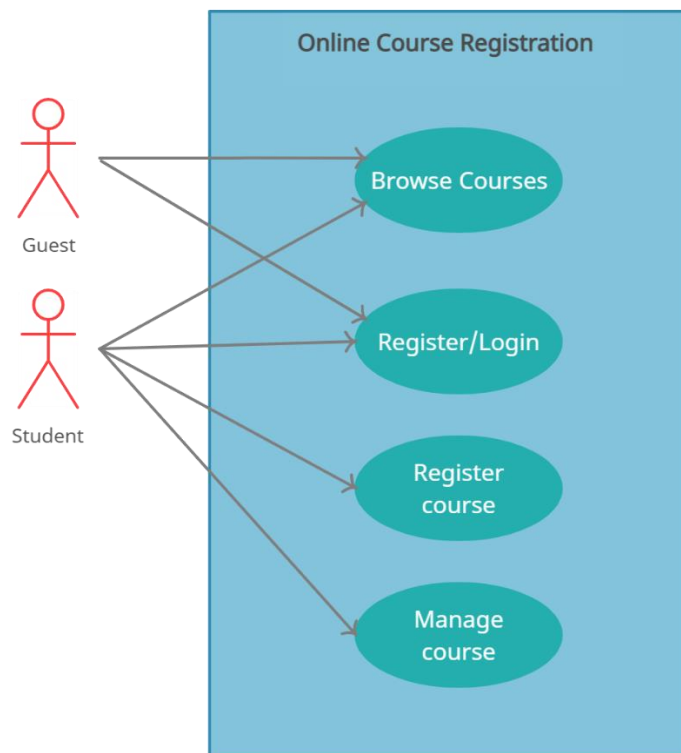*Figure 1: Class Diagram*

Figure 2: Activity Diagram

Figure 3: Use Case

2.4 Operating Environment

As a web application, the system will be operating in a windows environment. It should also be operable across the most popular web browsers such as Microsoft Internet Explorer, Google Chrome, Mozilla Firefox. Thus, the user is required to have access to the internet to utilize the product. Hardware requirements must include basic input and output devices, mouse, keyboard, monitor.

2.5 Design and Implementation Constraints

ABC University's web application provides an online catalog available to potential students to view and enroll in courses via the internet. They can add courses to their semester which will display to a profile page. Students can edit their courses through their profile page to drop courses. Compliance to best practices within IEEE recommendation will be adhered to as well as in accordance with Americans with Disabilities Act to accommodate all users.

2.6 User Documentation

- User manual.

2.7 Assumptions and Dependencies

- Code should be free of errors.

- User-friendly interface.

- Quick response time to database queries.

- Users can access the system from any device connected to the internet utilizing a web browser.

- 24/7 availability.

3. External Interface Requirements

3.1 User Interfaces

- Landing Page

- Registration Page

- Login Page

- Profile Page

- Enrollment/Course viewing Page

3.2 Hardware Interfaces

- Operating System: Windows

3.3 Software Interfaces

- MySQL server

- XAMPP

- Notepad++

3.4 Communications Interfaces

Users must connect to the internet to access the web application.

4. System Features

4.1 Student Registration

4.1.1 Description and Priority

Potential students should be able to utilize the web application to register as a student. It is a high priority to ensure potential students can register as students to access the course catalog.

4.1.2   Stimulus/Response Sequences

Users should be able to click on the register link where they are taken to the registration page to allow the user to register as student. Once the student is on the registration page, they enter basic personal information, such as full name, email, and create a password. After hitting submit, the data is stored onto the database and an enrollment date is created.

4.1.3   Functional Requirements

TBD

4.2 Student Profile Management

4.2.1   Description and Priority

Students should be able to utilize the web applications profile page to edit their personal information. It is a high priority to ensure students can receive pertinent information to their direct email for status updates regarding enrollment status.

4.2.2   Stimulus/Response Sequences

Student should be able to view their personal information upon entering the profile page. Below are empty input fields which students can utilize to update partial or all student information. Hitting update button overrides their own personal information in the database.

4.2.3   Functional Requirements

TBD

4.3 Student Course Enrollment

4.3.1 Description and Priority

Students should be able to utilize the web applications enrollment page to view available courses and enroll for their preferred semester available. It is a high priority to ensure students can enroll in the courses for a particular semester.

4.3.2 Stimulus/Response Sequences

Student should be able to click on the enrollment page from their profile page. Once there, students will verify their full name and student registration number generated at registration and select the department, course, and semester for their course enrollment. Once submit button is clicked, the enrollment table is updated showing the student registration number, department, course, and semester associated with the enrollment.

4.3.3 Functional Requirements

TBD

4.4 Course Management

4.4.1 Description and Priority

Students should be able to utilize the web applications profile page to view their currently enrolled courses. From there, they can drop classes. It is a high priority to ensure students can drop classes listed in enrollment.

4.4.2 Stimulus/Response Sequences

Student should be able to view the enrolled courses through their profile page. The table will show all currently enrolled courses of the student. There should be the option to drop the course form the users table to remove the course from their enrollment.

4.4.3 Functional Requirements

TBD

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Performance may vary depending on user connectivity, but database queries must be updated quickly to ensure accuracy across all users.

5.2 Safety Requirements

Database backups must be utilized to prevent data loss in case of data corruption.

5.3 Security Requirements

The system should be secure when storing user password and personal information. The system should utilize a secured database to prevent unauthorized access. Only administrative users can edit web application details. Registered users are only provided read access to course details.

5.4 Software Quality Attributes

The system should promote maintainability through loose coupling and high cohesion. Availability should allow the system to be available at any time of day and any location with internet connection.

5.5 Business Rules

Students can only access the course information through enrollment screen. Administrative access can only be utilized for site updates, course edits, or student profile changes, and enroll in courses on student behalf. Course requirement must be observed with degree requirements.

6. Other Requirements

ABC University will manage error reporting upon release.

Appendix A: Glossary

TBD

Appendix B: Analysis Models

TBD

Appendix C: To Be Determined List

TBD

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