UCS1617 - MINI PROJECT

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Online Course Reservation System

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SOFTWARE REQUIREMENTS SPECIFICATION

VERSION 1.1

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Introduction

Managing course registrations, monitoring of students' performance in each course and generating reports at colleges and universities are being done manually and majorly on paper. The student needs to check an information brochure, choose a course, and needs to physically go to the course registrar of the college to enroll in it. The registrar needs to ensure that the student is eligible to take up the courses they have chosen, and then enroll them in those courses by updating their database. Now, the professor needs to keep track of all his students using registers and also has to use separate software to keep track of grades of the students taking up their courses. This is time-consuming, cumbersome and hard to maintain in the long-term.

This Online Course Reservation System aims to solve this by bringing the entire process online, eliminating physical involvement in the process as well as remove the need for a lot of paper work. The system will allow The professors will be able to set the syllabus, lesson plan and other details such as eligibility. They will be able to post announcements, create & collect assignments and provide resources for the course. They can also grade students and generate reports. The students will be able to register for courses offered by the university professors. They will be able to access the course resources, submit assignments and monitor their progress in each course they take up. They will also be able to discuss and clarify doubts in a public forum created for each course.

1.1   Purpose

The purpose of Software Requirements Specification (SRS) document is to describe the external behavior of the Online Course Reservation System. Requirements Specification defines and describes the operations, interfaces, performance, and quality assurance requirements of the Online Course Reservation System. The document also describes the nonfunctional requirements such as the user interfaces. It also describes the design constraints that are to be considered when the system is to be designed, and other factors necessary to provide a complete and comprehensive description of the requirements for the software. The Software Requirements Specification (SRS) captures the complete software requirements for the system.

1.2   Scope

The Online Course Reservation System provides students the ability to register for courses online as well as monitor their performance in assignments and tests of the courses they have registered for. It allows professors an easy way to manage all the classes that they handle, and have a clear idea of how their students in each course and class are performing, using automatically created reports. The system is supposed to have the following features:

1. The system allows Students, Professors and a System Administrator to logon to the system all day long.

2. The professors of the university will be able to create and manage courses.

3. They can set the syllabus, lesson plan and other details such as eligibility during creation.

4. They will be able to post announcements, create & collect assignments and provide resources for the course.

5. They will be able to assign grades for students for the assignments, and also for tests that may be conducted offline.

6. They will be able to generate a report for any course they are managing at any point of time.

7. The students will be able to register for courses offered by the university professors.

8. They will be able to access the course resources, submit assignments and monitor their progress in each course they take up.

9. They will be able to discuss and clarify doubts in a public forum created for each course.

10. The system administrator will have the job of maintaining the system throughout its working.

11. They will be able to approve or decline courses that have been created by professors, and will also be able to do the same to registrations made by students.

12. They will have direct access to the database as well, and can manage all the users that are registered on the system.

The features that are described in this document are used in the future phases of the software development cycle. The features described here meet the needs of all the users. The success criteria for the system is based in the level up to which the features described in this document are implemented in the system.

1.3 Overview

The SRS will provide a detailed description of the Online Course Reservation System. This document will provide the outline of the requirements, overview of the characteristics and constraints of the system.

1.3.1 Section 2: Overall Description

This section of the SRS will provide an overall description of the product with items such as Product Perspective, Product Functions, User Characteristics, Constraints, Assumptions & Dependencies and Requirements.

1.3.2 Section 3: Specific Requirements

This section of SRS contains all the software requirements mentioned in section 2 in detail, sufficient enough to enable designers to design the system to satisfy the requirements and testers to test if the System satisfies those requirements.

Overall Description

2.1   Product perspective

The Online Course Reservation System that facilitates the management of courses in a university.

The professors of the university will be able to create and manage courses. They can set the syllabus, lesson plan and other details such as eligibility during creation. They will be able to post announcements, create & collect assignments and provide resources for the course. They can also grade students and generate reports.

The students will be able to register for courses offered by the university professors. They will be able to access the course resources, submit assignments and monitor their progress in each course they take up. They will also be able to discuss and clarify doubts in a public forum created for each course.

The system administrator's role is minor in volume but vital in the entire working of the system. They have the capability to approve/decline courses created by the professors to provide human monitoring of the creating of courses, to account for many possibilities of human error. They can also deregister a student from a course if need be under some circumstances.

2.2 Product Functions

The Online Course Reservation system acts as an interface between the Students and the Professors, with minor human monitoring by the system administrator.

The major functions of The Online Course Registration System include:

1. Professors should be able to create, manage and monitor multiple courses courses that they have offered.

2. Professors should be able to post announcements, create & collect assignments and provide resources for the course.

3. Professors should also be able to grade students and generate reports.

4. Students should be able to register & monitor their performance and manage courses that they have registered for.

5. Students should be able to access the course resources, submit assignments and monitor their progress in each course they take up.

6. Students should be able to discuss and clarify doubts the public forum of the course.

7. The System Administrator should be able to approve/decline courses created by the professors

8. The System Administrator should be able to can also deregister a student from a course.

2.3 User Characteristics

The users of the system are students & professors of the university and the system administrator. The students & professors are assumed to have basic knowledge of the computers and Internet browsing. The system administrator to have more knowledge of the internals of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface, users manual, online help and the guide to install and maintain the system.

2.4 Operating Environment

The Online Course Reservation System will be implemented as a WebApp, which can be accessed using any internet browser that is up-to-date and supports the HTML5, CSS3 and JS6. It is therefore platform-independent, and can be run on any Operating System that has support from any major Web Browser such as Google Chrome, Firefox, Opera, Microsoft Edge etc.

2.5 Constraints

- The applicants require a computer with a working internet connection to access the Online Course Reservation System, access course content, submit assignments etc.

- The system must be up to date and support HTML5, CSS3 and JS6 in order for the website to render as intended and be used without any hassle.

2.6 Assumptions And Dependencies

- The users have sufficient knowledge of computers.

- The users know the English language, as the user interface will be entirely in English.

- The users have sufficient knowledge of using Google Drive Storage, since that will be used for submission of assignments.

Specific Requirements

This section describes in detail all the functional requirements.

3.1   Functionality

3.1.1   Login Capabilities

The System shall provide Login capabilities for the Students, Professors and the System Administrator at all times, except during maintenance.

3.1.2   Specifically for Students

- Course Catalog of all courses the student is eligible for. The Student should be able to sort/filter the listings

- Course Catalog of Courses that they are currently enrolled in.

- Course Registration Page where a student chooses a course and provides their details

- Course Dashboard where Announcements, Updates, deadlines for assignments and test dates are displayed. It should also have a general forum where the student can discuss with other taking the same course.

- A Course Progress Page where a student can check their attendance, marks, grades and other details that the professor has put up regarding the course.

- A general assignments & tests page, where all assignments due/overdue and upcoming tests across all courses that the student has taken should be displayed.

3.1.3   Specifically for Professors

- Catalog of all courses currently handled by them right after the login page to let them choose which course they want to manage.

- Course Creation Page, in case the professor wants to create a new Course for the upcoming Semester.

- Course Dashboard where Announcements, Updates, deadlines for Assignments and Test Dates are displayed. The professor should also be able to communicate with the students via the general forum.

- Course Assignment/Test Creation Page

- Course Report Generation Page where the professor can generate detailed reports on the performance of the students taking up his course. The report should contain details such as attendance of all the students, scores and grades of all students, statistical data such as the mean & standard deviation of the students' scores.

3.1.4 Specifically for System Administrator

- Details pages for all Professors and Students

- General Announcements Page that can be read by everyone in the System.

- Pending courses page where they can approve/decline new courses offered by Professors. They should be able to provide feedback to the professor, in case they reject the course.

3.2 Usability

- The system shall allow the users to access the system from the Internet. The system uses a web browser as an interface.

- Since all users are familiar with the general usage of browsers, no specific training is required.

- The System has a Graphical Interface and is therefore user friendly and self-explanatory.

3.3 Interfaces

The User interface of the system will include the following Pages:

1. Login page

2. General Announcements Page

3. Current Courses Page

4. Course Catalog Page

5. Course Registration Page

6. Individual Course Dashboard

7. Course Progress Page

8. Assignments & Tests Page

9. Course Creation Page

10. Assignment/Test creation page

11. Course Report Generation Page

12. Professor & Student details page