



E-Learning-Srs - srs on e learning website by mintu

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1 Introduction

1.1 Purpose

This project focuses on developing an E-learning website which provides facility to institute and students in a manner that the learning, evaluation; assessment does not remain limited to the four wall of a classroom.

This website works finding new ways to make an institute a centre of excellence in education by providing all the study material, exams available to students online.

The students belonging to different places, unable to attend regular classes get access to educational courses across wide range of programs. It provides facility to students to communicate with faculty regarding academics.

1.2 Scope

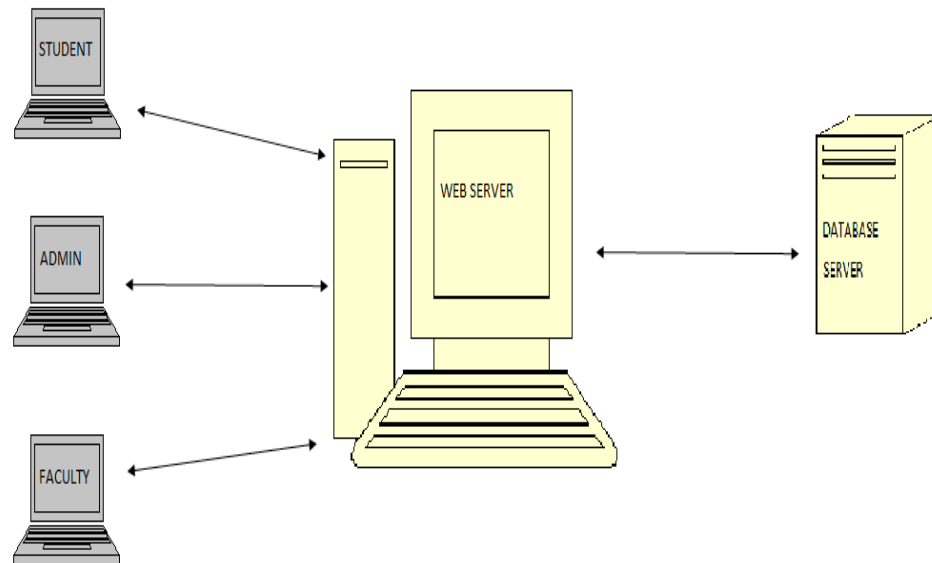
This will mainly be used by distance education programs offered by institutes, inorder to enable students to get the academic facilities from any computer connected to the Internet. This website is designed in a way that it can be easily extended to provide more features and will be easily customizable so that it can work according to every potential user.

1.3 References

IEEE - *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications*,
Computer Society, 1998.

2 Overall Description

2.1 System Architecture



2.2 User Characteristics

The system will be having 3 roles - Faculty, Student and Administrator. There will be a set of permissions associated with each role.

2.2.1 Faculty

This role enables the user to offer courses, upload lectures, set exams for courses he is offering.

2.2.2 Student

This role enables the user to register for courses, answer tests, view lectures.

2.2.3 Administrator

This role enables the user to manage users (create, edit and delete) besides performing other administrative tasks such as monitoring the system operation, editing system configuration etc.

2.3 Functional Requirements

The features of the e-learning site will be:

- It will store all data in a single centralized database. The database will contain the following information:
 1. Student details
 2. Faculty members details
 3. Students query and their solutions
 4. Courses Information
- The site will provide course study material to the students in electronic form.
- All the information including course details, fee structure and notices for students will also be displayed on the site.
- The site will be used by three different types of users: Students, Faculties, and the administrators having different interface for each type of user.
- Each user will be provided with a username and password to access his/her account on the site.
- The students can take their mock test of their course and evaluate themselves.
- The faculties can upload lectures on the site.

2.4 General Constraints

2.4.1 Technology Constraints:

Proposed web application will be implemented with Java for front end design purpose & For the database purpose, we can opt for JavaDB/Oracle.

2.4.2 Interface Constraints :

Since, this is a Web based application so it should work on major browsers like Internet explorer, Mozilla Firefox, Google Chrome, Opera etc.

2.4.3 Safety and Security Constraints :

Since, application is intended for the authenticated users only, so anonymous person should not be able to access and operate over the user data.

3 Description - System Features

3.1 Account Features

3.1.1 Obtaining User Accounts - All

When the students or faculties are enrolled in the institute, a request for new user will be provided to the administrator who will create new user account for them.

3.1.2 Creating User Accounts - Admin

Administrators will be allowed to create users. The creation will result in the user login and password to be emailed to the user at the mentioned users email account.

3.1.3 Disabling Accounts - Admin

Administrators can disable users. A account that is disabled will prevent the user from working till it is reenabled by the administrator. The administrator will inform of the same to the email address with the reason for disabling.

3.1.4 Deleting Users - Admin

Administrators can remove users entirely from the system.

3.1.5 Logging In - All

The system will allow users to login with a password if they already possess a valid account on the system. The system will protect password and other user information and ensure that it will not be viewable by others except the administrator.

3.1.6 Editing Account Information - All

Users can edit information themselves and change the password once logged in. Any change saved in the system will be confirmed via an email sent to the users email account.

3.2 Course Creation, Modification and Deletion

3.2.1 Course Creation - Administrator

Admin can set up new courses in the system and assigns the faculty for that.

3.2.2 Displaying Courses - All

The system will display list of courses offered. The system will display the details of a course to the user, when he clicks on a specific course.

3.2.3 Modifying Course Details - Administrator

Admin can modify details of the course or delete the course from the system.

3.2.4 Registering for a Course – Student

The registration process will be held at the institute.

3.2.5 Dropping a Course - Student

Dropping from the course will be done as per the rules of the institute.

3.3 Lectures, Study Material and Exams

3.3.1 Uploading Lectures - Faculty

The faculty for the course can upload lectures for a given course.

3.3.2 Viewing Lectures - Student

Students can view the lectures associated with the course.

3.3.3 Uploading Study Material- Faculty

The faculty for the course can upload the study materials, syllabus and other reference materials.

3.3.4 Downloading Study Material- Student

The students can download the study material from the site according to their courses. Student are only allowed to access the study material of their course.

3.3.5 Setting a Exam - Faculty

The system will enable a faculty to set a exam, along with specifying exam parameters like type of exam, duration, total marks.

A exam is a set of multiple choice questions. Setting a exam would imply the faculty also needs to indicate the correct choice for automated evaluation.

3.3.6 Modifying and Deleting a Exam - Faculty

The system will enable faculty to modify or delete any exam for a course that he is offering.

3.3.7 Taking a Exam - Student

The system will enable a student to take a exam for the only courses he is enrolled in. The system will display results at the end of the exam.

3.4 Feedback and Queries

3.4.1 Sending Feedback- Student and Faculty

This enables the students and faculties to provide their feedback on the services offered to them and any new ideas.

3.4.2 Viewing Feedback- Admin

This enables the administrator to view the feedback received form students and faculties.

3.4.3 Send Queries- Student

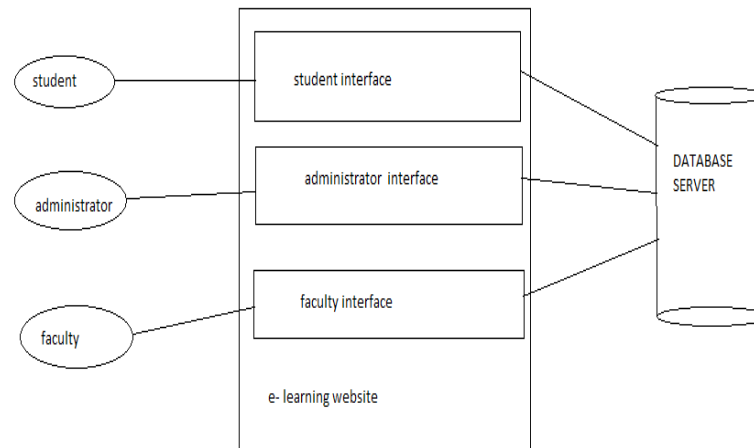
This enables the students to send queries to their respective faculty and see the answers of that.

3.4.4 Answer Queries- Faculty

This enables the faculty to answer the queries of their students. The faculties will be able to view the queries for only those courses in which they specialize.

3.5 Interfaces

The system will provide 3 different interfaces to the users based on their roles i.e. student, faculty, admin.



3.5.1 Student Interface

The interface for the student will provide the following features:-

- **Personal Information**-This enables the student to view and modify the user's personal information.
- **Access Course Material**- This enables the student to see lectures and download the study materials of the course.
- **Post Queries**- This will enable the student to send queries to their faculties and view answers to their queries.
- **Send Feedback**- This will enable the students to provide the feedback to the admin.
- **Change Password**- This enable the students to change the password for their account.
- **Taking Exam**- This enable the students to take the online automated exams on the courses they are enrolled in.

3.5.2 Faculty Interface

The interface for the faculty will provide the following features:-

- **Personal Information**-This enables the student to view and modify the user's personal information.
- **Uploading Course Material**- This enables the faculty to upload the lectures and study materials.
- **Answer Queries**- This will enable the faculties to view queries of the students and post answers for the same.
- **Change Password**- This enable the faculties to change the password for their account.
- **Creating Exams**- This enables the faculty to create an exam for the course. He will have to provide the questions and their answers , time and other details.

3.5.3 Administrator Interface

The interface for the administrators will provide the following features:-

- **Course Management**- This enables an administrator to add,delete, modify course information, such course name, duration, fee, and other details.
- **Student Management**- This enables an administrator to add, delete and block the student accounts.
- **Faculty Management**- This enables an administrator to add, delete and block the faculty accounts.
- **View Feedback**- This enables an administrator to view the feedback received from the students and faculties.
- **Post Notice**- This enables an administrator to display notices and other messages on the website.
- **Search Information**- This enables an administrator to access all the information about all the users of the system.

4 External Interface Requirements:

4.1 User Interface:

Since this is a Web based application so it should provide a very User friendly interface. It should be easy to navigate. A decent and pleasant appearance with ease of navigation should helps to users.

4.2 Software Interface:

The application should support all major web browsers that will make it convenient for the user to access our system with ease. The back- end i.e. the database services will be used to a great extent and hence it will be quite efficiently designed.

4.3 Hardware Interface:

The hardware requirement at the user end is really simple and the website can also run on the hardware that can run a basic simple browser, although the hardware should be good enough during peak times for the web servers.

5 OTHER NONFUNCTIONAL REQUIREMENTS

5.1 Performance Requirements :

The application should be able to operate on all major web-browsers with all of its fundamental functions . It should not slow-down the system even at peak hours without affecting the quality of service of the system.

5.2 Security Requirements :

- The server on which the E-learning webapplication will have its own security to prevent unauthorized *write/delete* access.
- The system should provide a secure login to the users by using advanced secure login algorithms and provide access only to the authorized users as security is the key requirement of this system.
- The user ID and the password should not be shared with anyone (students/faculty/or anyone else).