**Software Requirements Specification (SRS) document for an Online Course Website:**

**Introduction: -**

* 1. Purpose:

The purpose of this Software Requirements Specification (SRS) is to detail the functional and non-functional requirements for an online course website like Coursera. The website will provide a platform for users to access a range of courses and educational content online, with features for creating, managing, and participating in courses.

* 1. Scope:

The Online course system will cover the following features:

* Issue login ID and password to the system operators.
* Course information management (adding, updating, and deleting courses)
* View availability of desired course
* Certificate of completion
* Proper guide to complete a certain course.
* User management (adding, deleting the details of the user)
* User feedback (e.g., handling customer queries and complaints)
  1. Definitions, Acronyms, and Abbreviations:

SRS: Software Requirement Specification

Operator: Admin, staff, data entry operator

RAM: Random Access Memory

Student: A candidate enrol in a course offered by the system

System Administrator/Administrator: User having all the privileges to operate the system.

Faculty: Teaching staff from various universities

* 1. References:
* Software Engineering by K.K. Aggarwal & Yogesh Singh, New Age Publishing House, 3rd Edition, 2008. Appendix λ 439
* IEEE Recommended Practice for Software Requirements Specifications—IEEE Std. 830-1998.
* IEEE Standard for Software Test Documentation—IEEE Std. 829-1998.
  1. Overview:

An educational course website is an online platform that provides access to a variety of courses and educational content. These websites offer a range of courses, often with different levels of difficulty, and typically cover various subjects and fields of study. They may be designed for both formal and informal learning, catering to different types of learners such as students, professionals, and lifelong learners.

**Overall Description: -**

2.1 Product Perspective:

The online course system will be developed for the skill development of the students by various recognised instructors, provide courses for the same, and improve overall customer experience.

2.2 Product Functions:

The system will provide the following functions to users:

* View courses and their own time table
* Check availability and charge for the course
* Avail one or more courses
* View course details and instructor details
* Different handle for students and instructors
* Certificate on the completion of course (within deadline)

The system will provide the following functions to the administrators:

* Manage course details (e.g., adding, updating and deleting courses)
* View instructor details and give permission for course moidfications
* Manage customer queries and complaints
* Monitor the performance of the system and resolve technical issues

2.3 User Classes and Characteristics:

The system will be used by the following user classes:

* Students: individuals who want to enrol in the courses
* Instructors: individuals who can post their courses on their handle
* Administrators: authorized personnel who can manage course, user information and handle customer queries

2.4 Operating Environment:

The system will run on modern web browsers and will be compatible with popular operating systems such as Windows, macOS and Linux. The system will be optimized for both desktop and mobile devices.

2.5 Design and Implementation Constraints:

The following design and implementation constraints must be considered while developing the online course system:

* The system must be developed using secure coding practices to prevent data breaches and unauthorized access
* The system must be scalable to accommodate a large number of users
* The payment gateway integration must comply with industry-standard security protocols (e.g., PCI DSS)
* The system must be easy to use and accessible to users with disabilities (e.g., support for screen readers)
* The system must be able to handle large volume of transactions
* The system must have a backup and recovery mechanism to ensure data integrity in case of failure

**External Interface Requirements:**

3.1 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 that should be of help to the users.

3.1.1 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 enables 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.

3.1.2 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.

3.1.3 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.

3.2 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 quiet efficiently designed.

3.3 Hardware Interface:

The hardware requirement at the user end is simple and the website can also run on hardware that can run a basic simple browser, although the hardware may not work properly (overload) during peak times for the web servers.

**System Features: -**

4.1 Course Information Management:

The system should allow users to access course materials, such as videos, quizzes, readings, and assignments, and progress through the course at their own pace. Users should be able to search for and select courses based on subject, level, duration, pricing, and other criteria.

4.2 Payment Processing:

The website should allow users to have a secure payment gateway. The instructors should be to be able to get their payment for uploading courses while the students should be able to make payments for enrolling in one or more than one courses.

4.3 Assessment and feedback:

The system should provide users with regular assessments to track their progress and help them improve their understanding of the course content. The data collected from their assessments can be shown to the student in the form of graphs and their rankings. They should be able to give feedbacks to the instructor for the betterment of the courses.

4.4 User Management:

The system will store customer information in a database and will allow users to view and update their details. The system will also provide administrators with a platform to manage

customer queries and complaints.

4.5 Analytics and Reporting:

The system should provide administrators with analytics and reporting features, such as user engagement and course completion rates, to help them improve the system's effectiveness.

4.6 Customer Support and Management:

The system should provide a platform for customer support and management, allowing administrators to handle customer queries and complaints.

**Non-functional Requirements:**

5.1 Performance Requirements

* The system must respond to user requests within 3 seconds
* The system must be able to handle at least 500 concurrent users
* The system must be able to process at least 100 transactions per second

5.2 Security Requirements:

The system must comply with industry-standard security protocols (e.g., PCI DSS)

The system must use encryption for sensitive data (e.g., passwords, payment information, etc.)

5.3 Usability Requirements:

The system must be user-friendly and intuitive, with clear and concise navigation

The system must be accessible to users with disabilities, following accessibility standards (e.g. WCAG)

5.4 Reliability Requirements:

* The system must have 99.5% uptime
* The system must automatically recover from crashes and errors
* The system must have backup and recovery procedures in place

5.5 Scalability Requirements:

The system must be scalable to accommodate growth in users and data

The system must be easily deployable in different environments (e.g., cloud, on-premises, etc.)

5.6 Technical Requirements:

* The system must be developed using a modern web development framework (e.g. Django, etc.)
* The system must be compatible with popular web browsers (e.g. Chrome, Firefox, etc.)

The system must be optimized for both desktop and mobile devices