**Software Requirement Specification (SRS)**

**for**

**Online Course Management System (OCMS)**

1. **Purpose :**

* This document is meant to delineate the features of OCMS, so as to serve as a guide to the developers on one hand and a software

validation document for the prospective client on the other.

* The Online Course Management System(OCMS) for college web application is intended to provide complete solutions for students as well as faculties through a single gateway using the internet.
* It enables faculty to give assignments, check assignments, assign grades as per assignment solution and mark attendance of student.
* In students module, they have to complete assignment before due date and submit it.
* Also they can check their grade report, attendance report, notice board, daily timetable and fine(penalty).
* The students and faculties can interact with each other using discussion forum.

1. **Scope :**

* This system allows faculty to give the assignments and due date for that assignment and marks attendance of each student.
* Students should submit those assignments before due date otherwise they will have to pay a fine.

1. **Definitions :**

OCMS – Online Course Management System

SRS – Software Requirement Specification

GUI – Graphical User Interface

Portal – Personalized Website

RDBMS – Relational Database Management System

Clusters – Group of independent servers

1. **Overview :**

* This System provides an easy solution to students and faculty to submit assignments and check assignments online.
* Also provides solution to mark and check attendance online.

1. **Additional Information :**

* The system work on internet server, so it will be operated by any registered student and faculty for assignment submission purpose with secure platform.
* This system protects the integrity of the students and faculties data and provide easy solution for assignment submission and attendance management.

1. **General Description :**

* The Online Course Management System helps to submit and check assignments easily without any paperwork.
* Also gives facilities for marking attendance, daily timetable, notice board and pay penalty.

1. **Functional Requirement :**

This section provides requirement overview of the system. Various functional modules that can be implemented by the system will be-

**Description :**

* Registration if student wants to submit the assignment using this portal then he/she must be registered, Unregistered users are not allowed.
* Faculty also needs to be register for assigning the assignments, for checking, and for marking the attendance.
* Students, faculties and admin can logins to the system by entering valid user id and password.
* Faculty can assign assignments and give the due date and marks for that assignment.
* Faculty can upload the study material of particular course.
* Also faculty can mark attendance of each student for particular course.
* Students get email of that assignment on same day when faculty assigned that assignment and also get email one day before due date.
* Students can submit the assignments before due date otherwise they will have to pay fine.
* Students can download the study material provided by faculty.
* Also students get email of grade report and attendance report.
* Admin generates student grade report, attendance report, daily update the timetable and notice board.
* Students and faculties can interact with each other using discussion forum.
* After all work done students, faculties and admin can logout from the system.
* The term client/server refers primarily to an architecture or logical division of responsibilities, the client is the application (also known as the front-end), and the server is the RDBMS (also known as the back-end).
* A client/server system is a distributed system in which, Some of the sites are client sites and others are server sites.
* All the data resides at the server sites.
* All applications execute at the client sites.

1. **Technical Issues :**

* This system will work on client-Server architecture. It will require an internet server.
* The system should support some commonly used browser such as Chrome etc.
* Interface Requirement contains various interfaces for the course could be
* There will be a screen displaying login form and registration form.
* After login the student may select the different options which will be open in another screen as

1. Course Section

2. Syllabus

3. Study Material

4. Assignment

5. Discussion Forum

6. Marks

7. Attendance

8. Fine

9. Timetable

10. Notice Board

* After login the faculty may select the different options which will be open in another screen as

1. Course Section

2. Syllabus

3. Upload Study Material

4. Check Assignment

5. Assign Grade

6. Discussion Forum

7. Mark Attendance

8. Timetable

9. Notice Board

10. Search Student

* After login the admin may select the different options which

will be open in another screen as

1. Add Student
2. Add Faculty
3. Generate Report

4. Grade Report

5. Attendance Report

6. Update Timetable

7. Update Notice Board

1. **Hardware Interface :**

Hardware requirements for insurance on internet will be same for

both parties which are as follows:

* Processor :- Dual Core
* RAM :- 2 GB
* Hard Disk :- 256 GB
* NIC :- For each party

1. **Software Interface :**

* Operating System :- Windows 7/8/8.1/10
* Java Development Toolkit

1. **Performance Requirement :**

* In order to maintain an acceptable speed at maximum number of uploads allowed from a particular student as any number of users can access to the system at any time.
* Also the connections to the servers will be based on the

attributes of the user like his location and server will be working 24X7 times.

1. **Design Constraints :**

* This system should be developed using Standard Web Page

Development Tool, which conforms GUI standards such like HTML, XML, JSON etc.

* The system should support various RDMS and Cloud

Technologies.

1. **Non-Functional Requirement :**
2. **Security :**

* The System use SSL (Secure Socket Layer) in all sections that include any confidential customer information.
* The system automatically logout all users after a period of inactivity.
* The system does not leave any cookies on the users computer containing users password.
* The system's back-end servers are only accessible to authenticated administrators.
* Sensitive data will be encrypted before being sent over insecure connections like internet.
* The proper firewalls are developed to avoid intrusions from the internal or external sources.

1. **Reliability :**

* The system provides storage of all databases on redundant computers with automatic switchover.
* The main pillar of reliability of the system is the backup of the database which is continuously maintained and update to reflect the most recent changes.

1. **Availability** :

* The system is available at all times means the user can access it using web browser, only restricted by the down time of the server on which the system runs.
* In case of a hardware failure or database corruption, a replacement page is shown.
* Uptime : It mean 24 \* 7 availability

1. **Maintainability :**

* A commercial database is used for maintaining the database and application server takes care of the site.
* The maintainability can be done efficiently.

1. **Portability :**

* The application is HTML and scripting language based (JavaScript). So the end user part is fully portable and any system using any web browser should be able to use the features of the system, including any hardware platform that is available or will be available in the future.
* An end-user is used this system on an OS; it is Windows.
* The System runs on PC, Laptops and PDA.etc.
* The technology is transferable to different environments easily.

1. **Accessibility :**

* Only registered users are allowed to submit and check assignments after authentications.
* Only GUI access of the system is permitted to end users.

1. **Policies :**

* The system adheres to all the legal formalities of the particular countries.
* The system maintains security related to sensitive data.

1. **Efficiency :**

* The system provides good throughput and response to multiple users without burdening the system by using appropriate number of servers.

1. **Safety :**

* Software does not harm ethical and environmental conditions of the end users machine.

1. **Modularity :**

* The system have user friendly interface.
* It is easily updated, modified and reused.