Software Requirements Specification

for

College Management System

Version 1.0

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8 Sept 2018

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1. <u>**Introduction**</u>

1.1 **Purpose**

- This document is the Software Requirement Specification (SRS) for the College Management System for College (CMS) project .The purpose of this document is to describe the functionality, requirements and general interface of the CMS.

1.2 **Intended Audience and Reading Suggestions**

- This document describes the product and its requirements and constraints. It provides a description of the project targeted towards external audiences. This section includes information such as data requirements, functional requirements, and a general description of the product and its interaction with users from the perspective of the client. Section 3 provides specific technical requirements as the team understands them at this time and is intended for an internal audience. This section includes information such as external interface requirements, performance requirements, and any other technical requirements needed to design the software.

1.3 **Product Scope**

- The main aim of this project is to develop an online web application which covers all the details of college i.e; Student attendance details, Event details, Marks details, etc. Admin is the Superuser of this project. All the record stores in MySQL Database. The proposed software will also reduce the cumbersome paperwork, manual labour as well as communication cost.

2. **Overall Description**

2.1 Product Perspective

- The product will be a standalone web application and can run on multiple systems through an internet network. The product will require a keyboard, mouse and monitor to interact with the users. The minimum hardware requirements for the product are specified in this document.

2.2 Product Functions

- Access/ Search information.
- The system should have a login.
- Students can give feedback on college/staff/any other student.
- An admin login should be present who can read as well as remove any uploads.
- The administrator governs the working of the system.
- The staff can view the student's details.
- The students can view their marks/attendance/exam schedules.
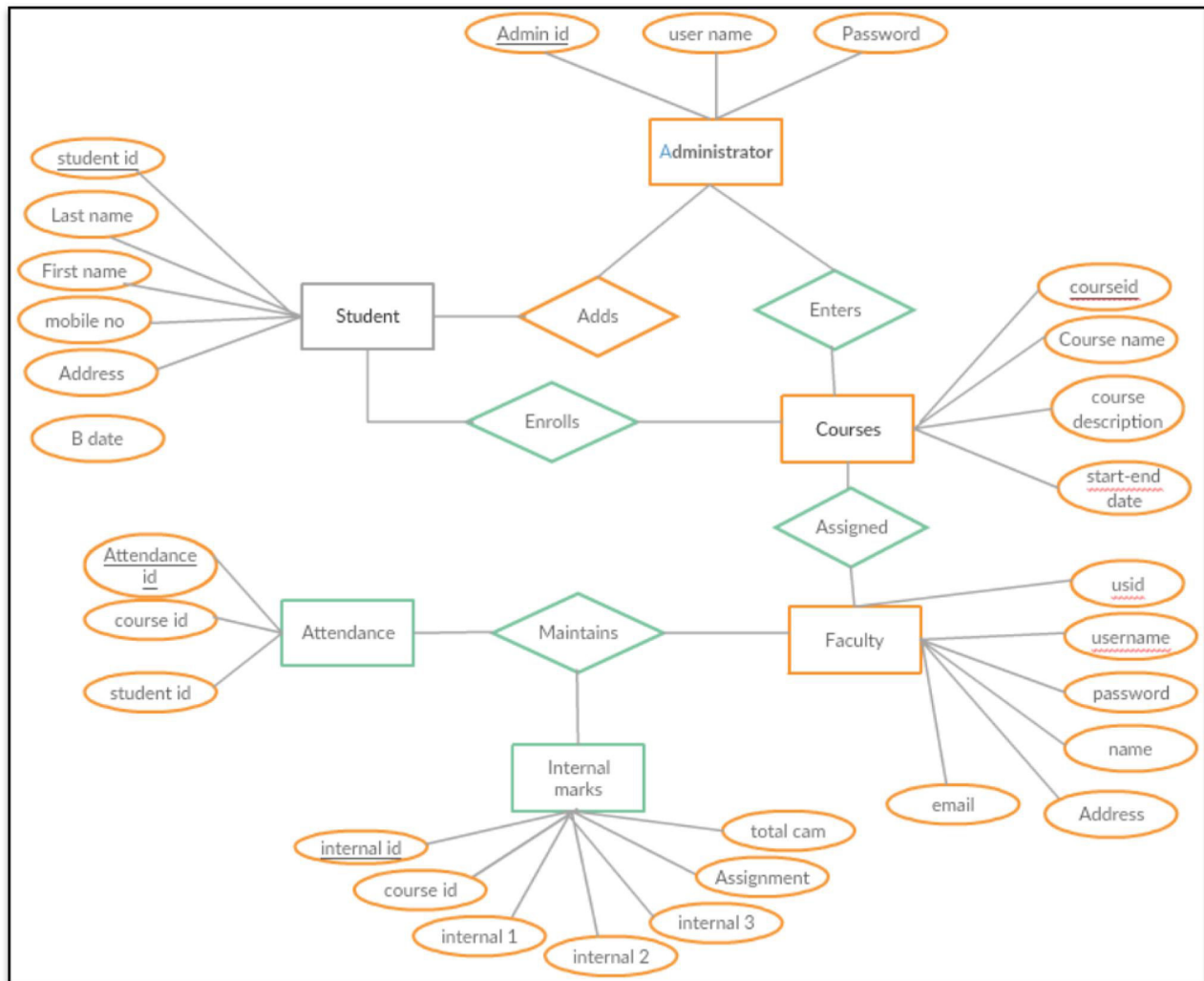- The system should have help feature.

2.3 Operating Environment

- ➢ Operating environment for the college management system is as listed below:
- Client/Server system
- Operating system: Windows.
- Database: MySql
- Platform: PHP

2.4 Database Schema

> ➢ The database schema of College Management System is shown in the Entity Relationship Diagram below:

3. **External Interface Requirements**

3.1 User Interfaces

- Front-end Languages: HTML, CSS, Javascript

- Back-end Languages: PHP, SQL

3.2 Hardware Interfaces

- Windows OS

- A browser which supports HTML & JavaScript.

- A working internet connection.

3.3 Software Interfaces

Software used		Description
• Operating system	**:**	We have chosen <u>Windows</u> operating system for its best support and user friendliness.
• Database	**:**	To save the data related to admin, faculty, student and college we have chosen <u>MySql</u> Database

4. **System Functionalities**

> ➤ College Management System will have the following modules:-

- Admin
- Faculty
- Student
- Parents

4.1 **Admin Module:**

- Admin can add or delete a new course in college's courses.
- Admin can add or delete the new branch in particular course according to student study and requirement.
- Admin can add and delete (manage) the seats in particular branch, means admin can set number of seats in any branch of any courses.
- Admin can set the criteria for the admission of student.
- Admin can enter the Roll no of a particular student if he wants to see the full profile of student.
- Admin can change bio data and profile of any student.
- When any student registers for admission in the college, admin will check the qualification for the course opted by student and check that there is a seat available in that particular branch or course.
- If the student is given admission then admin give a unique Student Id & Password for student and a unique Parents Id & Password for parents.
- Admin can see the attendance of all students year wise, branch wise or roll no. wise. And admin can update and modify the attendance of all branches students. If admin has any issue regarding attendance of particular student then admin can be send a notice in student account and parents account.
- If admin wants to give any notice to all students or to a particular student then admin can send a message or notice to student(s) account.

- Admin can update the calendar for students about the midterms, practical and final exam dates.
- Admin can update the time-table about the class's time, subject and days.

4.2 Faculty Module:

- Faculty can enter the Roll no of a particular student if he/she wants to see the full profile of student.
- Faculty can change bio data and profile of any student of their batch.
- Faculty can see the attendance of their batch and can update and modify the attendance of their batch students only. If faculty has any issue regarding attendance of particular student then the faculty can send a notice in student account and parents account.
- If faculty wants to give any notice to his/her batch students or to a particular student then faculty can send a message or notice to student(s) account.

4.3 Student Module

- Student will require a unique User ID and Password to login, which will be given at the time of admission.
- Student can register/apply for the admission process.
- Student can see the full profile of themselves and can request for any change or update(if required)
- Student can see their attendance, marks, assignments submitted.
- Student can ask their queries about any subject to the related faculty.
- Student can submit their leave application to their faculty in-charge.
- Student can directly contact the Admin/HOD to complain about any faculty, student, other staff or facilities in college.
- Student can see the notices uploaded by faculty or admin.

4.4 Parents Module

- Parents can see the attendance of their child.
- Parents can take feedback about their child's performance from the faculty in-charge.
- Parents can see the notices uploaded by admin.
- Parents can also directly contact the Admin/HOD to complain about any faculty, student, other staff or facilities in college.

5. <u>**Other Nonfunctional Requirements**</u>

5.1 Performance Requirements

➢ **Database Normalization**
  - Database normalization is the process of restructuring a relational database in accordance with a series of normal forms in order to reduce data redundancy and improve data integrity..
  - A fully normalized database allows its structure to be extended to accommodate new types of data without changing existing structure too much.

5.2 Safety Requirements

➢ The most important part of the College Management System is the database and safety of the database is the top most priority. The database can be secured by using security controls:
  - Access control.
  - Authentication.
  - Encryption.
  - Backups.

5.3 Software Quality Attributes

- **Availability**

  The CMS should be always available for use at any given time.

- **Security**

  The main security concern is for users account hence proper login mechanism should be used to avoid hacking. Every user will be required to login with proper credentials to access the desired data, this prevent unauthorized access to the data.

- **Usability**

  As the system is easy to handle and navigates in the most expected way with no delays. In that case the system program reacts accordingly and quickly to the commands of user.

6. Conclusions

The College Management System is developed to replace the existing system with a web application based system. This will make the process paperless. The CMS can be monitored and controlled remotely. It reduces the manpower required to maintain and manage large amount of data. It provides accurate information always. Malpractice can be reduced. All gathered and extra information can be saved and can be accessed at any time. The data which is stored in the project helps in taking intelligent and quick decisions by the college management. So it is better to have a Web-Based College Management System. All the Admins, faculties, staff members and students can get the desired information without delay. This system is essential in the every college for effective management.

Glossary

1. HTML   :   Hypertext Markup Language

2. CSS   :   Cascading Style Sheet

3. PHP   :   Hypertext Preprocessor

4. CMS   :   College Management System

5. SQL   :   Structured Query Language

6. OS   :   Operating System