SOFTWARE REQUIREMENT SPECIFICATION

**Assignment No: 1**

**Title:** Write Software Requirement Specification (SRS) for College Association Management (CAM)

**Date:** 23 August 2022

**Remark:** The SRS document typically includes a detailed description of the software product, its purpose, and the intended audience. It outlines the functional requirements of the software, including its features, interfaces, and interactions with other systems. The SRS would identify the specific requirements of college associations, such as membership management, event management, communication tools, and financial management. The document would include a detailed description of the software product, its purpose, and the intended audience, as well as the functional requirements, including the features, interfaces, and interactions with other systems.

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**Aim:**

The aim of SRS is to specify the software product in detail. In other words, it contains all necessary and important information that the product team should be aware of in order to create the software.

**Problem Statement:**

A college has different student associations like sports, literary, science club etc. A student can login to the college website, look at the various available associations and choose one of them to join. All the associations expect you to be a valid student first. The joining process could be different for different associations for example, the sports association expects you to undergo a fitness test too. The associations organize various events. A member can register for the event online for free. Nonmembers need to pay nominal fees by credit card to register and in either case one gets a confirmation of registration of the event. The registration information needs to be passed onto the activity that sends the email confirmations.

**Objective:**

* To understand different sections of Software Requirement Specification (SRS).
* To understand functional requirements of the system
* To understand performance requirements of the system
* To apply design constraints and appropriate validation on the system

**Theory:**

A Software Requirement Specification (SRS) document usually contains a software vendor’s understanding of a customer’s software requirements. This document ensures that the software vendor and the customer agree as to the features required in the software system being built. SRS is created after the initial requirement elicitation phase in which a software vendor interacts with the customer to understand the software needs. Usually, SRS documentation is prepared by a business analyst who has some technical background.

**1. Introduction**

**1.1 Purpose**

The purpose of our project is to have a better understanding of the college website management. It consists of all the statistics regarding the college like faculty, issue return kit, club particulars and events and a student portal consisting of examination details, fee structure, attendance, and result information.

**1.2 Scope of Development Project**

The College Management System is the ultimate solution to digitize and streamline the day-to-day operations of colleges and universities. From student enrolment system to admission management and online classes management to finance management and human resource management, as well as every other process of college operations. It also digitizes routine work of the campus such as student attendance management system, student record management system, student profile management system, student record keeping system, student mark management system, student fee management, and other small and big operations. The approach of college ERP software has several benefits. It has one username credential for all the processes connected to that college. In addition, it analyses the captured data in different modules within the software.

The college management system is a new version of the Management Information System, or MIS – a tool used to collect college operations data and analyze. Management uses this data to make informed decisions.

The software contains the functionalities of the student information system as well as the management information system. It manages the complete student lifecycle, parent, as well as faculty in the college. It also manages the academic, administrative, and fee management and all other financial activities of a college.

**1.3 Definitions, Acronyms and Abbreviations (Put it in table format)**

CAM – College Association Management

SRS - Software Requirement Specification

**1.4 List of Stakeholders**

* Staff
* Student
* Admin
* Event Head

**1.5 References**

* Books
* Software Requirements and Specifications: A Lexicon of Practice, Principles and Prejudices (ACM Press) by Michael Jackson.
* Software Requirements (Microsoft) Second Edition by Karl E. Wiegers.
* Software Engineering: A Practitioner’s Approach Fifth Edition by Roger S. Pressman.
* Websites
* https://en.wikipedia.org/wiki/Software\_requirements\_specification

**2. Overall Descriptions**

**2.1 Product Perspective**

Architecture Diagram of Library Management System

This is a broad level diagram of the project showing a basic overview.

**2.2 Product Function**

CAM is the complete enterprise solution for higher institutions. Colleges & universities looking to automate their Academic and Administrative processes. This comprehensive suite streamlines the complete student life cycle from Enquiry to Graduation as well as administrative processes such as Inventory, Hostel, Library, Human Resources etc. ERP impacts all the functions & departments and removes manual intervention as far as possible, making execution of processes smooth and leading to increased efficiency and greater control on the system. This software is designed keeping in mind the different operations of a college. Our team understands that for any college to function their administrative processes plausibly, should and must opt for CAM for the following reasons.

**2.3 Operating Environment**

The CAM is expected to be deployed in a real environment to manage the DBMS inside the college. The centralized database is used to store the information. The user only within the college (members of college staff) can use this management system. Users outside of the college cannot access the management system. This application is developed for Windows operating systems that can be run on Windows XP and above.

**2.4 Development Environment**

**Software Configuration: -**

This software package is developed using java as front end which is supported by sun micro system. Microsoft SQL Server as the back end to store the database.

Operating System: Windows NT, windows 98, Windows XP

Language: Java Runtime Environment, Net beans 7.0.1 (front end)

Database: MS SQL Server (back end)

**Hardware Configuration: -**

Processor: Pentium(R) Dual-core CPU

Hard Disk: 40GB

RAM: 256 MB or more

**2.5 Data Requirement**

**User details**

The inputs consist of the query to the database and the output consists of the solutions for the query. The output also includes the user receiving the details of their accounts. In this project the inputs will be the queries as fired by the users like signing into an account. Keeping an accurate database of all members, club panels, notifications and regular alerts on college activities, fee payment, attendance, result information and all items is necessary as it would improve the overall productivity of the CAM.

**3. External Interface Requirement**

The purpose of this section is to identify and document interfaces and interaction of the software with external entities in detail. The software provides a good graphical interface for the user and the administrator can operate on the system, performing the required task such as create, update, and view the details of the student.

**3.1 Functional requirements**

Functional requirements are the following:

1. The primary function of the CAM web server is essentially to save the whole system information sequentially into the database server. It would allow an individual to register and access any piece of information at any time BUT all the associations expect you to be a valid student first.
2. The CAM should allow the administration department to access the whole system environment and that can be modified as per their needs.
3. The architecture of CAM is made easy so that any member can login into the system and use the functions.
4. A student can witness its individual performance in academics briefing about the timetable, attendance, syllabus and faculty along with sports and extracurricular activities.
5. The data related to payments like fee receipt and fee dashboard will give proper updates regarding an individual’s profile.
6. Based on the interest of a student, CAM will display the happening events of various growing clubs. A member can register for the event online for free. Non-members need to pay nominal fees by credit card to register and in either case one gets a confirmation of registration of the event.

**4. System Features**

The users of the system should be provided the surety that their account is secure. This is possible by providing: -

* User authentication and validation of members using their unique member ID
* Proper monitoring by the administrator which includes updating account status and keeping an eye on the student’s overall performance.
* Proper accountability which includes not allowing a member to see other member’s account. Only administrator will see and manage all member accounts

**5. Other Non-functional Requirements**

**5.1 Performance Requirement**

The proposed system that we are going to develop will be used as the Chief performance system within the different campuses of the university which interacts with the university staff and students. Therefore, it is expected that the database would perform functionally all the requirements that are specified by the university.

* The performance of the system should be fast and accurate
* Admin Management System shall handle expected and unexpected errors in ways that prevent loss in information and long downtime period. Thus, it should have inbuilt error testing to identify invalid username/password
* The response should be fast enough to avoid users’ response collisions

**5.2 Safety and Security Requirement**

* System will use secured database
* Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
* System will have different types of users and every user has access constraints
* Proper user authentication should be provided

**Conclusion:**

In this assignment the major sections of a typical Software Requirement Specification (SRS) document are studied.