SOFTWARE REQUIREMENTS SPECIFICATION (SRS) FOR STUDENT INFORMATION MANAGEMENT SYSTEM

1. INTRODUCTION

The student management system can handle all the details about a student. The details include college details, course details, student personal details, academic details etc., the student management system is an automated version of manual student management system.

1.1 PURPOSE

This SRS Document contains the complete software requirements for the Online Student Information Management System (OS I MS) and describes the design decisions, architectural design and the detailed design needed to implement the system. It provides the visibility in the design and provides information needed for software support. New reliable and fast school/college management software with the great customers support. It'll help you with your daily school/college management routines.

1.2 SCOPE

Online Student Information Management System is developing for general purpose and used to replace old paper work system and PUMS. OSIMS is to build upon the existing information system PUMS in order to efficiently provide student information to teachers and school/college administration. This increase in efficiency of result making, provide result to parents, give feedback to student, finally, publication and email student result. It provides a mechanism to edit the student information form which makes the system flexible.

1.3 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

OSIMS - Online Student Information Management System

PUMS - Project Units Management System

SRS - Software Requirements Specification

OS - Operating System

1.4 REFERENCES

(a)https://www.scribd.com/doc/48111565/Software-Requirements-Specification-for-online-st

udent-management-system.

(b) 'Software Engineering' by K.K. Aggarwal & Yogesh Singh, New Age Publishing House, 2nd Ed.

(c) IEEE Recommended Practice for Software Requirements Specifications – IEEE Std 830-1998.

(d) IEEE Standard for Software Test Documentation – IEEE Std. 829-1998.

2. OVERALL DESCRIPTION

The student management system allows authorized members to access the records of academically registered students. It can be used in various educational institutes across the globe and simplifies working of institutes.

2.1. Product Perspective

The proposed system shall be developed using client/server architecture and be compatible with Microsoft Windows Operating System. The front end of the system will be developed using Visual Basic 6.0 and backend will be developed using MS SQL Server 2000.

2.1.2. User Interfaces

The ONSMS will have following user-friendly and menu driven interfaces

a) Login: to allow the entry of only authorized users through valid login Id and password.
b) School/college Details: to maintain school/college details.
c) Programme Details: to maintain programme details.
d) Scheme Details : to maintain scheme details of a programme.
e) Paper Details: to maintain paper details of a scheme for a particular programme
g) Faculty Details : to maintain the faculty details.

2.1.3. Hardware Interfaces

a) Screen resolution of at least 640 x 480 or above.
b) Support for printer (dot matrix, deskjet, laserjet)
c) Computer systems will be in the networked environment as it is a multi-user system.

2.1.4. Software Interfaces

a) MS-Windows Operating System
b) Microsoft Visual Basic 6.0 for designing front-end
c) MS SQL Server 2000 for backend
d) PLATEFORM : JAVA LANGUAGE
e) INTEGRATED DEVELOPMENT ENVIRONMENT(IDE):ECLIPSE

2.1.5. Communication Interfaces

Connections to the system will be over TCP/IP connection.

2.1.6. Memory Constraints

At least 512 MB RAM and 500 MB space of hard disk will be required to run the software.

2.1.7. Site Adaptation Requirements

The terminal at client site will have to support the hardware and software interfaces specified in the section 2.1.3 and 2.1.4 respectively.

2.2. PRODUCT FUNCTIONS

The ONSMS will allow access only to authorized users with specific roles (System administrator, Faculty and Student). Depending upon the user's role, he/she will be able to access only specific modules of the system.
A summary of major functions that the URS will perform

- A login facility for enabling only authorized access to the system.
- System administrator will be able to add, modify or delete programme, school/college, scheme, paper and login information.
- Students will be able to add/modify his/her details and register for papers to be studied in the current semester.
- System administrator/Faculty will be able to generate reports.

2.3. USER CHARACTERISTICS

- Qualification: At least matriculation and comfortable with English.
- Experience: Should be well versed/informed about the registration process of the university.
- Technical Experience: Elementary knowledge of computers

2.4. CONSTRAINTS

- There will only be one administrator.
- The delete operation is available only to the administrator. To reduce the complexity of the system, there is no check on delete operation. Hence, administrator should be very careful before deletion of any record and he/she will be responsible for data consistency.

2.5 ASSUMPTIONS AND DEPENDENCIES

- The login Id and password must be created by system administrator and communicated to the concerned user confidentially to avoid unauthorized access to the system.
- It is assumed that a student registering for the subsequent semester has been promoted to that semester by the university as per rules and has paid desired university fee.
- Registration process will be open only for specific duration.

2.6 APPORTIONING OF REQUIREMENTS

Not Required

3.1.1 Hardware Interfaces

As stated in Section 2.1.3

3.1.2 Software Interfaces

As stated in Section 2.1.4

3.1.3 Communication Interfaces

Connections to the system will be over TCP/IP connection.

3.2 FUNCTIONAL REQUIREMENTS

3.2.1 Log in Module (LM)

User (admin, student and teachers) shall be able to load the Login Module in the internet browser. The LM shall support the user to log into the system. The login panel shall contain fields to contain a user name and a field for password. The password field shall be masked with symbols when the user types. It shall also contain a button labeled as Login. When the user clicks on Login button the username and password will be verified by database administrator and then only the user will able to use the system functions.

3.2.2 Registered Users Module (RUM)

After successful login, user shall be able to continue navigating through the website and view school/college detailed information. After successful login, user (admin, student and teachers) shall be able to update and maintain their profile, such as changing password and personal details.

3.2.3 Normal Users Module (NUM)

Users who visit SMS but have not registered, are able to navigate through the system. Users shall be able to view currently held events & upcoming institute schedule. Users shall be able to view school/college timings and their faculties information. Users are able to register themselves as registered users, by clicking on the register now button.

3.2.4 Administrator Module (AM)

After successful login, system shall display administrative functions. Administrative functions shown shall be add and update. When administrator clicks on the add button, system shall display a section where administrator can add new student details, remove unused student details and many more. When administrator clicks on update button, system shall display a section where administrator can update student details and schedule of lecture which are currently stored

in the database. When administrator adds, updates or delete and entry, the AM module will send the request to the Server Module which will do the necessary changes to the DB.

3.2.9 Server Module (SM)

SM shall be between the various modules and the DB. SM shall receive all requests and format the pages accordingly to be displayed. SM shall validate and execute all requests from the other modules

4. Non-functional Requirements

Non-functional requirements may exist for the following attributes. Often these requirements must be achieved at a system wide level rather than at a unit level. State the requirements in the following sections in measurable terms (e.g., 95% of transaction shall be processed in less than a second, system downtime may not exceed 1 minute per day, etc.).

4.1 Performance

The system and the server must be capable of handling the real-time error functionality occurs by the defined users. In addition, the system must be safety critical. All failures reported by the server side must be handled instantaneously to allow for user and system safety.

4.2 Reliability

The system is safety critical. If it moves out of normal operation mode, the requirement to drop or down the server and fix it as soon as possible and open it again. This emergency behaviour shall not occur without reason.

4.3 Availability

When in normal operating conditions, request by a user for system shall be handled within 1 second. Immediate feedback of the systems activities shall be communicated to the user.

4.4 Security

There shall be a strong security mechanism should be place in the server side of the system to keep unwanted users to hack or damage the system. However, all users of the system give and store the details of privacy related to personal information and many other.

4.5 Maintainability

There shall be design documents describing maintenance of the software and database used to save the user details as well as the daily updated and modification done in system. There shall be an access on the control system by the admin to be maintained it properly at the front end as well as at back end.

4.6 Portability

There is portability requirement as far as our system is concern because it is an online as well as offline (local server based) system so we can access it from anywhere through the internet connection. And we have to maintain the copy of stored data into our database.