Software Requirement

Specification

**1. Introduction:**

A development process consists of various phases ends with the predefined output. The main reason for having a phase’s development is to break the problem of developing the software into set of phases, each handling a different concern of software development.

**2. Meaning and definition:**

The SRS is a document that completely describes what the proposed software should do without describing how the software will do it. The basic goal of the requirement phase is to produce the SRS, which describes the complete external behavior of the proposed software. The following subsections of the Software Requirements Specifications (SRS) document provide an overview of the entire SRS.

This SRS document also describes the structure of database. The basic

Purpose of SRS is to bridge the communication gap between the clients, the end users and the software developers. However, in general we say that any problem solving in software consist of following steps.

* Requirement specification for understanding and clearly starting the problem.
* Designing for deciding a plan for solution.
* Coding for implementing the planned solution.
* Testing for verifying the problem.
* The main advantages of SRS:
* An SRS establishes the basic for the agreement between the client and the supplier on what the software product should do.
* An SRS provides a reference for validation of final products.
* A high quality SRS is a prerequisite of final products.
* A high quality SRS is a prerequisite to high quality software.
* A high quality SRS reduces the development cost.

3. Purpose:

The purpose of the project is to provide online facility to Institutes to conduct online exams and to Students to give online exams. Institutes can enter and edit the questions along with the students list. Also they can view the result. Students can login and give their respective exams and view their score then and there. Others can view sample papers to get look and feel of the online examination system.

**4. Scope:**

The website to conduct online examination is “OnlineExams4U”. This

Website provides facility to institutes to conduct online exams by providing a unique id to each institute. The institute provides questions along with positive and negative marks. Institute also enters the list of eligible students. All the information entered can be later edited by the institute. In turn student can login with their id, name and institute id to give the exams and can view their result then and there. Institutes can also view the result of their students.

**5. Definitions, Acronyms and abbreviations:**

This program is a menu driven program. When we click the menu options the different forms will be enabled.

The program consists of the following menus:

**Home**:

This Page will bring you back to the Home page.

**About:**

This page will be displaying about our website, and also it will explain how to write exam and view reports.

**Login:**

1. **Admin Login:** This page is used to admin login, and admin can add student details, course details, teacher details, subject details, question and answer details, and he can view all the reports like students report, student marks reports etc….
2. **Student Login:** This page is used to student login, once the student logged into this site, then he can write an exam, also he can view his old exam reports.

**6. References:**

This web application has been prepared on the basis of discussion with Team members, faculty members and also taken information from following books

& website

Websites:

4) www.4tests.com

5) www.thinkexam.com

**7. Overall Description:**

In Online examination system institute can register to conduct an online test and view the records later. Students can give the test and their respective records, which include their marks for each test given by them, will be maintained separately. No student can take a particular exam more than once.

**7.1. Product perspective:**

The main modules of the project “ONLINE EXAMINATION SYSTEM” is:

* Login
* Accounts
* Course
* Examination
* Dashboard
* Question Bank
* Result

**7.2. Product function:**

The website will allow access only to authorized users with specific roles (Administrator- maintains the website, Institutes-Register to conduct the exams, Students-Give the exams online) A summary of the major functions that the website will perform:

a. Provide facility to institutes to register to conduct an online test.

b. Institutes can enter the number of questions, +ve, -ve marks, questions and answers and the list of eligible students.

c. Students can login and give the tests.

**7.3. User Characteristics:**

a. Educational level: Users should be comfortable with the English Language.

b. Experience: Users should have prior information regarding the online examinations.

c. Skills: Users should have basic knowledge and should be comfortable using general purpose applications on computers.

**7.4. General Constraints:**

\* Since the DBMS being used is Microsoft SQL server 2008, which is not a very popular DBMS, it will not be able to store a very huge number of records.

\* Due to limited features of DBMS being used performance tuning features will not be applied to the queries and thus the system may become slow with the increase in number of records being stored.

\* An extra security as SSL must be used to secure the marks details and other examination information.

**7.5. Assumptions and Dependencies:**

Full working of OES is dependent on the availability of Internet connection.

**Assumptions:**

In general it has been assumed that the user has complete knowledge of the system that means user is not a naïve user. Any data entered by him/her will be valid. To make the software as user friendly as possible but at the same time keeping in minds user requirements.

Server OS should be Windows NT/2000/XP.

Client PC should be Windows 9X/NT/WorkStation or Windows 2000 with latest service pack.

**Dependencies:**

It depends that the one should follow the international standards for the generating the User ID & should fill the related information in the proper format.

**8)Specification Requirements:**

This section contains all the software requirements at a level of details, that when combined with the system context diagram ,use cases, and use case descriptions, is sufficient to enable designers to design a system to satisfy those requirements and testers to test that the system satisfies those requirements.

**8.1. Functional Requirements:**

1. **Login Module:** In this module user can login to the website by entering login ID and password. After Login the system links to Profile page.
2. **Accounts Module:** The module maintains the details for each student as well as provides a facility for editing the student details and the students can change their own passwords in this module if required.

**c. Course module:** In this module we can add course details and subject details of the course. One course contains 4 to 8 subjects.

**d. Examination Module:** In this module students can take the exam and submit the answers. The system can automatically create exams by randomly choosing questions from question database.

**e. Dashboard module:** Only Administrator and Examiner can access this module. Here administrator or examiner can view student details, Marks report, examination report, etc

**f. Question Bank Module:** Questions bank will have a program to add, modify and delete questions from subject. Here Examiner can upload questions and setting mark schemes and test duration.

**i. Results module:** In this module students and examiners will get instant results. Results can also be printed as soon as the test finishes.

**8.2 .External Interface Requirements:**

**8.2.1.User Interfaces:**

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above. No user would be able to access any part of the application without logging on to the system.

**8.2.2. Software interfaces:**

* **Client Side:** .HTML, Web Browser, Windows XP/2000/Vista
* **Web Server:** .HTML, Windows XP/2000/Vista

**8.2.3. Hardware interfaces:**

**Server Side:**

* Operating System: Windows 9x/xp ,Windows ME
* Processor: Pentium 3.0 GHz or higher
* RAM: 256 Mb or more
* Hard Drive: 10 GB or more

**Client side:**

* Operating System: Windows 9x or above, MAC or UNIX.
* Processor: Pentium III or 2.0 GHz or higher.
* RAM: 256 Mb or more

**8.2.4. Communication Interfaces:**

The Customer must connect to the Internet to access the Website:

* Dialup Modem of 52 kbps
* Broadband Internet
* Dialup or Broadband Connection with a Internet Provider.

**9) Design constraints:**

* Standard compliance.
* Checkboxes, radio buttons, dropdown lists helps in selecting user options flexibility.
* Keyboard & mouse can be interoperable.
* Errors have to be shown as message boxes.
* Validation whenever applicable based on the database.
* The Online Examination System is a Web based application. The system shall be developed using ASP.NET and Microsoft SQL server database.

**10) Non-functional requirements:**

Non-functional requirement define the needs in terms of performance, logical database requirements, design constraints, standards compliance, reliability, availability, security, maintainability and portability.

**11) Reliability:**

* Will generate appropriate and descriptive error messages for incorrect entries.
* Data entry is reduced ad some of the fields are automatically retrieved from the records.

**12) Performance requirements:**

* Performance requirement defines acceptable response times for system functionality.
* The load time for user interface screens shall take no longer than five seconds.
* The log in information shall be a verified within five seconds.
* Queries shall return results within five seconds.