Software Requirement Specifications

Online Examination System

Submitted By:

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1. Introduction

1.1. Purpose

- ✓ This Web Application provides facility to conduct online examination world wide.
- ✓ It saves time as it allows number of students to give the exam at a time and displays the results as the test gets over, so no need to wait for the result. It is automatically generated by the server.

- ✓ Administrator has a privilege to create, modify and delete the test papers and its particular questions.
- ✓ User can register, login and give the test with his specific id, and can see the results as well.

1.2. Document Conventions

The following are the list of conventions and acronyms used in this document and the project as well:

Administrator: A login id representing a user with user administration privileges to the software

- **User:** A general login id assigned to users
- **Client:** Intended users for the software
- **Examiner:** Checks the test n gives result

1.3. Scope

Scope of this project is very broad in terms of other manually taking exams.

Few of them are:-

_ This can be used in educational institutions as well as in corporate world.

_ Can be used anywhere any time as it is a web based application(user Location doesn’t matter).

_ No restriction that examiner has to be present when the candidate takes the test.

1.4. 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

1.4.1 Websites:

4) www.google.com

5) www.wikipedia.org

6) www.alexa.com
7) Fundamental of Software Engineering By Rajiv Mall
8) Software Engineering : A practitioner’s approach Ed. By Pressman, Roger
9) Software Engineering Seventh Edition Ian Sommerville
10) Software Engineering Ed.2 by Jalota & Pankaj.
11) Schaum’s Series, “Software Engineering”

2. Overall Description

2.1. Product Perspective

The proposed **Language Skill Exam System** is an on-line Exam System.

The online test created for taking online test has following stages

- ✓ Login
- ✓ Test
- ✓ Result

Login:-

There is a quality login window because this is more secure than other login forms as in a normal login window there are multiple logins available

so that more than one person can access to test with there individual login.

But in this project there is only one login id i.e. administrator id and password by which a person enter the site. Hence it is more secure and reliable than previously used on-line test simulators.

TEST:

Test page is the most creative and important page in this project. It consists of 2 modules namely:

- ✓ Subject selection
- ✓ Utilities

Subject selection:-

From the given choices the candidate can select his

field (like C, C++ and JAVA etc) for taking on with the test.

Utilities:-

It includes:-

- ✓ Skip and come back to the question afterwards if needed.
- ✓ Gives the list of attempted and unattempted questions and can go to any question directly and can either attempt or change the answer of the already attempted question.

2.2. Product Features

There are three different users who will be using this product:

- ✓ University chancellor who will be acting as the administrator.
- ✓ Students who will be accessing the OES online.

The features that are available to the Administrator are:

- ✓ The administrator has the full fledged rights over the OES.
- ✓ Can create/delete an account.
- ✓ Can view the accounts.
- ✓ Can change the password.
- ✓ Can hide any kind of features from the both of users.
- ✓ Insert/delete/edit the information of available on OES.
- ✓ Can access all the accounts of the faculty members/students.

The features available to the Students are:

- ✓ Can view The different categories of Test available in their account.
- ✓ Can view their marks.
- ✓ Can view the various reading material.
- ✓ Can view and modify its profile but can modify it to some limited range.
- ✓ Can pay their fee online.

The features available to the Examiner are:

- ✓ Can view The different categories of Test conducted by users.
- ✓ Can view their marks.
- ✓ Can view and modify Results.

2.3. User Classes and Characteristics

There are various kinds of users for the product. Usually web products are visited by various users for different reasons.

The users include :

- ✓ Chancellor who will be acting as the controller and he will have all the privileges of administrator.

- ✓ Students who will be using the above features by accessing the OES online.
- ✓ Examiner who will prepare& load database into the software.

2.4. Operating Environment

The product will be operating in windows environment. Also it will be compatible with the IE 6.0. Most of the features will be compatible with the Mozilla Firefox & Opera 7.0 or higher version. The only requirement to use this online product would be the internet connection.

2.5. Design and Implementation Constraints

The whole implementation is done in two modules. The first one is Administrator and the second is Examinee.

Module I:-

This first module tracks the path of Administrator. In this module it shows how the admin can log into the system with a valid password and can add new valid user to the database. His name and examid is saved in the database .Also he can manipulate the database and add new question in the database from the webpage itself. It also shows how many questions are in database.

Module II:-

This second module track the path for the examinee .The examinee can log into the system with a valid ID issued by the admin. After successfully login into the system the examinee moves to the instruction web page where he will get instruction about the examination process. Then after clicking the start button the exam starts and timer also starts .In this manner examinee can take up the test and clicking the submit button , he will get the result of that section immediately. At the end system displays the initial web page.

2.6. User Documentation

The product will include user manual. The user manual will include product overview, complete configuration of the used software,technical details, backup procedure and contact information which will include email address. The product will be compatible with the Internet Explorer 6.0 or higher.

2.7 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.

3. System Features

3.1. Database – Storage

3.1.1. Description and Priority

Proposed Database is intended to store, retrieve, update, and manipulate information related to university which include

- ✓ Profile of both users
- ✓ Student details
- ✓ My account
- ✓ Test results

3.1.2. Stimulus / Response Sequences

Responses for Administrator: The administrator can Login and Logout. When the Administrator Logs into the Online Exam system. The system will check for validity of login .If the Login and password are valid, the response to this action is the administrator will be able to modify, view, add, deleting and all other functions that can be performed on the database.

Examination:

First of all the user/examinee gets a valid identification number (same as

the roll no for a normal examination).The user can log on with this identification no. and can take up the examination. After logging in the user

can see various options and can choose the option from the menu.

3.2. Functional Requirements

This section gives the list of Functional and non functional requirements which are applicable to the Online Exam System. Functional requirements are nothing but the services provided by the system to its end users.

There are three sub modules in this phase.

- Candidate module.
- Examiner module.
- Administrator module.

The functionality of each module is as follows.

Candidate module: The candidate will logon to the software and take his examination. He can also check his previous examinations marks and his details. The candidate will get result immediately after the completion of the examination.

Examiner module: The database is prepared & loaded into the software. Selection for examination can be done language wise by the examiner. The results will be displayed immediately after completion of the examination.

Administrator module: The administrator collects all the results after successful completion of the examination and sends to the head quarters as and when required.

3.2.1 Interface Requirements

This section describes how the software interfaces with other software products or users for input or output.

3.2.1.1 User Interface

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.

4. Non Functional Requirements

4.1. 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.

4.2. 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

4.3. Software Interfaces

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

4.4. Communications 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.

5.Other Nonfunctional Requirements

5.1. Performance Requirements

Some Performance requirements identified is listed below:

- ▪ The database shall be able to accommodate a minimum of 10,000 records of students.
- ▪ The software shall support use of multiple users at a time.

There are no other specific performance requirements that will affect development

5.2. Safety Requirements

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.

5.3. Security Requirements

Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below.

1 Keep specific log or history data sets

2 Assign certain functions to different modules

3 Restrict communications between some areas of the program

4 Check data integrity for critical variables

5 Later version of the software will incorporate encryption techniques in the user/license authentication process.

6 Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

5.4. Software Quality Attributes

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users.

The software quality attributes are assumed as under:

1)Accurate and hence reliable.

2) Secured.

3) Fast speed.

4) Compatibility.