Survey on Online Examination System

1. Reeshabh S Thakur, 2.Aman Kumar, 3.RohitDhande, 4.VipinTekam, 5. VanitaBuradkar

1.Computer Technology Department, Rajiv Gandhi College of engineering research and technology, Maharashtra, India
2. Computer Technology Department, Rajiv Gandhi College of engineering research and technology, Maharashtra, India
3.Computer Technology Department, Rajiv Gandhi College of engineering research and technology, Maharashtra, India
4. Computer Technology Department, Rajiv Gandhi College of engineering research and technology, Maharashtra, India
5. Assistant Professor, Computer Technology Department, Rajiv Gandhi College of engineering research and technology, Maharashtra, India

Abstract: Conducting a paperless examination is made available by using the concept of web based online examination, which includes automated processing system for all the works which was previously done by using human work power.
Keywords: Web application, Examination system, Database, Web server, Security.

I.   Introduction:

This online examination system will able to work as two way road just by single system. Through this web application, it can be possible to conduct examination through internet or to a particular geographical region using the concept of LAN or through intranet for particular organization. It can be possible to conduct either objective type examination of subjective type examination through this web based application. In case of objective type examination, question checking process will be carried out directly by the system and in case of subjective type of examination, each candidate's answers will be sent to the examiner which will be reviewed by them and assign marks based on their answers.

The questions and answers both will be stored inside the local database and will be accessible only by the faculty who is setting the question paper. These questions will get displayed through web server on the web application interface.

The other securityfeatures which are available are: - keeping each candidates invisible to others, providing different questions for each system at same time, disabling answer option after time limit and passing the session to next question. This paper describes the principal of online examination system and presents the main features of the system.

Ordinary Examination System was helpful for teachers to teach the lesson and test the student. Teachers have to prepare for lesson and then teach in the class cautiously. Students attend the lecture and need to do the homework regularly so it becomes more difficult for teachers to evaluate large amount of papers. This was one of the drawbacks of ordinary examination system. So, online examination system came into existence. Online examination system plays an important role in reducing efforts of teachers as well as saving the time. Now a day's every organization or company or institute is computer based world. So many universities and companies are planned to develop a computer based online examination system in which education plays an important role.

There are two types of examination system First is paper based such as Secondary School Certificate Examination, Higher Secondary Certificate Examination as well as school test and second is paperless where it consist of windows application and web based application.

Paper based examination system:

Paper based systems are less complex than paper less examination system, which make it easier for untrained person to access the data. The data can get out of order in paper based system if someone unknowingly or accidentally puts a file or supplement in wrong place it leads to loss of data.

Paperless examination system:

Paperless examination system is usually accessible on network so there are chances for attacker or unauthorized person to gain access to the data. This data can also be damaged by computer virus. Locating and updating information may require technical training for untrained person. It provides higher degree of computerization so it consumes less time.

Web based system:

In Web based system client can access application using URL which is loaded in the server and you can test it on different web browser. Web based system make use of protocols like HTTP, SOAP etc. It is also known as internet based application or browser based application. Web based system is not an operating system dependant. Web application is loaded on server side. In ASP.NET web application user interfaces is difficult to build and performance is slower. There are Framework dependency as only server needs to have .NET framework and other required libraries.

Window based system:

In Window Based System application: runs on personal computers and so when you test the desktop application you are focusing on a specific environment. Window based application make use of protocols like X windows system, server message block etc. It is also known as desktop based application or intranet application. Windows based system is operating system dependant and Runs on the client machine. Window application is loaded on pc for example exe file.

II. Existing System:

Exam Pro Software:

Exam Pro is very spontaneous and simple to handle. User can create his/her own unique exams/tests and administer them and his/her exam is saved as files with the ".exam" extension. He/she can reopen/ modify the files in Future. Exams related to his/her are stored using encryption algorithm, so that they cannot be attacked by hacker and it is being secured by two passwords. A general password and an administrator password. When administrator set Questions he allocates the time and marks. Administrator has full rights to add, modify or delete questions .He also can add images, audio, video related to examination which provide more effective way for candidates to learn and prepare for exams.

Features:

It is helpful for parents to keep the track of the kid's performance. It provides email notification facility. It provides usage restriction which enable administrator to conduct examination remotely and securely. It is fully protected from unauthorized access to the question paper.

Advantages:
- Today, most of the companies or institutes are conducting their exams online to be a part of this fastest growing world.
- Online Examination System covers almost all type of problems faced by a company or institute while conducting online examinations.
- User can give any available exam at any available centre as per his/her choice.
- The results of the online exam will help a company or institute to list out the outstanding exam takers all over the country.

Disadvantages:

There is simulation error if any one incorrect key is pressed then simulation provide wrong results. A simulation can give you results that are not experimentally measurable with our current level technology.

III. Overall Description:

A. Product Perspective:

Online examination system (OES) is accessible via the Internet. The objective of this application is to reach and connect candidates and admin in remote communities and conduct exams in a virtual environment online. This application will only allow the registered users to enter the test module.
- Login
- System Overview
- Test
- Result
- Login

This window provides two choices for user logging into the system according to the present rights - Candidate login and Admin login. The candidate login will take the user to the user profile. The administrator Login will take the user to the admin profile.

B. 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:
Accurate and hence reliable.
Secured.
Fast speed.
Compatibility.

B. System Overview:
This window can only be accessed by the administrator. Administrator has full rights to add and edit the exam questions.

A.   Test:
This window contains all the exams candidate can give. All these exams are organized according to the categories they fall in. The test window will be different for students and corporate employees. This window will display the result of exams the candidate has just appeared.

B.   Functions:
The functions are separated according to the user types such as
• Administrator: The function of the admin is to add/edit exams in the test module.
• Candidate: The function of the student is to update his/her profile and give various exams.
C.   User Classes and Characteristics:
The various users of this application are classified into two types:-
•   Administrator
•   Candidate.

D.   Software requirements for online examination system:
This application requires the user to have characteristics such as the user should be able to communicate and write in English and should have previous experience of giving an online exam. Whenever candidate should be instructed about the basics usage of the application by authorized person.

E.   OperatingEnvironment:
This application is internet based so it will run in any operating system with internet access through a web browser.

F.   Design and Implementation Constraints:
The candidate is allowed to give the exams any number of times, until it is been specified by the administrator while building the test module. While giving the exam the candidate is given only a set amount of time and the result will be displayed immediately.

G.   Assumptions and Dependencies:
Proper working of this application is dependent on the internet connectivity of the user's computer, assumptions, and dependencies.
It is assumed that the user has basic knowledge of the system (i.e. he/she is not a first time user) as any action by the user is considered valid during an examination. It is assumed that the data entered by the user while registering is true.

I.   Quick scheduling:
The system helps the faculty member to generate an automatic exam instead of using papers. Which save a time for writing, checking and for input marks. Also, student can see the exam when he login as an individual to the system.

J. **Immediate results and solutions:**

When the student finishes his exam, the system checks her answers and compared with the correct answer. And the system saves the incorrect and correct answers and calculates the mark of correct answers. Then give the total mark. And send a report for student to see where he is fault.

K. **Easy to store and retrieve information:**

Rather to save the information on a papers or in separate sheets. There are a data base management to store and retrieve the information needed by the administrator or Faculty member or student according a report generated by the system.

L. **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.

M. **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.

N. **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. Keep specific log or history data sets

- Assign certain functions to different modules
- Restrict communications between some areas of the program
- Check data integrity for critical variables
- Later version of the software will incorporate encryption techniques in the user/license authentication process.
- Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

IV.   Conclusions:

Online examination system is a web based application that provides facility to conduct online examination at any place and any time. It saves time, as it allows number of candidates to give the exam at a time. Online examination system completely eliminates managing and keeping records of students manually.

References:

[1].   A Novel Web-Based Online Examination System.
[2].   Workplace Collaborative Learning Authoring Tool Guide.
[3].   L. Shen, M. Wang, and R. Shen, Affective e- Learning: using emotional data to improve learning in pervasive learning environment.
[4].   Database System
[5].   Software Design Specification (SDS) Acropolis Course Management System, 2011
[6].   IEEE Recommended Practice for Software Requirements Specifications, Software Engineering Standards Committeeof theIEEE Computer Society. 1998
[7].   Software Requirements Specification for PPDP Contact Management System (CMS)
[8].   http://www.ehow.com/facts_5156877_preface-book.html, Sat. 29/10/2011.
[9].   ]http://www.sil.org/lingualinks/literacy/referencematerials/glossaryofliteracyterms/WhatIsAPreface.htm, Sat. 29/10/2011.
[10].   http://www.deftinfosystems.com/index.php/application/e-education-system/online-examination-system.html, Mon. 9/1/2012.