Online Examination System for MCQ's

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Abstract: Online examination systems are very popular these days due to limitations of our traditional examination system i.e. chances of human error, handling or records manually, time killing process of marks evaluation and it also need more time for preparation. Universities needs to deploy online examination system for their internal/sessional examinations. These types of examinations consist either MCQ or true/false based questions, which can be successfully conducted by online examination system.

Keywords— Online examination system, MCQ, client – server architecture, Module, Server, CSV

I. INTRODUCTION

Online examination system is required to eliminate the need of manual answer evaluation. This online examination system can be developed using JSP and MySQL. This system separates each task which is performed according to pre written methodology in fully automated way. It reduces the time killing process of examination. Online examination system is going to be used by every institution in the near future due to its flexibility and facilities offered by the system.

This system offers multiple choice questions (MCQ) with legitimate number of options, generally the number of options in many examinations system is four. The result is evaluated with the help of database where actual answers exists. Students can check their result after completing the examination by clicking on submit button. Students are not allowed to select more than one option.

II. REVIEW LITERATURE

Functional module of online examination system includes question management and paper generation module. Question management include addition, deletion and modification of questions. A special kind of client/server model is known as browser/server model can be used in online examination system. This include browser used by client to generate request and a JSP engine to respond to user request and a data tier to store papers and control information. [1]

Online examination system can include three module such as candidate module, examiner module and administrator module. Candidate can logon into the system for examination, to check his/her result and to change password. Result will be displayed immediately after the examination. Administrator can add new faculty and he/she also had authority to add or delete subjects. Here interaction model is used which is a dynamic model to facilitate the services of online examination system. [2]

Online Examination System is a web application that sets up a system between the establishments and understudies. The architecture includes three tiers of the system. These three tiers are Client, Business Logic Tier and Information Tier. First two are utilized by user and administrator to accomplish the examination and

database management system is used in information tier. Here MS Access is used in Information tier to achieve DBMS functionality. Information tier is used to store questions and control information. [3]

A DMZ (demilitarized Zone) is a conceptual network design where publicly accessible servers are placed on a separate, isolated network segment. Only authorized user have authority to cross the firewall, this can be achieved by using access control. Access control is based on identification of IP address and port address. Rules can be defined for outgoing and incoming packets in internet known as direction control. [4]

A proposed system can be divided into two components – Central Command Center (CCC) and Examination Command Center (ECC). CCC include the duties such as question management and paper set management such as set1 and set2 etc. It is also responsible for secure distribution of question sets. Whereas ECC is responsible for communication with CCC server and for request of question paper in proper time. ECC monitor each terminal. It is also responsible for uploading of answers into CCC server after completion of exam. Questions are encrypted using 3 DES and should be decrypted only in proper time, it should not be decrypted by authenticate person in wrong time. [5]

III. PROPOSED SYSTEM

Proposed online examination system will follow client – server architecture. Students, teachers and admin will perform their work from client side i.e. browser and a dedicated computer system will perform its services as server.

A. Students need to register their self with their enrolment ID, which prevent our database from redundant and fake student profiles.

B. Authority of teachers should be given from admin. From his/her module, admin can add or remove a teaching authority. He/she will also be able to add new subject, in case a course/branch is added into the department.

C. Admin module will be given by developers but admin can change his/her necessary details such as password later.

D. Teachers can upload their question paper using .csv files in database. This .csv file will contain seven columns such as question number, question, option 1, option 2, option 3, option 4 and correct answer.

E. Students need to login with their valid username and password. Now they will fill necessary details such as subject code and exam type (main, back).

F. Now students have to wait until admin give permission for examination.

G. This examination page will be bounded by the time constraint. After the completion of time page will be automatically redirected to result page.

H. Immediately result will be shown by comparing student choice and correct answer stored in database.

IV. ARCHITECTURE

The architecture of the system will be divided into the three basic modules. These three modules are listed below -

A. Admin Module

Admin will have authority to add new teaching authority and also to remove them. Admin can also check results of all subjects according to the ascending and descending order. Admin have authority to see public profile of students as well as teachers.

B. Teaching Authority

This module is developed for teachers. Teachers can upload question papers from their profile. They can add delete or modify existing questions. From this module they can perform question management. They can also check results of their respective subjects.

C. Students Module

Students can appear for examination using this module. Although result will be shown to students immediately after the result, but they can also check their marks later using this module.

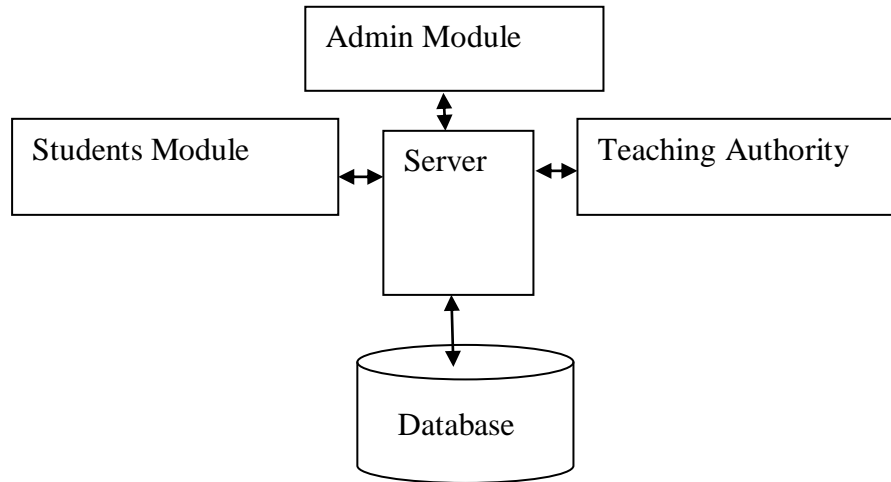Server resides between all the modules, as shown in Fig. 1.

Fig. 1 Architecture of Modules of online examination system

V. CONCLUSIONS

It can be said that online examination system seems hard to develop but once it is developed it will reduce the difficulties faced by colleges/universities before and after the examination. Online examination system reduces the need of resources like paper and pen and also reduces the time killing process of marks evaluation. Time Constraint, login credential and three level module will help to ensure to security of system. This system can deployed in local host using a dedicated server.

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