

Online Examination System

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Abstract— Online examination system is web based system developed using a server-side programming technology i.e. Java Server Pages. JSP provides the creation of dynamic, platform-independent method for building Web-based applications. The Online Examination system provide the functionality to generate the question paper for the exam, to add/register the students and to conduct online exam/test for the students on the particular subject and displays the result to the student as soon as the test is submitted and displays the intelligence report of the result to the admin along with graphical representation.

Key words: Online Examination System, JSP, Intelligence Detection

I. INTRODUCTION

Online Examination represents the examination through the internet. This System is useful for conducting online exam with various services provided by the admin. This system is very useful for Educational Institute to prepare and to evaluate the answers of the questions very easily and it will help to improve students' knowledge about the subjects they are learning in the college as well as the aptitude and programming skills also. The advantage of this system is, it helps administrator to detect the intelligence of the students. It is useful for the institutions, academies, to improve their way of conducting the exams. This system also helps to detect the intelligence of the student based on the time taken by them to solve the particular question. According to total time taken by student to solve the test, intelligence report of all the students is displayed in graphical format to the administrator.

II. PROPOSED SYSTEM

Online Examination system is the web based system developed in the Java Server Pages which conducts exams on web for the learners and students. Admin is responsible for the management of the question paper, setting the exam, registering the student and evaluation of the intelligence of the students all this tasks are done by admin. Student can login to the system with their enrolment number and the date of birth and can give the exam. Intelligence detection is the core part of the system, in which the system detects intelligence according to the time taken by the candidates to solve the all questions in the test.

A. Intelligence Calculation

Intelligence calculation is one of the new things in the era of online examination system. In online examination system a new concept is seen that is Intelligence Calculation It will work for calculating the intelligence of a student or the candidates who has given the exam on the basis of time taken by them for solving a question. The intelligence report generates a separate graphical representation on the basis of time taken by the student for solving all questions.

1) Working of Intelligence Algorithm:

In the intelligence calculation algorithm firstly it will check the amount of time taken for solving a question. The starting time and the end time taken by the student to answer the single question will be recorded. From the starting time and the end time the estimated time i.e. time required to answer the question is calculated. After calculating the time taken by student to answer all the questions, the total estimated time is calculated for each student. Total estimated time represent the total time taken by student to solve the test. Time for all students is calculated and the graphical representation of the system is displayed in the graphical format to the admin. So that admin can detect the intelligence of the student.

The working of intelligence calculation is as follows:

- 1) In the intelligence calculation, the starting time end time taken by student to solve each question is recorded.
- 2) From which total estimated time to solve the all question is calculated.
- 3) On the basis of time taken by the student for solving a question will be represented on the report in the graphical form.

This graph will help to identify the question solving skill of the student

B. Design of online examination system

The overall design of the online examination system is shown below through the data flow diagram.

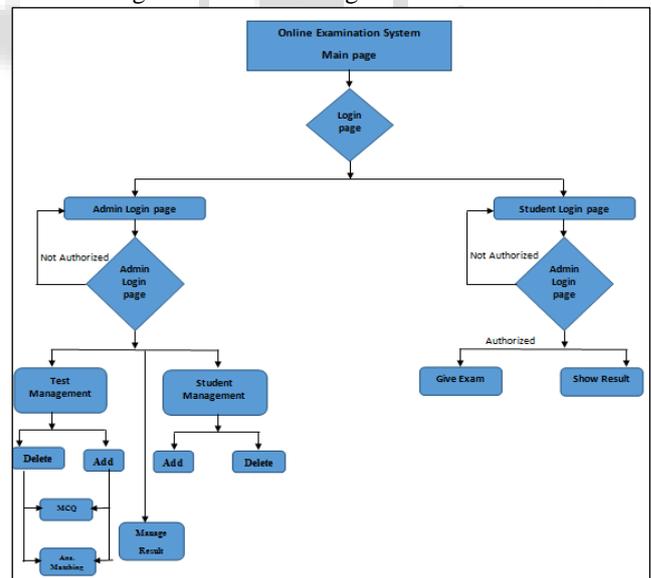


Fig. 1: flowchart of online examination system

Above diagram shows the data flow of the Online Examination system. In Online examination system there are two user admin and the students both needs to login to interact with the system. After the successful login of the admin, he/she will be able to handle all the management of the system. Management in the sense Student details, Test generation and manipulation, etc. Admin can add and delete the questions and test generated by him at any time can also add the number of the students so that the will be able to login

to the system for giving the test. Student can login to the system. After successful login student is able to give the test as per the test scheduled by the admin and the as soon as the test is submitted result is displayed.

C. Functional modules and working

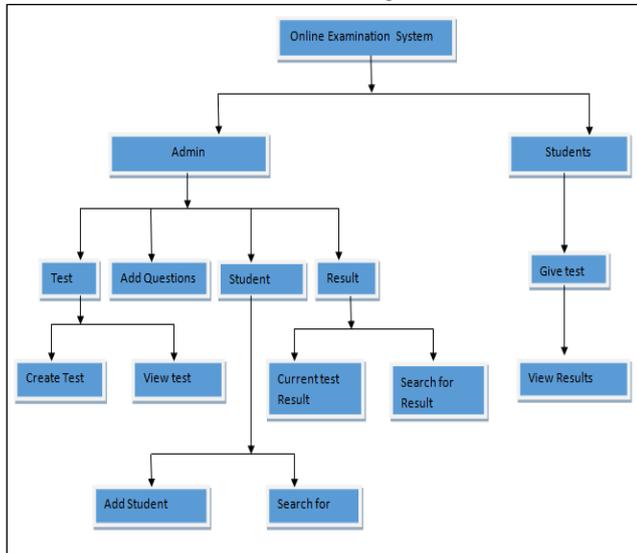


Fig 2: Functional module diagram of Online Examination System

1) Admin module:

Admin module consist of the dashboard, which consist of the Test, Questions, Results, Student Section, Logout. Working of all this section is given below.

2) Test Section:

This part of the admin dashboard consists of the Create test and View test. Create test is used for creating the test. For creating the test admin needs to give the test title Computer Science test, Aptitude test, Mechanics test ,Topic of the test for example Aptitude test, C, CPP, Data Structure, etc. test. After that enter the Marks, that is for how many marks the test will be, then the minimum passing marks required to pass the exam and the time for which the test will be conducted. Hit the create button after entering all the required information for creating the test. And the test will be created, all tests created by the admin will be viewed in the view section. Admin can add and remove the test from the system at any time.

3) Question paper Management:

This section is used for adding the question to the test created by the admin. This section show all the test created by the admin and allow to add the questions to the test or to remove the test from the system. Clicking on add questions opens the window which asks you for the question, four options for that question and the correct answer. After clicking to the add button the question along with the four options and the answer will be added to the test. And below the add questions, page displays the questions added to the test, four options and the answer of the question and action which will allow the admin to remove or to update the question added to the test.

4) Result Management:

This section will display all the test conducted till date with all information such as total marks of the test, time allotted for the test, passing marks, subject and the title of the test, to display the result admin needs to click on to the show result

of test whose result he/she wants to see. After hitting the show result button, browser will display the details of the test and below that the result of the test. The result will consist of the Name of the students, marks obtained and the status (pass or fail) and will also display the intelligence of the student. The result section of the admin module will display the graphical representation of the total time taken by the all the students to solve all the questions of the respective test so admin can detect the intelligence of the student.

5) Student section:

This section consists of the two parts that are, adding the new student and other part of searching and displaying the list of all the students. Add student allow the admin to add student, to add the student admin needs to enter the name, enrolment id, branch, current year (1styr, 2ndyretc) and the date of birth of the student and clicking on to the add student button the student will be added to the list. The enrolment id and the date of birth of the student work as the username and password for students to login to the system for giving the test. Another part that is search student show the list of all the student added by the admin with all the details of that student and also provides the functionality of searching the student by their name. In this way admin has given all the rights of accessing the details of students, test and the result and has given the permission to conduct the test.

6) Student module:

Student will be able to give the test as per scheduled by the admin. To login, student needs to enter enrolment id and date of birth and clicking on to the login button displays the name of the student, details of the test such as title, subject, total marks, passing marks, time given for the test and some instructions. Clicking on the start test, test will be started. As soon as the test finishes the result will be displayed to the students.

III. CONCLUSION

By Java Server Pages the web based Online examination System is developed to conduct the online exam on the objective questions. The students are able to give the exam on the system as per the test scheduled by the admin and can see the result after the submission of the test. It is the good aid for the institution, colleges and academies to conduct the exam and to evaluate the students intelligence.

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