Online MCQ Application For Exams

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Abstract : It is good source of interactivities among students and between the teacher and students. It is done in order to improve student‘s comprehension levels and learning motivation. As one of their tools, online test tools are quite effective. However, in order to use the online test tool, a teacher is generally required a great deal of labor.The main objective of the project on MCQ Quiz Applications is to manage the details of Students, Examinations, Marks, Courses, Papers. It manages all the information about Students, Results, Papers,Sudents. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for Marks, Couses, Papers.

I. INTRODUCTION

The 'MCQ Quiz Application' project will be developed to overcome the time-consuming problem of a manual system. Apart from that in the current system, checking the answer sheets after taking a test, waste the examiner's time, so this application will check the correct answer and save the examiner time and carry the examination effectively. The users which are using this system don't need high computing knowledge and also the system will inform them while entering invalid data.

This project aims to computerized the existing manual system and helps the examiners to save their valuable time and important data. Apart from this, data that exist in this system will exist for a long period and will be easily accessible. This project helps the examiners to manage their services in a good way and provide a better service to their users.

II. OBJECTIVE

The objective of this project is to manage the details of students, examinations, marks, courses, and papers in a good manner. The performance of the application will be fully controlled by the administrator and the administrator can guaranty anyone to access it. The project will reduce the manual process in managing examinations and all issues regarding that.

Functionalities of the project will be as following:

-Able the examiners to punch the MCQ questions online;

-Able the users to solve the questions online;

-Examiners can manage the information regarding exam;

-Correct answers will be evaluated by the system (First it should be determined by the examiner);

-Users can see their results after submitting the test.

III. DESIGN

To design and implement this project we plan that the project supports different types of users apart from its administrative part. When a project is run for the first time it allowed the user to select who he/she wants to login into the system. Project support login as teacher and login as a student. If a user is a student, try to log in as the teacher system will not allow him and vice versa. A user who adds as a teacher in the system will be able to punch test and questions to the system and also will be able to observe the result of the student who attempts tests. The user who login to the system as a student will be able to select a particular test and attempt questions depend on this test. After attempting the test and submitting that user will receive a message that you have attempt the test successfully and if the user tries to attempt the same test, the system will not allow him/her. Also, a user who login to the system as the student will be able to observe the result of a test he/she attempt.

To conclude the introduction, we have used these modules to follow the objectives of our project and each of these modules has logical connections to other modules on which they are dependent.

Index: Which allow users to select their type of login to the system;

Teacher Login: Able the teachers to log in to a system with a valid user name and password.

If a teacher is successfully log in to the system, he/she will have access to the following pages:

Teacher Home: Which have information about Online MCQ Quiz and issues supported by this system for the teachers;

Punch Test: This able the teacher to punch a test and after entering the test name and clicking on 'Submit to Enter Questions', a teacher will be able to add questions to the particular test.

Students Marks: Which able the teacher to observe the result of all student who has attempted the tests;

Student Login: Able the students to log in to a system with a valid user name and password.

If the student is successfully log in to the system, he/she will have access to the following pages:

Student Home: Which have information about Online MCQ Quiz and issues supported by this system for students;

Attempt Test: Which able the student to select a particular test for attempting from the existing test in the system from the drop-down list and after clicking on 'go to selected test', the questions of the selected test will be displayed for the student to attempt. Then the student will be able to attempt the questions and after submitting, a student will receive a message that the test successfully attempts.

Marks: This able the particular students to have access to the result of the test which he/she attempt.

IV. EXISTING SYSTEMS

Various MCQ quiz applications exist on the internet with different criteria. Each of the existing applications has its goodness and problems. In this MCQ quiz application which is designed and implemented in JSP based we try to overcome the existing problems with the following features:

-Remove source confuse the issue;
-Better management;
-Connection to the database for better storing of data;
-Better frontend management;
-Better backend management;
-Try to decrease the error issuer during runtime.

1.Project Objectives

The main objective of the project MCQ Quiz Application is to manage the details of students, examinations, marks, courses, and papers. The project is totally at the administrative end and thus only the administrator is granted access. The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz and we will follow to achieve these objectives in this project.

-To create an appropriate platform for best managing of MCQ test;

-To overcome the time-consuming issues and taking MCQ tests;

-To release the marks of the test taker as soon as possible;

-To manage the information of different tests.

2.Methodology

The methodology of developing the project will be a step-by-step sequence to design, develop and deliver the application. In software engineering, this methodology is called the 'waterfall model' which one portion of work follows after another in a linear sequence. Following steps will be followed in this methodology:

-Initiation (Requirement Specification);

-Planning and design;

-Execution (construction and coding);

-Validation (Testing);

-Closure (Installation and Maintenance).

Figure 1: SDLC Diagram of Project

3.Project Requirements Specification

By project requirements specifications we can analyze the tasks which going to be done by the system. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description. A detailed functional and behavioral description of the project and concentrating on requirements and constraints of that will provide and good product. The proposed system should follow these requirements:

-The system must store information about users (Student and Teachers), tests, questions, and result;

-The system should able the teacher to punch tests;

-Each teacher should be able to punch many tests;

-The system should do not allow an unauthorized user to enter the system;

-Each student should be able to attempt many tests;

-The system should keep and display the results of Students;

-The system should support test which one or more question dependent on it;

-The system should allow the administrator to delete and update tests and questions dependent on it.

4.Project Design

For designing and implementing of Online MCQ Quiz application we used HTML, CSS, JavaScript, and SQL Server with the context of Java and JSP. The following pages have been designed using HTML, CSS, and JavaScript to handle the defined objective of this project.

4.1 Index: This the first page which user observe after running the project. This page will able the user to select the type of login. Selecting "Login as Teacher"will direct the user to Teacher Login Page and selecting "Login as Student" will direct the user to

Student Login page.

Figure 2: Project Index Page

4.2 Login Pages: Login pages exist for both teachers and students. After the user selects the type of login from figure 2, the login page of the particular user will be displayed. Users enter their user name and password and after clicking on login first system will check is it a valid user or not. If a user is authenticated by the system, will be directed to a particular Home Page and if not authenticated by the system the message "Either user name or password is incorrect" will be displayed to the user.

Figure 3: Student & Teacher Login Pages

4.3 Home Pages: After users successfully log in to the system. Each particular user will be directed to their particular Home Page which are "Teacher Home" and "Student Home". Teacher Home will able the teachers to observe information about the Online MCQ Quiz and punch a test by clicking on "Punch Test" and observe student results by clicking on "Student Marks". Student Home will able the student to observe the information about the Online MCQ Quiz, attempt a test by clicking on "Attempt Test" and observe his/her result by click on "Marks".

Figure 4: Teacher Home Page

4.4 Punch Test: Clicking on the punch test in Teacher Home will direct the teacher to a page that allows the teacher to write the name of the test he/she wants to punch. When the teacher types the name of the test and clicks on "Submit to Questions", the system will be directed to the Insert Question page.

Figure 5: Entering Name of Test

By clicking on the "Submit to Enter Question" button, the teacher will be able to insert a question for the particular test which he/she enter its name. As the teacher enters the test name, an automatic ID will be generated for this test in the Test Table of database and all a session will be created, all questions entered will be store for the particular test according to the Test ID and session which has been created. Teacher will receive of "Question Successfully Sored" each time when he/she write the questions and their answer and click on the "Submit Question" button.

Figure 6: Insert Question Page

4.5 Student Marks:

Clicking on "Student Marks" will direct the teacher to a page that displays the result of all students who attempt the test.

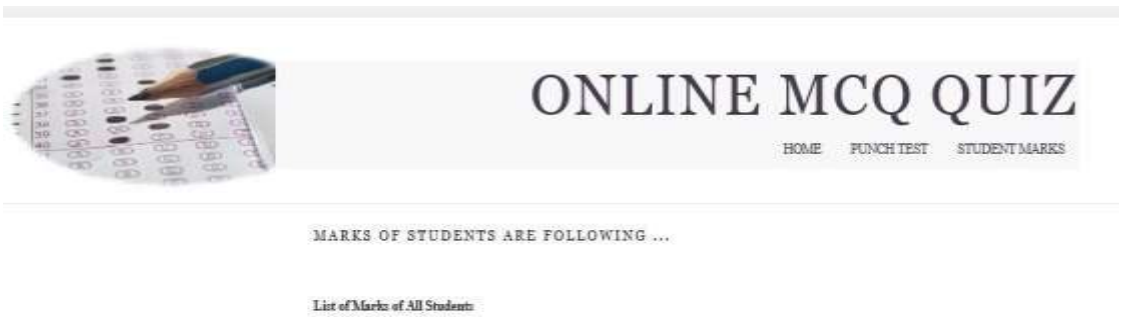
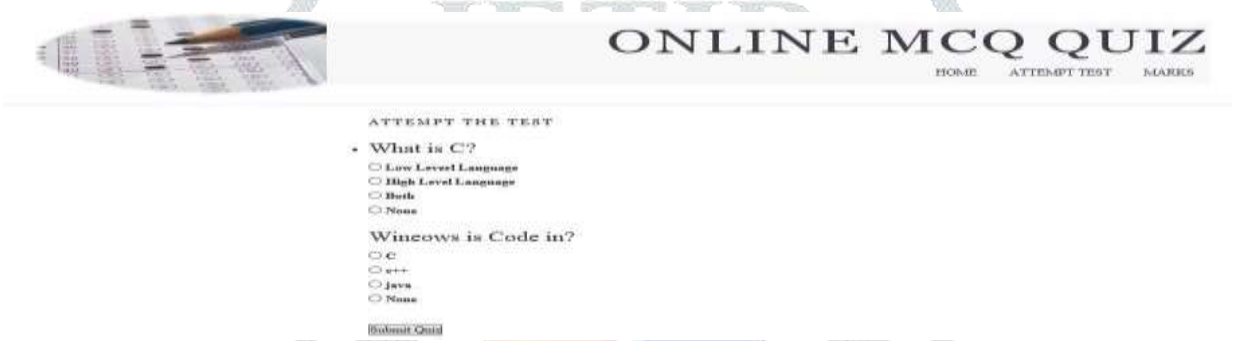


Figure 7: Result of All Student Which Attempt the Tests

4.6 Attempt Test: Clicking on "Attempt Test" on Student Home will direct the student to the page which able the student to select the test he/she wish to attempt. After the student selects the test from the drop-down list and clicks on "Go to Selected Test", the system will be directed to the questions of the particular test.

Figure 8:Select test page of student

When students select the test and click on "Go to Selected Test" the page will be directed to questions of the selected test. Student can attempt all questions of that test and after clicking on "Submit Test", will receive a message that "You Have Successfully Attempt" the test. If the particular student has already attempted the test before, he/she will receive the message "Sorry, You Have Already Attempted this Test".



4.7 Marks: Clicking on "Marks" in Student Home will direct the system to the page which will show the result of particular student for all test he/she attempt.

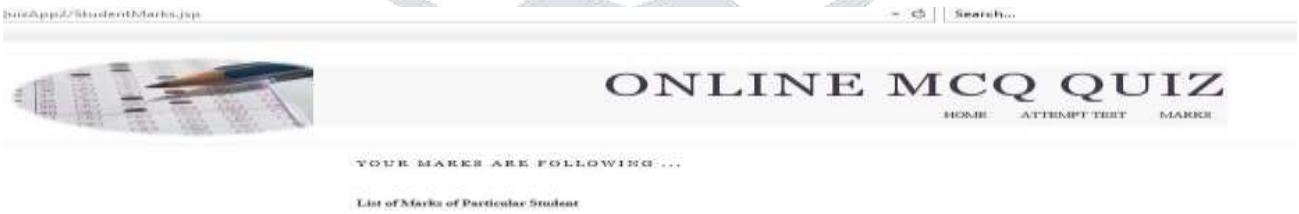


Figure 10: Result off All Test for Particular Student Which Have Taken

V.FUTURE SCOPE AND CONCLUSION

As mentioned the project is on the java platform which is coded in NetBeans IDE with help HTML, CSS, and JavaScript and running as a web page by Apache Tomcat web server. But this project is only for the MCQ test but in the future, we have a plan to extended it to support the subjective type of questions with more functionality. We will add the Administrative part on it which able the system to delete the test, add user, delete the user and so on graphically vie the web.

To conclude, this is a simple Online MCQ Quiz which able a teacher to punch MCQ question to the system which will be store in SQL Server database and able the student to attempt any test for once. The marks of the student will be calculated according to questions they attempt and will be displayed by the system to teachers and students.

V. References

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