A Dynamic Framework for Online Examination System

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ABSTRACT---

Most of the educational institutions are conducting examinations in manual model. Institutions are sending questions papers to the franchises for examination and collect the answer sheet from the franchise all these things are taking lot of time and require greater physical strength. The present system developed will help in uploading multiple choice questions and answer keys for various exams and it is an interactive and user-friendly interface, it is flexible enough to cope up with the changing trends of the institution. The system provides the easy way of attending the exam, and evaluating results and ranks for that particular type of exam. Thus the user can write exam online saving time.

Keywords — Online Exam, MCQ, Web portal, Optimum grouping

I. INTRODUCTION

The present system of the examination conducted through educational institutions are carried out manually. Institutions are sending questions papers to the franchises for examination and collect the answer sheet from the franchise all these things are taking lot of time and require greater physical strength. Institutions are frequently conducting the exams and they have to maintain the variation of questions from one exam to another exam for different times. This will take lot of time and also a very cost effective. Evaluation of answer sheets and publishing results also takes a lot of time. All sort of information pertaining to the examination such as student information, franchises information, courses information, question papers and results etc., is to be done manually. These types of procedures involve lot of paper work and it will take a lot of time. All the examination procedures are carried out using physical strength.

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The rest of the chapter organizes as follows chapter 2 provide Survey of Literature, chapter 3 represent the algorithms and analysis of the result is given in the chapter 4. Chapter 5 conclude the research work.

II. SURVEY OF LITERATURE

Abdul Gaffar Khan [1] analyzes benefits and challenges in online exam. It analyzes various parameters of to enhance online exam system.

Armen seith et al [2] analyze the impact of technology in online learning. The online security mechanism. The significance of the computing time in online assessment.

Nisha Chanana et al [3] discuss the future of E-learning in Indian academic system. This paper articulate the overall growth of the online assessment will increase in forth coming years.

D. K. Gangeshwer [4] discusses various motivational factors of online learning. The current development is a valuable increase in the present scenario.

Eister sara et al [5] analyze the impact of the digital assessment system. in India. This paper analyzes the impact of the digital marketing campaign in real-time.

Deodar sampaul [6] analyze the various limitation in online examination system in current scenario. He addresses various drawbacks like security, lack of qualified people and interoperable systems in e-commerce.

Lokesh Giripunje [7] analyzes the security issues in mobile devices which impacts the online learning.

N. Jayakanthan et al [8] proposed a model to improve the performance and latency issues in mobile learning. Clustering and scheduling algorithms are used for grouping.

III. METHODOLOGY

The enhanced online examination system is a feature-based system to improve assessment of the students. The feature are given in the following table. The various type of questions are used for the assessment.

SNO	Feature
1	Multiple Choice
2	Multiple Sequence
3	Math the following
4	Assertion and reason
5	Descriptive

The question assesses the remerging, understanding, applying creation and evaluation level which are mentioned in the bloom's taxonomy. These questions are splatted   in to various knowledge level and each level is given equal weitage and assessed. Finally, the outcome is produced.

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The present system developed will help in uploading multiple choice questions and answer keys for various exams and it is an interactive and user-friendly interface, it is flexible enough to cope up with the changing trends of the institution. The system provides the easy way of attending the exam and evaluating results and ranks for that exam. Thus, the user can write exam online saving time.

The steps of the methodology is given below:

- Requirements gathering: The first step in developing an online examination web portal is to gather all the requirements. This is a critical step as it sets the foundation for the rest of the project. The following should be considered while gathering requirements:

- User authentication and authorization: Determine how users will log in and access the portal.

- Exam creation and management: The admin should be able to create exams and manage them. The student should be able to see the exams available to them and take the exams.

- Question bank creation and management: The admin should be able to create a question bank and manage it, including adding, modifying, and deleting questions.

- Result calculation and management: The system should be able to automatically calculate the results of the exams and store them in the database. The student

- Design: The next step is to design the portal. This includes creating the database structure and designing the user interface using HTML, CSS and PHP. The design should be user-friendly and easy to navigate

- Development: Start coding the different modules. Begin with user authentication and authorization, then move on to exam creation and management, question bank management, result calculation, and report generation. Use PHP to write the code and connect it to the database.

- Testing: Once the modules are coded, thoroughly test each one. Identify any bugs or errors and fix them. Repeat this process until all modules are functioning correctly.

- Deployment: Once the testing is completed, deploy the portal on a server.

- Maintenance: Regular maintenance and updates are important to keep the portal running smoothly. This includes updating the portal with new features, fixing bugs, taking regular backups of the database and code, and responding to user feedback. Regular monitoring of the portal is also necessary to ensure that it is functioning correctly.

IV. IMPLEMENTATION AND EVALUATION

RESULTS

The proposed system is implemented using PHP and MYSQL each module are developed independently with appropriate functionality. The question registration, online examination conducting and producing the output is carried out. The various reports are generated by the system.

The developed system is properly tested. The tests are carried out as follows. The performance, regression and unit testing are carried out as follows.

PERFORMANCE TESTING

Each and every component of the "Online Examination System" web application went through each   stage of the approached methodology. It was identified that each unit behaved differently as a single entity and differently when it was integrated with other units in respect of speed. The test environment of the application plays a crucial role on its performance. More over the technical specifications of the platform where the application is installed plays a major role.

SYSTEM TESTING

In system testing, integration testing passed components such as report issues, adding project, user registration, custom fields, and tags are taken as input. The system elements are tested as a whole. The environment and behavior of the system and its elements is tested here. The administrator system fulfils the objective in efficient manner. The administrator deals the processes with less expectation of system resources and user friendly with the help of software which takes care of the system resources.

REGRESSION TESTING

Whenever a change in a software application is made, it is quite possible that other areas within the application have been affected by this change. Regression testing is performed to verify that a fixed bug hasn't resulted in another functionality or business rule violation. The intent of regression testing is to ensure that a change, such as a bug fix should not result in another fault being uncovered in the application. Our website "Online Examination system" is tested properly then and there whenever the bugs are being fixed, to ensure that it doesn't affect other modules.

UNIT TESTING

Unit testing is a level of software testing where individual units/components of software are tested. It is necessary to test each module by giving them different kind of inputs. This ensures the stability and consistency of the application.

V. CONCLUSION

This Project is a user-friendly system, which is very easy and convenient to use. The system is complete in the sense that it is operational, and it is tested by entering data and getting the reports in proper order. But there is always a scope for improvement and enhancement. During the development of this, coding standards are followed for easy maintainability and extensibility.

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