

Design and Implementation of an Online Examination System for College Level

Badal Lanjewar¹, Akshay Wagh², Trilok Anand³, Shubham bisen⁴, Vicky Chaudhary⁵

^{1,2,3,4}Students, ⁵Asistant Professor
Wainganga College of Engineering and Management, Nagpur, India, 441114

badallanjewar999@gmail.com

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Abstract – The purpose of this research paper is to design and implement an online examination system for college level. The proposed system aims to provide a user-friendly platform for students to take exams remotely, while maintaining the integrity and security of the examination process. The system will allow for the creation of multiple choice questions, short answer questions, and essay questions. The system will also provide automatic grading and feedback to the students. The system will be built using modern web technologies and deployed on a cloud-based infrastructure for scalability and availability.

Keywords- (HTML, CSS JavaScript Django framework, load balancer, python, dB SQLite)

I - INTRODUCTION

Online examination systems have become increasingly popular in recent years due to the convenience and scalability they provide. With the COVID-19 pandemic, online examination systems have become a necessity for educational institutions to ensure continuity of education. However, designing and implementing an online examination system for college level is a challenging task due to the need for security and integrity of the examination process. This research paper proposes a solution to this challenge by presenting a design and implementation of an online examination system for college level.

Examination, they say is not a true test of knowledge. In our contemporary society, this axiom holds only in theory but not in practice. Examination that is supposed to be conducted and evaluated in confidence is now seen with students even before the date and time the examination is scheduled to take place.

History has it that ancient China; was the first country in the world that implemented a nationwide standardized examination, which was called the “imperial examination”. The main purpose of this examination was to select able candidates for specific governmental positions. The imperial examination was established by the Sui Dynasty in 605 AD and was later abolished by the Qing Dynasty 1300 years later at 1905.

England adopted this examination system in 1806 to select specific candidates for positions in Her Majesty's Civil Service. This examination system was later applied to education and it started to influence other parts of the world as it became a prominent standard (e.g. regulations to prevent the markers from knowing the identity of candidates), of delivering standardized tests. There are three methods of examination: written examinations, oral examinations and physical fitness examination. In written examinations we have the multiple choice questions.

Multiple choice questions have two sub categories. The first category is called True/False. This requires the

student to choose all answers that are appropriate. True/False questions present candidates with a binary choice - a statement is either true or false. This method presents problems, as depending on the number of questions, a significant number of candidates could get one hundred percent (100%) just by guesswork, and should on average get fifty percent. The second category. This requires the student to only answer from a list of options.

II -METHODOLOGY

The proposed online examination system will be developed using web technologies such as HTML, CSS, JavaScript, and PHP. The system will have a user-friendly interface for both students and instructors. The system will allow instructors to create exams, questions, and assign them to students. The system will provide automatic grading and feedback to the students. The system will also ensure the security and integrity of the examination process by implementing measures such as randomized question ordering and limiting access to the examination to authorized users only. The system will be deployed on a cloud-based infrastructure for scalability and availability

The software methodology followed in this project includes the object-oriented methodology and the application system development methodologies. The description of these methodologies

Although there are a growing number of applications (such as decision support systems) that should be developed using an experimental process strategy such as prototyping, a significant amount of new development work continues to involve major operational applications of broad scope. The application systems are large highly structured.

User task comprehension and developer task proficiency is usually high. These factors suggest a linear or iterative assurance strategy. The most common method for this stage class of problems is a system development life cycle modal in which each stage of development is well defined and has straightforward requirements for deliverables, feedback and sign off.

The system development life cycle is described in detail since it continues to be an appropriate methodology for a significant part of new development work. The basic idea of the system development life cycle is that there is a well-defined process by which an application is

conceived and developed and implemented. The life cycle gives structure to a creative process. In order to manage and control the development effort, it is necessary to know what should have been done, what has been done, and what has yet to be accomplished. The phrases in the system development life cycle provide a basis for management and control because they define segments of the flow of work

III -CONCLUSION

The proposed online examination system provides a solution to the challenge of designing and implementing an online examination system for college level. The system provides a user-friendly and secure platform for students to take exams remotely, while maintaining the integrity and security of the examination process. The system can be further enhanced with additional features such as analytics and reporting.

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