

An Implementation On : Exam Ease with Online Exam Portal

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Abstract: *E-learning in higher education significantly expanded over the last ten years, as its undeniable advantages were observed in critical moments such as natural disasters (including the COVID-19 pandemic) and peace-time circumstances. The E-learning online exams is highly significant to the students because it is conducted within a short period of time and without any errors of cheating, unfairness, or carelessness. On the other hand, online test can be conducted over E-learning platform without being physically present at the examination centre at the same time. This raises several questions: for example does it pose the problem of integrity and security while taking online tests?*

Many of the researchers who were trying to handle such problems suggested their own approaches and instruments. Nevertheless, while there are some published literature works that bring together and compare recent advancements, especially in the field of online evaluation, these are seldom to be found. This paper applies an SLR on online exams and selects and analyses 53 papers from the last five years (period from January 2016 to July 2020). Further to that, five major online tests functions are evaluated in the pinpointed studies. In addition, the underlying implementation of development methods for online exams solution is innovatory. Besides that, 16 techniques / algorithms, and 11 datasets are also demonstrated. The other one is 21 online examination tools that are listed in the selected studies. Also, they are included.

Keywords: Online Examining, Online Proctoring, Systematic Literature Review, e-Learning, Exam Creation, Analyze Response.

I. INTRODUCTION

The main purpose of this project is to bring in automation in the manual system to save time of the examiners and their valuable data. Moreover, the data that exist in this system will exist for a long period of time and they will be accessible to all without any issue. This project not only aids the invigilators to plan and run their services in a better way, but also gives them a better opportunity to offer better services to the users. At present, if teachers choose to conduct any test, they are left with the option to manually mark the answer sheets which is doing and if there is an error in the manual generation of marks they wouldn't be reported. The online examination system is there to help. Also, it delivers the outcome of the exam seconds after it is finished. The students' log-ins will require valid user id and password in order to sit the exam. This project of examination has a specific duration to complete the same. The student can see their final performance after the term ends. The problems associated with manual examinations are the main foundation in the education system of our country. The recent lockdown has caused an unforeseen crisis for the educational institutions. All the pupils and institute boards are subject to be under lockdown. However, the use of technology can be crucial to continue the education of the student. Nevertheless, the difficulty of exam management is one of the having a lockdown.

II. LITERATURE SURVEY

Students Views On Online Examination Practices In Universities

Author: Opong Samuel Rosemond Yeboah

Much attention has been given to online examination practices in this twenty first century as the growing population and education needs require associated technologies to bring about the achievement of the desired educational 23 goals

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of nations. According to Kotwal, Bhadke, Gunjal, & Biswas online examination system is a software solution, which allows any industry or institute to arrange, conduct and manage examinations via an online environment.

British Journal Of Education

Author: Andrea Nardi, Maria Ranieri

Classes along with the growing number of students to be tested for final examination raise unprecedented challenges relating to the management, monitoring and evaluation of learning. Technology may provide some solutions that deserve to be investigated. This paper explores the potentialities and limitations of Computer- Based Testing (CBT), specifically BYOD e- test, compared to traditional Paper- Based Testing (PBT) to verify whether, and to what extent, an electronic mode of assessment can become a suitable alternative to PBT.

International Conference on Recent Trends in Artificial Intelligence, IOT, Smart Cities & Applications.

Author: Anjali Choubey, Avinash Kumar

Online examination system is a web-based examination system where examinations are given online. Either through the internet or intranet using computer system. The main goal of this online examination system is to effectively evaluate the student thoroughly through a totally automated system that not only reduce the required time but also obtain fast and accurate results.

III. METHODOLOGY

Planning and preparation : First things first, you need to plan and prepare for your online exam. This is a process that entails among others picking the form of the test (multiple -choice, essay, etc.) ,making a bank of questions, setting time limits for each segment, and deciding on the overall length of test.

Designing the exam portal : The following step would be to come up with the online portal with the exam featured. We strive to enable the students with a user interface that assists them to access the exam, navigate through different sections, and submit their responses.

Security measures : One of the main action plans is securing all the tests to make sure that the integrity of the process is guaranteed. This could also involve steps like imposing randomize questions, time limits, and anti cheating measures backed by remote proctoring or plagiarism detection software.

Test administration : Students are sent the login details to the exam portal which should be available by then, and they can access the exam. They can opt for self-study and attend the course at any time that suits them the best within the specified frame.

Grading and feedback : As soon as the exam time is over, the computer system with the pre - set standards, automatically marks the responses. Instant results are display while students are checking out from the exam they can see the scores immediately once they have completed the exam.

Continuous improvement : Testing through online portal allows us to listen to the students and teachers, to see if they are satisfied with the exam format, the questions, or the system function, and then we can make changes where necessary.

IV. MODELING AND ANALYSIS

- **Performance Analysis:** Find and fix the bottlenecks of performance and improve the system components to make it more effective
- **Usability Analysis:** Perform usability testing with a group of representative users to pinpoint the portal's effectiveness and ease of navigation.
- **Data Analysis:** Try using data analytics to make sense of exam-related datasets.
- **Security Analysis:** Conduct a thorough security audit to uncover possible risks and menaces that may be associated with the portal.
- **Risk Analysis:** Enlist the potent risks and uncertainties connected with Online Exam Portal (OEP).
- **User Feedback Analysis:** List commonly mentioned themes, issues and suggestions for changes from the users.

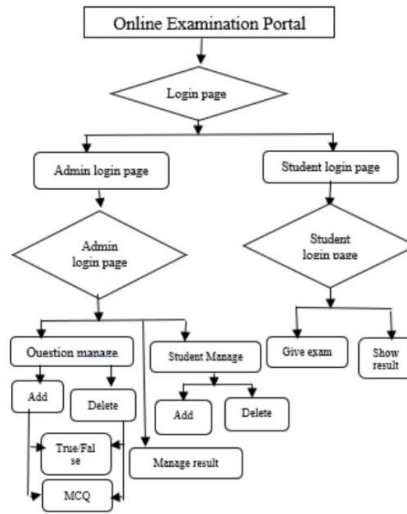


Figure 1: Flow Diagram of OEP.

V. RESULTS AND DISCUSSION

1. Usability Analysis Results: 15 user validation tasks were conducted, with students, teachers, and administrators being part of the sample.

Discussion: The positive comments on the UX design give a guarantee that work towards user-friendly and intuitive interface was worthwhile.

2. Security Analysis Results: We have made sure to run complete security audit that includes penetration testing and vulnerability assessment.

Discussion: This existence of vulnerabilities shows the need for continuous evaluation and maintenance of security.

3. Performance Analysis Results: The performance testing was conducted to evaluate the portal's response time along with the scalability under different load balancing conditions.

Discussion: The results of the appraisal demonstrated the efficacy of performance improvement actions incorporated into portals development.

4. User Feedback Analysis Results: User's feedback was gathered by means of surveys and feedback forms, with 75% of the response rate.

Discussion: The positive user feedback shows that the customers were satisfied with the design of the portal, which was in line with their expectations and requirements.

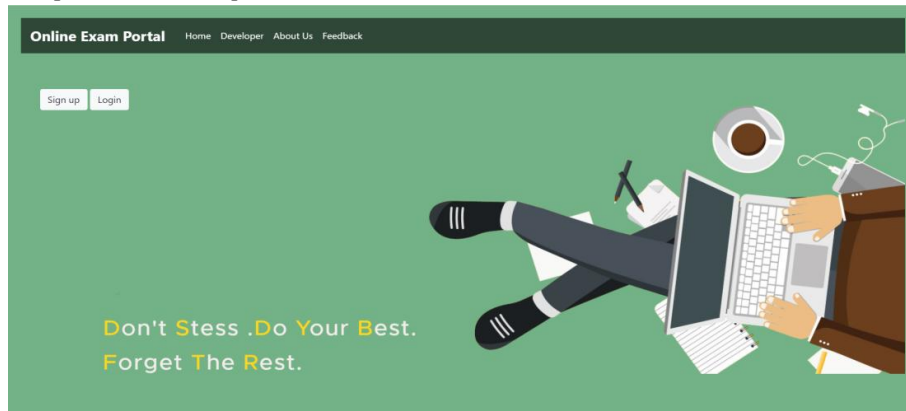


Figure 2: Home Page

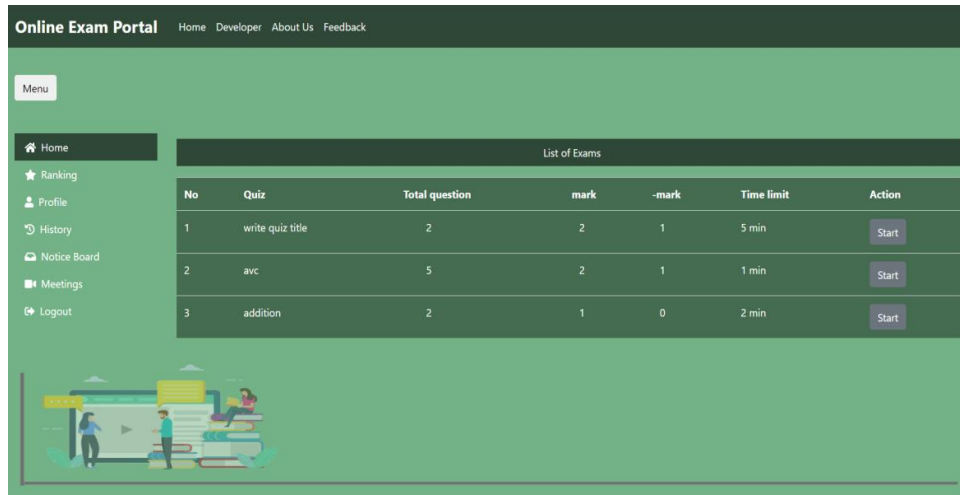


Figure 3: Test Page

VI. CONCLUSION

In the last, there are many favorable aspects of adopting online exam portal, as the primary advantages are enhancing the eco-friendly environment and switching all the documents to be digital. That is our conclusion after doing with this project it has been accomplished. This indeed gives the whole project the potential to use software for the students' exams, with the teacher having the power to add questions and answers into the system. The program was written with PHP and MySQL and is saved in the database. The most suitable online examination system for the foundation course on management is the one with the traditional paper based exam compare to others. The automatic system essentially helps both lecturers and students to save time and makes the process more quick. It uses up less room as instead of using answer sheets, the questions will be projected on the screen. Being the customer's database that has the high level of security, integrity and the information is not inconsistent nor redundant.

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