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Online Examination System

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Abstract: Online Examination System is an online test simulator is to take online examination, test in an efficientmanner and no time wasting for manually checking of the test paper. The main objective of this web based online examination system is to efficiently evaluate the student thoroughly through a fully automated system that not only saves lot of time but also gives fast and accurate results. For students they give papers according to their convenience from any location by using internet and time and there is no need of using extra thing like paper, pen etc. Online examination system helps students to offer a quick and easy way to appear for the test. It also provides the results immediately after the examination with 100% accuracy and security. Student can enter to perform exam only with their valid username and password. This examination contains multiple choice questions and appropriate number of options. There are no limitationson number of options and it can be randomized so same set of question will not appear to all student so it prevent manipulation. More than one option can be correct but the user can select only one option. This provides time limit. The user can see their results after completing the exam. This helps the students to write the exam from far distance and which canprovide security and simplicity and other beneficial features to the user.

Keywords: Front-end: HTML,CSS, JavaScript for UI so thatusers can interact .
Back-end: Sql, NodeJS for maintaining Database.
Security, Client Server Architecture; Browser ServerArchitecture Random Number Generator; Randomization.

I. INTRODUCTION

A. *Purpose*

The purpose of on-line exam simulator is to take online exam in an efficient manner and no time wasting for checking the paper. The main objective of on-line test simulator is to efficiently evaluate the candidate thoroughly through a fully automated system that not only saves lot of time but also gives fast results. For students they give papersaccording to their convenience and time and there is no needof using extra thing like paper, pen etc.

B. *Scope*

Scope of this project is very broad in terms of othermanually taking exams. Few of them are:-

1) This can be used in educational institutions as wellas in corporate world.
2) Can be used anywhere any time as it is a web basedapplication(user Location doesn't matter).
3) No restriction that examiner has to be present whenthe candidate takes the test.

II. LITERATURE REVIEW

Hongmei Nie Math, Physics and Information Engineering College Online examination is the crucial parts among online education. It is efficient and fast enough and reduces the large amount of material resources. Examinationsystem is developed based on web. This paper describes the principle of the designed system, that presents the mainfunctions of the system, analyzes the algorithm of auto-generating test paper,and discusses the security of the system.

Nor Shahida bt Mohd Jamail Abu Bakar Md Sultan Faculty of Computer Science and Technology, Selangor,Malaysia Examination process is important activities for institutions to evaluate student's performance. Thus the quality of the exam questions would determine the quality ofthe students produced by the institutions, also preparing exam questions is challenges, tedious and time consuming for the instructors.

Current technologies help instructors to store the questions banks in computer databases. The issue arise is how the current technologies would also help the instructors to auto generate the different sets of questions from time to time without concern about repetition and duplication from the pass exam while the exam bank growing. This paper describes the use of shuffling algorithmin an Automatic Generator Question paper System (GQS) asa randomization technique for organizing sets of exam paper.The results displays the shuffling algorithm could be used toovercome randomization issue for GQS.

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III.PROBLEM FORMULATION

Online examination will diminish the rushed occupationof evaluating the answers given by the applicants physically.
Being a coordinated Online examination framework itwill decrease paper work.

To permit programmed reviewing and manual evaluatingwhich can be recorded per test.

1) *Require Tools:* Visual Studio Code
2) *Feasibility:* The application is feasible regarding technical and economical. During the development ofOnline Examination System, we have tried to adrdessall these.
3) *Complete Work Plan Layout:* 1 week :- Frontend structrue and domain name 2 week :- Hosting plan 3 week :- Website platform ,Website Theme and contents 4 week:- Work on frontend 5 week :- Work on Database 6 week :- Testing and Debugging

A. *Functional Requirements*

This section gives a functional requirement thatapplicable to the On-Line Exam system.
There are three sub modules in this phase.

1) Candidate module.
2) Examiner module.
3) Administrator module

B. *Non-Functional requirements*

1) *Performance Requirements*

Some Performance requirements identified is listedbelow:

a) The database shall be able to accommodate a minimumof 10,000 records of students.
b) The software shall support use of multiple users at atime.
c) There are no other specific performance requirements that will affect development.

2) *Safety Requirements:* The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is requiredto take the database backup.
3) *Security Requirements:* Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets

a) Assign certain functions to different modules
b) Restrict communications between some areas of the program
c) Check data integrity for critical variables
d) Later version of the software will incorporate encryption techniques in the user/license authentication process. Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

C. *System Requirements*

1) *Software Requirements*

a) *Client Side:* .HTML, Web Browser, Windows XP/2000/Vista Web Server: .HTML, Windows XP/2000/Vista ii.

2) *Hardware Requirements*

a) *Server Side*

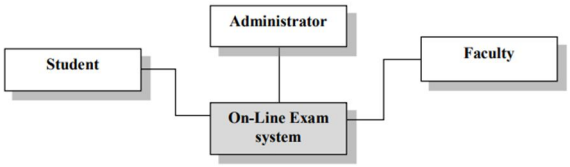
- *Operating System:* Windows 9x/xp ,Windows ME
- *Processor:* Pentium 3.0 GHz or higher
- *RAM:* 256 Mb or more
- *Hard Drive:* 10 GB or more Client side:
- *Operating System:* Windows 9x or above, MAC orUNIX.
- *Processor:* Pentium III or 2.0 GHz or higher. RAM: 256Mb or more

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IV. SYSTEM ARCHITECTURE

This diagram represents what are the bounders and scopeof On-Line Exam System project.
It describes the main objective of the system and itsentities involved.



Administrator can do the following:of his student)

- Create/delete accounts (add a list of faculty names and list

- Change password for Faculty/Student
- Create/ delete/update courses (subject).

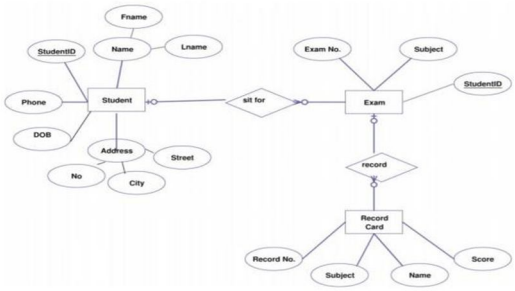
The Faculty can do the following:

- Change password.
- Insert questions.
- Specify the answers.
- Update mark of questions and answers.

The Student can do the following:

- Change password.
- Choose exam.
- Review answers.

Figures



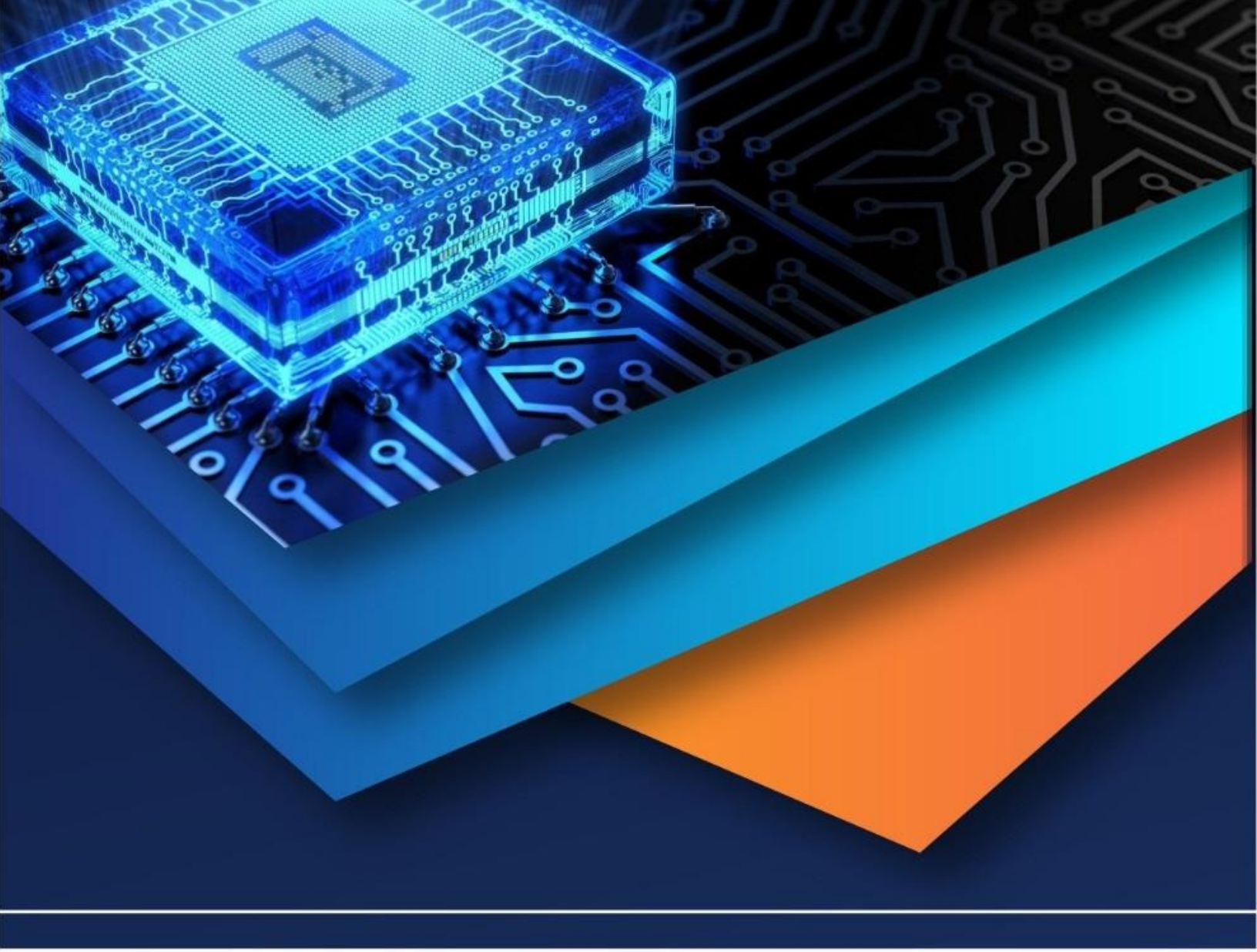
V. CONCLUSION

Online Examination System (OLES) is a web application. The key concept is to minimize the amount of paper and convert all forms of documentation to digital form. It can observe that the information required can be obtained with ease and accuracy in the computerized system. The user with minimum knowledge about computer can be able operate the system easily. The system also produces brief result requiredby the management.

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