

## ONLINE EXAMINATION SYSTEM

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**Abstract** - This Online Examination System is a software solution, which allows any industry or institute to arrange, conduct and manage examinations via an online environment. It can be done through the Internet/Intranet and/ Local Area Network environments. Some of the problems faced during manual examination systems are the delays occurred in result processing, filing poses a problem, filtering of records is difficult. The chance of loss of records is high also record searching is difficult. Maintenance of the system is also very difficult and takes lot of time and effort. Online examination is one of the crucial parts for online education system. It is efficient, fast enough and reduces the large amount of material resource. An examination system is developed based on the web. This paper describes the principle of the system, presents the main functions of the system, analyzes the auto-generating test paper algorithm, and discusses the security of the system.

**Key words:** Security, Client Server Architecture; Browser Server Architecture; Random Number Generator; Randomization;

### 1. INTRODUCTION

The Online Examination System is an electronic application. This framework will help the college/Institution to assess the inquiry have different alternative with one right reply. The college/Institution can direct the online examination and report the outcome in a couple time. The examination office is in charge of the creating the inquiry paper and it would be totally secure. Online Examination framework give remotely access to understudies. It assists the inspector with reducing the work

of leading exam, checking answer sheets and producing result. All these work is finished by the machine. All the information is put away on the server. What's more, customers can get to these databases and give exam. Here we utilize a customer server model. Executive offer access to instructor and understudies. Understudies who have account on the framework will have the capacity to give exam. There are two sorts of exam segment Practice and Real test. Understudies can give both tests. Right answer will be highlighted in diverse shading. Subsequent to submitting test the outcome will be created and examinations is done on the premise of result and send it to every single understudy.

### 1.1 MOTIVATION OF THE PROJECT

In customary framework directing exam is extremely repetitive work for analyst and educator too. The entire procedure of allocating exam and assessing their score after the test was done physically till date. Be that as it may, online examination framework is absolutely electronic framework. The framework goes for diminishing expenses connected with directing exams over a timeframe and accomplishing complete computerization of examination framework related assignments like enlistment, distribution of results, which prompts a high level of framework effectiveness. In the wake of experiencing huge numbers of reference papers at long last we are concluded that we can manufactured one examination framework that can be give easy to understand access to establish for directing exam and investigation of result.

### 1.2 LITERATURE SURVEY

- 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. Examination system is developed based on web. This paper

describes the principle of the designed system, that presents the main functions 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 of the 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 algorithm in an Automatic Generator Question paper System (GQS) as a randomization technique for organizing sets of exam paper. The results displays the shuffling algorithm could be used to overcome randomization issue for GQS.

## 2. STATEMENT OF SCOPE

Online Examination arrangement is a Multiple Choice Questions based Examination framework. It gives a simple way to utilize the environment for both test-conductors and understudies showing up for examination. Online Examination System is a web application that sets up a system between the establishments and understudies. Establishments enter on the site the inquiries they need in the exam. These inquiries are shown as a test to the qualified understudies. The answers enter by the understudies are then assessed what's more, their score is computed and spared. This score then can be got to by the organizations to focus the passes understudies or to assess their execution. Online Examination System gives the stage yet does not specifically take an interest in, nor is it included in any tests led. Inquiries are posted not by the site, but rather clients of the site. The site requires an organization to enlist before posting the inquiries. The site has a manager who watches out for the general working of the framework.

### Goals and Objectives are as follows:

- Online examination will diminish the rushed occupation of evaluating the answers given by the applicants physically.
- Being a coordinated Online examination framework it will decrease paper work.

- To permit workforce to give extra time to understudies with handicaps.
- To permit workforce to make tests and answer key.
- To permit programmed reviewing and manual evaluating which can be recorded per test.

## 3. AREA OF THE PROJECT

- The main objective of this online exam system is to reduce the work of conducting the exam.
- The online examination system is a web based application which is useful all over the educational and corporate sector.

This online examination system includes the architectural components as Browser-Server architecture, Client-Server Architecture, Auto Question Generator System, Security, Randomization.

The Random Number Generator Algorithm is used for this system. It is described forward.

- RANDOM NUMBER GENERATOR

Random Number Generators i.e. RNG's used for applications of cryptography that mostly produces a sequence of zeros and one bits, that may be together combined into the sub-sequences or blocks of random values. The two basic classes that are used for this algorithm are as follows:

1. *Deterministic and*
2. *Non Deterministic.*

A Deterministic RNG consists of algorithm that produces a sequence of bits from an initial value called a seed.

A nondeterministic RNG produces the output which is dependent on some unpredictable physical source that is outside human control. No FIPS approved nondeterministic random number generators are there.

#### 4. ARCHITECTURAL DESIGN

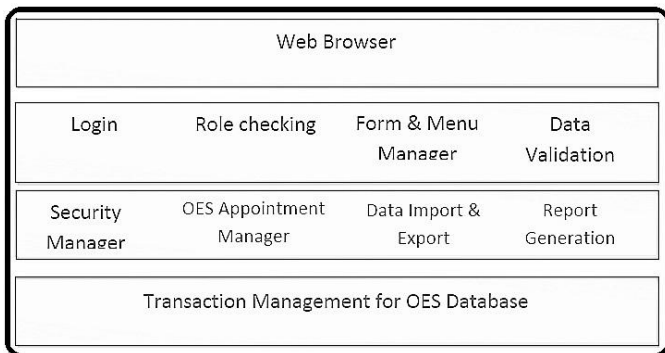


Figure: 4.1 Architectural Design of the Online Exam System

A description of the program architecture is presented. Subsystem design or Block diagram, Package Diagram, Deployment diagram with description is to be presented.

##### Data Deign:

In this system web program was utilized as a customer, JSP Engine as the business rationale level to accomplish its capacity, and database framework as the information layer.

**1. Client:** Client was Web Browser, which executed the framework’s showcase rational. The capacity was to send demand to the web server through the web programs by the clients (instructors or understudies). While the Web Server return the asked for HTML pages or HTML pages powerfully created by JSP page to the customer, which were appeared in the Web program.

**2. Business Logic Tier:** Business rationale level was accomplished primarily by JSP and JavaBeans running the JSP Engine. It reacted to customer demands and accomplished the business rationale with the Web Server.

Tomcat, an open source programming, was utilized as the JSP Engine and Web Server.

**3. Information Tier:** Data level was acknowledged with database framework, used to store the business information, for example, inquiries and papers furthermore, control information, for example, client information. MS ACCESS was utilized to accomplish the information level. The JSP improvement model in view of Model 1 is extremely suitable for snappy and little scale application advancement.

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