

## On-Stream Examination System

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**Abstract:** The On-Stream examination system is a test system that allows users to take tests and automatically generates results based on answers marked by users. The system is to be used for various tests conducted by schools colleges and other institutions. The system is an application that can be used to take tests and get instant results. The system is designed currently for different subjects. It also consists of a Teacher module. The Teacher module leads to Teacher dashboard which is accessible through Teacher login. The Teacher dashboard allows Teacher to add new questions into system along with 4 options and 1 right answer. The Teacher may also set the time in minutes for every subject and number of questions. So now whenever user registers he may then login using registered username password. The user is now allowed to give a test from any mentioned subjects as desired. On choosing a subject the test starts and user may now tick desired answers within the time limit. After the time ends the system goes to the result page and shows users score to him.

**Keywords:** *On-Stream, Java, online exam, automated exam.*

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### I. INTRODUCTION

On-Stream Examination itself represents the examination through the internet. This project will help the university/Institution to evaluate the questions having multiple options with one correct answer. This project contains objective type or MCQ questions. Student will first login and further proceed to their examination online. Result for the same will be displayed after accomplishing the examination. This project helps the management for conducting online examination and save recourse. The university/Institution can conduct the online examination and announce the status or result in a few data. The examination department is responsible for the marinating of question paper and it would be completely secure. This is the era of computer and we are adopting fast mechanism to solve any problem. On-Stream examination is also a way to give result as soon as we submit our paper.

### II. BACKGROUND

The existing system is manual entry of up keeping of the details of the persons who are registered already. And it is very difficult for each person to come to the exam centre. It is very difficult to the Students from far distance to reach the exam centre. This system is required to prepare registration\application Form, question paper for the students and required to print a lot of number manually. To calculate

how many students registered, and verification of details of these students in a month by hand is very difficult. This requires quite a lot of time and wastage of MONEY as it requires quite lot of manpower to do that. Another factor that takes into account that is the possibility of errors and which requires verification and checking of data relating to various operations which is done manually. The limitation of existing system is that it is not all personalized. It cannot be used for personal and quick reference. Even the other staff Members can make quick entries if the responsible person is not present [1.] As the name of the project "On-Stream Examination" suggests, the system/application has to manage the examination for various department of an academy. So to keep the information correct and fast, it will manage the status/information of that examination so one can get the details of exam as per their requirement. Earlier it was a very time consuming and tedious process where both students as well as university used to perform all tasks manually be it Student Registration or Setting Schedules to finally declare the result. Apart from our examination system there are various examination systems those exist like MCSE and CCNA but in these systems the students are still expected to come and register themselves manually for exams. To overcome all these demerits and constraints of online exam we have proposed on-stream examination system. This application is coded in java. This Software project is very much helpful to students,

Examination department and Exam controller. It stores the information about Students, Exams, Report, Results, Student's details and Fee Status etc. As we know that this software project is coded in java programming language, it is user friendly. That means this software is easy to operate. Even a person having less knowledge of computer can easily operate is he will be guided throughout by the software to operate it. This Software is a best effort of changing in paper work to electronic work. This application is divided into many modules, and each module is related to different part of code. This integration makes the project very user friendly. Another advantage of this software is the database that is designed very strongly the current and previous information is stored in this database and maintains the database very easily. University used to keep all the details in files manually.

### III. LITERATURE SURVEY

**Table 1: Comparison of various online-examination systems**

Sr. No	Parameters	On-Stream Examination	MS-CIT	MCSE	CCNA
1	Server Block Problem	No	Yes	Yes	Yes
2	Confirmation for exiting or saving data	Yes (gives 3 times pop-up before exiting)	Once	Once	Once
3	Quick Result	Yes	Yes	Yes	Yes
4	Inbuilt Question Capacity	Yes	Only 75 questions	Only 20 questions	45 to 55 questions
5	Modifications in number of questions	Yes	No	No	No

**Table 2: Comparison of various online-examination systems[2]**

✓ x	Supported Feature Not Supported Feature	Elected Features							Web-Based, Application-Based Hybrid
		Secure Login	Resumption Capability	Multi-Instructor	Combination of Randomization			Portability	
Online Examination Systems					Random Question Selection	Random Question Distribution	Random Choice Distribution		
		✓	x	x	x	x	x	✓	Web-Based
		✓	x	x	✓	x	x	✓	Web-Based
		✓	x	✓	x	x	x	✓	Web-Based
		✓	x	✓	x	✓	✓	✓	Application-Based
		✓	x	✓	x	✓	x	✓	Hybrid
		✓	x	x	x	x	x	✓	Hybrid
		✓	x	✓	x	x	x	✓	Hybrid
		✓	x	✓	✓	x	x	✓	Web-Based
		✓	x	✓	✓	x	x	x	Hybrid

### IV. PROPOSED SYSTEM

We as a 5th semester students of Diploma in Engineering are making this project by taking help from these already working and tested applications as well as making our own set of improvements. The proposed system is designed by using authentication technique which includes registration phase and Verification phase. Concept of multithreading is used so that more than one user at a time can login without causing any error and server getting down. In-built question facility is provided. While logging out Confirmation for exiting and saving the data will be asked. Result will be displayed as soon after the completion of examination.

### V. DETAILED SYSTEM DESCRIPTION

#### 1.1 Modules:

There are three modules in overall system. Following are they, listed and described below.

#### 5.1.1 Question paper generator

Question paper generator generates the online question paper with multiple choice questions & declares the examination time table & answer students need to choose to answer one from them.

#### 5.1.2 Answer checking

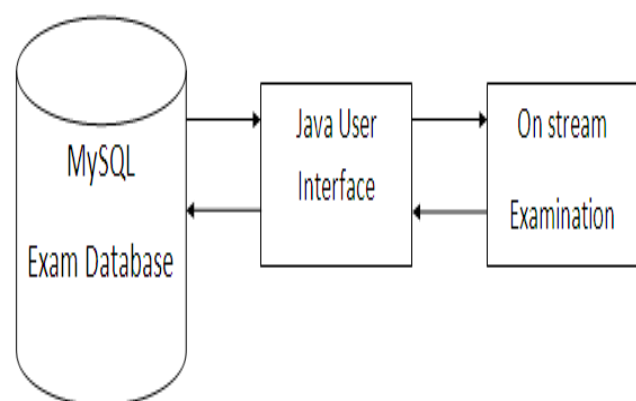
After examination period is over this module check selected answer and answers which is stored in database and calculate marks.

#### 5.1.3 Result store and generator

This module stores the result in database and generates it when it required.

### VI. DESIGN OVERVIEW

#### 6.1 Block diagram



**Figure 1. Block diagram of system**

### 6.2 System Architecture

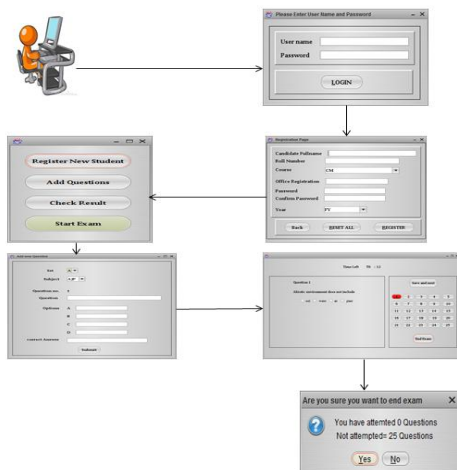


Figure 2. System Architecture

### VII. IMPLEMENTATION DETAILS

With the development of Internet and network database, online education has become an important method in knowledge innovation, dissemination and application. So how to achieve the goals of informational and paperless examination better, and make the examination more efficient, convenient and justice become an important topic in modern education field. Developing a stable online examination system can effectively solve this problem. The system is developed based on J2EE architecture and it mainly includes three modules: user management, test management, and score management. User management is responsible for managing the information of administrators, teachers and students. Test management includes the functions for administrators or teachers to select randomly questions from database to generate test papers. Score management is in charge of the automatic scoring of test papers and giving the corresponding feedbacks to students. The implementation of system efficiently provides teachers and students an interaction platform and improves the management level as well [3].

### 6.3 Flowchart

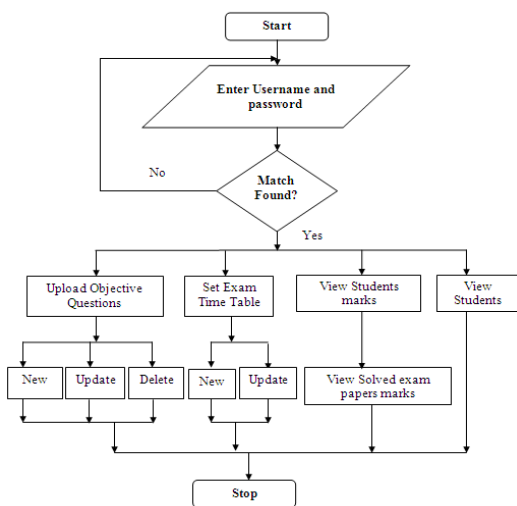


Figure 3. Flowchart of Teacher

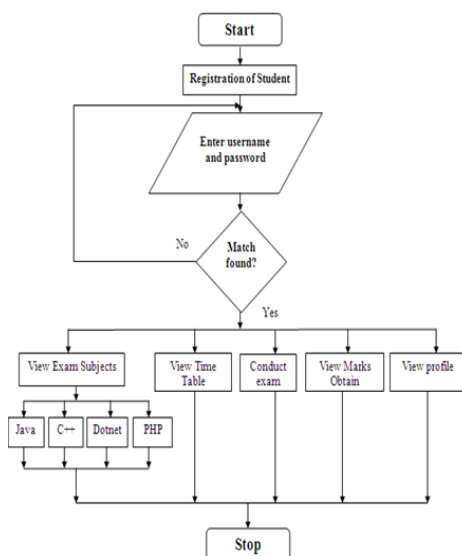


Figure 4. Flowchart of Student

### VIII. FUTURE WORK

There are many online examination techniques but those techniques doesn't have the concept that whenever internet is lost all the data get refreshed and is lost so to overcome flaw/problem the concept uses a technique in which even though internet connection lost the data doesn't get refresh and remains as it is but still in some situation user is in dilemma and is unsure that his/her data is saved and get panic which affects his further examination process and may lead to poor result. So to make the user sure and confident enough to appear to exam without getting panic for loss of data we will display previous data or answers the user has marked or appeared successfully before the internet connection is lost. So this will make the user sure that his/her data is not lost and he/she can attain his examination properly.

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