Chapter 1

Introduction

1.1 Online Exam System

In our education system examination plays a vital role. In this way instructor can evaluate their students as well as students can judge themselves. They get opportunity to know their weakness and strength and can work on their weakness.[1] The traditional system is offline system which allows the institute to conduct exam manually. The pen and paper method of writing examination, which has been ongoing for decades, always are not be pleasing for use because of the problems usually associated including examination venue capacity constraints, lack of comfort for examination candidates, delay in the release of results, examination malpractices, cost implication of printing examination materials and human fault [2]. Online Exam System is an application that allows an institution to conduct examination via the Internet or Intranet. It may be considered a fast developing method because of its accuracy and speed. This system will make it easier for examiners to conduct exams and collate results. The application provides facility to conduct online examination anywhere and at any time. It is designed to eliminate to bottlenecks associated with pen and paper type of examination. Online exam system is significantly important to the educational institution to prepare the exams, saving the time and effort that is required to check the exam papers and to prepare the results report. Online exam will helps the Student to monitor and keep eyes on their progress. The best use of this system would be in scholastic institute and training centers because it will help in managing the courses, course offerings, exam schedule, question bank, MCQ type examination as well as Written examination and get the results in easy and efficient manner.

1.2 Background study

The paper-based examination system has been used for centuries in evaluating the learning abilities of a person. The introduction of written exams is believed to have started in China over a thousand years ago [3] and are still in use today. The paper-based examination system, to some extent, enables one to asses how much a person knows and how well he or she is able to apply what they know in solving problems.

1.2.1 Disadvantages of Current Examination System

Although the paper-based system has been useful in many ways various shortcomings have been detected which limits its efficiency. Paper-based examinations are prone to human errors and limitations. Mistakes in the grading of an exam and delays in declaration of results can occur which raises suspicions of unfairness. A tedious amount of time goes into co-ordination of paper-based exams, the distribution and collection of large amount of papers, and the manual assessment of these papers can make the whole process inefficient and monotonous. [4][5]. The rigidity of the exam location and the exam time is another setback in the paper-

based examination system, times and locations are usually fixed and can't be altered easily. Other limiting factors of Paper-based Examination systems are their cost and security. Printing large amounts of exam papers, hiring extra hands (e.g. invigilators), and safe guarding of exam papers are issues which plague the Paper-based examination system and create potential problems.

1.2.2 Advantages of proposed Online Exam System

To overcome pitfalls of current paper-based examination system we need such a system that will be able to handle many services to take care of all students records in a quick manner. The web enabled examination system can be accessed from anywhere through the Internet that an instructor can manage course student and their exam schedule from anywhere. Online exam system is cheaper than traditional system. On completion of this online examination system institution can save money and many hours of human work. Students get the result just after completion of examination in objective test. This system support both objective and written question to suit for educational institute like university, collage as well as training centers. Thus the advantages of Online Exam system is:

- The system will save time and paper work and make examination more systematic and disciplined.
- Analysis will be very easy
- Result will be very precise and accurate and will be declared in very short span of time.
- No chances of leakage of question paper as it is dependent on the instructor only.
- The logs of appeared candidates and their marks are stored and can be backup for future use.
- Students could understand their weakness and opportunity to work on it.

1.2.3 Related works and Comparisons

Several research and project is done related works on Online Examination System to the regarding problem. In order to judge the desired features in practice, these systems are subjected to the elected features discussed in the previous section. The following subsections contain a brief description and features for existing online examination systems.

Guzman and Conejo (2005) proposed an online examination system called System of Intelligent Evaluation using Tests for Tele-education (SIETTE) [6]. SIETTE is a web-based environment on generate and construct adaptive tests. It can be used for instructional objectives, via combining adaptive students self-assessment test questions with hints and feedback. SIETTE supports secure login and portability features. But it is like just arranging examination and get result. Thats why not well suited to an educational institute like a university. No functionality for managing course offerings and instructor to the following following offered course. Moreover no written question and answering system to judging a

students logical abilities.

   Henke (2007) proposed a web-based Test, Examination and Assessment System (WETAS) [7]. WEATAS is web-based system designed for integration into existing Learning Management System(LMS). This system provides an examination environment but written test, question bank for objective question and written question as well as multi-instructor are missing.

   Rashad et. al. (2010) proposed a web based online examination system called Exam Management System (EMS) [8]. EMS manages the examination and auto-grading for students exams and supports conducting exams, collects the answers, auto mark the submissions, and produce the reports for the test. Ems supports secure login, multi-instructor, and portability features. However , the others features multi-courses, semester wise course offerings, written examination is missing.

   Fagbola et. al. (2013) developed a Computer Based Test System (CBTS) [2]. CBTS is a web-based online examination system developed to address issues such as lack of timing flexibility for automation candidates log-off upon expiration of allowed time, result integrity, guaranty, stand alone deployment, need for flexibility, robustness, designed to supports the examination processes. CBTS supports secure login, multi-instructor but course offerings, written test, semester wise test not supported thats why not well suited for a education institute. There is no functionality like semester wise examination.

1.3 Project Aims and Objectives

   In this section we will discuss what this project hopes to achieve. The aim of this project is to :

> ➢ Provide solutions to the limitations of paper-based examination systems.
> ➢ To create an online examination system that is geared towards enhancing the skills of students and teachers.
> ➢ To offer a flexible, smart and convenient alternative for conducting exams and assessing students.
> ➢ To provides students with a user-friendly, fun and helpful guide for knowledge enhancement.
> ➢ To improve the quality of teaching and learning, and the general standard of education by enhancing academic evaluation methods.
> ➢ To permit programmed reviewing and manual evaluating which can be recorded per test.
> ➢ To offer a institute to manage their course offerings, question bank as well as their students of a section.
> ➢ To provide flexibility to a instructor regarding exam type, MCQ or Written examination.

1.4 Project Scope

- Online Exam System is designed for educational Institutes like schools, universities, training centers.
- Support three type of users that is Admin, Instructor and Student.
- Offer administration to manage courses, students, instructor , course offerings and examination.
- Offer an instructor full control on examination schedule, paper and student of a course.
- Allow students to attend in exam of a course only if he is assigned to that course.
- The system handles all the operations, and generates reports as soon as the test is finish, that includes all information related to the exam as well as all submission details and explanation of marking.
- The type of questions is both Multiple choice and written question.

1.5 Project Pitfalls

- Students needs to be online if exam is arranged over internet.
- Need computerized classroom if any institute wants to arrange exam over Intranet.
- Large database storage to store a large question bank.

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