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## Analysis Process of Design and Development of Online Examination System

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**ABSTRACT:** The main objective of the paper is to analyze process of design & development of online Examination System to provide better student evolution process. Different features of the online examination system are discussed in this paper. This paper corporate between the data stored in server of the institution and our online Exam system. To deal with online system in an easy way and efficient mannered. we Creates strong and secrete data base that allow for any connection in secret way to prevent any outside or inside attacks. The features include the administrator, examination instruction, valid time of examination, Students, Examiner and release of the examination results.

**KEYWORDS:** Computer Based Test, University Examination, Manual, e-Assessment

### I. INRODUCTION

With the help of the internet technology, online examination system has become an effective component to traditional test in many developed countries. It is web based, efficient, flexible and adaptable, which can provide a new and open mode of examination meeting the needs of various Academic organizations. Online course examinations are useful to evaluate the student's knowledge using modern computer technology without any effects on the traditional university course exam that uses Pens, Papers and invigilators. Online exam can improve the standards of student's examination whereas the traditional examination system using the pen and paper requires more effort on the part of students and invigilators. Online examinations are considered an important source for university exam, and the development of network technology polices has given the possibility to conduct the exams online. Thus, the university students, college, Autonomous bodies institute can benefit from these services. The traditional way of identifying the students is checking the student card, driving license, resident card or Passport. The online process and security of the online exam system helps with eliminating cheating. The system should be designed in as a secured system applying safety measures. Special exception handling mechanism should be in place to avoid system errors. In case of scenarios where data integrity can be compromised, measures should be taken to ensure that all changes are made before system is shut down. The main intention of this paper is to develop an online examination system with suitable features and lack of ambiguities. The system allows creating a test from the question bank of the system and conducting Academic and Non-Academic examinations in English. It indicates that higher education institutes moving towards using modern technologies to meet the demand of the students and familiarise them with the new technologies.

### II. LITERATURE REVIEW

Most modern online education uses Web-based commercial courses management software such as blackboard, software developed in-house. This software is not used widely for online exams, due to security vulnerabilities, and the system must rely on students' honesty. Online course exam nowadays becomes more efficient than before; online course exam need for Enhancing the security. Jung, I.Y proposes an enhanced secure online exam management environment mediated by group cryptography using remote monitoring and control of ports and input. Holding the Online course exam for any substance requires more preparations, whether the teacher or through the support of university students. University on the duties assigned to it to provide the necessary environment entrusted to them. Everyone is there to serve the student and we have to encourage students and train them psychologically for a computerized exam, note that many universities in the world of the complexity of computerized tests on its campus. More of recent research shows the advantage and disadvantage of using online course exam on the university campus.



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many people reached to good results showed that there was a positive perception towards the adopting of online exam. They measured students perceptions toward the use of online exam as an assessment tool on university campus within a Decision Support System Course at Christian emient college . A study has been conducted on online exam and traditional exam which indicates that an online exam has better results than traditional exams. Considerable discussion has taken place on group protocols and group-mediated communications to ensure secure communications among group members.

### III. PROBLEMS IDENTIFIED IN EXISTING SYSTEM

The first problem is that there are loads of hard copied documents being generated. This brings us to the age-old discussion of keeping information in the form databases versus keeping the same on sheets of paper. Keeping the information in the form of hard-copied documents leads to the following problems:

**3.1 Lack of space – It becomes a problem in itself to find space to keep the** sheets of paper being generated as a result of the ongoing discussion. The documents being generated are too important to be ill-treated.

**3.2 Filing poses a problem –** Filing the documents categorically is a time consuming and tedious exercise.

**3.3 Filtering is not easy –** It becomes hard to filter relevant documents for the irrelevant ones if the count of the same crosses a certain manageable number.

**3.4 Reviewing becomes time-consuming –**

All the process done manually at the centers and all the records are maintained on the papers. So the maintenance of the record is very difficult in the departments and as well as it's very difficult for the workers to check the record. The Existing system is paper based, time consuming, monotonous, less flexible and provides a very hectic working schedule. The chance of loss of records is high and also record searching is difficult. Maintenance of the system is also very difficult and takes lot of time.

v. Result Processing is slow due to paper work and requirement of staff.

### IV. NEED FOR THE NEW SYSTEM

To solve these problems they required a computerized system to handle all the works. They required a web based application that will provide a working environment that will be flexible and will provide ease of work and will reduce the time for report generation and other paper works.

#### 4.1 Aims and Objective

The main purpose behind the proposed system is to provide a comprehensive computerized system, which can capture, collate and analyze the data from these wards and evaluate the impact of the program.

#### 4.2 Constraints, Assumptions, Dependencies

##### 4.2.1 Constraints

As this system is based on client server technology, so for normal operation minimum of 64 MB RAM will be required on all clients.

##### 4.2.2 Assumptions

In general it has been assumed that the user has complete knowledge of the system that means user is not a naïve user. Any data entered by him/her will be valid. To make the software as user friendly as possible but at the same time keeping in minds user requirements.

- Server OS should be Windows NT/2000/XP.

- Client PC should be Windows 9X/NT/WorkStation or Windows 2000 with latest service pack.

##### 4.2.3 Dependencies

It depends that the one should follow the international standards for the generating the User ID & should fill the related information in the proper format.

### V. SOFTWARE SYSTEM ATTRIBUTES

**5.1 Usability:** The links are provided for each form. The user is facilitated to view and make entries in the forms. Validations are provided in each field to avoid inconsistent or invalid entry in the databases. Some forms consists



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Hyper Links, which provides further details. Reports screen contains text boxes and drop down lists, so that reports can be produced.

**5.2 Security:** Application will allow only valid users to access the system. Access to any application resource will depend upon user's designation. There are two types of users namely Administrator and Student. Security is based upon the individual user ID and Password.

**5.3 Maintainability:** The installation and operation manual of examination management system will be provided to the user.

## VI. ACCEPTANCE CRITERIA

The software should meet the functional requirement and perform the functionality effectively and efficiently.

- A user-friendly interface with proper menus.
- Data transfer should be accurate and within a reasonable amount of time keeping in mind the network traffic.
- The system should not allow entry of duplicate key values.
- System should have the ability to generate transactional Logs to avoid any accidental loss of data.
- Log file should also be generated.

## VII. METHODOLOGY

There are three modules in this phase

**7.1 Candidate module:** the candidate will logon to the software and take his examination . he can also check his previous examinations marks and his details. The Candidate will get result immediately after the completion of the examination . candidate can also perform below mentioned activities.

Can view the different categories of Test available in their account.

Can change password.

Can view the various reading material.

Can view and modify its profile but can modify it to some limited range.

**7.2 Examiner module:** The database is prepared & loaded into software . selection for examination can be done language wise by the examiner. The results will be displayed immediately after completion of the examination.

**7.3 Administrator module:** The administrator collects all the results after successful completion of the examination and sends to the head quarters as and when required. Administrator can also done following activities:

Create/delete accounts

Change password for Faculty/Student

Create/ delete/update courses (subject).

## VIII. SYSTEM DESIGN

### 8.1) Introduction:

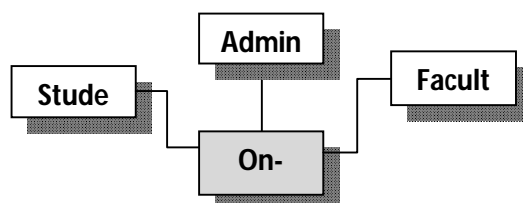
Design is the abstraction of a solution; it is a general description of the solution to a problem without the details.

Design is view patterns seen in the analysis phase to be a pattern in a design phase. After design phase we can reduce the time required to create the implementation.

In this chapter we are introduce context diagram, models, system architecture, principal system object, design model and object interface.

### 8.2) Context Diagram:

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



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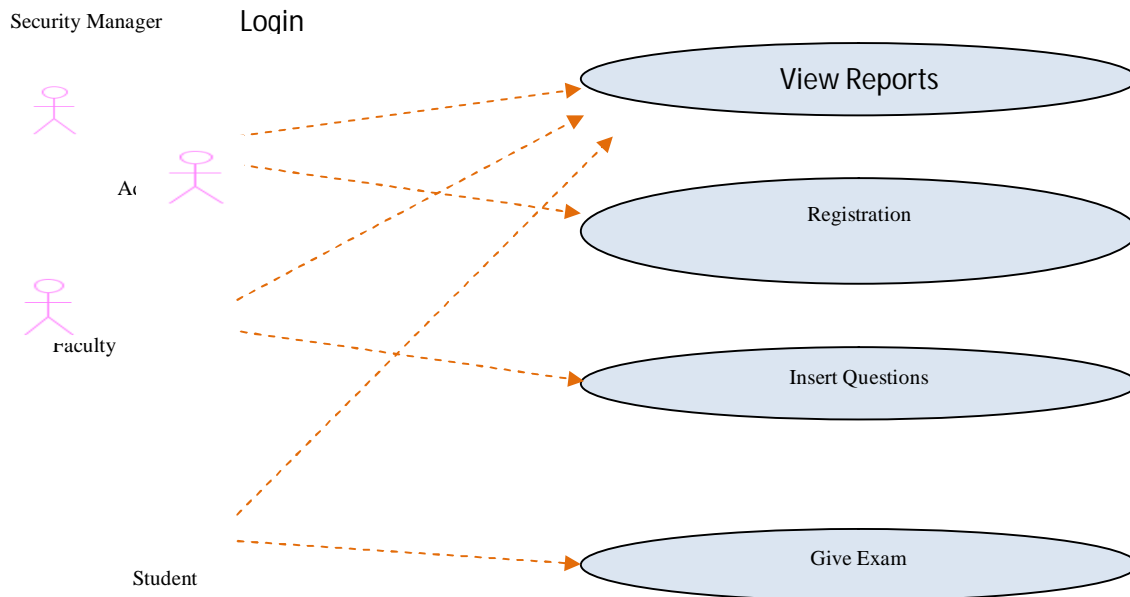
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### 8.3) Models:

#### 8.3.1) Interaction model:

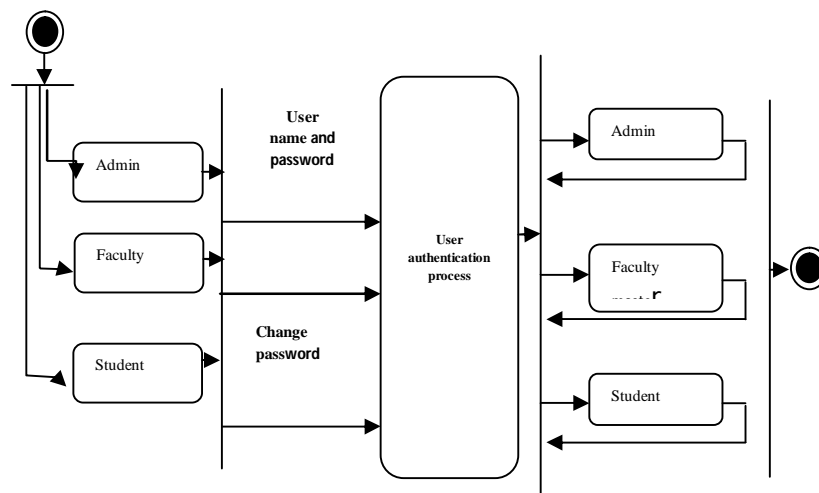
Is a dynamic model that shows how the system interacts with its environment. We use a data flow diagram.

##### 8.3.1.1) use case diagram:



Fig(8.3.1.1): the basic function for each actor

## IX. DEVELOP DESIGN MODEL



## X. CONCLUSION

The Online Examination System is an innovation in the context of College, Universities and Academic Institutes etc. It will boot transparency of the examinations, reduce the risk of leakage of examination questions due to control of only the super admin, and provide opportunity for publishing results immediately after the examinations. Apart from these



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facilities, large number of participants may sit for the examination simultaneously. It will save their time and money. However, ensuring security of the online question bank still remains a challenge for the admin and super admin of the system. The answers are evaluated and the marks obtained are stored in the database while the examiner can get the results immediately from the system in various forms such as general mark list, and ranking of participants. The main features of an examination system include instructions for the participants, accessibility of examination content, valid time allocation, submission ways and result release.

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