

*Review Article*

## Automated Examination Support System

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### Abstract

*The Current examination system is based on CGPI/SGPI and which is not been implemented yet in our institute. The software that was implemented previously is based on old examination system and gave output that was not appropriate. Hence, it is not used in our institute. So, we are focusing on the new examination pattern and trying to create a single automated examination system for our esteemed instituted. The present examination system is based on grades. In this project we have following modules: Student's enrolment: The working of this module is that it will store the information of the students. Hall ticket generations: Hall tickets will be generated on the basis of AT-KT heads of the students per semester and hall tickets will also be generated for those who are regular. Result generation: In this result will be generated by calculating the CGPI and SGPI. Result is generated departmentally as per the respective semester. we also will include session management. The advantage of this software is that there will be no data redundancy. This particular software will only be applicable to SE and TE, for eligibility we are using number of KT heads as a criteria. Our main focus is to provide A secure and remote access to Users. To implement these modules we are using open source software named as "UserCake" we are trying to modify this software according to our project. Auto-back up is also a facility provided. This project can be easily handled by non-technical persons efficiently.*

**Keywords:** Automated, Auto-Back, Eligibility, Non-technical, Result Generation, Session, UserCake.

### 1. Introduction

Our project name is "Automated Examination Support System". The automated examination system will be able to generate hall ticket, result semester-wise and yearly. It will also provide secure remote access and authorization for the users. The project is mainly focused on the new examination pattern introduced by Mumbai University recently. Till last year old examination system was used. But the old system gave irrelevant output for new examination system. Hence to overcome the drawbacks we are designing an automated system according to new system. As the name suggests our main focus will be on how to provide access to the users on just one click.

Our aim is to develop a web application for supporting the newly introduced CGPI/SGPI examination system with reference to secure remote access and administration for students, teachers and examination department staff.

Scope of our project is to enroll the users, to enter marks of students, hall ticket generation, online availability of hall ticket, and generation of result on

the basis of leisures, semester and year, online availability of result, generation of revaluation forms, KT forms and also to provide auto backup.

### 2. Related Work

Our institute has software that is based on old examination system, but since that examination pattern is changed by University of Mumbai, it was necessary to be replaced by new examination pattern that is based on CGPI/SGPI. The software which is currently in use is not able to provide relevant output for the new examination system. There is a need to design software for the new examination pattern with all possible functionalities and which will provide secure remote access and authorization to the users.

Something's about the technologies: PHP is a server-side scripting language designed for web based developments but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: Hypertext Preprocessor.

PHP code is easy to mix with HTML code, or it can be used in integration with various engines and

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frameworks. PHP code is generally compiled and processed by a PHP interpreter, which is usually implemented as a web server's relative module or a Common Gateway Interface (CGI) executable application. After the PHP code is interpreted and executed, the web server sends resulting output to its client, usually in form of a part of the generated web page – for example, PHP code generates a web page's HTML code, or an image, or some other data. PHP also has a command-line interface (CLI) capability and can be used in standalone graphical applications.

PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

MySQLi is the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius's daughter, My. The SQL stands for Structured Query Language. MySQLi is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQLi, Perl/PHP/Python." Free-software-open source projects that require a full-featured database management system often use MySQLi

### 3. Proposed Work

In this area we are going to develop a web application for supporting the newly introduced CGPI/SGPI examination system with reference to secure remote access and administration for students, teachers, examination department staff and principal.

We are using "UserCake User Management System" for managing users according to permissions.

Currently "UserCake" provides two level of authority one is admin and other is user, all data retrieval is based on the permission id. We are providing n number of authority levels on bases of priority. In our project, we are going to increase the permission level by 10 so that if another permission level is to be accommodated that can be easily done. For example, if Exam-Incharge is given the highest permission level and then by increasing it by 10 to say Clerk. And if permission say like Principal is to be added then that can be easily entered in between Exam-Incharge and Clerk. We are going to have the following modules:

1. User's Enrollment
2. Marks Entry
3. Hall Ticket Generation
4. Online Availability of Hall Ticket
5. Result Generation
  - By leisure
  - By year
  - By department
  - Online Viewing of Result

6. Revaluation Forms
7. KT Forms
  7. Auto Backup

We are going to develop software for the new examination pattern as per proposed by Mumbai University.

On line hall ticket generation and the result generation is necessary thing for our academic institutions examination department. The reason behind it is that the staff of our examination cell still has to do the work manually in this era of technology for the results of Second Year and Third Year. In last three years the current examination system is get replaced by the new CGPI system and the new system is somewhat difficult to handle manually. Our Mumbai University generates the result of first year and Last year, which we will get online but currently there is no such a system that the Hall ticket as well as results which will be available on the internet for second year and third year students.

So we think that it could have been better if we could develop such a system which reduces the work as well as will give the efficient output. The main aim of our project is auto generation of the hall ticket and result with the help of available database. In our project when the student fills their examination form, on the basis of information which is filled in the form, the staff will enroll that student into the database. If there are any changes made then we can reflect that changes by firing just simple query on the current database, and the database will get updated. On the basis of previous KT's hall ticket will be generated by the system which will be available on the website.

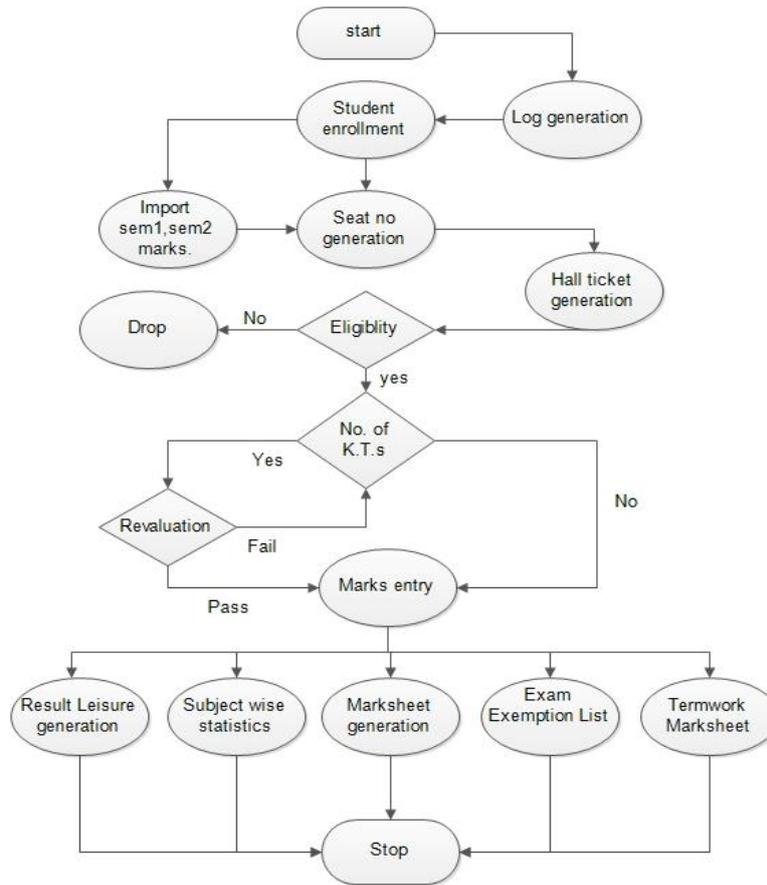
For the result generation the passing criteria are applied to theory as well as practical examination. On the basis of marks obtained per subject the CGPI is calculated by the formula:

$$CGPI = (C1 * S1 + C2 * S2 + C3 * S3 + C4 * S4 + C5 * S5) \div C$$

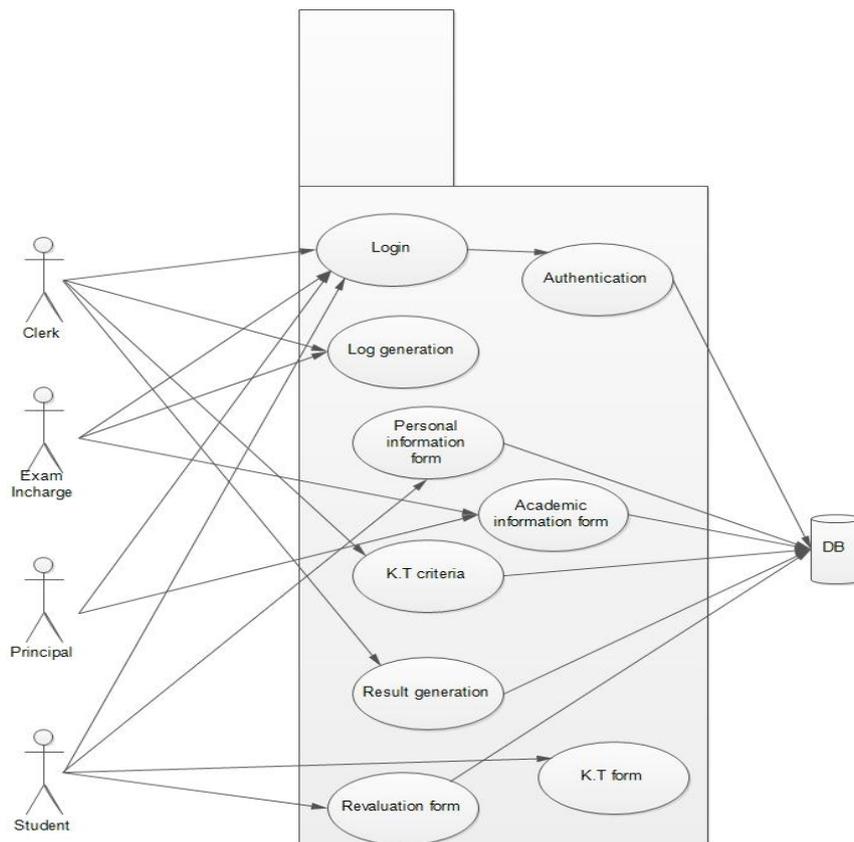
here,  
C1, C2, C3, C4, C5 are the credits assigned for that subject  
S1, S2, S3, S4, S5 are the marks obtained in that subject  
 $C=C1+C2+C3+C4+C5$

Again there is Grading System for the generation of result, according to the calculated CGPI system will look up into the grade criteria and the respective grade will be given to that particular student. As this way result will be generated by the system and available for the students on the website. This is methodology of our project

Each user that is using this system can have his independent access to the system. That means, there will not be any problem of privacy or secrecy. The users are going to have their own views. In other words, they will have different access to each. For example: Principal can have all the access related to system while clerk of examination department can only enter and do all the result works.



**Fig.1** Flowchart for Automated Examination Support System



**Fig.2** Use-Case Diagram for Automated Examination Support System

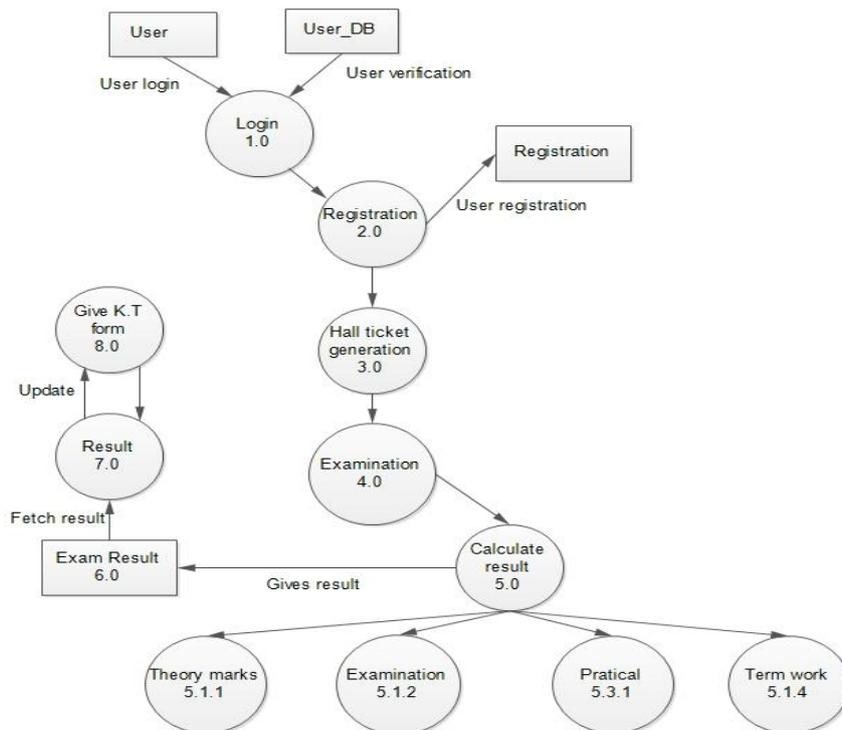


Fig.3 Data Flow Diagram for Automated Examination Support System

The hardware that is required is as follows:

- Client Machine
- Server Machine
- Or

A single machine that can work as client as well as server

- LAN cable
- 500 MB of minimum hard drive space

The software that is required is as follows:

- XAMPP server or WAMP server
- Web browser

**Conclusions**

The result of this implementation will be a fully-fledged working examination system for college. Apart from this, students will be able to view their hall tickets and as well as result. Each user will have his/her independent working status.

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