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STUDENT RESULT MANAGEMENT SYSTEM Using Web Technologies

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Abstract
Student Result Management System is a web-based application which was developed to maintain the results of the students. In this application, PHP is the server side language, MySQL and PHP is used as back-end design and HTML, CSS and JavaScript are used as front-end tools. The project aims to automate semester result management of VNSTIW since it is a computerized examination results management system for tertiary student's examination records. It will simplify and speed up the result preparation, management process, and duties like a tool for reducing the manual work, dispense us with maximum optimization that holds up both students and administration authorities to access the results. The project intends to provide the examination result to the student in a simple way. It is functional for students and institutions to come into possession of the results in a simple manner. Being a result analyzer displaying subject status and grades helps students look at the results. The system meant for students with privileges given to students are to read and execute their results by furnishing user names and passwords for secure login. In the case of a new student, the registration system is ready for use, and the guest user has the privilege only to read.
Keywords: PHP, result management, XAMPP, MySQL, Student Result Management System

1. Introduction

The main objective of this research is to enhance and automate the management and declaration of students' results using a computerized system. This document aims to define the overall software requirement for Student Result Management System and, the efforts have defined the conditions to be intensely and accurately. This specification document describes the capabilities laid out by the software application System Result Management System. It states the various constraints by which the system will abide. This blueprint gives comprehensive information about student's current and previous semester results. It deals with the complete academic details of the students and comprises the student registered number, grades, total and average. It can be accessible to faculty who can use the portal for result analysis. This portal can also be handy for students to view their current

2. Literature Survey

Generating data and organizing data in a useful way is called data processing. The errors have been associated with the existing manual method of processing the student result in most of the universities, this make not only desirable but imperative that computerized approach be used in measuring student Result. The manual methods have been employed to suffer with a number of setbacks; they make the process to be time consuming and prone to error. This lead to examination results reach late, sometimes with wrong grades being considered and student GPAs being wrongly computed, this lead to wrong conclusion in awarding of class of degree . The solution to the problem, therefore, is to find a method of processing result that would be sufficiently accurate and reasonably timely.

Welling(2007) stated that the principle, that is the inputting data to a computer system was a punch cards-the so called IBM cards that generation of students were admonished never to fold, spindle or mutilate. Eludire (2011)

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observed that a number of problems associated with student result management System include late release of student result, in accuracy due to manual and monotonous calculation and retrieval inefficiency. According to him, the development of database concept is answer to this problem, where the amount of redundant data is reduced and possibility that data contained on a file might be inaccurate because they were never automatic updating Option.

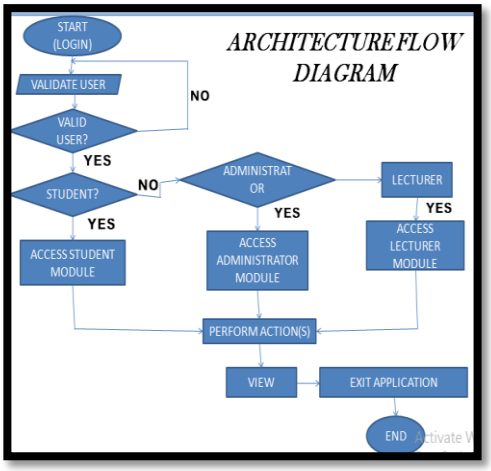
Hemn and Wu Fei (2014) proposed a system in china that provides students result information. According to him, the student result Management system can be used to create, read and update the details of a student and also generate reports about his/her skills. These systems save time of retrieval and prevent data loss.

This research is focused on creating an automated students result management system using oracle's database, forms and reports. This is a computerized examinations results management system for tertiary student's examination records. The manual method of students' academic result processing was found to be tedious, especially when carried out for a large number of students, this makes the entire process time-consuming and error prone.

The system designed is meant to register students as soon as they have paid their departmental registration and only then will they be able to view their results. The system presents a single platform that will be used to manage the processing of all examination records within the institution. The data used for testing was obtained from the Department of Physics, Nasarawa State University and an empirical evaluation of the system shows that the system expedites the processing of students' examination results and the reporting of it.

3. Proposed Work

The proposed system has three roles Student, faculty and Admin. The wholesystem is used by three roles and managed by the admin. The data stored in the database will be retrieved by the persons who have access to access the data. The Admin has full access to the system; The Faculty can access partial information that is viewing Students results and well as analysis of the result. The Student has access to view his/her profile and result of their semester. There are mostly 3 operations performed on every data: r-Read, w-Write and x-Execute.



Admin have 6 modules they are Register (rwx), Login (wx), Profile (rwx), Setting (wx), Upload(rwx), Logout(x). The faculty has 6 modules: Register (rwx), Login (wx), Profile (rwx), Setting (wx), Result(rx), Logout(x). The Student has 6 modules: Register (rwx), Login (wx), Profile (rwx), Setting (wx), Result(rx), Logout(x).The data change is given only to the admin.

There 3 roles must get authenticated by their username and password before accessing the data. The authentication system is encrypted so it cannot be understood by anyone who is involved in MIMA (Man In The Middle Attack) After completion of authentication if the authentication is valid the user gets logged in or if the authentication is not valid the user gets redirected to homepage with a prompt "Mismatch username/password".

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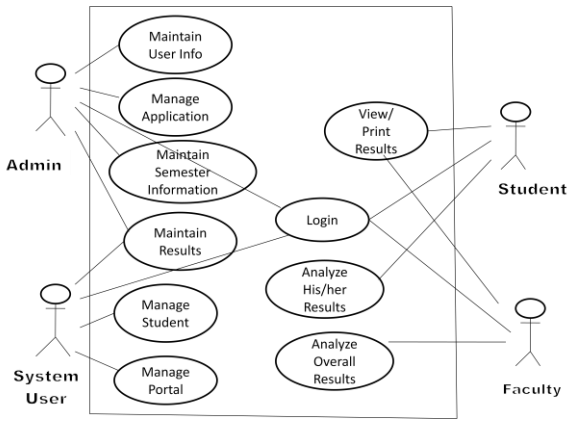
The user had a session opened with the server; now the user can access his modules. After completion of the tasks the user can logout by clicking the logout button then the session will be closed.

The data of every student is stored in a relational database, we used MySql server to create the database. The records are retrieved according to the query and processed using logical gates. The database is normalized as per the requirements. The commit happens after completion of every successful transaction. If any error occurs, the rollback executes and the data will be in its previous committed state. The database is designed to maintain all the ACID properties. The database is not publicly available; it was maintained in a private subnet so that nobody can access it, only the application server can access it.

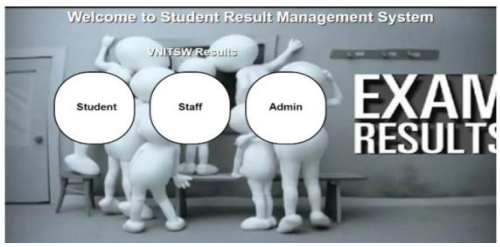
The student will have a smart management of their results, which help them to keep track of their progress with easy access, from anywhere, anytime and any device that has an internet connection by providing basic details such as registered no, password, Name. The faculty while login will automatically get the results of students, and as well as analysis of the result. This system secures the data by implementing all the ACID properties.

Use case diagram:



4. Results

The following shows the results of our SRMS which include register, login, view and update options as follows:



Analysis part

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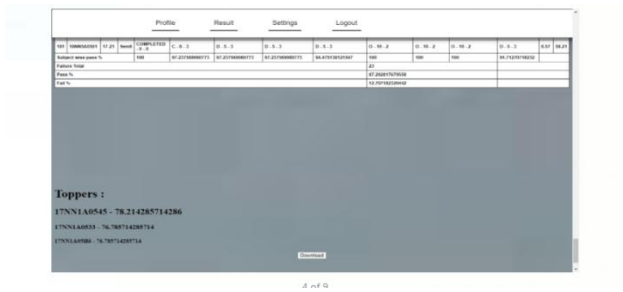

5. Conclusion

In conclusion, this Paper presents a software application that is capable of storing and processing students' results at the click of the button and presenting the output in a certain required forms. Its qualities include enabling error free registration, reduction in the cost and time spent in computing Students' results, faster generation of a term result per class and enabling the teachers and or administrators to view every term result of a whole class in a single sheet called the broadsheet as well as the result summary for a whole class, The Application is easy to use, reasonably secure and enforces data integrity resulting from the use of a relational database management system. The software design if effectively implemented will solve the problems associated with manual processing of student's results in educational institutions by putting in place an efficient computerized result processing system.

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