STUDENT RESULT MANAGEMENT SYSTEM Using Web Technologies

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Abstract

The Student Result Management System is a web-based program that was created to keep track of students' grades. The server side language in this program is PHP, the back-end design is MySQL and PHP, and the front-end tools are HTML, CSS, and JavaScript. Since SRMS is a computerized examination results management system for tertiary students' examination records, the project intends to automate semester result management. It will simplify and speed up the result preparation, management process, and tasks as a tool for eliminating manual work, dispensing us with maximum optimization that prevents both students and administrators from accessing the results. The goal of the project is to communicate the exam results to the student in a straightforward manner. It is practical for students and institutions to obtain outcomes in a straightforward manner. As a result, analyst, you may let students look at the outcomes by providing subject status and grades. Students can utilize the system with privileges to read and execute their results by providing user names and passwords for a secure login. The registration system is ready for use in the case of a new student, and the guest user has simply the ability to read.

Keywords: PHP, result management, XAMPP, MySQL, Student Result Management System

1. Introduction

The major goal of this study is to use a computerized system to improve and automate the management and declaration of students' outcomes. The goal of this document is to specify the overall software requirements for the Student Result Management System, and the efforts have identified the criteria to be deeply and correctly defined. The capabilities of the software application System Result Management System are described in this specification document. It specifies the different limitations that the system must adhere to. This chart provides detailed information about a student's current and past semester grades. It contains the student's entire academic information, including their registration number, grades, total, and average. It may be accessed by professors who will be able to utilize the site to analyze results.

2. Literature Survey

HTML stands for Hypertext Markup Language, and it is the standard markup language for texts that are meant to be viewed on a web browser. Technologies such as Cascading Style Sheets and programming languages like JavaScript can help. [3]

Cascading Style Sheets (CSS) is a style sheet language for specifying the appearance of a document written in a markup language like HTML. Along with HTML and JavaScript, CSS is an important part of the World Wide Web. [4]

PHP is a general-purpose programming language that is particularly well suited for web development. It was first designed by

Rasmus Lerdorf, a Danish-Canadian programmer, in 1994. The PHP Group currently produces the PHP reference implementation. [2]

MySQL is a relational database management system that is free and open-source. "My" is the name of co-founder Michael Widenius's daughter, and "SQL" is the acronym for Structured Query Language. [1]

XAMPP is a stands for Cross-Platform, Apache, MySQL, PHP, and Perl, with the Ps standing for PHP and Perl, respectively. It's an open-source web-solutions package that contains Apache distribution for a variety of servers and command-line executables, as well as Apache server, MariaDB, PHP, and Perl modules.[5]

Algorithms/programs in Use:

I as previously said, various computer programs exist today that assist users in finding and storing basic information such as a student's name, grades, and seat number. The rest of the computational work is either done manually by faculty at that university or requires a separate software.

Drawbacks of the current system:

If a computer program is written in the C programming language, it may be dependent on the operating system. The use of linear search in file handling may add to the time complexity.
NO enhanced feature advantage, such as in a web application, is available.

The proposed approach and its advantages over the current system are as follows:

Friendly to the user (as faculties can easily use web based application).
AVAILABILITY AT ALL TIMES.
(As long as the computer is linked to the network, the system is available.)
Simple computation. Simple storage

MODULE

Student Result Management System divided into two modules–
● Student
● Admin
Admin Features
● Admin Dashboard
● Admin can add/update/ Class
● Admin can add/update/ Subjects
● Admin can add/update/ Active/Inactive Subject combination with class
● Admin can register a new student and also edit info of the student
● admin can declare/ edit the result of a student.
● Admin can change own password

Student Features
● Students can search their results using a valid roll-id.
● Student can view their result
● Student can print the result.

Proposed Work

Student and administration are the two responsibilities in the proposed system. Three roles use the system, which is administered by the admin. Persons with access to the database will be able to retrieve the information contained there. The Admin has complete access to the system, Where as The student gets access to his or her profile as well as the semester's results.
Every data is subjected to three operations: r-Read, w-Write, and x-Execute.

Register (rwx), Login (wx), Profile (rwx), Setting (wx), Upload (rwx), and Logout (rwx) are the six modules available to the administrator (x).

Login (wx), Profile (rwx), Setting (wx), Result (rx), and Download Marks Sheet are the five modules available to students (Dx).

Only the administrator has access to the data modification.

Before accessing the data, the two roles must be authenticated using their login and password. Anyone participating in a MIMA (Man In The Middle Attack) cannot understand the authentication method since it is encrypted. If the authentication is successful, the user is logged in; if the authentication is unsuccessful, the user is routed to the homepage with the prompt "Mismatch username/password. "The server had established a session with the user, and the user may now access their modules. The user can exit after completing the tasks by clicking the logout button, and the session will be cancelled. Every student's information is saved in a relational database, which was built using the MySQL server. The records are obtained and processed using logical gates in accordance with the query. The database has been standardized to meet the needs. Every successful transaction is committed when it is completed. If there is a problem, the rollback is executed, and the data is restored to its original committed state. The database is built to keep all of the ACID characteristics intact.

E-R Diagram
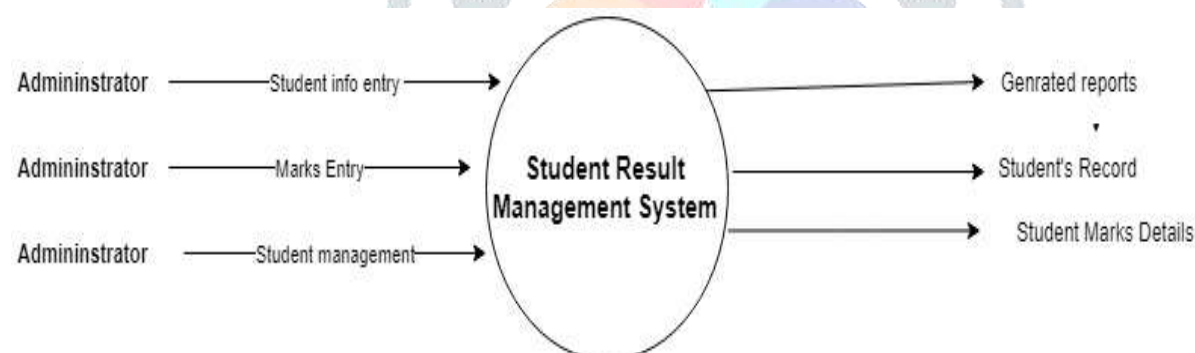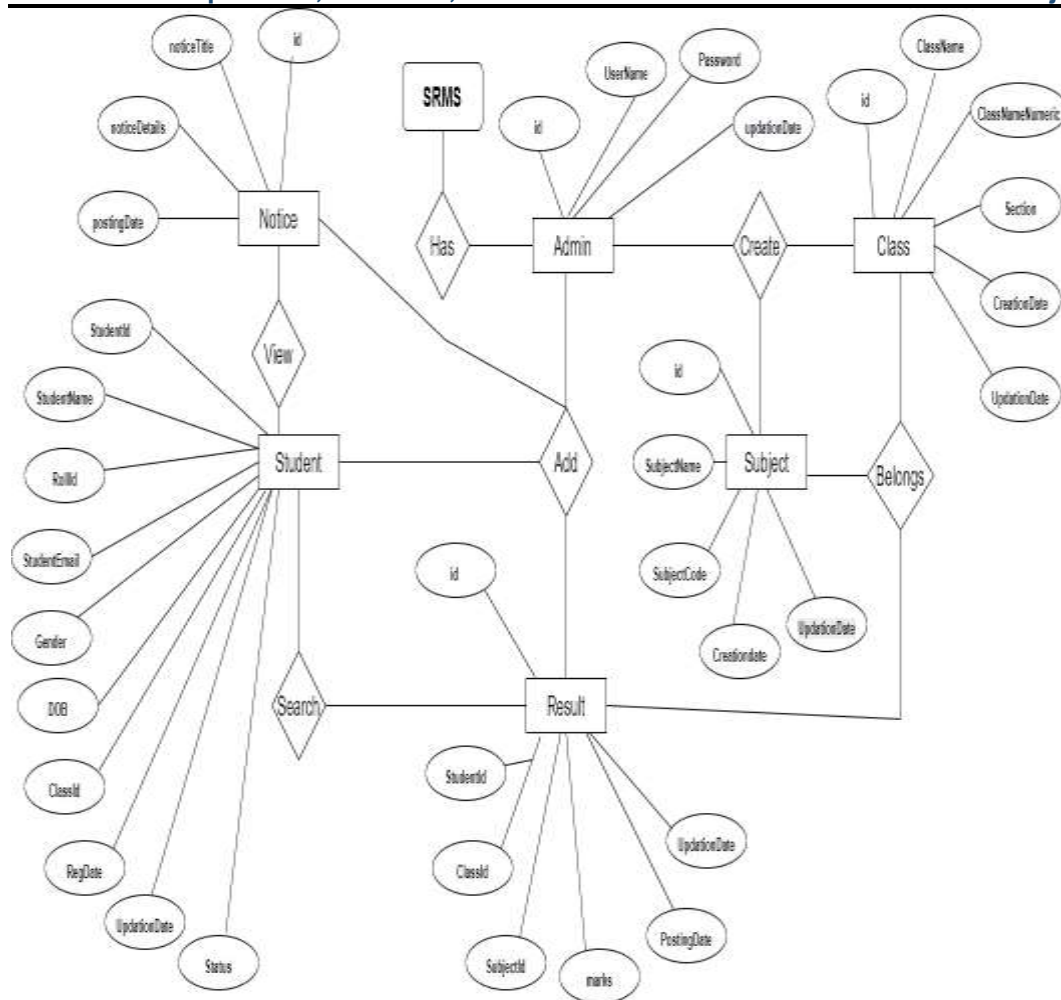
Conclusion:

The Student Result Management System (SRMS) is discussed in this work. The product is designed to solve the challenges that understudies face in school with their board records. The SRMS was built with PHP, MYSQL, HTML, CSS, and JAVASCRIPT, and it was hosted locally using Apache web worker. The product improvement concept is also based on the Participatory Steady Process Model (PIP Model). A useful breakdown of the framework and its core components is provided in order to understand the framework's primary functions. Similarly, a use case graph is given to demonstrate the various framework client classes as well as the numerous functionality associated with each framework client.

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