

Student Result Management System

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Abstract

The Student Result Management System (SRMS) is a web-based application designed to automate and streamline the process of managing and publishing student results efficiently. Traditional result management methods rely heavily on manual data entry, extensive paperwork, and time-consuming verification processes, which often lead to errors and inconsistencies. Our system provides an efficient, secure, and automated approach to handling student records, reducing administrative workload while improving accuracy and accessibility. By integrating a centralized database, the system ensures easy storage, retrieval, and management of academic results.

The system is designed to cater to the needs of administrators, faculty, and students by providing role-based access control. Administrators can efficiently manage student data, input marks, and generate reports, while faculty members can update subject-specific scores and analyze student performance. Students can securely access their results online without the need for physical mark sheets, ensuring transparency and convenience. The RMS also includes an automated grading system, which calculates grades based on predefined criteria, minimizing human intervention and ensuring fairness in evaluation.

The implementation of robust security measures, including authentication and encryption, ensures data privacy and protection against unauthorized access. Additionally, the RMS provides historical data analysis, allowing institutions to track academic trends and improve decision-making processes. With a user-friendly interface and responsive design, the system ensures seamless access across various devices, improving the overall user experience.

Developed using modern web technologies, the Student Result Management System are designed for scalability and adaptability. It can be customized to fit the specific requirements of different educational institutions, making it a versatile solution for schools, colleges, and universities. By digitizing the result management process, this system significantly reduces paperwork, minimizes human errors, enhances operational efficiency, and promotes a more transparent and accessible.

1. INTRODUCTION

Student Result management system (SRMS) is a technological opportunity for the school, college, university and coaching center institutions searching for a secure, simple and alternative solution to the conventional paper-based exam results evaluation, reporting and distribution. Like any other software, the system comes with certain advantage and disadvantage.

The software application unbelievably unravels and quickens the result management system with unique templates by providing the administration a secure database system for storing, evaluating and publishing the test scores and grades of candidates online. The database likewise allows the students to observe and gander at the exam results on the web at whatever point necessary.

The software exhibits some effortlessness in solving, adjusting and eradicating the problems in traditional result and examination management with automation system. One of the principal purposes of the system is to give the test results to the students in the as fundamental and exact way as possible. The administrator, modify and assess marks for the students whenever needed.

2. MODULES OF THE SYSTEM

Student Result management system (SRMS) divided in two modules–

- i. Student
- ii. Admin

Admin Features-

- iii. Admin Dashboard
- iv. Admin can add/update/ Class
- v. Admin can add/update/ Subjects
- vi. Admin can add/update/ Active/Inactive Subject combination with class
- vii. Admin can register new student and also edit info of the student/ Bulk import students/Export students
- viii. Admin can declare/ edit result of a student/ Bulk import results /Export results
- ix. Admin can add/update notices
- x. Admin can change own password

Students Features-

- xi. Student can search their result using valid roll ID.
- xii. Student can view result with their grade and percentage.
- xiii. Student can print out the result sheets.
- xiv. Student can view Notices

3. LITERATURE SURVEY

According to Freund et al. (2017), nowadays people interact directly with technology in fields such as education, government, finance, retail, entertainment, health care, science, travel, publishing, and manufacturing. And they also state that, educators and teaching institutions use technology to assist with education.

Most equip labs and classrooms with laptops or desktops. Some even provide computers or mobile devices to students. Many require students to have a mobile computer or mobile device to access the school's network or Internet wirelessly, or to access digital-only content provided by a textbook publisher. And educators may use a Course Management System (CMS) or systems like this called a Learning Management System (LMS), which is a software that contains tools for class preparation, distribution, and management.

For example, through the course management system, students access course materials, grades, assessments, and a variety of collaboration tools. Many schools offer distance learning classes, where the delivery of education occurs at one place while the learning occurs at other locations. Distance learning courses provide time, distance, and place advantages for students who live far from a campus or work full time.

Referencing Wallace (2015), the LMS or systems like this is an information system used to track student progress, and manage educational records. Many offer other features, such as online registration, assessment tools, collaborative technologies, and payment processing. They also offer tools for creating or importing content.

Referencing Wundenberg (2015), LMS characterizes a complex, often web based software system which pools multiple task specific subprograms under a shared User Interface (UI). These subprograms support, for instance:

- i. Allocation and organization of learning content for different learning scenarios
- ii. School administration
- iii. Information management

4. SCOPE OF THE PROJECT

The study aims at developing and implementing a web-based Student Result management system (SRMS) for the schools in rural areas, replacing the old manually done paper work and to minimize the security issues and the problems it possesses. The proposed is a multi-user system, developed using php language with XAMPP Server and MySQL DBMS (Database Management System) Support. The system is confined to and intended for the students. They possess privileges to check their results after he/she is provided with a specific roll id and class. The entire system is managed by a system administrator, who possesses the full control of the system. Automatically and each student will have access to their results only, using their respective Details.

The whole system is controlled by institutional administration. Administration section will edit and update this system and they have the permit to view whole system.

Lastly end users are students. They can check their result by giving their credentials (Student Id and Class) in this system. They could not update/edit something. But they can get there result report with fully formatted design and format.

5. METHODOLOGY

The tools used for physical and database design are: Unified Modeling Language (UML) diagrams for description of the class diagram, and Entity-Relationship Diagrams (ERD) used for the design of the database table structures. The description covers the logical and database Structural designs as well as its database normalization. The entire web-based program is designed and developed with object-oriented codes, mainly with server side PHP scripts.

The application will be developed in the form of a database, using a Database Management System (DBMS). The decision to implement the application in the form of a database was informed by the consideration that various types of data would need to be held, and a database approach would be more appropriate due to the advantages that the database file system has over other forms of file systems. A database management system permits organizations to efficiently create databases for will be used to create the database tables and Personal Home Page Pre-Processor (PHP), a Scripting language to communicate with and manipulate the database. The primary features of the PHP are that it is object-oriented and a cross platform language. By cross platform, it means that the programs can run across several platforms such as Microsoft Windows, Apple Macintosh, Linux, and so on.

6. IMPLEMENTATION

Several open source tools, Programming Languages and Database have been used here to complement and improve this system.

- i. Sublime text and code editor
- ii. XAMPP cross-platform web server
- iii. MySQL as web server Database

DATABASE

MySQL, is an open-source relational database management system used for storing data.

PROGRAMMING LANGUAGE

- iv. CSS, Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML.
- v. HTML, Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser.
- vi. Bootstrap, contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.
- vii. PHP, hypertext preprocessor is used for backend development
- viii. JavaScript, Used for Animations and login authentication and session management.
- ix. Some online 3rd party resources are used to get the job done.

7. CONCLUSION

Student Result management system (SRMS) lead to a better organization structure since the Result management of the students is well structured and also lead to better as well as efficient utilization of resources.

The system is designed to achieve maximum user satisfaction. The goal of this system is to make it easier for teachers and students to keep up with the times. This will definitely make the institute authorities more comfortable as they do not have to think of keeping the results of their students on a conventional paper.

Student Result management system (SRMS) can be utilized by training foundations to keep up the records of understudies without any problem. Accomplishing this goal is troublesome utilizing a manual framework as the data is dissipated, can be repetitive and gathering significant data might be very tedious. Every one of these issues are understood utilizing this venture.

The project will be upgraded and extended in the following features:

- i.Improving the design, implementation, and documentation in such a way that anyone can use this project for better performance.
- ii.Anyone can give more data input to the data server if they want. This will make the database stronger.
- iii.The web here is very commonly displayed. It can be further equipped.
- iv.The Web page can be made lighter so that with low internet speed that page can be browsed
- v.Bio-metric attendance system will be implemented.
- vi.We will add new user as Teacher
- vii.Teacher can view the list of students assigned to them.
- viii.Sign up option for new user

ACKNOWLEDGEMENT

We would like to acknowledge and express our heartfelt gratitude to Ms. Patil S.S., our guide, for her unwavering motivation and support throughout the completion of our project, "Student Result Management System." We are deeply thankful to Mr. Belli R.S., our Head of Department, for his constant inspiration, and to Mr. Shelake A.S., our Principal, for his ongoing encouragement. Lastly, we extend our sincere appreciation to our parents for their inspiration and steadfast support during the entire process.

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