

# **STUDENT RESULT MANAGEMENT SYSTEM**

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# Abstract

The Student Result Management System (SRMS) is a software engineering project aimed at developing a user-friendly application for managing and tracking student results in educational institutions. This abstract provides a brief overview of the project's objectives, key features, and technologies used. The SRMS project aims to create an easy-to-use system that simplifies result management for administrators, teachers, and students. It will have a front-end interface that allows users to input data and view results, while the back-end handles data storage and processing.

The front-end development focuses on creating a visually appealing interface using common web technologies like HTML, CSS, and JavaScript. This interface will work well on different devices and be easy for users to navigate. The back-end of the SRMS handles data storage and processing. It will use appropriate technologies and techniques to ensure efficient handling of student information and calculation of grades.

This project contains three modules, register/login module, admin module and student module. Admin module is used to create and manage the subjects, classes and add the students and their results. Student module used to provide the results of the students and can download the results. Registered users can access the database of the students. Which will provide details about subjects, classes, results, and students can download the results, which is very useful for the students.

It creates a centralized database to store student information, subject information, and examination results. Here we create a user-friendly interface for administrators, teachers, and students to input, manage, and retrieve academic performance data.

Overall, the SRMS project aims to provide a simplified and efficient solution for managing student results, benefiting educational institutions by streamlining the result management process.

# 1. Introduction

The Student Result Management System (SRMS) is an innovative software engineering project that aims to transform the management and tracking of student results in educational institutions. Conventional methods of handling academic data, such as manual record-keeping and fragmented spreadsheets, have proven to be time-consuming, prone to errors, and inefficient. Recognizing the need for a modern and user-friendly solution, the SRMS project seeks to develop an application that simplifies the result management process for administrators, teachers, and students.

The front-end development of the SRMS focuses on designing an attractive and user-friendly interface. By leveraging widely adopted web technologies like HTML, CSS, and JavaScript, the system's front-end aims to provide a seamless user experience across various devices. The interface will enable users to easily input data and retrieve results.

On the back-end, the SRMS project emphasizes efficient data storage and processing. By employing appropriate technologies and techniques, the system will establish a centralized database to securely store student information, subject details, and examination results. The back-end functionality will facilitate seamless data retrieval, automated result calculations, and accurate grade generation.

The SRMS project consists of two main modules: the register/login module and the admin module. The register/login module ensures secure access to the system, while the admin module empowers administrators to create and manage subjects, classes, and student records, including results.

Registered users, including teachers and administrators, will benefit from convenient access to a comprehensive student database. This access will provide essential information about subjects, classes, and results. Students, on the other hand, will have the advantage of easily accessing their individual results and downloading them, enabling them to monitor their academic progress effectively.

## 1.1. Existing System

The existing system for managing student information in educational institutions relies on manual processes, leading to inefficiencies and limitations. The manual collection and input of data by administrative personnel result in time-consuming and error-prone procedures. Students often experience delays in receiving their results, as the manual handling of data contributes to longer wait times. Accessing comprehensive information

about courses, results, and other details is challenging due to the absence of a centralized database.

To overcome these limitations, the Student Result Management System (SRMS) project aims to introduce an automated approach to result management. By implementing a digital platform with a user-friendly interface and a centralized database, the SRMS project will provide administrators, teachers, and students with efficient access to and management of academic data. This transition from manual processes to a technologically advanced system aims to streamline result management in educational institutions, improving speed, accuracy, and accessibility of student information.

#### **1.1.1. Proposed System:**

The proposed "Student Result Management System" aims to replace the manual administrative work with an efficient and user-friendly application. The system will provide students with easy access to modules such as results and course information, eliminating the need for time-consuming manual processes. The proposed system will be flexible and easily accessible for students, significantly reducing the time required to obtain necessary information. By implementing this system, the administration aims to streamline the result management process and enhance the overall efficiency of accessing student-related data.

The proposed system will provide a user-friendly interface that ensures ease of use and efficient retrieval of student data. With the introduction of this system, the administration aims to enhance productivity, reduce errors, and improve the overall experience of managing student results. By embracing digitalization and automation, the proposed system will revolutionize the way student information is handled, providing a more streamlined and effective approach to result management in educational institutions.

## **2. Literature Review**

### **2.1.Challenges in Manual Result Management**

- In this section, the literature focuses on the challenges and limitations associated with the manual management of student results in educational institutions.
- The literature discusses issues such as time-consuming processes, errors in data entry, and difficulties in retrieving and accessing student information.
- Scholarly articles and research papers provide insights into the inefficiencies and drawbacks of relying on manual methods for result management.

#### **2.1.1. Benefits of Automated Result Management Systems**

- This section explores the advantages and benefits of implementing an automated result management system in educational institutions.
- The literature highlights how such systems streamline processes, reduce errors, and improve the overall efficiency of result management.
- Academic studies and case studies provide evidence of improved accuracy, faster result dissemination, and enhanced data accessibility through automated systems.

##### **2.1.1.1. Technologies and Tools for Result Management Systems**

- This section focuses on the various technologies and tools used in the development of result management systems.
- The literature discusses web technologies like HTML, CSS, JavaScript, and database management systems that are commonly employed in building user-friendly interfaces and efficient data storage.

##### **2.1.1.1.1. User Experience and Interface Design in Result Management Systems**

- This section explores the importance of user experience (UX) and interface design in result management systems.

- The literature discusses the significance of creating intuitive and user-friendly interfaces that enhance user satisfaction and efficiency.
- Research and best practices in user experience design inform the development of a user-friendly interface for the Student Result Management System. This ensures that administrators, teachers, and students can effortlessly navigate and utilize the system, resulting in an efficient and satisfactory user experience.

### 3. Discussion

The Student Result Management System (SRMS) is a software application designed to streamline the management and tracking of student results in educational institutions. It aims to replace traditional manual processes with an automated system that offers numerous benefits for administrators, teachers, and students.

One of the key advantages of the SRMS is its ability to eliminate the tedious and error-prone nature of manual result management. With the SRMS, administrators no longer need to rely on manual record-keeping or disjointed spreadsheets, reducing the chances of data entry errors and saving valuable time and effort. The system provides a centralized database that securely stores student information, subject details, and examination results, ensuring accuracy and accessibility.

Teachers also benefit from the SRMS as it simplifies the process of inputting and managing student results. The system allows teachers to efficiently record and calculate grades, generating accurate results and saving them time in result preparation. The SRMS provides a user-friendly interface for teachers to access student data, track progress, and provide timely feedback, enhancing the overall teaching experience.

For students, the SRMS offers a convenient and transparent way to access their results and track their academic performance. They no longer need to wait for manual processes or rely on administrators to provide them with their results. The system provides students with easy access to their individual results, allowing them to download and review their performance whenever needed. This empowers students to take ownership of their learning journey and make informed decisions regarding their academic progress.

The implementation of the SRMS requires careful consideration of user experience design principles. By following industry best practices and conducting user research, the system's interface can be designed to be intuitive, user-friendly, and visually appealing. This ensures that administrators, teachers, and students can easily navigate the system and perform tasks efficiently, promoting a positive user experience.



## 4. System Requirements

The Student Result Management System has specific system requirements to ensure its successful implementation and functionality. These requirements encompass both the front-end design and the back-end database.

### Front-End Design:

- **HTML:** The system utilizes HTML (Hypertext Markup Language) for structuring the content and elements of the user interface.
- **CSS:** Cascading Style Sheets (CSS) are employed to define the visual presentation and layout of the system's interface, enhancing its appearance and user experience.
- **JavaScript:** JavaScript is used to add interactivity and dynamic functionality to the front-end, enabling features such as data input validation and real-time updates.
- **Bootstrap:** The Bootstrap framework is leveraged to facilitate responsive web design, ensuring that the system's interface adapts well to different screen sizes and devices.

### Back-End Database:

- **Microsoft SQL Server:** The system utilizes Microsoft SQL Server as the back-end database management system. It provides robust data storage, efficient retrieval, and secure management of student information, subject details, and examination results.
- **PHP:** PHP (Hypertext Preprocessor) is employed as the server-side scripting language. It handles data processing, interacts with the database, and enables dynamic content generation for the system.

These system requirements are essential for the successful development and operation of the Student Result Management System. They enable the creation of a user-friendly front-end interface using HTML, CSS, JavaScript, and Bootstrap, while

ensuring efficient data storage and retrieval using Microsoft SQL Server and PHP for the back-end database. By meeting these requirements, the system can provide an optimized user experience and effectively handle the management and tracking of student results in educational institutions.

## 5. Proposed Scheme

The proposed scheme for the Student Result Management System aims to address the limitations of the existing manual process by introducing an automated and user-friendly solution. The scheme incorporates a front-end design using HTML, CSS, JavaScript, and Bootstrap to create an intuitive and visually appealing interface. This ensures easy navigation and accessibility for administrators, teachers, and students.

In addition, the proposed scheme includes a back-end database using Microsoft SQL Server and PHP. This database management system enables efficient storage, retrieval, and management of student information, subject details, and examination results. By leveraging these technologies, the proposed scheme aims to streamline the result management process, reduce errors, and improve data accuracy.

The scheme also offers distinct modules, including a register/login module, admin module, and student module. The register/login module ensures secure access to the system, while the admin module empowers administrators to manage subjects, classes, and student records, including their results. The student module provides students with access to their results and the ability to download them for their reference.

The proposed scheme aims to reduce the dependency on manual processes and paperwork, leading to increased efficiency and time savings for administrators, teachers, and students. The system will provide real-time access to student results, allowing stakeholders to view and track academic progress promptly.

Overall, the proposed scheme combines user-friendly design principles and robust database technologies to create an efficient and effective Student Result Management System. It offers convenience, accuracy, and accessibility for all stakeholders involved, revolutionizing the way student results are managed in educational institutions.

## 5.1.Pseudo Code

start

input user\_role

if user\_role == "student" then

    display\_student\_menu()

    input student\_choice

    if student\_choice == "view result" then

        display\_result()

    else if student\_choice == "download result" then

        display\_result()

        input download\_choice

        if download\_choice == "yes" then

            download\_result()

        else

            exit

    else

        exit

else if user\_role == "admin" then

    display\_admin\_menu()

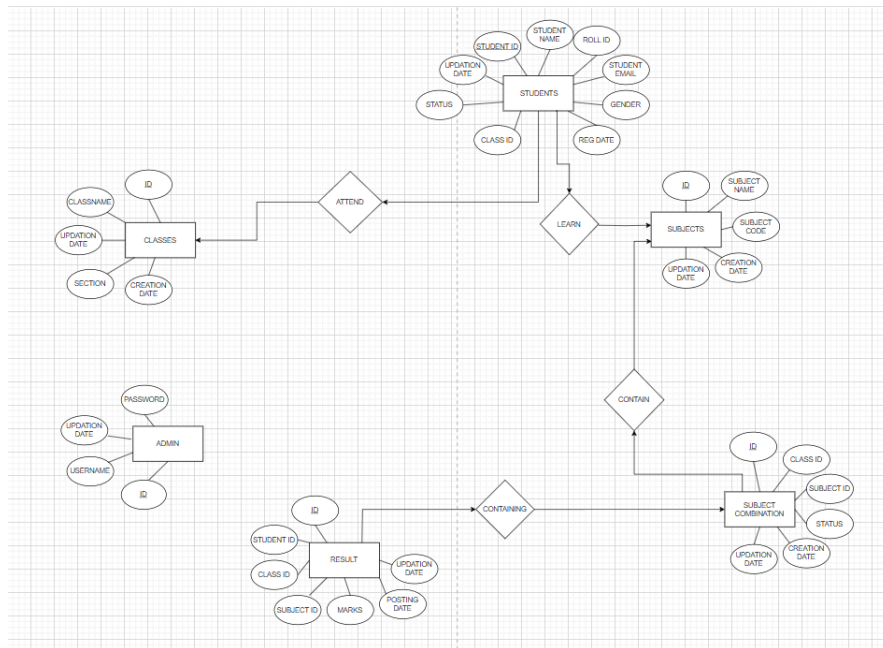
    input admin\_choice

```
if admin_choice == "add subjects" then
    input subject_details
    add_subject(subject_details)
else if admin_choice == "add students" then
    input student_details
    add_student(student_details)
else if admin_choice == "add classes" then
    input class_details
    add_class(class_details)
else if admin_choice == "reports" then
    display_reports_menu()
    input report_choice
    if report_choice == "module 1" then
        generate_module1_report()
    else if report_choice == "module 2" then
        generate_module2_report()
    else if report_choice == "module 3" then
        generate_module3_report()
    else
        exit
else if admin_choice == "update or delete information" then
    display_update_delete_menu()
```

```
input update_delete_choice
if update_delete_choice == "update" then
    input update_details
    update_information(update_details)
else if update_delete_choice == "delete" then
    input delete_details
    delete_information(delete_details)
else
    exit
else
    exit
else
    exit
end
```

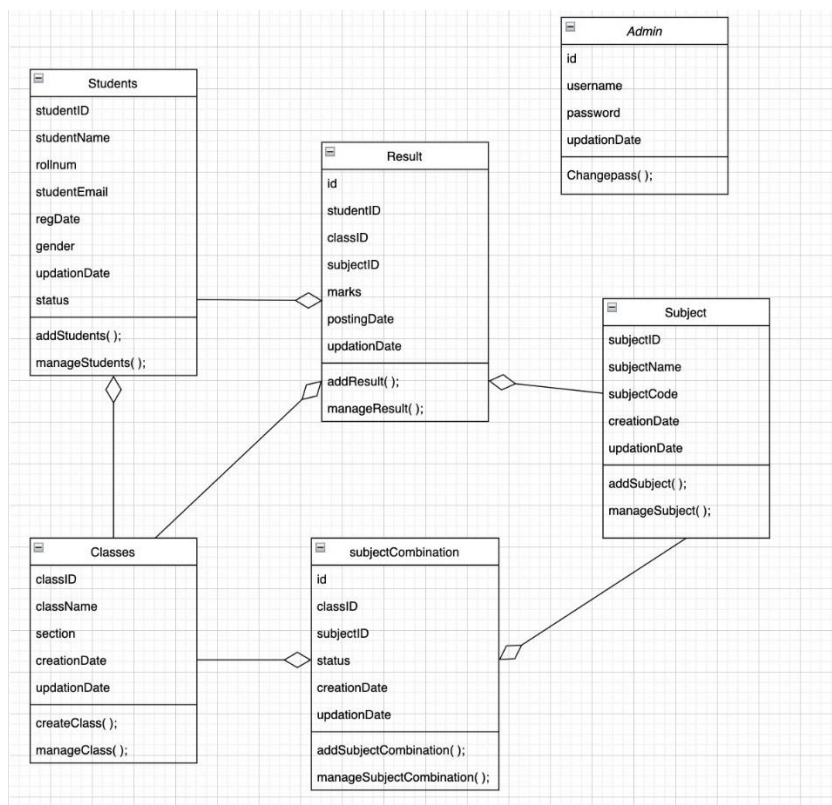
## 6. Results/Screenshots

### 6.1. ER Diagram:

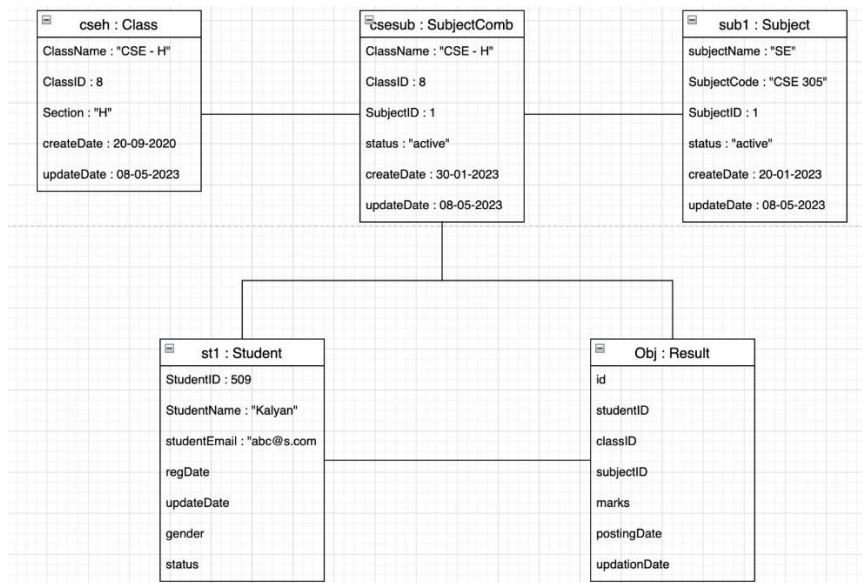


### 6.2.

#### 6.2.1. Class diagram



## 6.2.2. Object Diagram





## 6.3. Application screenshots

### 6.3.1. Login:

**For Students**

Student Result Management System

**Search your result**  
click here

**Admin Login**

**Username**

**Password**

[Sign in](#)

### 6.3.2. Class creating and management

SRMS | Admin [Logout](#)

**MAIN CATEGORY**

- Dashboard

**APPEARANCE**

- Student Classes >
- Subjects >
- Students >
- Result >
- Admin Change Password

### Manage Classes

[Home](#) / [Classes](#) / [Manage Classes](#)

**View Classes Info**

Show  entries Search:

#		Class Name		Class Name Numeric		Section		Creation Date		Action	
1		CSE		1		H		2023-05-15 17:04:03			
2		CSE		2		A		2023-05-15 18:01:38			
3		CSE		3		B		2023-05-15 19:19:38			
4		CSE		5		C		2023-05-17 19:30:17			
#		Class Name		Class Name Numeric		Section		Creation Date		Action	

Showing 1 to 4 of 4 entries Previous **1** Next

SRMS | Admin [Logout](#)

**MAIN CATEGORY**

- Dashboard

**APPEARANCE**

- Student Classes >
- Subjects >
- Students >
- Result >
- Admin Change Password

### Create Student Class

[Home](#) / [Classes](#) / [Create Class](#)

**Create Student Class**

**Class Name**  
  
Eg- Third, Fourth, Sixth etc

**Class Name in Numeric**  
  
Eg- 1,2,4,5 etc

**Section**  
  
Eg- A,B,C etc

[Submit](#)

### 6.3.3. Subject Management

SRMS | Admin Logout

MAIN CATEGORY  
Dashboard

APPEARANCE  
Student Classes  
Subjects  
Students  
Result  
Admin Change Password

## Manage Subjects

Home / Subjects / Manage Subjects

View Subjects Info

Show 10 entries Search:

#	Subject Name	Subject Code	Creation Date	Updation Date	Action
1	se	302	2023-05-15 19:21:20	0000-00-00 00:00:00	<a href="#">✕</a>
2	ADS	310	2023-05-17 19:30:31	0000-00-00 00:00:00	<a href="#">✕</a>
#	Subject Name	Subject Code	Creation Date	Updation Date	Action

Showing 1 to 2 of 2 entries Previous 1 Next

### 6.3.4. Subject Combinations management

SRMS | Admin Logout

MAIN CATEGORY  
Dashboard

APPEARANCE  
Student Classes  
Subjects  
Students  
Result  
Admin Change Password

## Manage Subjects Combination

Home / Subjects / Manage Subjects Combination

View Subjects Combination Info

Show 10 entries Search:

#	Class and Section	Subject	Status	Action
1	CSE Section-H	se	Active	<a href="#">✕</a>
2	CSE Section-C	ADS	Active	<a href="#">✕</a>
3	CSE Section-H	ADS	Active	<a href="#">✕</a>
#	Class and Section	Subject	Status	Action

Showing 1 to 3 of 3 entries Previous 1 Next

localhost/Student Result Management System/dashboard.php

### 6.3.5. Manage Students

SRMS | Admin Logout

MAIN CATEGORY  
Dashboard

APPEARANCE  
Student Classes  
Subjects  
Students  
Result  
Admin Change Password

## Manage Students

Home / Students / Manage Students

View Students Info

Show 10 entries Search:

#	Student Name	Roll Id	Class	Reg Date	Status	Action
1	mihir	510	CSE(H)	2023-05-15 19:20:45	Active	<a href="#">✕</a>
2	sameer	28	CSE (C)	2023-05-17 19:31:36	Active	<a href="#">✕</a>
#	Student Name	Roll Id	Class	Reg Date	Status	Action

Showing 1 to 2 of 2 entries Previous 1 Next

### 6.3.6. Add Result

The screenshot shows the 'Add Result' form in the SRMS Admin interface. The left sidebar contains a menu with 'Subjects', 'Students', 'Result', and 'Admin Change Password'. The main content area has a form with the following fields: 'Class' (dropdown menu showing 'CSE Section-H'), 'Student Name' (dropdown menu showing 'mihir'), 'Result Already Declared' (checkbox), 'Subjects' (text input), 'ADS' (text input), 'SS' (text input), and 'Marks' (text input). A 'Declare Result' button is at the bottom.

### 6.3.7. Change Password

The screenshot shows the 'Admin Change Password' form in the SRMS Admin interface. The left sidebar contains a menu with 'Dashboard', 'Student Classes', 'Subjects', 'Students', 'Result', and 'Admin Change Password'. The main content area has a form with the following fields: 'Current Password', 'New Password', and 'Confirm Password'. A 'Change' button with a checkmark is at the bottom.

### 6.3.8. Result

Result Management System

Student Name : mihir		
Student Roll Id : 510		
Student Class: CSE(H)		
#	Subject	Marks
1	SS	80
Total Marks		80 out of 100
Percentage		80 %
Download Result		Download
Back to Home		

## 7. Conclusion

In conclusion, the Student Result Management System (SRMS) is a transformative software engineering project that aims to modernize and streamline the management of student results in educational institutions. By replacing manual processes with an automated and user-friendly solution, the SRMS enhances efficiency, accuracy, and accessibility for administrators, teachers, and students.

The proposed scheme incorporates front-end technologies such as HTML, CSS, JavaScript, and Bootstrap to create an intuitive and visually appealing interface. The back-end utilizes Microsoft SQL Server and PHP to ensure efficient data storage, retrieval, and management. The system offers distinct modules for register/login, administration, and student access, providing secure and personalized functionality.

With features like real-time result access, data security, comprehensive reporting, and scalability, the SRMS addresses the limitations of existing manual processes. It empowers educational institutions to effectively manage student results, track academic progress, and make informed decisions to support student success.

By embracing the proposed scheme, educational institutions can benefit from time savings, improved data accuracy, and enhanced user experience. The SRMS facilitates seamless collaboration between administrators, teachers, and students, promoting efficient result management and fostering a positive learning environment.

Overall, the Student Result Management System offers a transformative solution that streamlines result management processes, enhances data accuracy, and promotes effective communication in educational institutions. It represents a significant step towards modernizing academic record-keeping and supporting educational excellence.

## 8. Future Work

- 8.1. **Gradebook Application:** We are planning to expand its usage so that the faculty can also enter the grades and internals and calculate the final grade. Create a digital gradebook application where teachers can enter and calculate students' grades for different assignments and exams.
- 8.2. **Student Feedback System:** Develop a platform where students can provide feedback on their courses, teachers, and overall learning experience. The system can include feedback forms, anonymous submissions, and reporting functionalities to help improve the quality of education.
- 8.3. **Parent/Guardian Access:** Introduce a separate login or portal for parents/guardians to access their child's results and related information. This would promote greater parental involvement and engagement in monitoring their child's academic progress.

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