VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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DBMS MINI PROJECT REPORT
(21CSL55)

ON

"STUDENT RESULT MANAGEMENT SYSTEM"

Submitted in partial fulfilment for the requirement of V Semester for the Degree of

BACHELOR OF ENGINEERING
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INFORMATION SCIENCE & ENGINEERING

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2023-24

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CERTIFICATE

This is to certify that the Project Report entitled **"STUDENT RESULT MANAGEMENT SYSTEM"** is a bonafide Project work carried out by **SUMANTH T C (1DB22IS419)** in partial fulfilment of Vth semester for the Degree of **Bachelor of Engineering** in **Information Science and Engineering** of Visvesvaraya Technological University, Belagavi, during the academic year 2023-24. It is certified that all corrections/suggestions indicated for Internal Assessments have been incorporated with the degree mentioned.

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ABSTRACT

The **STUDENT RESULT MANAGEMENT SYSTEM** is a computer-based application designed to streamline and automate the process of managing student results within educational institutions. This system provides a centralized platform for administrators, teachers, and students to efficiently handle various tasks related to result processing, analysis, and dissemination. The system allows administrators to maintain comprehensive records of student details such as personal information, enrollment status, and academic history.Result Processing facilitates the automation of result processing tasks, including data entry, calculation of grades, and generation of result sheets. This reduces manual errors and ensures accuracy and consistency in result generation. Grading System is SRMS supports customizable grading systems based on institutional policies. It allows administrators to define grading criteria, weightage for different assessments, and grade boundaries. Result Analysis system provides tools for analyzing student performance through various reports and statistical analysis. Teachers and administrators can gain insights into class averages, subject-wise performance, and individual student progress. Result Publication Once results are processed and verified, the system enables the publication of results online or through other communication channels. Students can access their results securely using login credentials.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

A Student Result Management System (SRMS) is a software application designed to efficiently manage and track the academic results of students within an educational institution. It is a crucial tool for schools, colleges, and universities to maintain accurate records, generate reports, and provide insights into student performance.

SRMS in a Database Management System (DBMS) is a system that utilizes database technology to store, retrieve, and manage student-related data such as grades, attendance, exam scores, and other relevant information. By leveraging the capabilities of a DBMS, SRMS ensures data integrity, security, and scalability, making it an essential component of modern educational institutions.

User Management the system allows administrators, teachers, and students to have secure access based on their roles and permissions. Data Entry and Maintenance Teachers can input student grades, attendance, and other details, while administrators can manage the overall database including adding or updating student information. Automated Calculations the system can automatically calculate GPA, class rank, and other metrics based on inputted data, reducing manual errors and workload.

Reporting and Analytics SRMS can generate various reports such as grade sheets, progress reports, and statistical analyses to help stakeholders understand student performance trends. Integration with Other Systems it can integrate with other educational systems such as learning management systems (LMS) for seamless data exchange and collaboration. Security and Data Privacy SRMS ensures data security by implementing access controls, encryption, and regular backups to protect sensitive student information.

1.2 ADVANTAGES

1. **Centralized Data Storage:** One of the primary advantages is the ability to store all student-related data in a centralized database. This eliminates the need for multiple manual records and ensures data consistency and integrity.

2. **Efficient Data Retrieval:** With a DBMS, data retrieval becomes faster and more efficient. Teachers and administrators can easily access student information such as grades, attendance records, and exam scores with just a few clicks.

3. **Improved Reporting and Analysis:** DBMS-enabled SRMS can generate various reports and analytics, providing insights into student progress, class performance trends, and areas for improvement. This helps educators make data-driven decisions to enhance teaching strategies and student outcomes.

4. **Enhanced Communication:** SRMS in DBMS facilitates communication between teachers, students, and parents/guardians. It allows for the sharing of progress reports, attendance updates, and other relevant information in a timely manner.

5. **Secure Data Management:** DBMS offers robust security features such as access controls, encryption, and regular backups. This ensures that student data is protected from unauthorized access, loss, or corruption.

1.3 DISADVANTAGES

1. **Initial Cost and Complexity:** Implementing an SRMS in a DBMS requires investment in software, hardware, and skilled personnel for setup, configuration, and maintenance. The complexity of database design and management adds to the initial cost and technical challenges.

2. **Training and Adoption:** Users, especially teachers and administrators, may require training to effectively use the SRMS. Resistance to change and learning curve can slow down adoption and impact productivity initially.

3. **Data Security Risks:** While DBMS provides security features, there are still risks of data breaches, unauthorized access, and data loss. Institutions need to implement robust security measures and protocols to safeguard sensitive student information.

1.4 APPLICATIONS

The application of a Student Result Management System (SRMS) is extensive and serves various purposes within educational institutions. Here are some applications of an SRMS:

1. **Efficient Data Management:** SRMS in DBMS allows educational institutions to efficiently manage student data including personal information, academic records, grades, attendance, and exam results. This helps in maintaining accurate and updated records for each student.

2. **Automated Calculations:** The system automates the calculation of grades, GPA (Grade Point Average), and other metrics based on predefined algorithms or customizable formulas. This reduces the manual effort required for calculating results and minimizes errors.

3. **Real-time Updates:** SRMS provides real-time updates on student performance, allowing teachers, parents, and administrators to monitor progress continuously. This helps in identifying areas of improvement and providing timely interventions or support to students.

4. **Customizable Reports:** The system generates customizable reports such as grade sheets, progress reports, and comparative analyses. These reports can be tailored to meet the specific needs of different stakeholders, providing insights into student achievements and areas for development.

5. **Communication Platform:** SRMS often includes communication features such as messaging or notification systems to facilitate communication between teachers, students, and parents. This improves transparency and enhances collaboration in the academic process.

6. **Integration with Learning Systems:** SRMS can integrate with learning management systems (LMS) or other educational platforms to streamline data exchange and provide a comprehensive view of student performance across various learning activities.

CHAPTER 2

SYSTEM ANALYSIS

2.1 PROPOSED SYSTEM

During analysis it is essential that a complete and consistent set of specifications emerge for the system. Here it is essential to resolve the contradictions that could emerge from information got from various parties. This is essential to ensure that the final specifications are consistent. It may be divided into 5 areas of effort.

1. Problem recognition

2. Evaluation and synthesis

3. Modeling

4. Specification

5. Review

Each Requirement analysis method has a unique point of view. However, all analysis methods are related by a set of operational principles. They are

- The information domain of the problem must be represented and understood.
- The functions that the software is to perform must be defined.
- The behaviour of the software as a consequence of external events must be defined.
- The models that depict information, function and behaviour must be partitioned in a hierarchical or layered fashion.
- The requirements of this system can be defined by going through the existing systemand its problems.

2.2 AIM

The aim of a Student Result Management System (SRMS) is to provide a centralized platform for efficiently managing and tracking the academic results of students within an educational institution. The system aims to streamline processes related to recording, calculating, and reporting student performance data, ultimately improving the overall management and analysis of student results. the aim of an SRMS is to leverage technology to improve the management, analysis, and communication of student result data, leading to better decision-making and enhanced educational outcomes within the institution.

2.3 OBJECTIVES

1,Efficient Data Entry: To enable teachers and administrators to easily input student grades, attendance, exam scores, and other relevant information into the system.

2. **Accurate Calculations:** To automate the calculation of GPA, class rank, and other metrics based on inputted data, reducing manual errors and ensuring accuracy.

3. **Comprehensive Reporting:** To generate various reports such as grade sheets, progress reports, comparative analyses, and statistical insights to provide a comprehensive view of student performance.

4. **User-Friendly Interface:** To design a user-friendly interface that allows stakeholders such as teachers, administrators, and students to access relevant information and perform necessary tasks with ease.

5. **Data Security and Privacy:** To implement robust security measures such as access controls, encryption, and regular backups to protect sensitive student information and ensure data privacy.

6. **Enhanced Communication:** To facilitate better communication between teachers, administrators, students, and parents/guardians regarding student performance, progress, and interventions as needed.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 SOFTWARE REQUIREMENTS

- Operating system : Windows 98, XP , 7,8 or 10 or Linux

Languages used

- Front end : HTML,PHP and Bootstrap
- Back end : SQL
- Web-Server: Apache Tomcat Web Server
- Web-Browser : Any Browser
- IDE : Notepad++, Xampp and MySQL

3.2 HARDWARE REQUIREMENTS

- Processor : Intel Core 3 or above
- Processor speed : 250MHz to 833MHz
- RAM : Minimum 512MB RAM
- Hard Disk : 100GB

CHAPTER 4

SYSTEM DESIGN

4.1 SCHEMA DIAGRAM

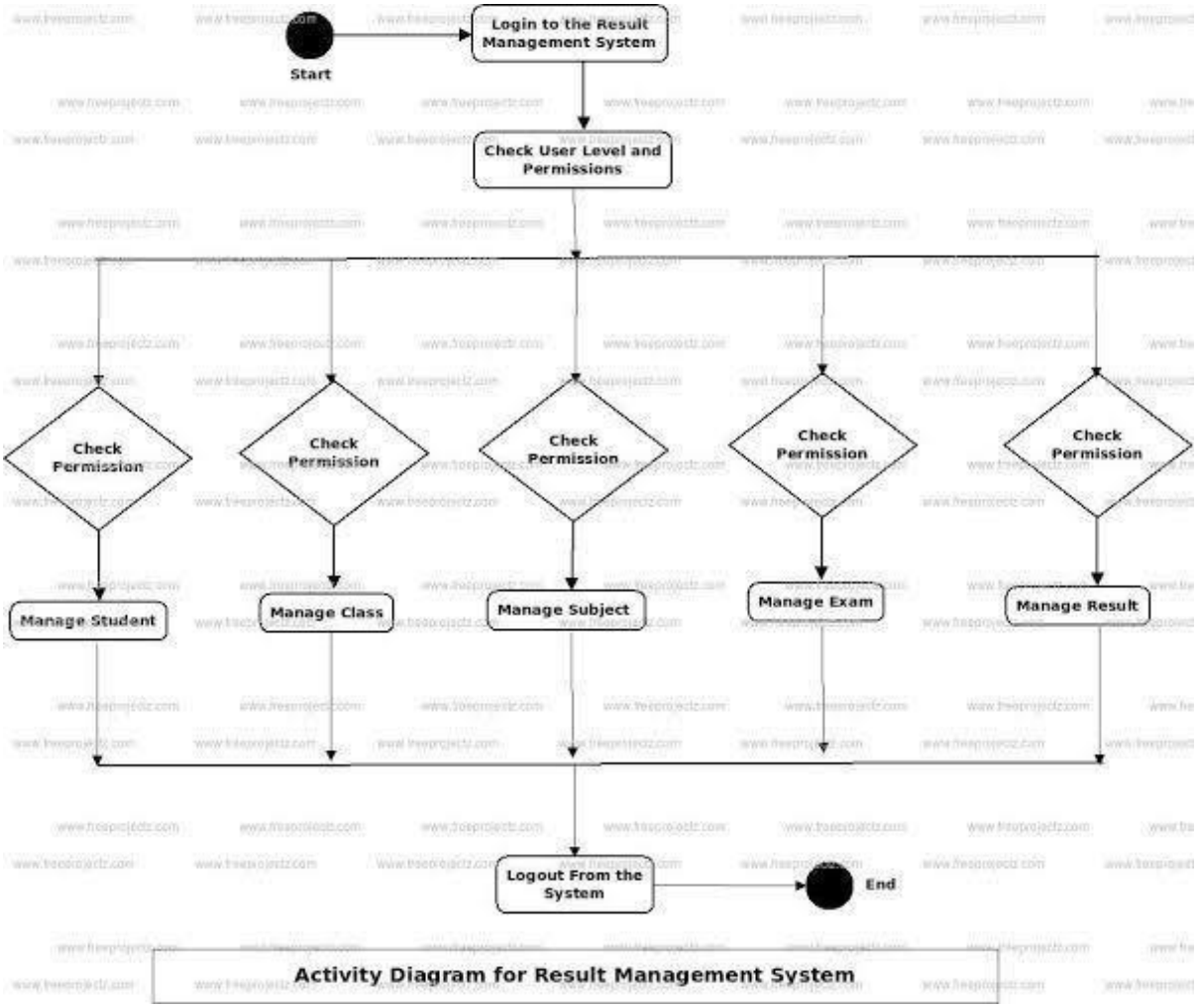


Figure 4.1 Schema Diagram

A database schema is a structure that represents the logical storage of the data in a database. Figure 4.1 which represents the organization of data and provides information about the relationships. Refer which shows the relation between the tables in a given database. In this topic, we will understand more about database schema and its types.

4.2 ER DIAGRAM

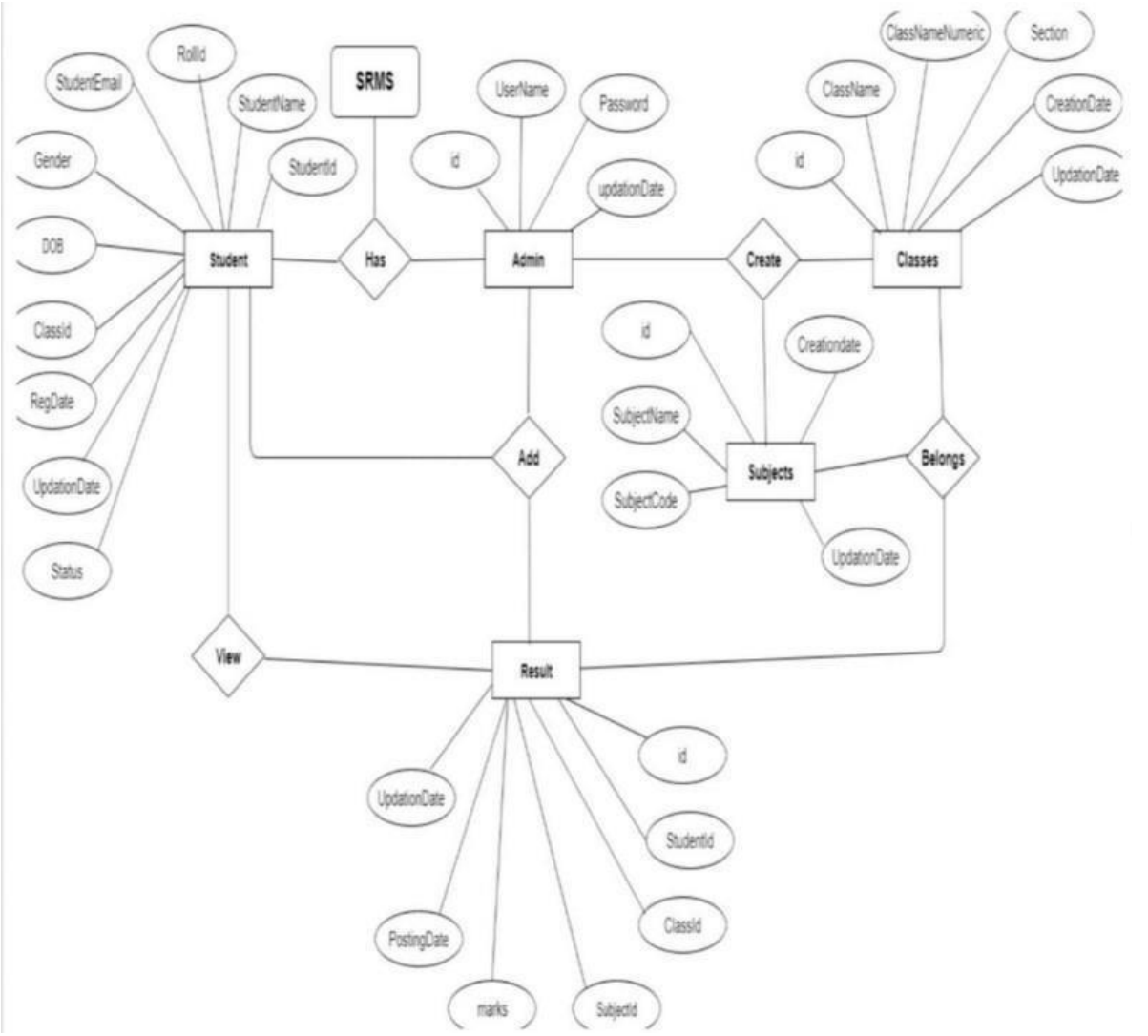


Figure 4.2 ER Diagram

The Entity-Relationship model or ER model describes the interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity type and specifies the relationships that can exist between the entities. The ER of Courier Management Figure 4.2 shows all the visuals instrument of database tables and the relations between the student and teachers.

CHAPTER 5

DATA BASE TABLE

ADMIN LOGIN

Table 5.1 Admin login Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Id	Int(30)		NONE		Auto-increment
User Name	Varchar(100)		NULL		
Password	Varchar(100)		NULL		
Updation Date	Timestamp		NULL		

The Table 5.1 Stores the admin login details.

CLASSES TABLE

Table 5.2 Classes Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Id	Int(30)		NONE		Auto-increment
Class Name	Varchar(100)		NULL		
Class Numeric	Int(5)		NULL		
Updation Date	Timestamp		NULL		
Creation Date	Timestamp		Current timers		
Section	Tarchar(5)		NULL		

The Table 5.2 Stores the classes information

SUBJECTS TABLE

Table 5.3 Subjects Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Id	Int(30)		NONE		Auto-increment
Subject Name	Varchar(100)		NONE		
Subject numeric	Varchar(100)		NULL		
Updation Date	Timestamp		Current timers		
Creation Date	Timestamp		NULL		

The Table 5.3 Stores the Subject details

SUBJECT COMBINATION TABLE

Table 5.4 Subjects combination Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Id	Int(30)		NONE		Auto-increment
Class Id	Int(30)		NULL		
Subject Id	Int(30)		NULL		
Status	Int(30)		NULL		
Creation Date	Timestamp		Current timers		
Updatation Date	Timestamp		NULL		On Update

The Table 5.4 Stores the Subject and class combination details.

STUDENT TABLE

Table 5.5 Subjects combination Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Student Id	Varchar(100)		NONE		Auto-increment
Student Name	Varchar(100)		NULL		
Roll Id	Varchar(100)		NULL		
Student E-mail	Varchar(100)		NULL		
Gender	Timestamp		NULL		
DOB	Timestamp		NULL		
Class Id	Int(3)		NULL		
Reg Date	Timestamp		Current timers		
Updatation Date	Timestamp		NULL		
Status	Int(3)		NULL		

The Table 5.5 Stores the Subject and class combination details.

RESULT TABLE

Table 5.6 Result Table

NAME	TYPE	ATTRIBUTES	DEFAULT	COMMENTS	EXTRA
Id	Int(11)		NONE		Auto-increment
Student Id	Int(11)		NULL		
Class Id	Int(11)		NULL		
Subject Id	Int(11)		NULL		
Marks	Int(11)		NULL		
Posting Date	Timestamp		Current timers		
Updatation Date	Timestamp		NULL		

The Table 5.6 Stores the Result details.

CHAPTER 6

RESULTS (SNAPSHOTS)

ADMIN LOGIN PAGE

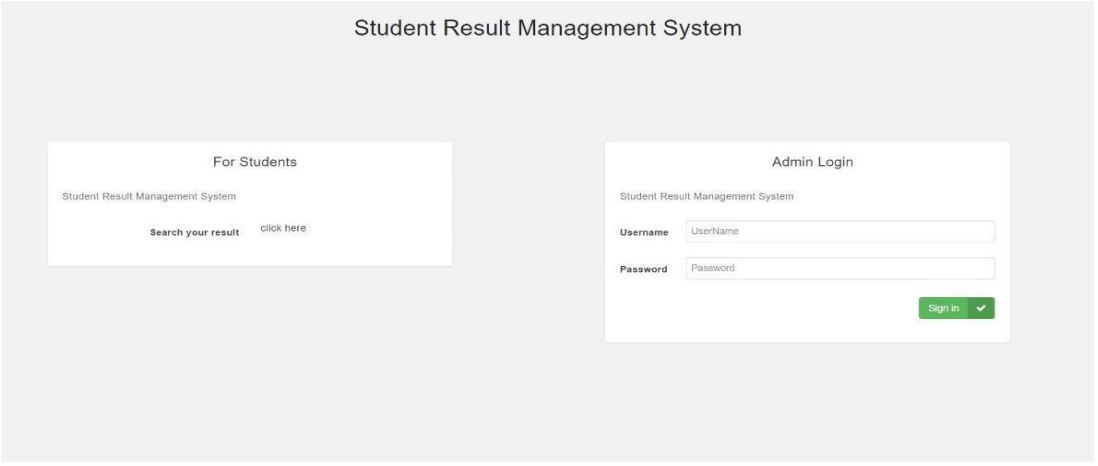


Figure 6.1 Admin login page

The Figure 8.1 shows the where a student can search the result and how the admin login.

ADMIN DASHBOARD

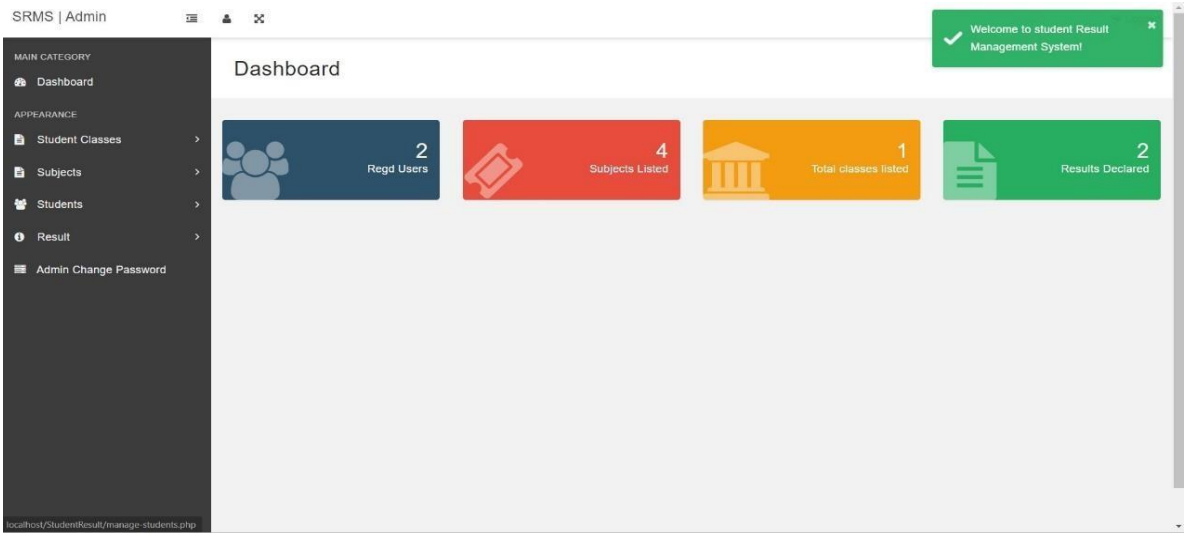


Figure 6.2 Admin dashboard

The Figure 8.2 shows the main dashboard of the admin panel.

REGISTERED STUDENTS PAGE

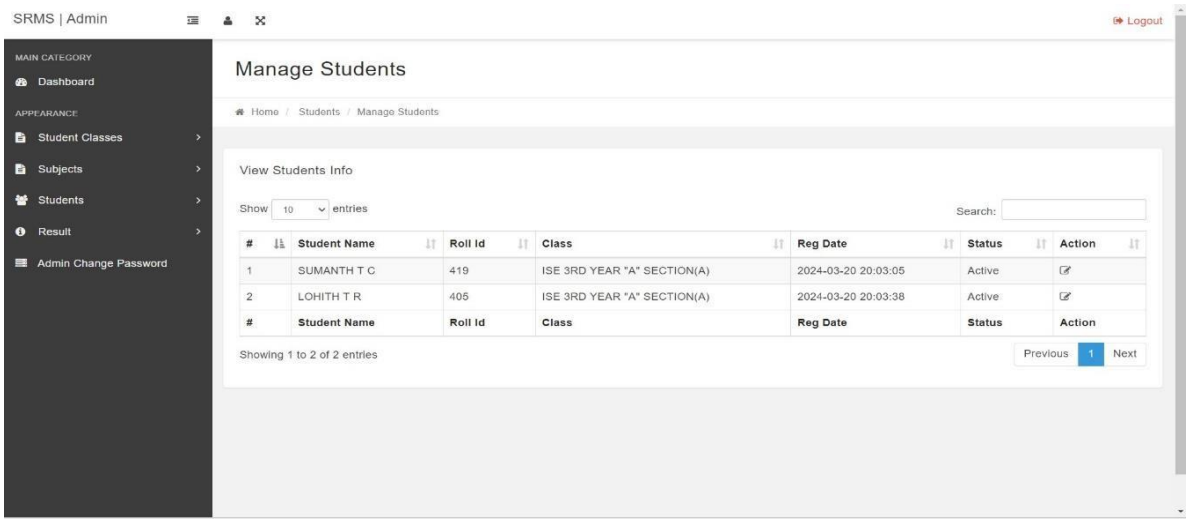


Figure 6.3 Registered students page

The Figure 8.3 shows the the managing of the students.

SUBJECT LISTED PAGE

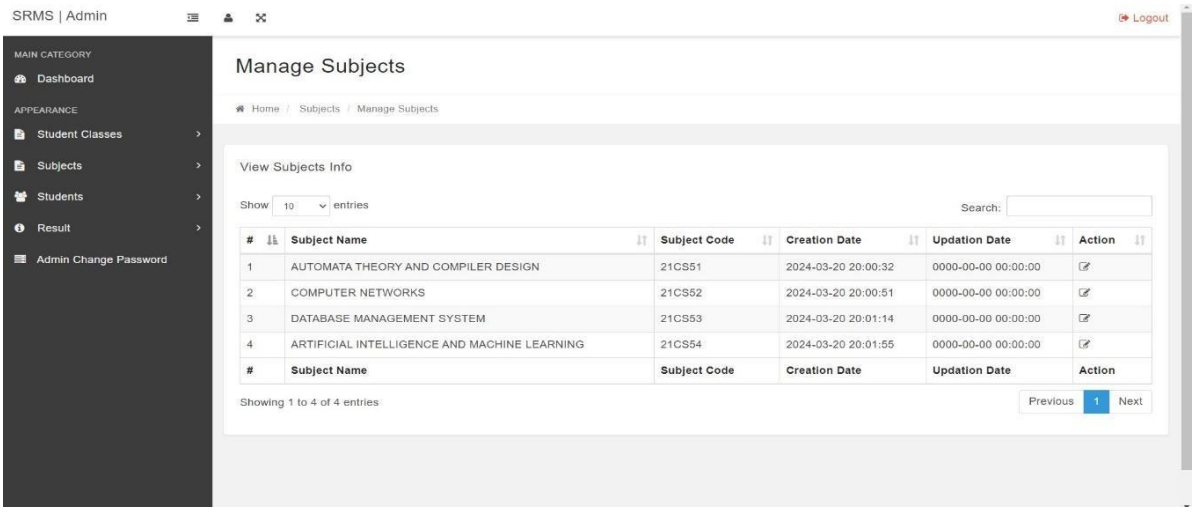


Figure 6.4 Subject listed page

The Figure 8.4 shows the subject added in the system

RESULT DECLARED PAGE

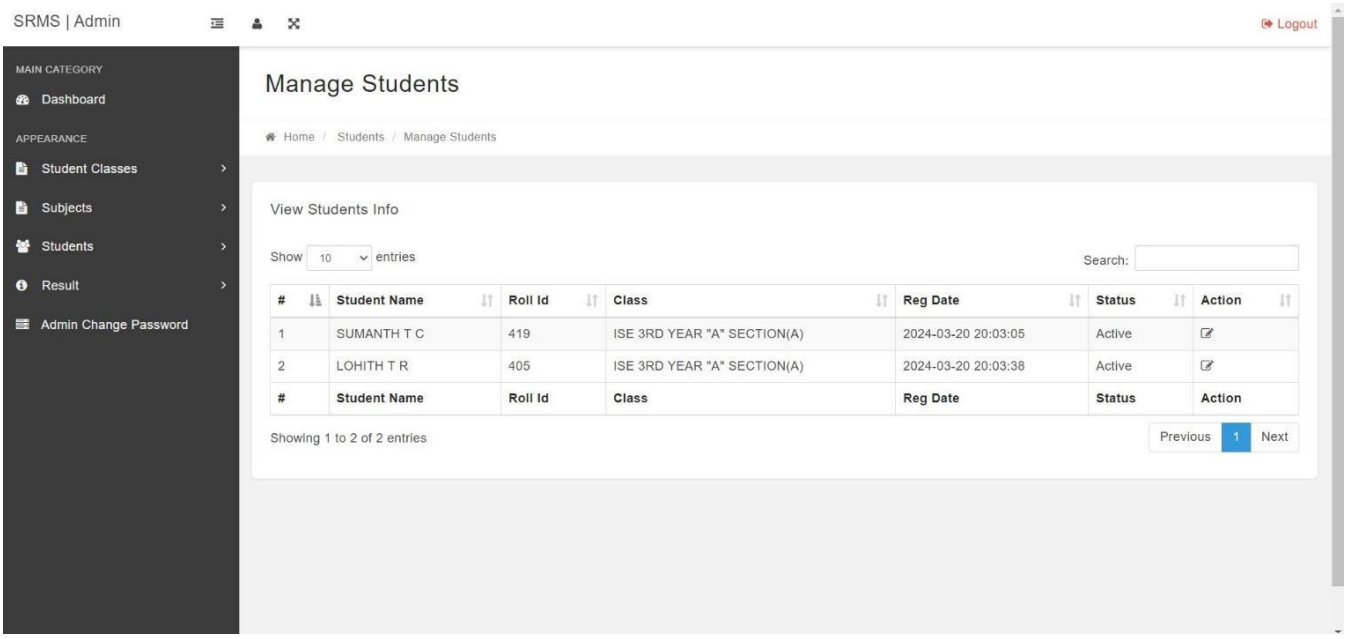


Figure 6.5 Result declared page

The Figure 8.5 shows the students whose result is declared.

CREATE CLASS PAGE

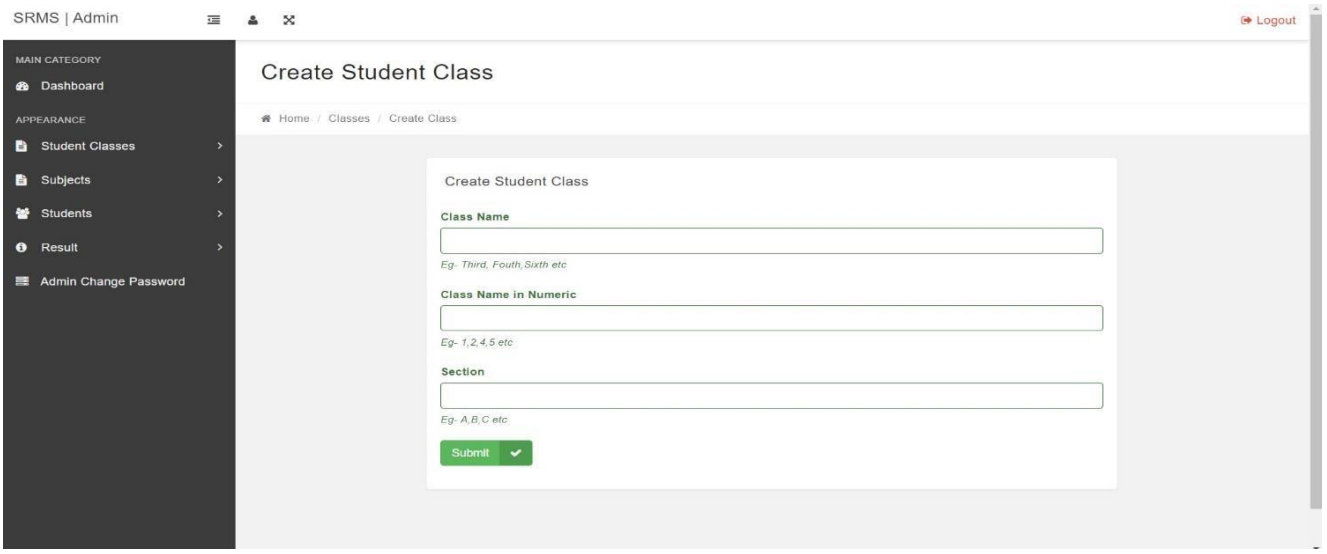


Figure 6.6 Create class page

The Figure 8.6 shows the how admin create new classes

CREATE SUBJECT PAGE

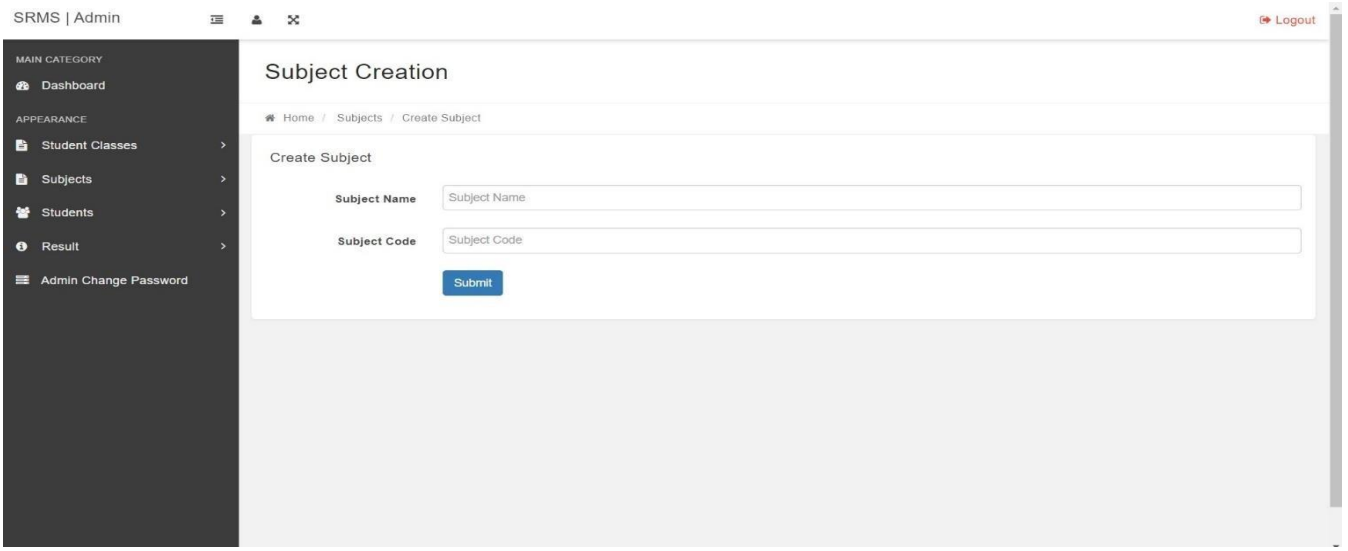
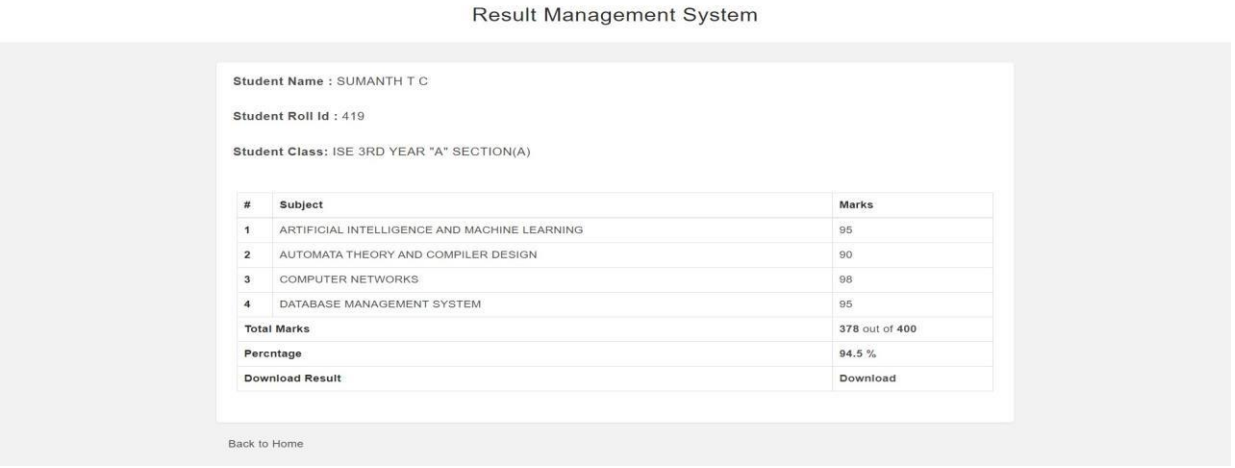


Figure 6.7 Create subject page

The Figure 8.7 is shows the how admin create new subjects

STUDENT RESULT PAGE



Student result page

The Figure 8.8 is shows the result of student the final outcome

CHAPTER 7

CONCLUSION

In conclusion, a Student Result Management System (SRMS) plays a crucial role in modern educational institutions by efficiently managing and tracking student academic results. By utilizing a database management system (DBMS), the SRMS ensures data integrity, security, and scalability, making it an indispensable tool for educators and administrators. The SRMS empowers educational institutions to effectively manage student academic data, promote transparency and accountability, and ultimately enhance the learning experience for all stakeholders involved. It is a valuable asset in today's digital age, supporting educational excellence and student success.

The SRMS centralizes student-related data such as grades, attendance, and exam scores, allowing for easy retrieval, updating, and maintenance of records. The system generates various reports and analytics, including grade sheets, progress reports, and statistical analyses, providing valuable insights into student performance trends and academic achievements. With automated GPA calculations, class rankings, and other metrics, the SRMS reduces manual errors and streamlines academic processes.

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