



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Skill Enhancement Project – Java Full Stack

STUDENT RESULT MANAGEMENT SYSTEM

STUDENT NAME

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JFS-(ST03)

AGENDA

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INTRODUCTION

- The **Student Result Management System (SRMS)** is a **full-stack web application** designed to digitize the process of managing student academic records.
- It allows **administrators** to manage student details and marks efficiently.
- **Students** can securely log in to view their individual results, averages, and performance statistics.
- The system integrates **React.js (Frontend)**, **Spring Boot (Backend)**, and **MySQL (Database)** for seamless communication and data handling.
- It ensures **automation, accuracy, and accessibility** in managing academic results.

ABSTRACT

The **Student Result Management System (SRMS)** is a full-stack web application developed to automate and simplify the management of student academic results. It provides a secure and user-friendly platform where administrators can manage student information and marks, while students can easily access their results, averages, and performance reports. Built using **React.js**, **Spring Boot**, and **MySQL**, the system ensures seamless data flow between frontend, backend, and database layers. By eliminating manual processes, it enhances **accuracy**, **efficiency**, and **transparency** in academic result management.

EXISTING SYSTEM

- **Manual Data Entry:**

Student details and marks are entered manually.

- **Paper-Based Record Keeping:**

All student information and results are stored in physical files.

- **Time-Consuming Process:**

Preparing mark sheets, computing averages, and updating records require significant manual effort, causing delays in result publication.

- **Limited Accessibility:**

Students need to visit the institution to check their results, as there is no online access or automated result portal.

- **Lack of Security & Data Management:**

The system does not provide secure login or restricted access.

PROPOSED SYSTEM

- Introduces a **web-based application** to manage student information and results digitally.
- Provides **secure login** for both Admin and Student roles.
- Ensures **real-time access** to results through an online portal.
- Uses **React.js** for a responsive and interactive user interface.
- Implements **Spring Boot** for backend logic and RESTful API communication.
- Stores and manages data efficiently using **MySQL** database.
- Allows **future scalability**, such as adding staff roles, analytics, and notifications.

ADVANTAGES

- Fast and accurate result processing.
- Easy access for both admin and students.
- Reduces manual work and human errors.
- Secure login and data management system.
- Real-time updates without page reloads.
- Data stored safely in a centralized database.
- User-friendly and responsive web interface.
- Easy to maintain, update, and scale in the future.

DISADVANTAGES

- Requires an **internet connection** for access.
- Initial **setup and deployment** may need technical knowledge.
- **Database maintenance** and backups are essential to prevent data loss.
- Limited functionality without proper **role-based access control**.
- System may face **downtime** if the server is not properly managed.
- Updates or changes require **developer involvement**

HARDWARE REQUIREMENTS

1. **Processor:** Intel Core i3 or higher
2. **RAM:** Minimum 4 GB (8 GB recommended)
3. **Storage:** At least 250 GB HDD / SSD
4. **Display:** 1366 × 768 resolution or higher
5. **System Type:** 64-bit Operating System
6. **Network:** Stable internet connection for database and API access

SOFTWARE REQUIREMENTS

- Operating System:** Windows 10 / 11, macOS, or Linux
- Frontend:** React.js, HTML, CSS, JavaScript
- Backend:** Spring Boot (Java Framework)
- Database:** MySQL
- Build Tools:** Maven (Backend), npm (Frontend)
- IDE Tools:** Eclipse IDE (Backend), Visual Studio Code (Frontend)
- Browser:** Google Chrome / Microsoft Edge (for testing)
- Server:** Embedded Tomcat (Spring Boot default)

MODULES

1. **Admin Module:** Manage students, marks, and view reports.
2. **Student Module:** View marks, average, and performance.
3. **Authentication Module:** Secure login for admin and students.
4. **Database Module:** Store and manage all system data.
5. **Result Module:** Calculate and display averages and percentages.

MODULE DESCRIPTION

1. Admin Module

- Secure login for administrators.
- Add, edit, delete, and view student details.
- Manage and update student marks.
- View overall performance and department summaries.

2. Student Module

- Student login using email and password.
- View subject-wise marks, average, and percentage.
- Access results anytime from the online portal.

MODULE DESCRIPTION

3. Authentication Module

- Provides secure login and validation for users.
- Prevents unauthorized access to system data.

4. Database Module

- Stores all admin, student, and marks data.
- Ensures data consistency and relational integrity.

5. Result Calculation Module

- Automatically computes average and percentage.
- Generates accurate results in real time.

SAMPLE OUTPUT(SCREENSHOT)

The screenshot shows a web browser window with the address bar displaying 'localhost:3000/admin'. The page has a dark blue header with the text 'Sathyabama Student Result Portal - full stack project' and links for 'Admin Login' and 'Student Login'. The main content area features a white box with the title 'Admin Login'. Inside this box, there are two input fields: the first contains the text 'admin', and the second contains a series of dots representing a password. Below these fields is a blue button labeled 'Login'.

localhost:3000/admin

Sathyabama Student Result Portal - full stack project

Admin Login Student Login

Admin Login

admin

.....

Login

Admin login portal

SAMPLE OUTPUT(SCREENSHOT)

The screenshot displays the Admin Dashboard of the Sathyabama Student Result Portal. The dashboard includes a header with the portal name and login links for Admin and Student. Below the header, there is a section for 'All Students' with a form to add new students and a table listing existing students.

Admin Dashboard

All Students

Form fields: Name, Email, Department, Password, Add Student

ID	Name	Email	Department	Average (%)	Action
6	monica(43110526)	monica@student.com	Computer Science	86.00%	Delete
7	mithra(43110525)	mithra@student.com	Electronics	88.00%	Delete
8	tania(43110540)	tania@student.com	Computer Science	90.00%	Delete
9	nanthini(43110539)	nanthini@student.com	Mechanical	82.80%	Delete
10	nandhini(43110537)	nandhini@student.com	Civil	80.80%	Delete

Admin portal

SAMPLE OUTPUT(SCREENSHOT)

The screenshot displays a web browser window with the address bar showing 'localhost:3000/student'. The page features a dark blue header with the text 'Sathyabama Student Result Portal - full stack project' and links for 'Admin Login' and 'Student Login'. Below the header, a white login form is centered on a light blue background. The form is titled 'Student Login' and contains two input fields: one for the email address 'monica@student.com' and another for a password represented by dots. A blue 'Login' button is positioned below the password field.

localhost:3000/student

Sathyabama Student Result Portal - full stack project

Admin Login Student Login

Student Login

monica@student.com

Login

Student login portal

SAMPLE OUTPUT(SCREENSHOT)

The screenshot displays a web browser at the URL `localhost:3000/student/dashboard`. The page header is a dark blue bar with the text "Sathyabama Student Result Portal - full stack project" on the left and "Admin Login" and "Student Login" on the right. The main content area is white and contains the following information:

Welcome, monica(43110526)

Department: Computer Science

Average: 86.00%

Marks:

Subject	Marks
Chemistry	85
English	80
Mathematics	89
Physics	82
Programming	94

Student Result portal

CONCLUSION

- The **Student Result Management System (SRMS)** successfully automates the process of managing student results.
- It ensures **accuracy**, **efficiency**, and **transparency** in result processing.
- The integration of **React.js**, **Spring Boot**, and **MySQL** provides a powerful, scalable, and user-friendly platform.
- Both admins and students benefit from real-time data access and secure system operations.
- The project demonstrates how technology can simplify academic management and improve overall productivity.

THANK YOU

We thank God, Our Department, Guide, Panel Members, Supportive Professors and all Technical and non Technical staff who helped us in our Project.