Student Result Processing System

Introduction:
The Student Result Processing System is a structured database project built using MySQL. It manages student records, course information, grades, and calculates semester-wise GPA and ranking using SQL queries.

Abstract:
This system provides an automated solution to handle student performance data. It includes schema design, GPA logic, rank list generation using window functions, and analytical queries to track academic progress. The system simplifies result analysis for institutions.

Tools Used:

- MySQL
- MySQL Workbench (or any SQL client)
- SQL (DDL, DML, Window Functions)

Steps Involved in Building the Project:

1. Designed schema with Students, Courses, Grades, Semesters, and GradePoints tables.
2. Inserted sample student, course, and grade data.
3. Calculated GPA using weighted average based on credit and grade points.
4. Generated rank lists with RANK() window function.
5. Linked relationships using foreign key constraints for integrity.

Conclusion:
The project showcases strong command over relational database design, normalization, joins, and analytics using SQL. It is highly scalable and adaptable to real-world academic systems, making result processing efficient and transparent.