

Student Performance Analysis - SQL Project

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Database: MySQL

PROJECT OVERVIEW:

The 'Student Performance Analysis' system is a small-scale MySQL project designed to demonstrate SQL skills. It includes database design, data insertion, and complex queries involving aggregation, joins, and subqueries. The system helps in analyzing student academic performance across multiple courses.

KEY OBJECTIVES:

1. Store student details, course information, and exam results.
2. Perform data analysis to identify top performers and weak students.
3. Showcase SQL capabilities such as JOIN, GROUP BY, HAVING, ORDER BY, and subqueries.

DATABASE SCHEMA:

Tables:

- Students(student_id, student_name, department, year_of_study)
- Courses(course_id, course_name, credits)
- ExamResults(result_id, student_id, course_id, marks)

Relationships:

- ExamResults.student_id → Students.student_id
- ExamResults.course_id → Courses.course_id

SAMPLE QUERIES INCLUDED:

1. Top 3 students by average marks.
2. Average marks per course.
3. Students failing in any course (marks < 40).
4. Highest scorer per course.

CONCLUSION:

This project demonstrates practical MySQL knowledge that can be applied in real-world scenarios. It highlights capabilities in database schema design, query optimization, and analytical SQL skills.