

SQL School

Database Project

(MySQL)

Project Description

This project demonstrates the design and analysis of a **School Management Database** using **MySQL**.

The database models real-world academic entities such as students, courses, enrolments, and progress tracking.

Using SQL joins, aggregation functions, and filtering techniques, meaningful insights are derived from relational data.

Database Schema

Schema Name: school

Tables Used:

- student
- course
- enrollment
- progress

Key Relationships:

- One student → multiple enrollments
- One course → multiple students
- Enrollment → linked to progress data

Tools & Technologies

- **Database:** MySQL
- **IDE:** MySQL Workbench
- **Concepts:**
 - Joins (INNER JOIN)
 - Aggregate Functions (SUM, AVG)
 - GROUP BY
 - WHERE & Date Filters
 - Relational Modeling

Steps Followed

1. Designed relational database schema

2. Created tables with primary & foreign keys
 3. Inserted sample data
 4. Established relationships between tables
 5. Wrote SQL queries for analysis
 6. Validated results using MySQL Workbench
-

SQL Queries Performed

- Total course price per student
 - Average course completion percentage per student
 - Students enrolled in multiple courses
 - Course-wise enrollment analysis
 - Students accessing courses after a specific date
 - Revenue analysis using enrollments
-

Sample Query

```
SELECT
    s.student_id,
    s.student_name,
    SUM(c.price) AS total_course_price
FROM student s
JOIN enrollment e ON s.student_id = e.student_id
JOIN course c ON e.course_id = c.course_id
GROUP BY s.student_id, s.student_name;
```

Key Insights

- Students often enroll in multiple courses, increasing total revenue
 - Average completion percentage helps identify engaged learners
 - Course pricing directly impacts total student spending
 - Enrollment data helps track course popularity
-

Conclusions

This project showcases strong understanding of:

- Relational database design
- SQL joins & aggregations
- Real-world data analysis using SQL

da 1 evening x

File Edit View Query Database Server Tools

Navigator

SCHEMAS

Filter objects

▼ school

▼ Tables

▶ course

▼ enrollment

▶ Columns

▶ Indexes

▶ Foreign Keys

▶ Triggers

▶ progress

▶ student

Views

Stored Procedures

Administration Schemas

Information

Table: **enrollment**

Columns:

<u>enrollment_id</u>	int PK
<u>student_id</u>	varchar(40)
<u>course_id</u>	varchar(40)
enroll_date	date

MySQL Workbench

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SCHMAS

Filter objects

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sales

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Schema: employees

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141 -- Q7: Find the total price of all courses each student is enrolled

142 SELECT

143 s.student_id,

144 s.student_name,

145 SUM(c.price) AS total_course_price

146 FROM student s

147 JOIN enrollment e

148 ON s.student_id = e.student_id

149 JOIN course c

Result Grid

student_id	student_name	total_course_price
1	Alice Johnson	4498
2	Bob Smith	1499
3	Charlie Brown	2999
4	Dana Prince	1799
5	Ethan Lee	4998

Result 2 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	03:25:23	use school	0 row(s) affected	0.016 sec
2	03:25:30	SELECT s.student_name, s.student_email, c.course_title, e.enroll_date FROM Enrollment e...	7 row(s) returned	0.296 sec / 0.000 sec
3	03:26:36	SELECT s.student_id, s.student_name, SUM(c.price) AS total_course_price FROM student s...	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

16°C Clear

Search

ENG IN

03:26 08-02-2026

MySQL Workbench

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116 -- Q5: Find the average completion percentage for each student.

117

118 SELECT

119 s.student_id,

120 s.student_name,

121 AVG(p.completion_percent) AS avg_completion

122 FROM student s

123 JOIN enrollment e

124 ON s.student_id = e.student_id

125 JOIN progress p

126 ON e.enrollment_id = p.enrollment_id

127 GROUP BY s.student_id, s.student_name;

128

129 -- Q6: List students who accessed their course progress after '2025-08-04'.

130 SELECT

131 s.student_id,

132 s.student_name,

133 p.last_accessed_date

134 FROM student s

135 JOIN enrollment e

136 ON e.student_id = s.student_id

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	03:25:23	use school	0 row(s) affected	0.016 sec
2	03:25:30	SELECT s.student_name, s.student_email, c.course_title, e.enroll_date FROM Enrollment e...	7 row(s) returned	0.296 sec / 0.000 sec

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87 -- Q2: Show the names of students from the city 'Mumbai' who are enrolled in any course.

88

89 SELECT DISTINCT s.student_name

90 FROM Student s

91 JOIN Enrollment e

92 ON s.student_id = e.student_id

93 WHERE s.city = 'Mumbai';

94

95

96 -- Q3: Count how many students are enrolled in each course.

97

98 SELECT

99 c.course_title,

100 COUNT(e.student_id) AS total_students

101 FROM course c

102 LEFT JOIN enrollment e

103 ON c.course_id = e.course_id

104 GROUP BY c.course_title;

105

106 -- Q4: Find all courses with more than 1 student enrolled.

107

Output

Action Output

Time Action Message Duration / Fetch

1 03:25:23 use school 0 row(s) affected 0.016 sec

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Object Info Session

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Q Search

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74 -- Q1: List all students with the course titles they are enrolled in.

75

76 SELECT

77 s.student_name,

78 s.student_email,

79 c.course_title,

80 e.enroll_date

Result Grid

Filter Rows: Export Wrap Cell Contents

student_name	student_email	course_title	enroll_date
Alice Johnson	alice@example.com	Python for Beginners	2025-07-01
Alice Johnson	alice@example.com	Web Development Bootcamp	2025-07-10
Bob Smith	bob@example.com	Advanced Excel	2025-07-05
Charlie Brown	charlie@example.com	Machine Learning Basics	2025-07-08
Diana Prince	diana@example.com	Digital Marketing 101	2025-07-15
Ethan Lee	ethan@example.com	Python for Beginners	2025-07-20
Ethan Lee	ethan@example.com	Machine Learning Basics	2025-07-25

Result 1 x

Output

Action Output

Time Action Message Duration / Fetch

1 03:25:23 use school 0 row(s) affected 0.016 sec

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03:25 08-02-2026