RISE Internship
Database(SQL / MongoDB)
Project List

Project 1: Online Library Management System (MySQL)

Problem Statement:

Manual library systems make it hard to track books, issues, and returns efficiently.

Objective:

Develop a MySQL-based database to manage books, student records, issue-return logs, and generate reports.

Requirements:

- MySQL
- PHP/Flask/Java (frontend optional)
- Tables: Books, Students, IssueLogs, Admins

Expected Outcome:

A structured DB that can be connected to any web or desktop app to manage a digital library.

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Project 2: Hospital Patient Records (SQL + Flask)

Problem Statement:

Hospitals need to manage growing patient and doctor records efficiently.

Objective:

Create a CRUD application using Flask and SQL to add, edit, delete, and search patient data.

Requirements:

- SQLite/PostgreSQL
- Flask (Python framework)
- Bootstrap for UI
- Tables: Patients, Doctors, Appointments

Expected Outcome:

A complete web-based patient management tool ideal for college portfolios.

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Project 3: Student Result Management System

Problem Statement:

Schools and colleges need efficient systems for grade entry, evaluation, and reports.

Objective:

Design a result database that tracks student scores, grades, attendance, and subject-wise performance.

Requirements:

- MySQL or PostgreSQL
- Frontend (optional: Django/Flask)
- Tables: Students, Subjects, Marks, Results

Expected Outcome:

Database-backed solution for fast report card generation and performance analytics.

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Project 4: E-Commerce Product Catalog (MongoDB)

Problem Statement:

Modern e-commerce requires flexible and scalable databases for diverse product types.

Objective:

Design a NoSQL (MongoDB) schema for an online store, including product data, categories, and customer reviews.

Requirements:

- MongoDB
- JSON Schema Design
- Optional: Express.js + Node.js + React

Expected Outcome:

A product catalog backend that is scalable for future app development.

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Project 5: Movie Booking System Database

Problem Statement:

Movie booking needs real-time seat tracking, showtime mapping, and customer records.

Objective:

Build a relational database to manage shows, theatres, customers, and seat bookings.

Requirements:

- MySQL/PostgreSQL
- Tables: Theatres, Shows, Seats, Customers, Bookings

Expected Outcome:

Backend database for a movie booking platform.

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Project 6: College Attendance System

Problem Statement:

Manual attendance entry is inefficient and error-prone.

Objective:

Create a system to track attendance, generate monthly reports, and identify defaulters.

Requirements:

- MySQL or SQLite
- Tables: Students, Subjects, AttendanceLogs
- Optional: Web UI (Flask or Django)

Expected Outcome:

Digital attendance tracking with analytical queries.

Project 7: Food Ordering App Backend

Problem Statement:

Need for structured data handling for online food ordering platforms.

Objective:

Build a relational backend to manage users, restaurants, menus, and orders.

Requirements:

- PostgreSQL/MySQL
- Tables: Users, Orders, Items, Restaurants

Expected Outcome:

A normalized schema ready to connect to any food delivery UI.

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Project 8: Survey Form Result Storage (MongoDB or Firebase)

Problem Statement:

Surveys and feedback forms often lose value due to poor data handling.

Objective:

Design a NoSQL solution to capture and analyze responses from educational surveys or career guidance forms (e.g., "Unnai Arindhal" program).

Requirements:

- MongoDB Atlas or Firebase Realtime DB
- JSON-based form structure
- Optional: React/Angular for frontend

Expected Outcome:

A scalable backend to store and retrieve dynamic form data from students and trainees.