

Team's Learning Report

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Throughout this project, our team delved into various database-related technologies and SQL techniques. Here's what we learned, broken down into key areas:

SQL Queries and Techniques

We started by sharpening our skills in SQL, particularly with complex JOIN operations and aggregate functions like SUM, AVG, MIN, and MAX. We gained a better understanding of how to use GROUP BY to group similar data and how ORDER BY and LIMIT can help us sort and restrict query results.

Database Design Fundamentals

Designing a robust database structure was another focus area. We explored relational database concepts, such as primary and foreign keys, to ensure proper relationships between tables. This approach helped us understand how to keep data consistent and avoid redundancy.

Data Manipulation and Integrity

Our project involved various data manipulation operations, such as INSERT, UPDATE, and DELETE. These skills allowed us to maintain records and manage data more efficiently. We also learned the importance of constraints to enforce business rules and maintain data integrity.

Functions, Views and Triggers

On the more advanced side, we learned about:

- **Functions:** These were instrumental in automating repetitive tasks and encapsulating complex logic, which improved code reuse and consistency.
- **Views:** Views allowed us to create simplified representations of complex data, making it easier to work with and understand.
- **Triggers:** We used triggers to enforce business rules and automate certain actions, adding a layer of automated control to our database operations.

Overall, this project was a valuable learning experience that gave us practical knowledge of database management and SQL techniques. It equipped us with the skills to design, build, and maintain robust databases.