INTEGRATED SUPPLY CHAIN AND FINANCIAL MANAGEMENT SYSTEM

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TEAM 4 (SQL SYNDICATES)
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Project Objective

The objective of this project is to design, develop, and implement a comprehensive Enterprise Resource Planning (ERP) Database Schema for a manufacturing and supply chain company. This database will streamline operations from product design to production, optimize employee management, and ensure meticulous financial oversight, ultimately enhancing efficiency and productivity within the organization.

Solution Statement

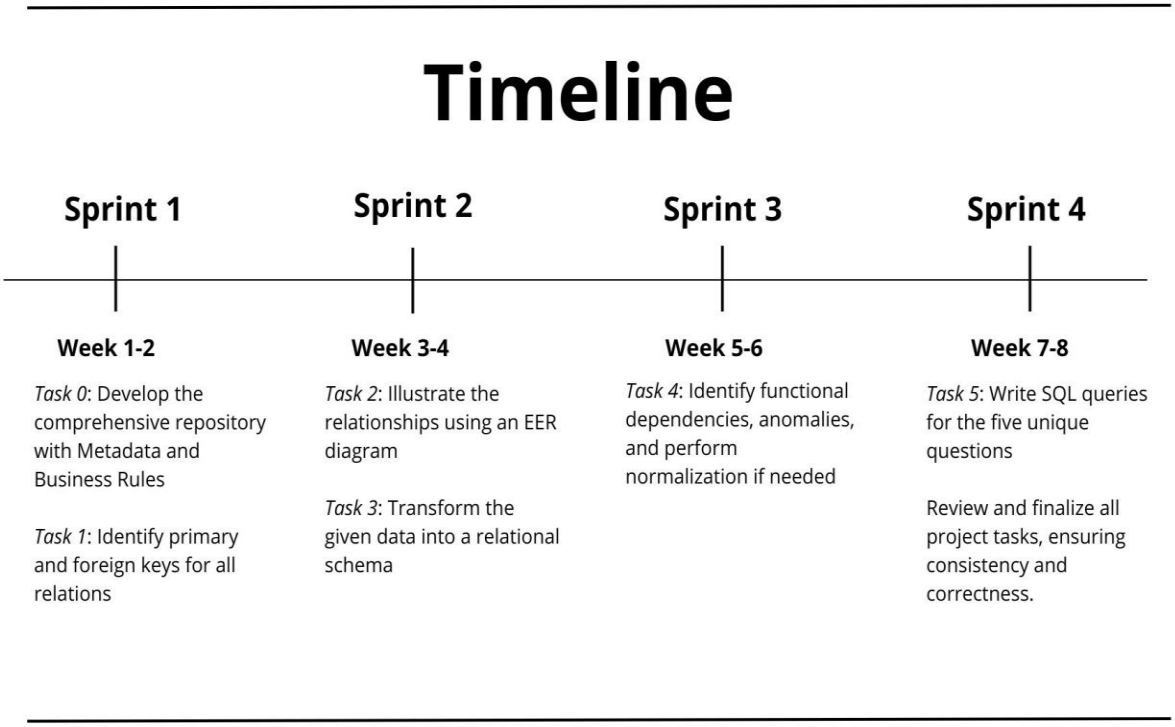
Our proposed solution involves the creation of a robust and efficient database schema that encompasses key components of the manufacturing and supply chain process. The schema will be designed with a focus on data integrity, scalability, and adherence to normalization principles (1NF, 2NF, and 3NF). By implementing this solution, we aim to provide the company with a powerful tool that optimizes operations, enhances productivity, and ensures seamless financial management.

Preferred Methodology: Agile

We will adopt the Agile methodology to ensure flexibility, collaboration, and iterative development, distinguishing it from less adaptable methods that may result in extended development timelines or constrained adaptability. We will establish regular meetings and continuous feedback loops to track progress, address any challenges, and adapt to evolving project requirements.

Expected Timeline

We have allocated an 8-week timeline for the completion of various tasks:



Repository Structure

Our repository will be organized in a systematic manner to facilitate easy access, interpretation, and understanding. It will include the following components:

Metadata: This section will contain detailed information about the database schema, including entity definitions, attribute details, relationships and integrity constraints.

Business Rules: Clearly defined business rules that govern the operations of the manufacturing and supply chain company, providing a foundation for our database design.

A summary of metadata pertaining to the entity "Employee."

Employee

Name	Type	Length	Description	Source	Access Logs	Timestamp
Employee ID	NUM	9	Unique identifier	HR System	HR Team, Payroll Team	Date and Time of Access
First Name	VARCHAR	30	First name of the employee	HR System	HR Team, Managers	Date and Time of Access and Modification
Last Name	VARCHAR	30	Last name of the employee	HR System	HR Team, Managers	Date and Time of Access and Modification
Salary	NUM	6	Salary of the employee	Payroll System	Payroll Team, Managers	Date and Time of Access and Modification
Position	VARCHAR	30	Job title of the employee	HR System	HR Team, Managers	Date and Time of Access and Modification

This serves as an illustrative example showcasing the format and content of metadata within our repository structure. The actual repository will encompass similar details and attributes for various entities.

Roles:

Current roles assigned to team members:

Team Coordinator	Pradhakshana Duraiswamy
Tech Lead	Mini Palepu
Presentation Lead	Evan Li
Co-researcher	Anam Haseeb

Up to this point, each team member has actively participated in all the activities related to the project proposal.

Future Roles:

Anam Haseeb:

- ✓ Responsible for initial analysis of business rules and repository setup.
- ✓ Assists in database design and normalization efforts for specific entities.

Evan Li:

- ✓ Focuses on schema integration and relationship establishment between entities.
- ✓ Responsible for project documentation and presentation.

Mini Palepu:

- ✓ Contributes to database design and normalization efforts for specific entities.
- ✓ Takes the lead on development.

Pradhakshana Duraiswamy:

- ✓ Focuses database design and documentation.
- ✓ Contributes to database design and normalization efforts for specific entities.

Conclusion

With a structured approach, clear roles, and adherence to Agile principles, we are confident in delivering a robust and efficient database schema that meets the operational requirements of the manufacturing entity. We look forward to successfully executing this project.