W2 - RetailStoreDB

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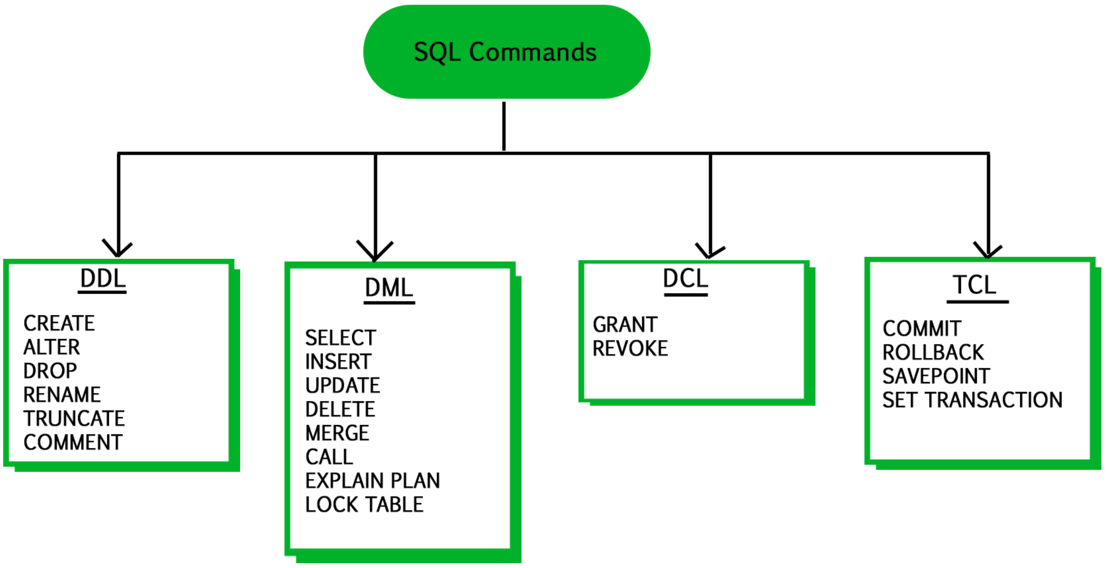
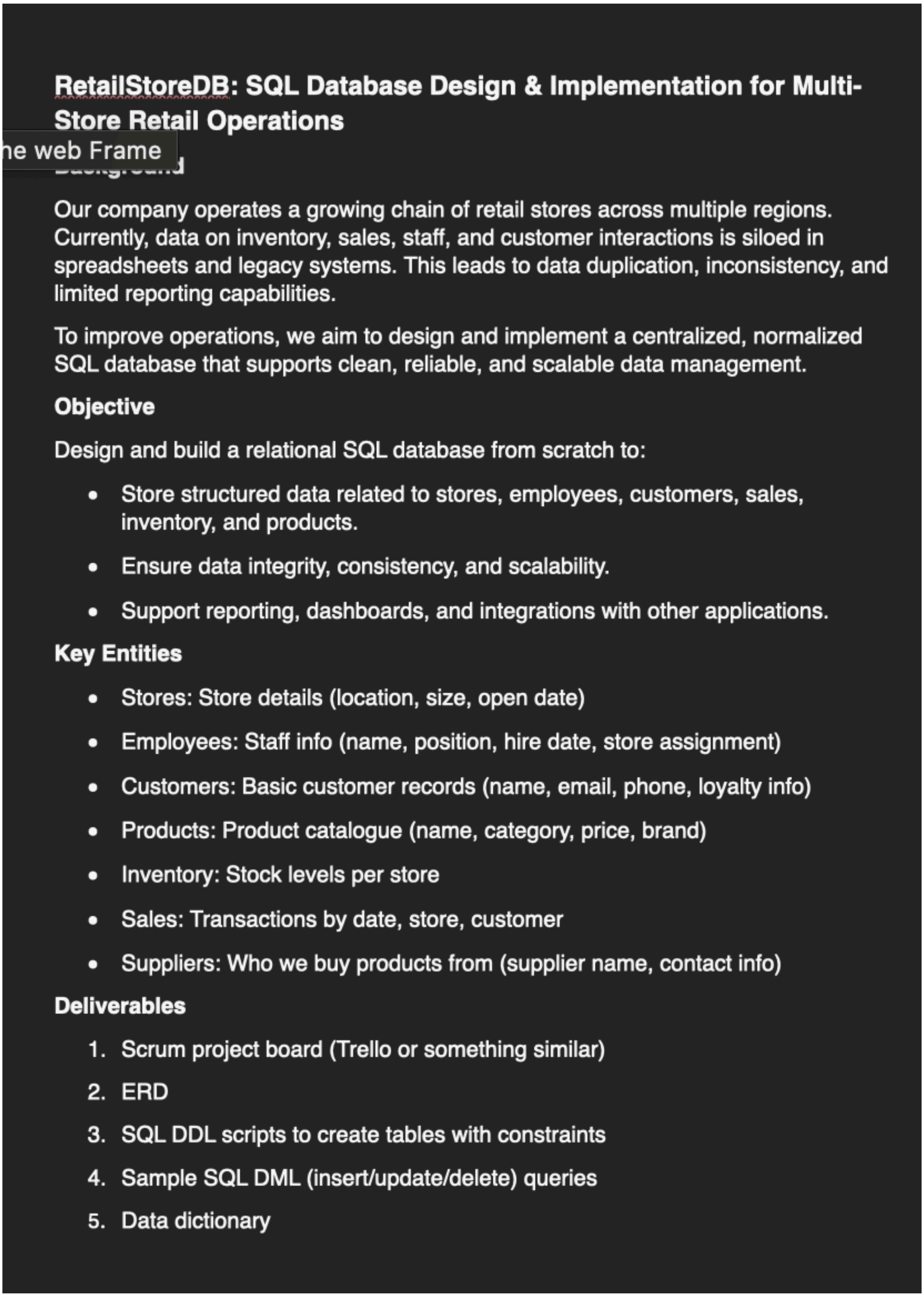




RetailStoreDB: SQL Database Design & Implementation for Multi-Store Retail Operations

Background

Our company operates a growing chain of retail stores across multiple regions. Currently, data on inventory, sales, staff, and customer interactions is siloed in spreadsheets and legacy systems. This leads to data duplication, inconsistency, and limited reporting capabilities.

To improve operations, we aim to design and implement a centralized, normalized SQL database that supports clean, reliable, and scalable data management.

Objective

Design and build a relational SQL database from scratch to:

- Store structured data related to stores, employees, customers, sales, inventory, and products.
- Ensure data integrity, consistency, and scalability.
- Support reporting, dashboards, and integrations with other applications.

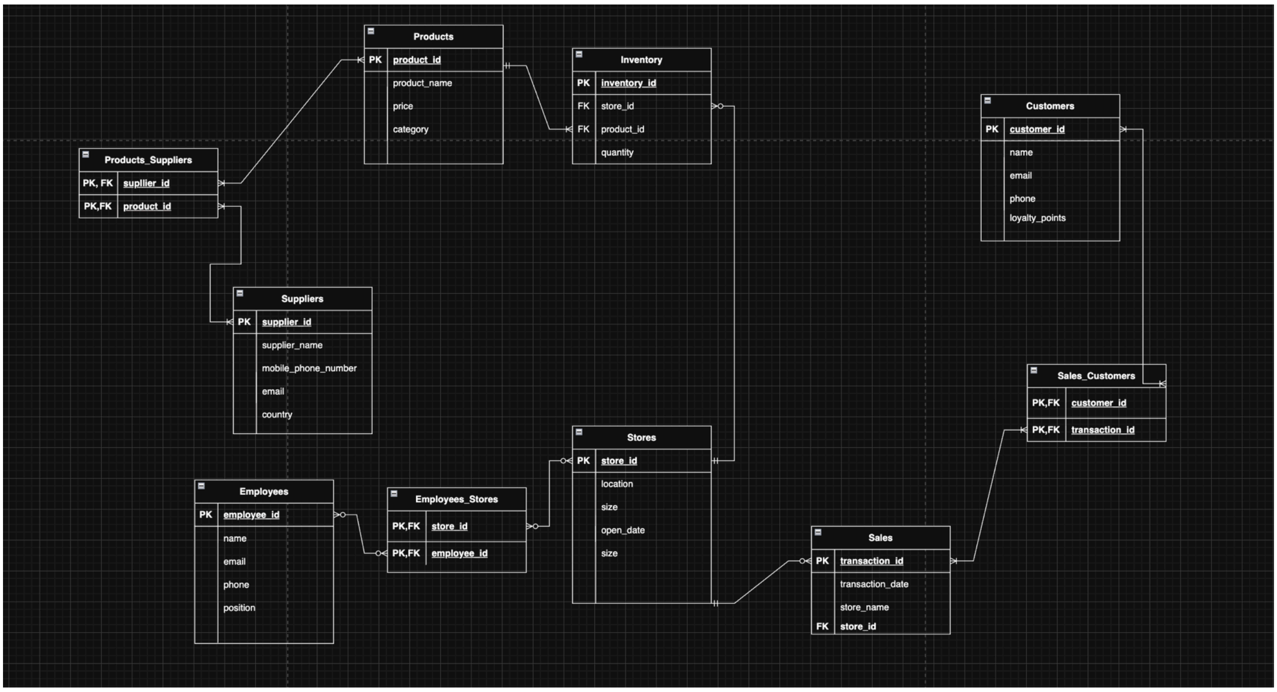
Key Entities

- Stores: Store details (location, size, open date)
- Employees: Staff info (name, position, hire date, store assignment)
- Customers: Basic customer records (name, email, phone, loyalty info)
- Products: Product catalogue (name, category, price, brand)
- Inventory: Stock levels per store
- Sales: Transactions by date, store, customer
- Suppliers: Who we buy products from (supplier name, contact info)

Deliverables

1. Scrum project board (Trello or something similar)
2. ERD
3. SQL DDL scripts to create tables with constraints
4. Sample SQL DML (insert/update/delete) queries
5. Data dictionary

ERD



Products

PK	product_id
	product_name
	price
	category

Inventory

PK	inventory_id
FK	store_id
FK	product_id
	quantity

Customers

PK	customer_id
	name
	email
	phone
	loyalty_points

Products_Suppliers

PK, FK	suplier_id
PK,FK	product_id

Suppliers

PK	supplier_id
	supplier_name
	mobile_phone_number
	email
	country

Sales_Customers

PK,FK	customer_id
PK,FK	transaction_id

Stores

PK	store_id
	location
	size
	open_date
	size

Employees

PK	employee_id
	name
	email
	phone
	position

Employees_Stores

PK,FK	store_id
PK,FK	employee_id

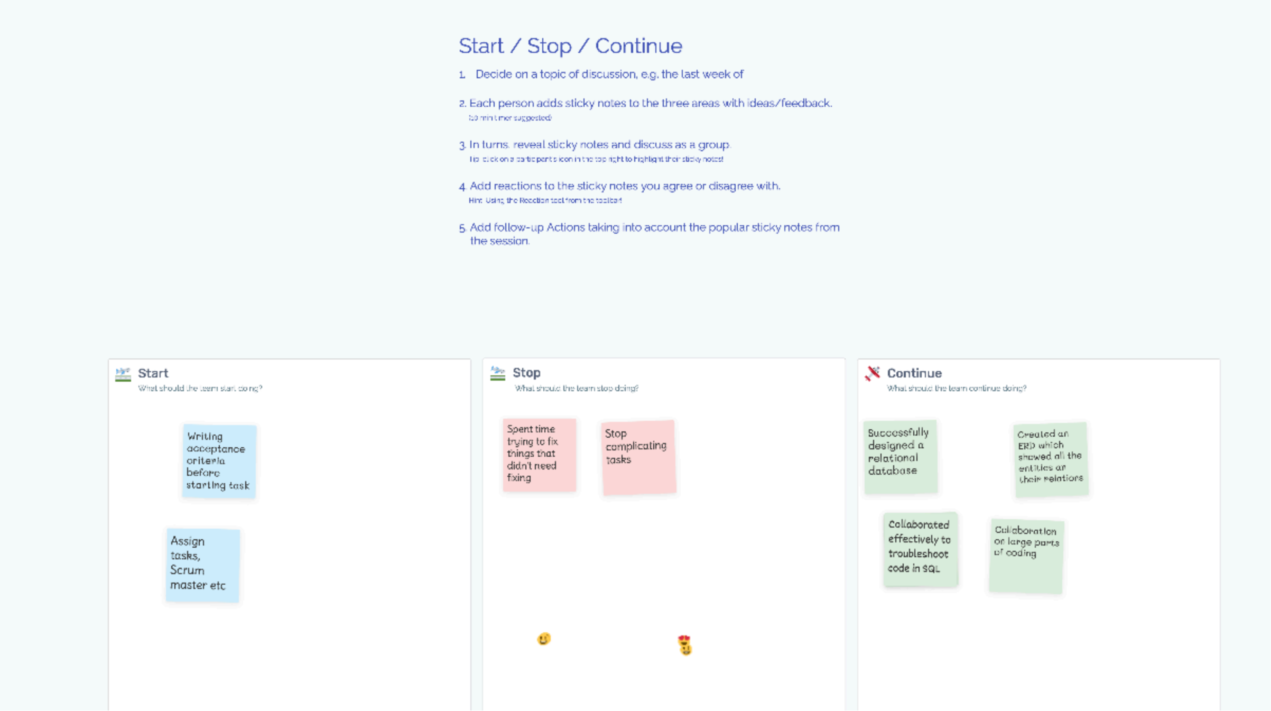
Sales

PK	transaction_id
	transaction_date
	store_name
FK	store_id

SQL DDL & DML

Check Visual Studio Code

RETROSPECTIVES



Start / Stop / Continue

1. Decide on a topic of discussion, e.g. the last week of
2. Each person adds sticky notes to the three areas with ideas/feedback.
   (10 min timer suggested)
3. In turns, reveal sticky notes and discuss as a group.
   Tip: click on a participant's icon in the top right to highlight their sticky notes!
4. Add reactions to the sticky notes you agree or disagree with.
   Hint: Using the Reaction tool from the toolbar
5. Add follow-up Actions taking into account the popular sticky notes from the session.

Start
What should the team start doing?

Writing acceptance criteria before starting task

Assign tasks, Scrum master etc

Stop
What should the team stop doing?

Spent time trying to fix things that didn't need fixing

Stop complicating tasks

Continue
What should the team continue doing?

Successfully designed a relational database

Created an ERD which showed all the entities an their relations

Collaborated effectively to troubleshoot code in SQL

Collaboration on large parts of coding