📘 Metadata Documentation

Database: `mcqueen_db`

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🗂️ Tables Overview

Table Name	Description
`Car`	Stores car inventory details
`Customer`	Contains customer personal information
`Employee`	Contains employee (sales staff) information
`Date`	Date dimension used for sale tracking and partitioning
`Sales`	Fact table storing car sale transactions (partitioned)
`top10_highest_sales`	Materialized view with the top 10 highest-value sales

🔍 Table: `Car`

Column	Data Type	Description
`carid`	INT	Primary Key – Unique ID for each car
`model`	VARCHAR	Car model name
`brand`	VARCHAR	Manufacturer
`year`	YEAR	Year of manufacture

| `price` | DECIMAL | Price of the car |

👤 Table: `Customer`

Column	Data Type	Description
`customerid`	INT	Primary Key – Unique ID for each customer
`first_name`	VARCHAR	First name
`last_name`	VARCHAR	Last name
`email`	VARCHAR	Contact email
`phone`	VARCHAR	Phone number

👨‍💼 Table: `Employee`

Column	Data Type	Description
`employeeid`	INT	Primary Key – Unique ID for each employee
`first_name`	VARCHAR	First name
`last_name`	VARCHAR	Last name
`position`	VARCHAR	Role in the company
`hire_date`	DATE	Date of hire

🗓️ Table: `Date`

Column	Data Type	Description
`dateid`	INT	Primary Key – Surrogate key
`full_date`	DATE	Calendar date
`month`	INT	Month number
`year`	INT	Year
`day_of_week`	VARCHAR	Day name (e.g., Monday)

💰 Table: `Sales` (Partitioned)

Column	Data Type	Description
`saleid`	INT	Primary Key – Unique sale transaction ID
`customerid`	INT	FK to `Customer`
`employeeid`	INT	FK to `Employee`
`carid`	INT	FK to `Car`
`dateid`	INT	FK to `Date` (used for partitioning)
`sale_amount`	DECIMAL	Total sale value
`sale_date`	DATE	Date of sale (used in partitioning logic)

Partitioning Details:

- Type: RANGE partitioning
- Key: `sale_date`
- Partition strategy: Monthly or yearly partitions (e.g., `sales_2025_08`)

📈 View: `top10_highest_sales`

Column	Data Type	Source Table	Description
`Sale ID`	INT	`Sales`	Unique ID of sale
`Date Sold`	DATE	`Date`	Date of transaction
`Customer Name`	VARCHAR	`Customer`	Full name
`Employee Name`	VARCHAR	`Employee`	Salesperson's full name
`Car Model`	VARCHAR	`Car`	Model of car sold
`Sale Amount`	DECIMAL	`Sales`	Value of sale

Note: This is a **materialized view**, implemented as a physical table with periodic refresh (e.g., hourly or daily).

📌 Notes

- All FK relationships are enforced manually or via application logic.
- All dimension tables (`Car`, `Customer`, `Employee`, `Date`) are assumed to be relatively static.
- Partitioning improves performance for time-based queries on `Sales`.

🔄 Maintenance Tasks

| Task | Frequency | Tool |

|------|-----------|------|

| Refresh `top10_highest_sales` | Daily | SQL Event Scheduler |

| Add new Sales partitions | Monthly | Manual or script |

| Run Data Quality Checks | Weekly | Custom SQL scripts |