

Homework Report: Tire Management Database

1. Database Structure

The database is designed to manage tire-related data, including categories, models, sizes, DOI numbers, and their operational scope. It consists of interconnected tables for efficient data organization and retrieval.

Key Tables:

- **Tire_Types:** Contains categories like Summer Tires and Winter Tires.
- **Tire_Models:** Includes manufacturers and their specific models.
- **DOI_Numbers:** Unique identifiers linking tire types and models.
- **Tire_Sizes:** Describes the size specifications of tires.
- **Scope:** Indicates whether a DOI is "in-scope" or "out-of-scope."

2. Inserted Data Overview

- **Tire Types:** Includes various categories such as Summer Tires, Winter Tires, and All Season Tires.
- **Tire Models:** Features manufacturers like Michelin and Bridgestone with models such as Primacy 4 and Blizzak LM005.
- **DOI Numbers:** Associates unique identifiers with specific types and models.
- **Tire Sizes:** Lists dimensions like 225/50/17 and 205/55/16.
- **Scope:** Differentiates between in-scope and out-of-scope DOI numbers.

3. Insights from Queries

In-Scope DOIs:

The query reveals all DOI numbers categorized as in-scope, along with their types, manufacturers, and models. This information is essential for identifying tires actively monitored or available in the inventory.

Out-of-Scope DOIs:

The query provides out-of-scope DOI numbers along with their size descriptions. This helps in identifying tires excluded from current operations or requiring further review.

4. Observations

- The database effectively organizes tire data with clear relationships between types, models, sizes, and scope.
- The use of scope status allows targeted filtering for operational and compliance needs.
- Inclusion of manufacturers and models enhances traceability and inventory management.

5. Conclusion

This database is well-suited for managing tire-related information in a structured manner. It supports operational decisions by providing insights into in-scope and out-of-scope items, ensuring efficient inventory and compliance management.

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