**Data Warehouse Design Documentation**

The data warehouse design documentation serves as a comprehensive guide for understanding the structure, relationships, and usage of the database. It is crucial for ensuring that stakeholders, developers, and analysts can navigate and utilize the data effectively. Here's a concise documentation outline:

**Overview:**

The data warehouse is designed to consolidate and integrate automotive data from Craigslist, enabling efficient analysis and reporting. The design adheres to a star schema model with a central fact table, `CarListings`, surrounded by dimension tables. The dimensions represent various attributes related to car listings.

**Implementation Steps:**

1. Database Creation:

- Tables for each dimension and the fact table created using a relational database.

2. Data Loading:

- Data loaded into tables through ETL processes, ensuring integrity and consistency.

3. Surrogate Keys:

- Surrogate keys assigned to non-unique attributes in dimension tables.

4. Relationships:

- Foreign keys established between the fact table and dimension tables to maintain relationships.

5. Indexing:

- Primary and foreign key indexing implemented for optimal query performance.

6. Data Mart Views:

- Views created for each data mart to cater to specific user requirements.

7. Testing:

- Rigorous testing conducted to verify data integrity and functionality.

8. Documentation:

- Comprehensive documentation includes the data model, relationships, and data mart structures.

This documentation serves as a guide for users, developers, and analysts, facilitating a clear understanding of the data warehouse structure and promoting efficient utilization of the integrated automotive data.

**NB:** Design documents are contained in the **Athena\_Star\_Schema.drawio**