# 📄 Data Documentation – Brazilian E-Commerce Store

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## 🔹 Overview

This document outlines the data cleansing and transformation processes implemented in the stored procedure 'silver.load\_silver', which is responsible for transferring data from the bronze layer to the silver schema in a curated, standardized form. The process includes text normalization, deduplication, validation checks, data type enforcement, and creation of surrogate keys to enable consistent analytics.

## 📦 Tables Processed

* customers\_dataset
* geolocation\_dataset
* order\_items\_dataset
* order\_payments\_dataset
* order\_reviews\_dataset
* orders\_dataset
* product\_category\_name\_translation
* products\_dataset
* sellers\_dataset

## 🧼 Data Cleaning Process Summary

* **Text Standardization:** TRIM(LOWER(...)) applied to text fields to eliminate leading/trailing spaces and unify casing.
* **State Name Expansion:** Two-letter Brazilian state codes translated to full names.
* **Date Parsing:** Strings converted to standardized DATE format.
* **Surrogate Keys:** Auto-generated using ROW\_NUMBER() for unique identification.
* **Null Handling:** Replaced nulls with 'N/A' where needed, e.g., in review messages.
* **Deduplication:** Used ROW\_NUMBER() with PARTITION BY to retain only top-ranked records.
* **Validation Flags:** Created custom columns like is\_valid\_location and is\_zero\_payment to support downstream filtering/analysis.
* **Data Integrity Fixes:** Adjusted inconsistent fields such as installment counts below sequential numbers.

### 📐 Data Model Alignment

All silver tables align with a clean star-schema design:

* Surrogate keys support joins to fact tables
* Fields are normalized and consistently named
* Data types enforced for optimal querying and analytics

## ✅ Final Note

The Silver Layer now contains clean, standardized, and analysis-ready data. All cleansing steps were executed within a robust error-handling procedure, ensuring traceability and resilience.

The layer is ready for transformation into Gold.