

# SalesAnalytics Data Cleaning Tasks List

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This document outlines the **activities and tasks** to be accomplished in each of the SQL scripts for the SalesAnalytics Data Cleaning Project. This serves as a checklist for building and executing the cleaning scripts.

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## 01\_Cleanup\_Customers.sql

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**Goal:** Clean and standardize the `Customers` table.

**Tasks:**

1. Remove leading/trailing spaces from `FirstName`, `LastName`, `Email`, `Phone`, `City`, etc.
  2. Standardize name capitalization ( `FirstName` and `LastName` ).
  3. Convert all `Email` entries to lowercase.
  4. Remove special characters from `Phone` numbers.
  5. Replace empty strings or NULLs in `City` with 'Unknown'.
  6. Identify and remove duplicate customers (based on `Email` ).
  7. Validate cleaned data: check NULLs, distinct cities, and duplicate counts.
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## 02\_Cleanup\_Products.sql

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**Goal:** Clean and standardize the `Products` table.

**Tasks:**

1. Trim whitespace from `ProductName`, `Category`, and `SubCategory` .
  2. Standardize text case for `ProductName`, `Category`, and `SubCategory` .
  3. Ensure numeric fields ( `Price`, `Cost`, `QuantityInStock` ) are non-negative.
  4. Handle NULL values for `QuantityInStock` (set to 0 if NULL).
  5. Identify and remove duplicate products (based on `ProductName` ).
  6. Validate ranges for `Price`, `Cost`, and `QuantityInStock` .
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## 03\_Cleanup\_Orders.sql

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**Goal:** Clean and standardize the `Orders` table.

**Tasks:**

1. Trim whitespace from `Status` and other text fields.
  2. Standardize `Status` values to consistent categories ('Shipped', 'Pending', 'Cancelled').
  3. Validate `OrderDate` and `ShipDate` :
    - Convert string dates to proper `DATE` type if necessary.
    - Identify invalid dates.
  4. Check for duplicate `OrderID` entries.
  5. Validate `TotalAmount` for non-negative values.
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## 04\_Cleanup\_Reviews.sql

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**Goal:** Clean and standardize the `Reviews` table.

**Tasks:**

1. Trim whitespace from `Comment` and other text fields.
  2. Standardize `Rating` to ensure values are between 1 and 5.
  3. Replace missing `ReviewDate` with current date ( `GETDATE()` ).
  4. Remove or correct invalid `ProductID` or `CustomerID` references if needed.
  5. Identify and remove duplicate reviews for the same `ProductID` and `CustomerID` .
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## 05\_Cleanup\_InventoryTransactions.sql

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**Goal:** Clean and standardize the `InventoryTransactions` table.

**Tasks:**

1. Trim whitespace from `TransactionType` .
  2. Standardize `TransactionType` values to only 'Sale', 'Purchase', or 'Return'.
  3. Ensure `Quantity` is non-negative.
  4. Validate `TransactionDate` is within a reasonable range.
  5. Identify duplicate transactions if necessary.
  6. Validate `ProductID` references exist in the `Products` table.
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**Note:**

- Each script should include **validation queries** after cleaning to ensure the dataset is consistent and ready for ETL or analytics tasks.
- All scripts should be **idempotent** to allow safe repeated execution.

This checklist can be used as a **reference while building and executing the cleaning scripts** in the SalesAnalytics Data Cleaning Project.