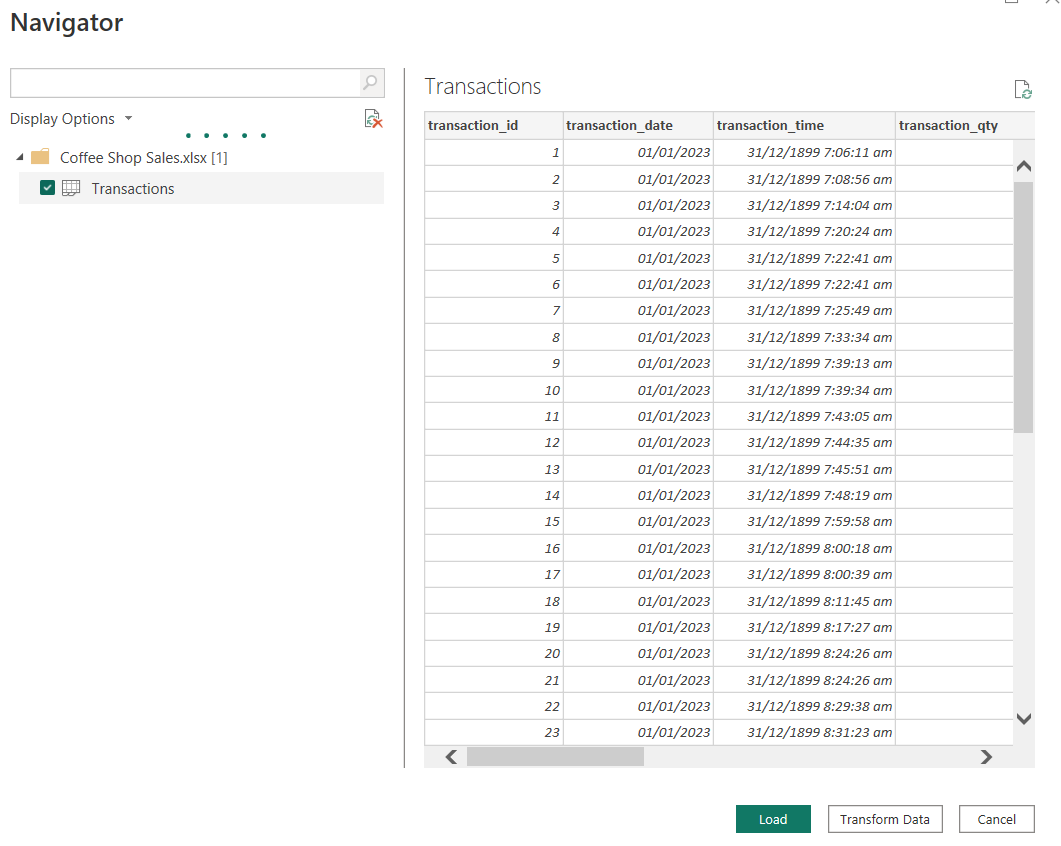
**Power BI Assignment 01**

**You are provided with a dataset containing Coffee Sales data. You aim to transform, clean the data, and create a data model.**

**Import Data**

**● Load the provided Coffee Shop Sales into Power BI.**



**Data Transformation:**

* **Check Column names, data types, missing, and error values.**

**{Column names, data types}**

{"transaction\_id", Int64.Type},

{"transaction\_date", type date},

{"transaction\_time", type datetime},

{"transaction\_qty", Int64.Type},

{"store\_id", Int64.Type},

{"store\_location", type text},

{"product\_id", Int64.Type},

{"unit\_price", type number},

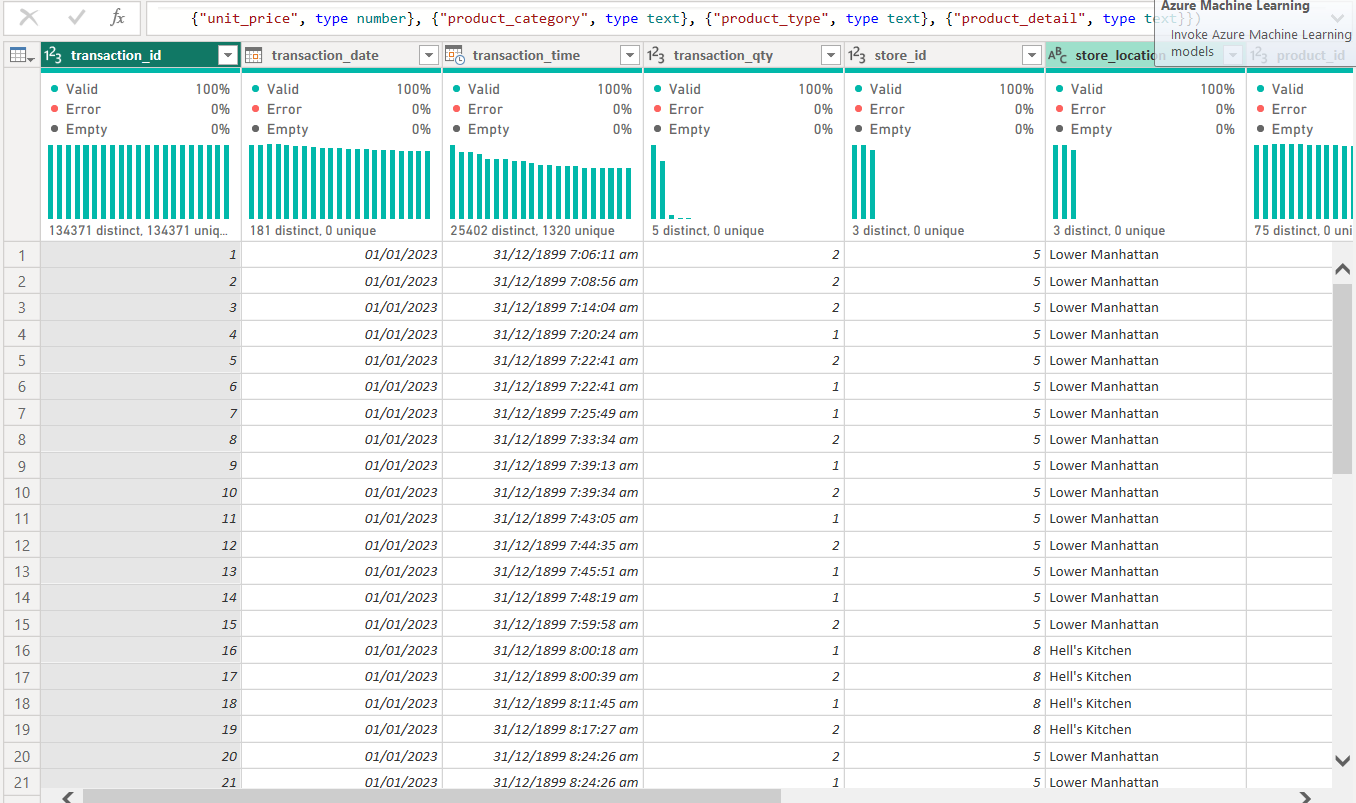
{"product\_category", type text},

{"product\_type", type text},

{"product\_detail", type text}

**Missing values:** 0

**Error-values**: 0

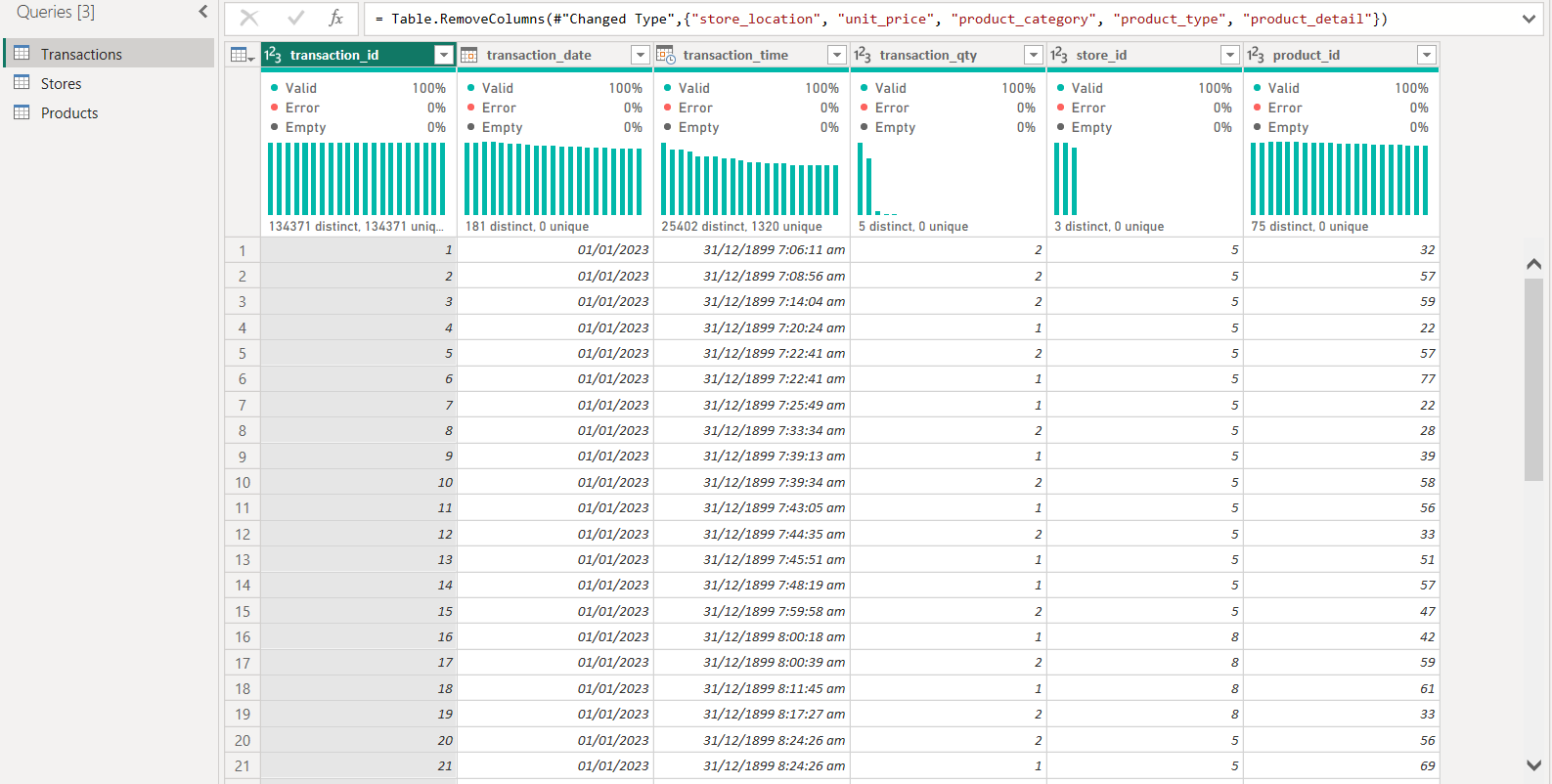


* **Split the dataset into smaller tables to normalize the data:**

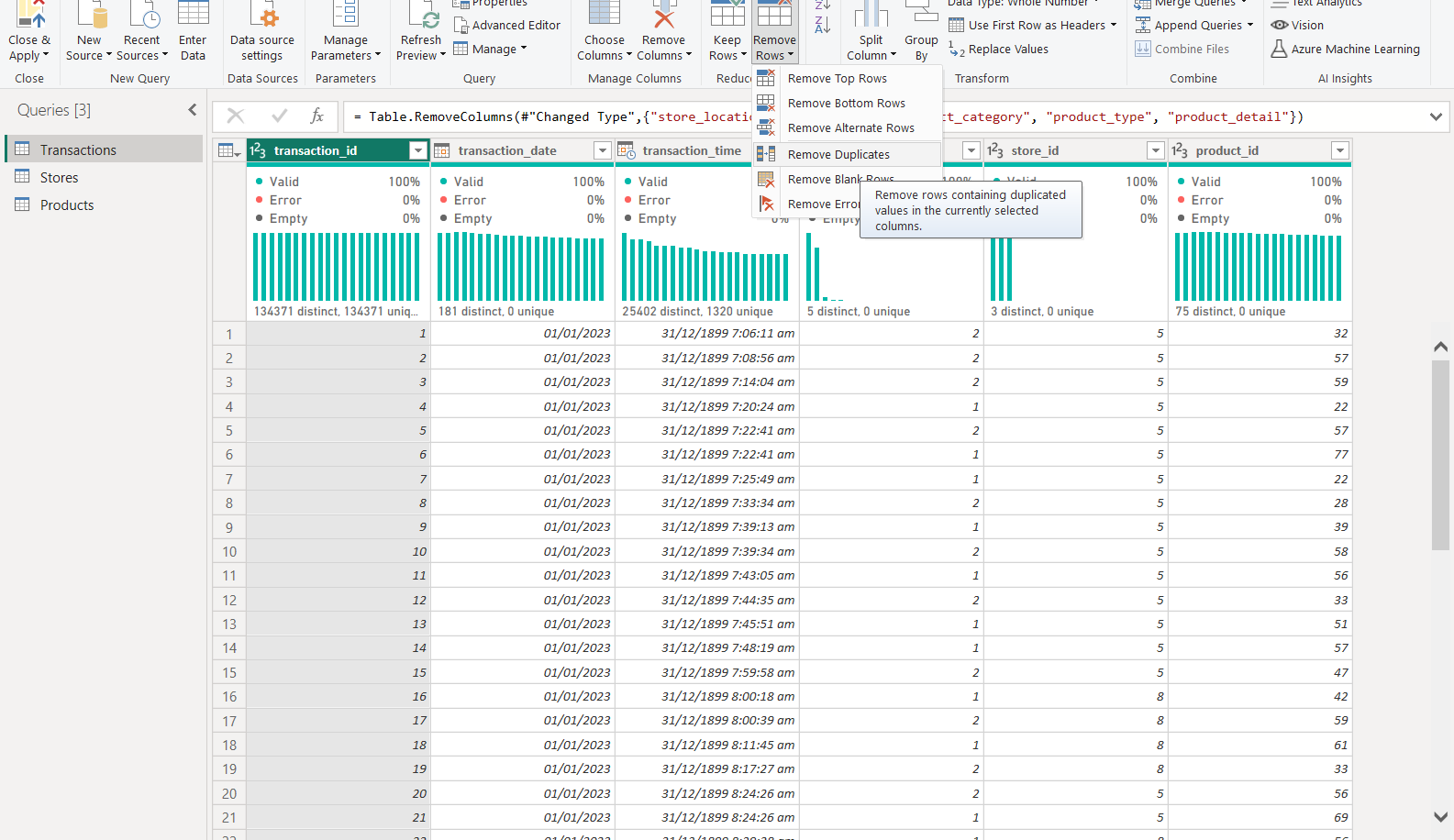
**○ Transactions:** transaction\_id, transaction\_date, transaction\_time, transaction\_qty, store\_id, product\_id.

**○ Stores:** store\_id, store\_location.

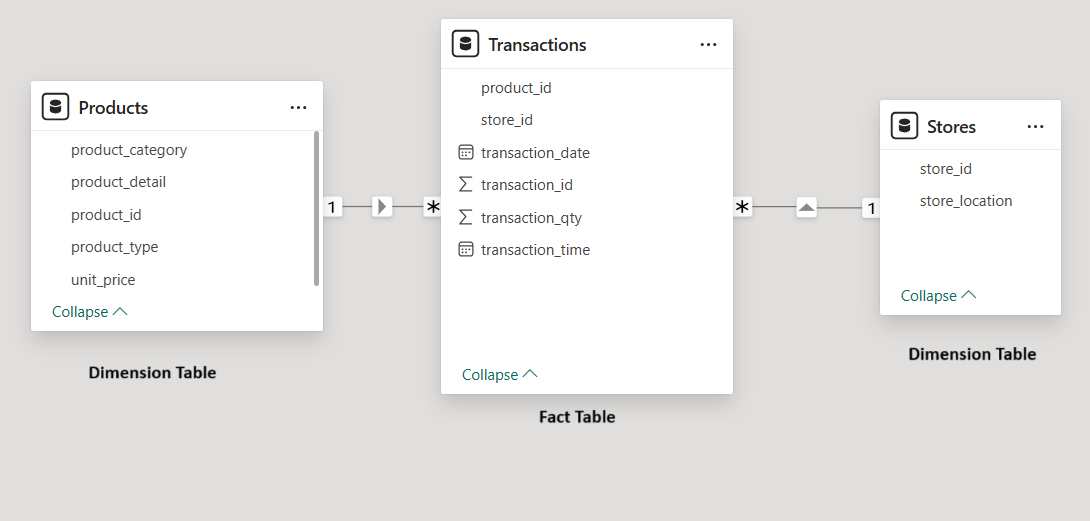
**○ Products:** product\_id, unit\_price, product\_category, product\_type, product\_detail.



* **Make sure to remove duplicates from each table.**

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**Data Modeling**

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**● Identify Fact and Dimension Tables.**

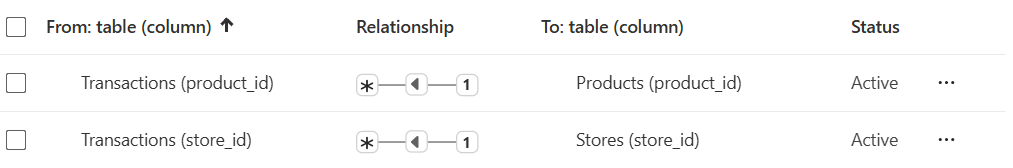
**Fact Table:** Transactions

**Dimension Tables:** Products and Stores

**● Create Relationships between tables.**

**Products and Transactions:** One to Many

**Stores and Transactions:** One to Many

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**● Identify the schema.**

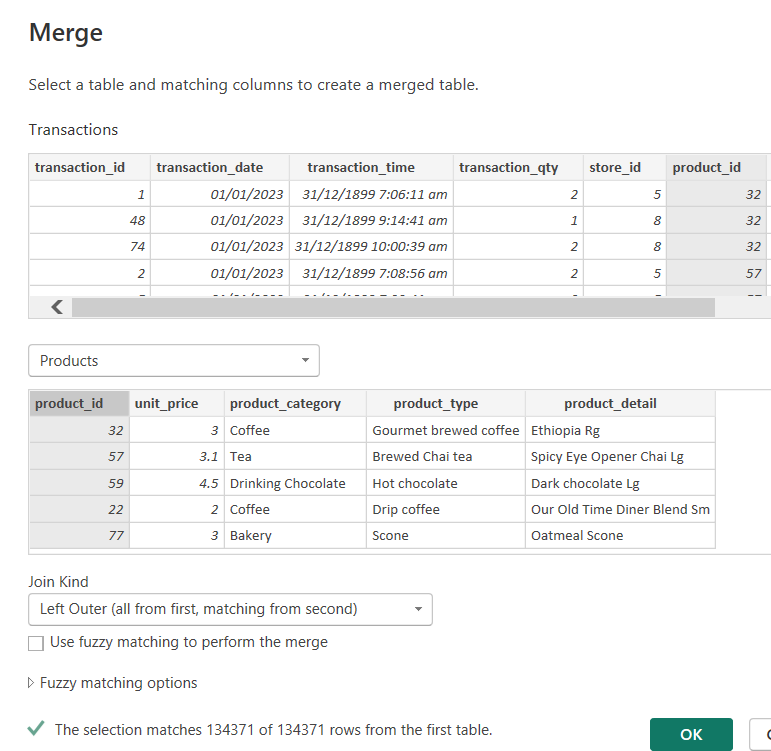
This is **Star schema** as Fact Table: “Transactions” is directly connected to dimension tables: Products and Stores

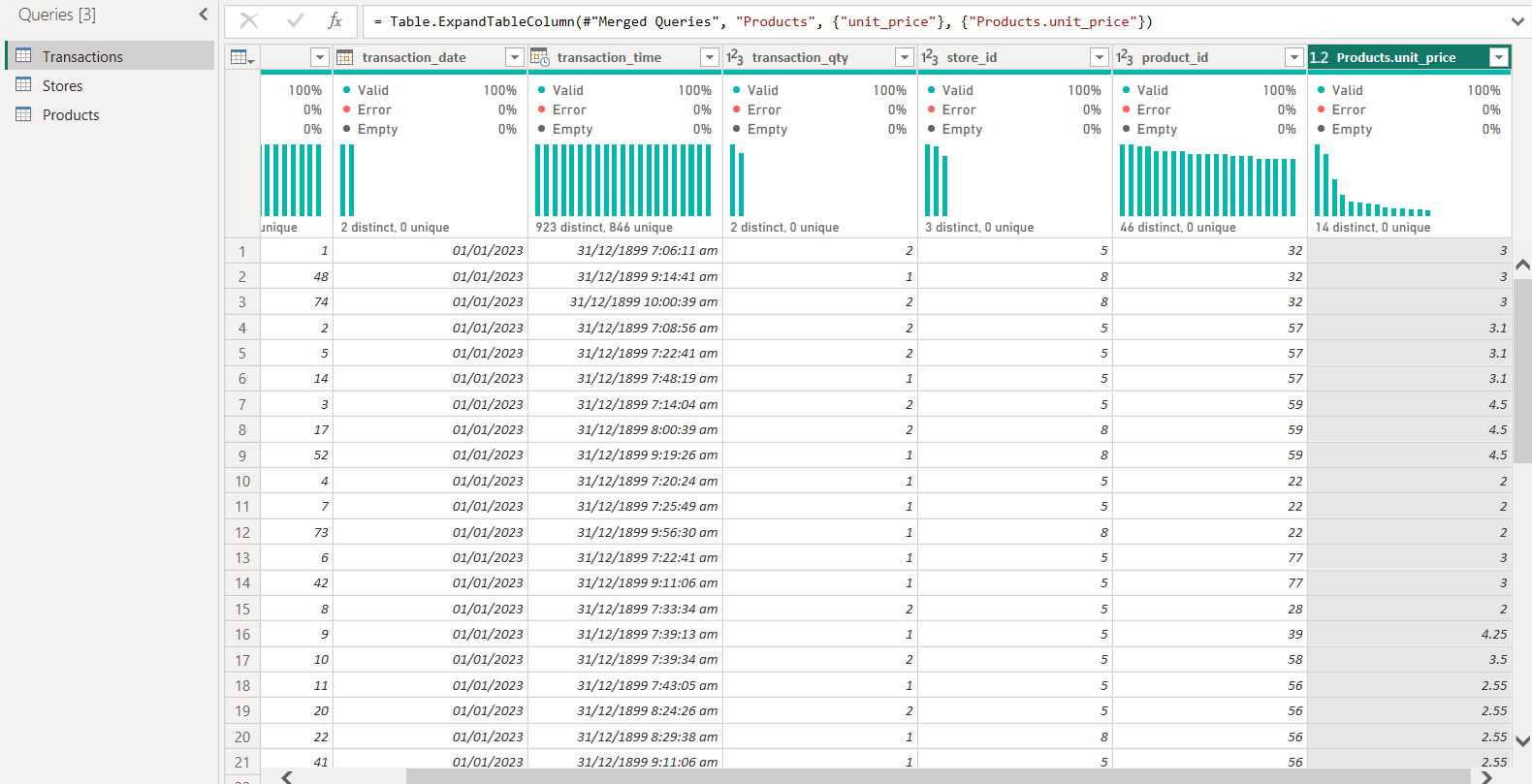
**Power Query Analysis**

**Perform the following tasks:**

**1. Create a column for Sales**

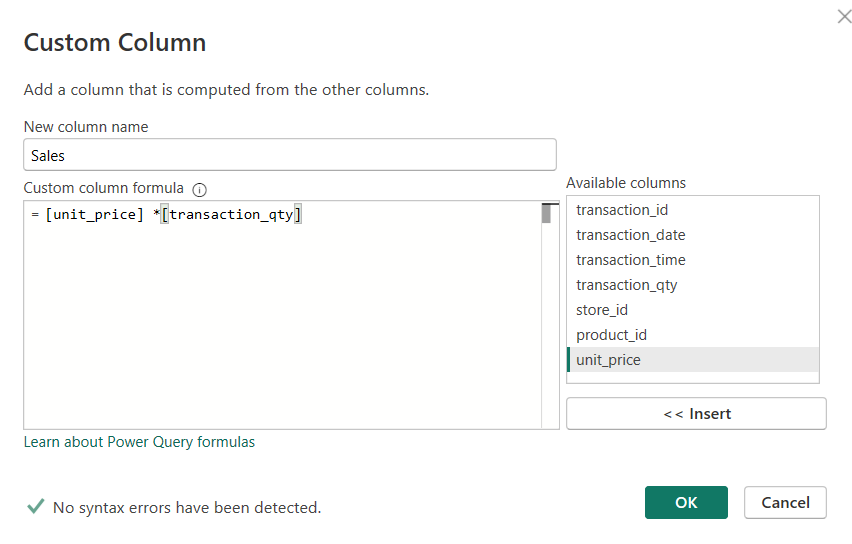
**○ Merge column” Unit price” from “products” to the “Transaction” table.**

**Merging the tables on the basis of “product\_id”:**

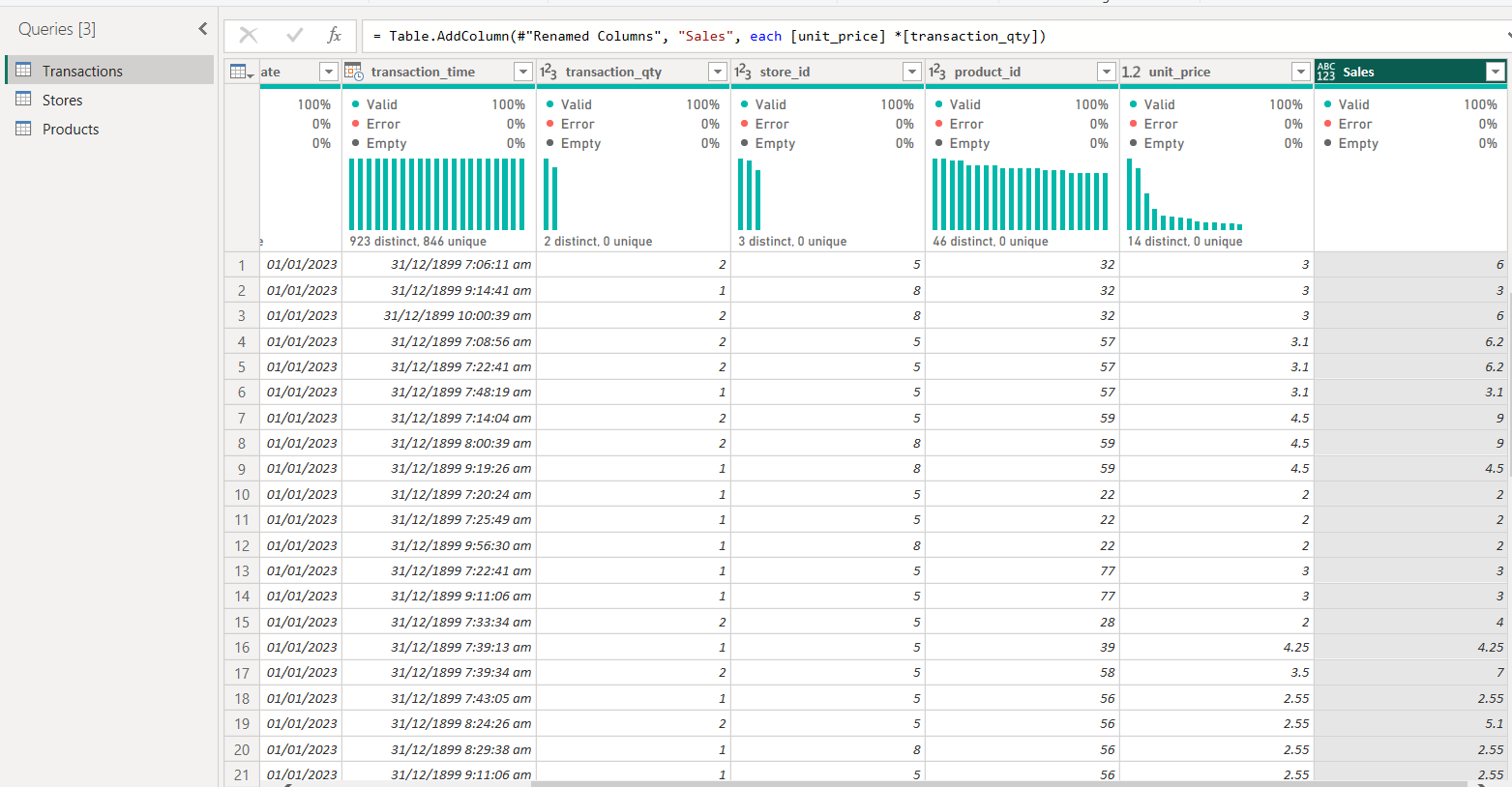
The “unit\_price” column merged to the Transactions table:

**○ Create a custom column: Sales = unit price x transaction\_qty.**

**Creating a column using the formula:**



The “Sales” column is added to the Transactions Table:

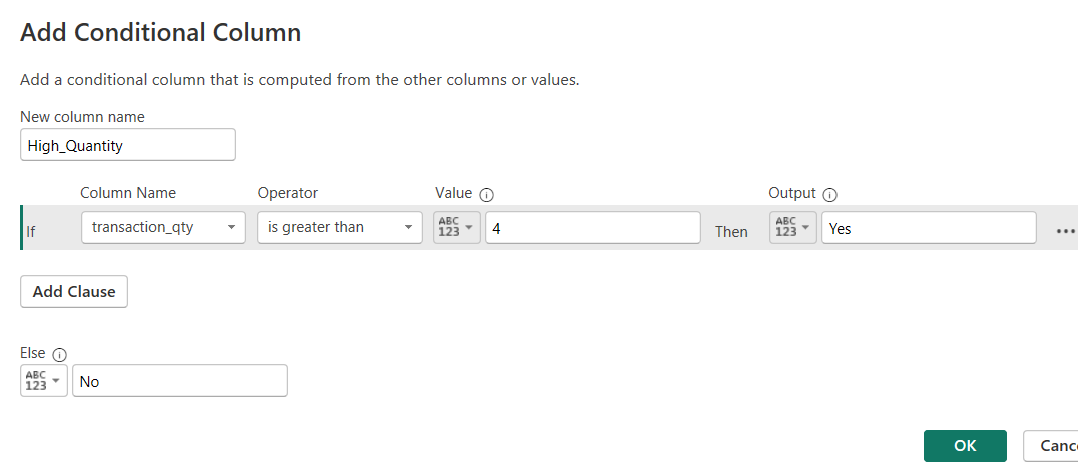


**2. Conditional column:**

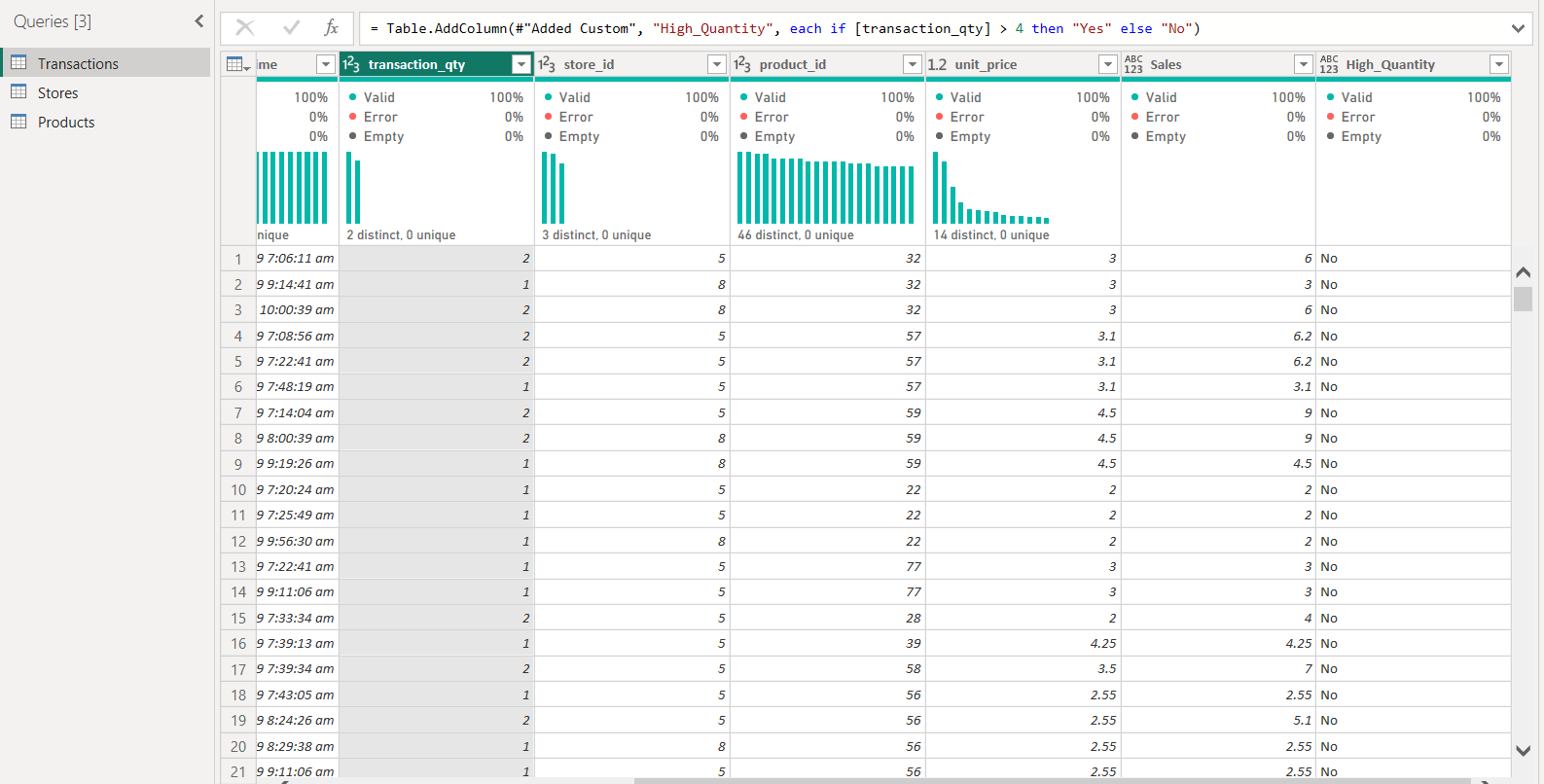
○ Create a conditional column Is **High Quantity:**

If transaction\_qty > 4, return **"Yes"**, otherwise **"No".**

**Adding conditional column:**

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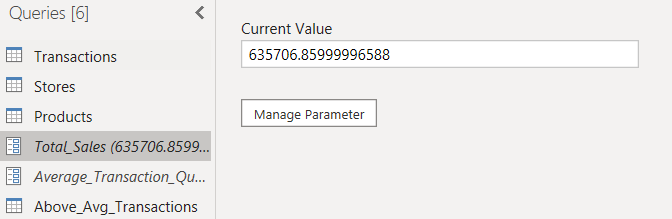
**Column High\_Quantity added to table Transactions:**

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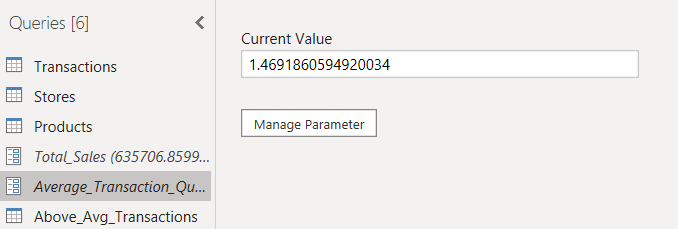
**3. Parameters:**

○ Calculate the given and store them as parameters:

i. Calculate **Total Sales:** Sum of Total Sales.

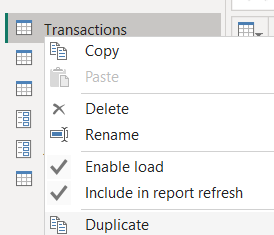


ii. Calculate **Average Transaction Quantity**: Average of transaction\_qty.



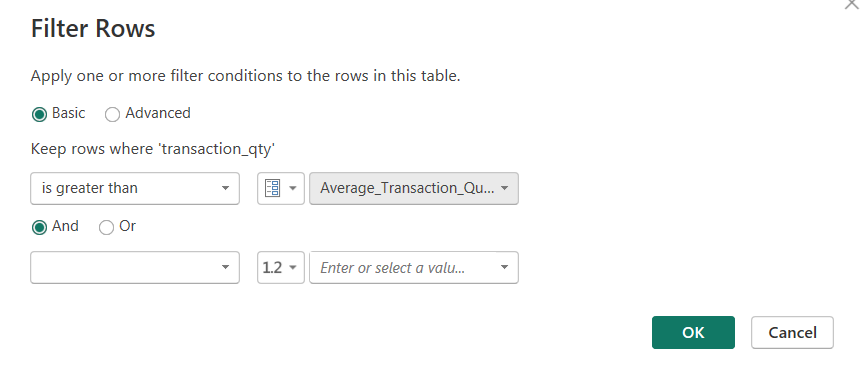
**4. Filter based on parameters:**

○ Create a duplicate of the Transactions Table.

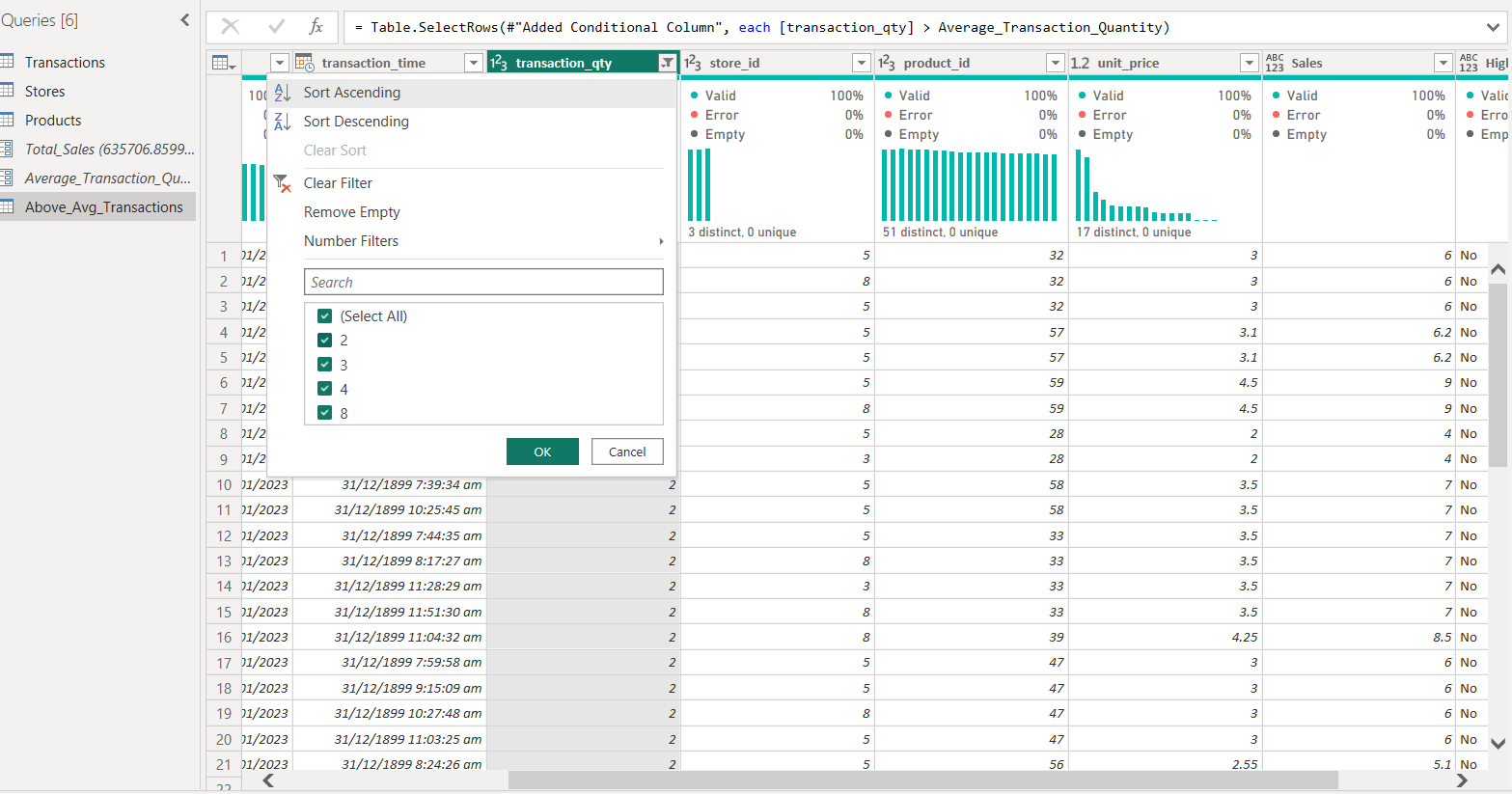


○ Filter the transactions with a quantity greater than the parameter “Average transaction quantity”.

Filter the rows having above average transaction quantity:



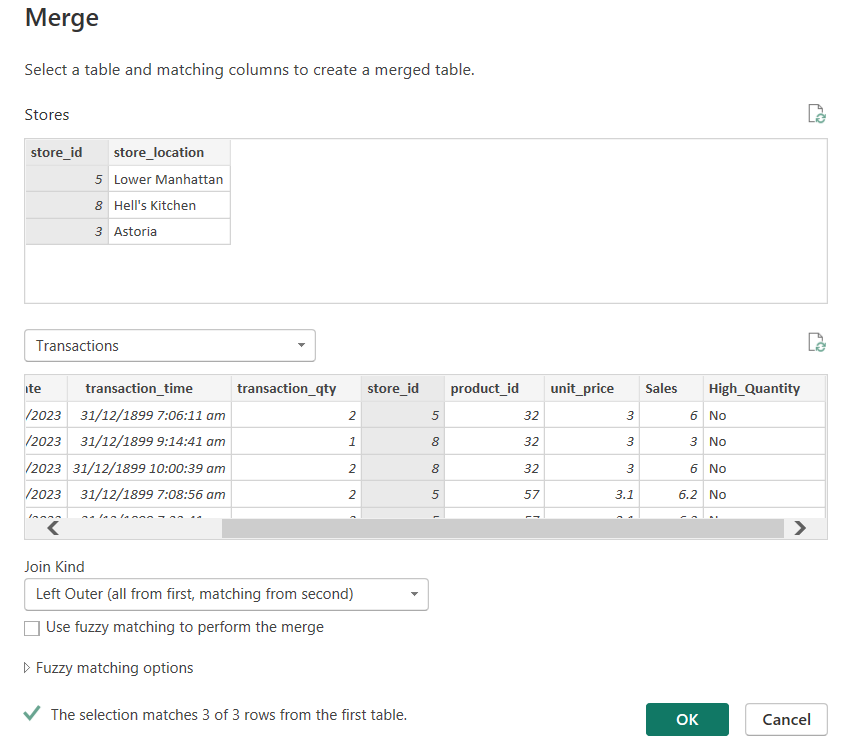
Above\_Avg\_Transactions:



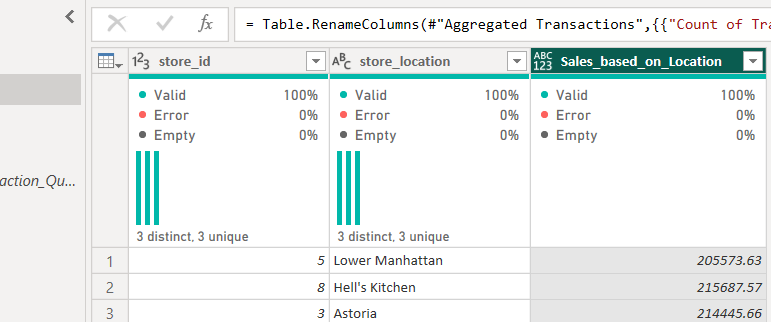
**5. Sales Based on Location:**

○ Merge Sales from “Transaction Table” to “Store” and show the aggregated value “Sum of Sales”.

**Merging the Sales column from Transaction Table to Store:**



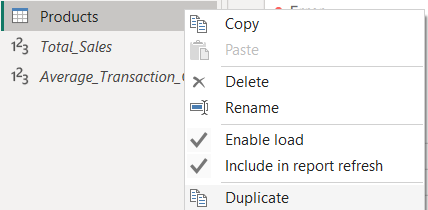
**Sales\_based\_on\_Location:**



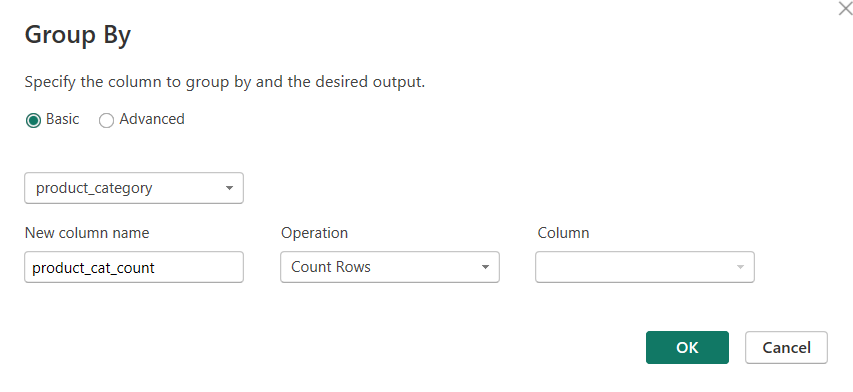
**6. Count of Products in each product Category:**

○ Create a duplicate of “Products”. Apply **GroupBY** to count products in each category. Rename this table as “Product summary”

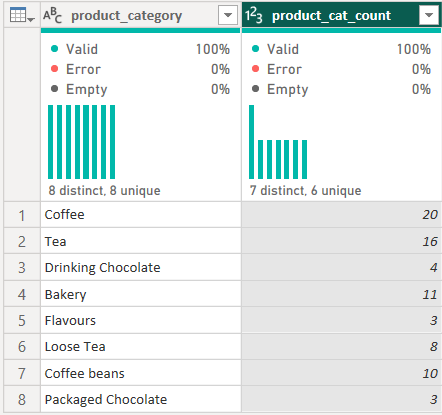
**Duplicate the Products Table:**

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**Apply GroupBY to count products in each category**

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**Product count of each product category:**

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**Rename this table as “Product summary”**

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