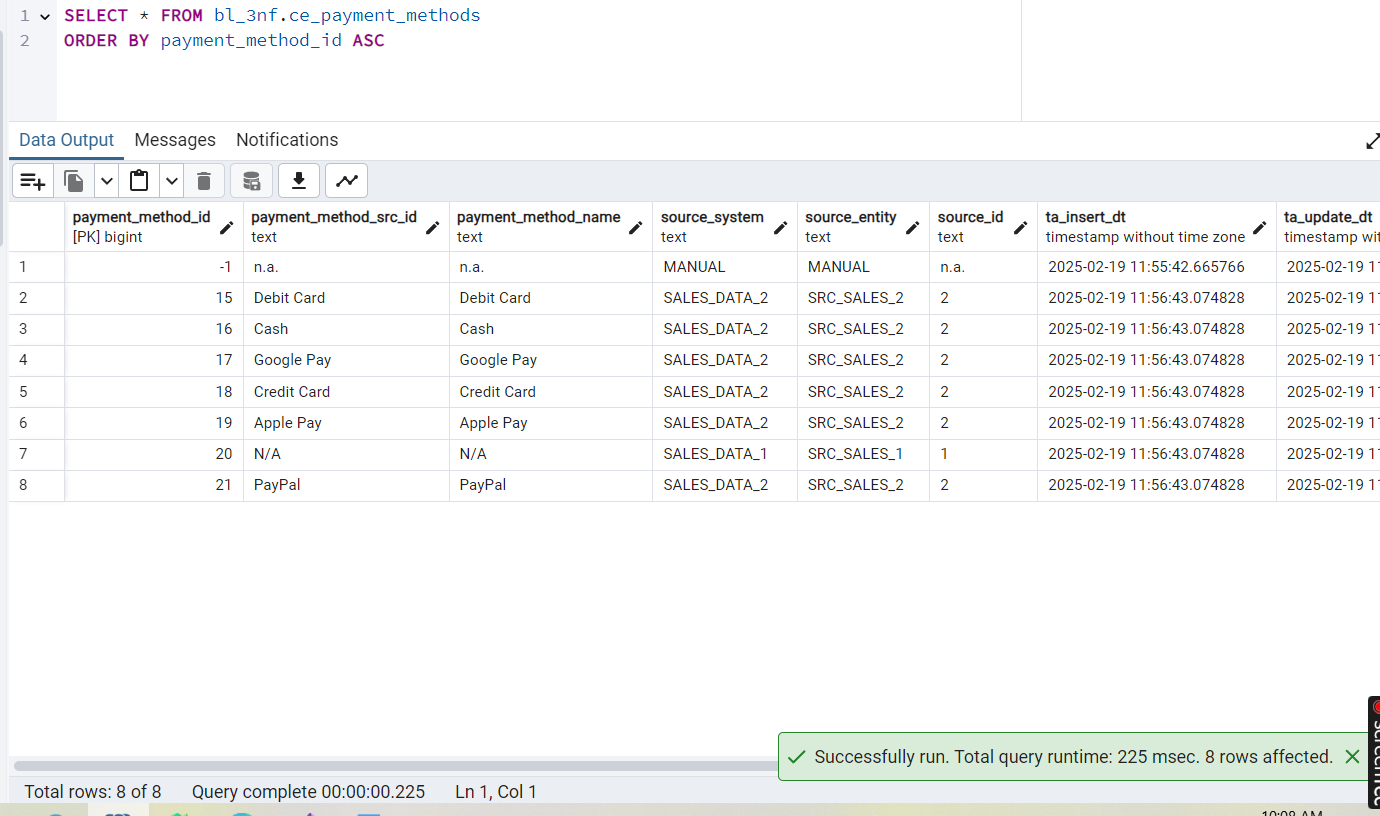
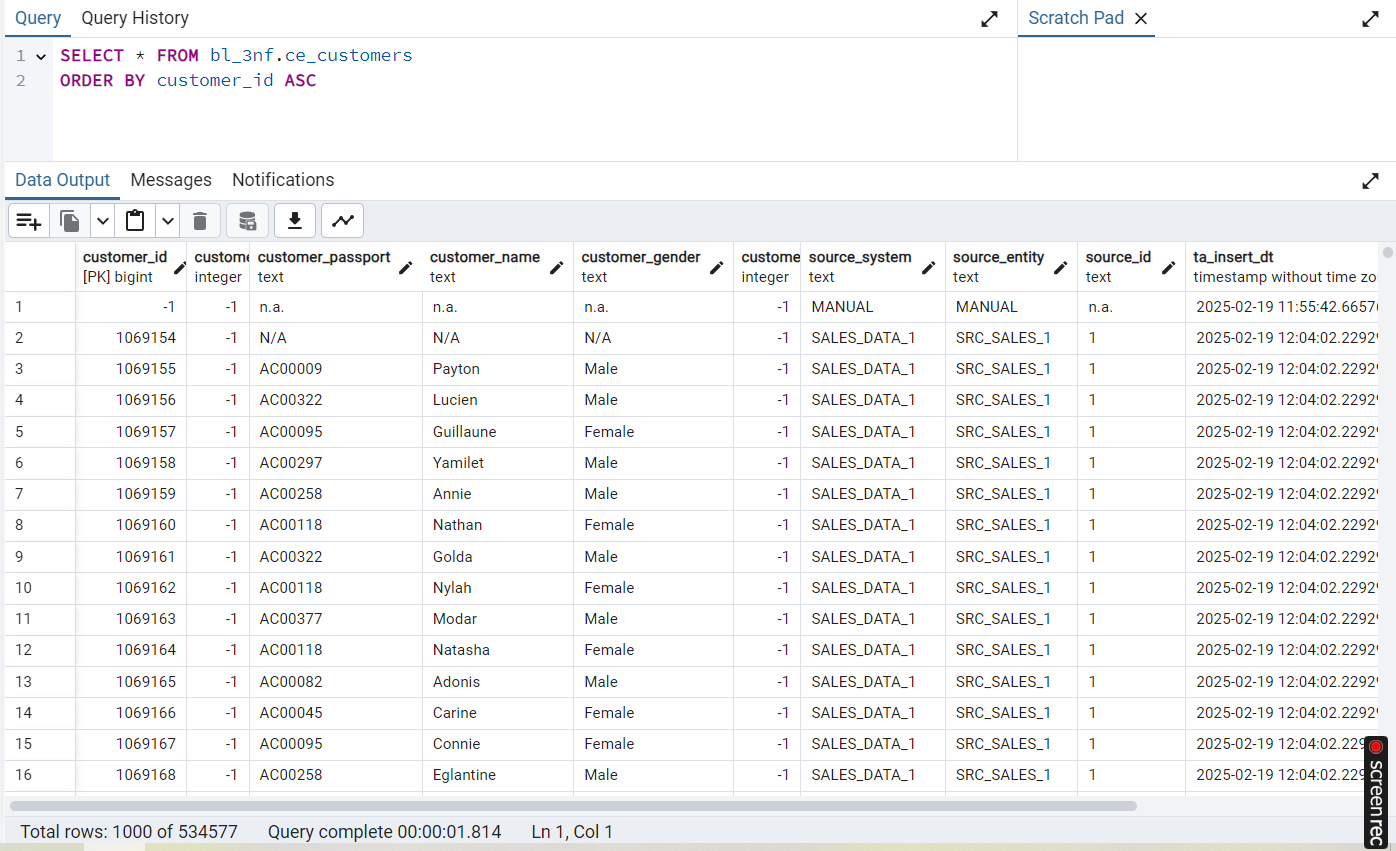
Task 1:

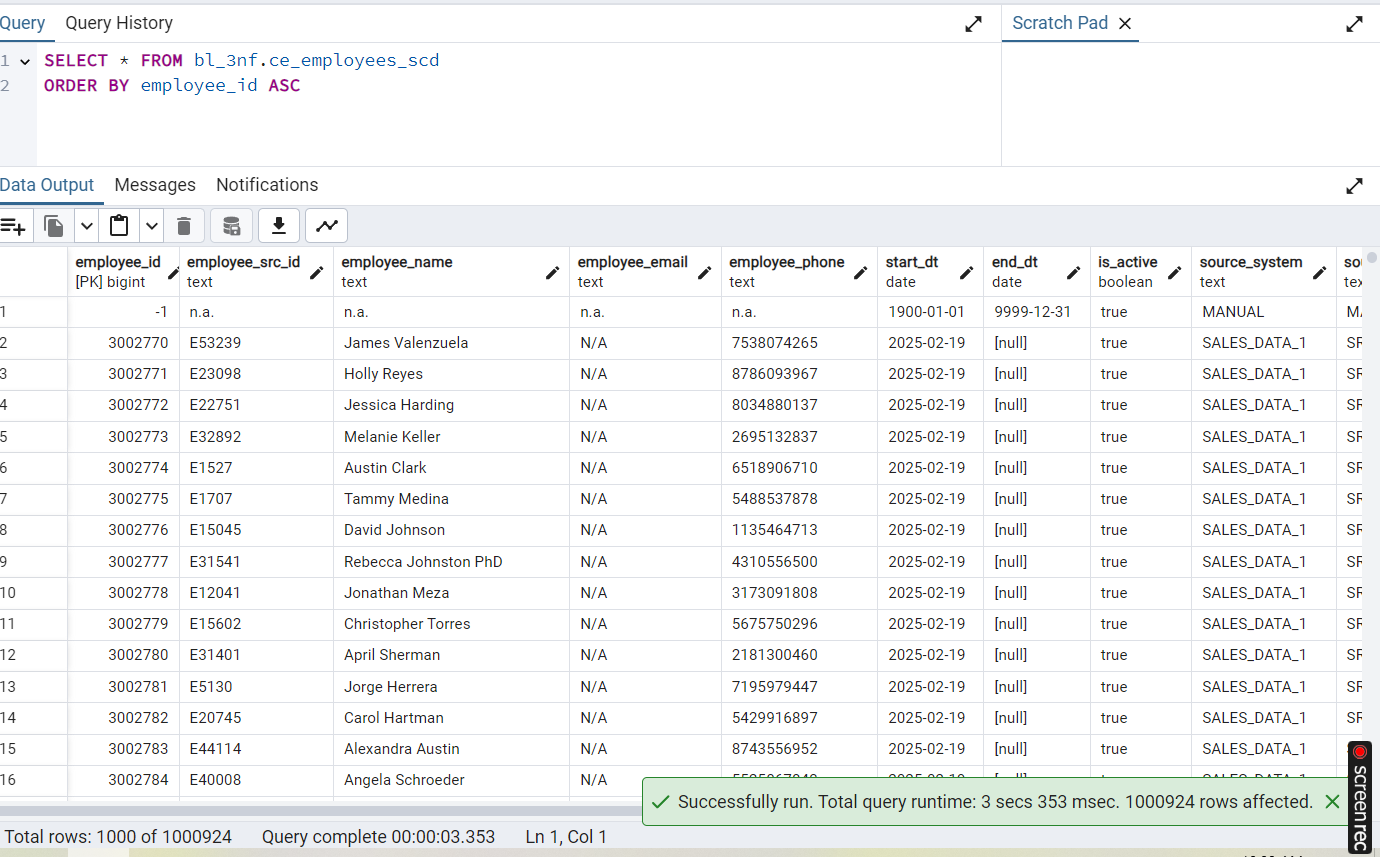
The provided **PostgreSQL PL/pgSQL** procedures load data from two sales data sources (sales\_data\_1 and sales\_data\_2) into a **third normal form (3NF) database (BL\_3NF)**. Each procedure follows a similar process:

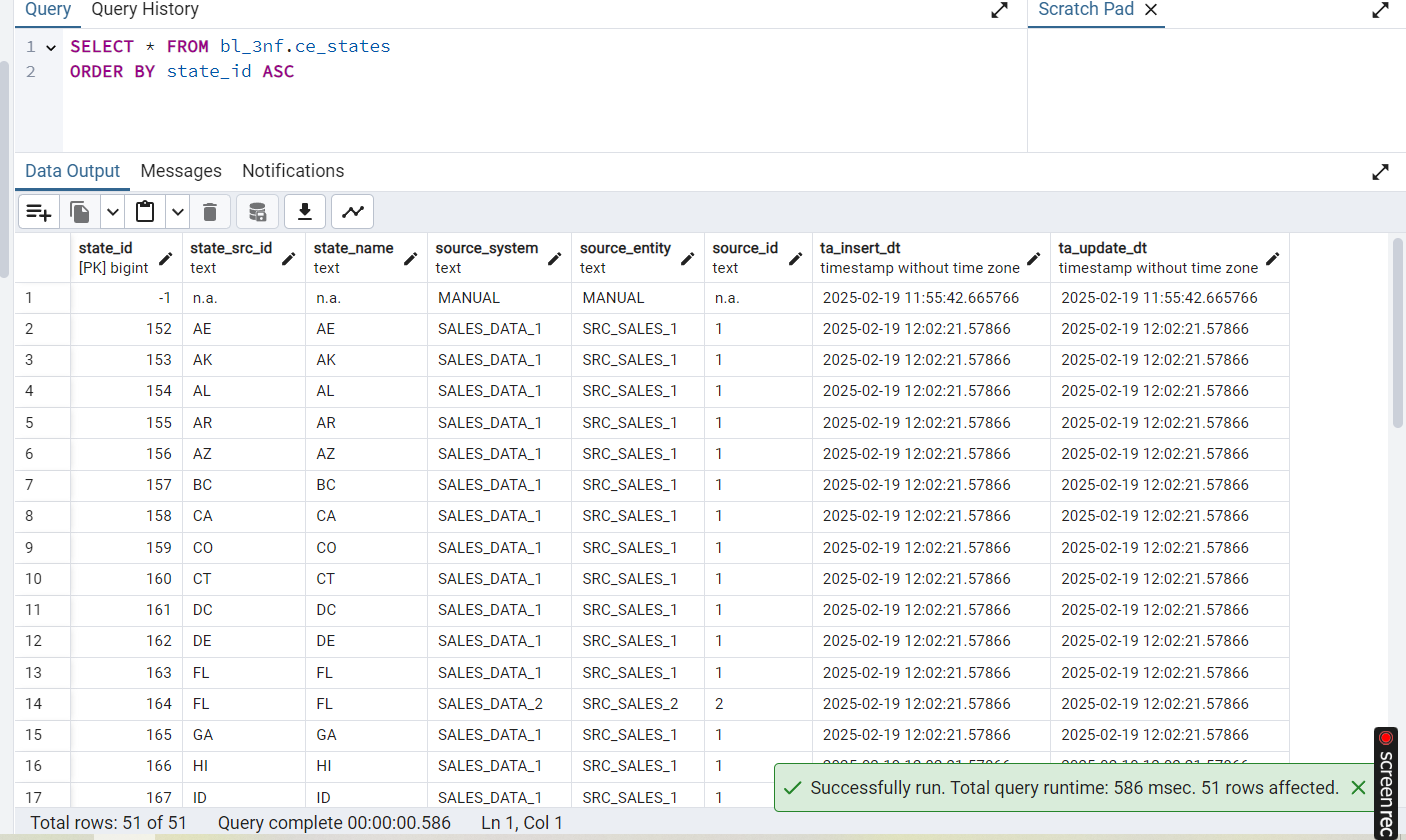
* Each procedure follows these steps:
* **DECLARE** a record (rec) to hold rows from the SELECT query.
* **Iterate (FOR rec IN ... LOOP)** through the data fetched using a SELECT query.
* **Check for duplicates** using a WHERE NOT EXISTS clause.
* **Transform and Standardize Data** before inserting into the target table.
* **Insert Data** into the appropriate target table.
* **Handle Errors** using EXCEPTION to log failed insertions.
* **Commit Changes** at the end of the loop

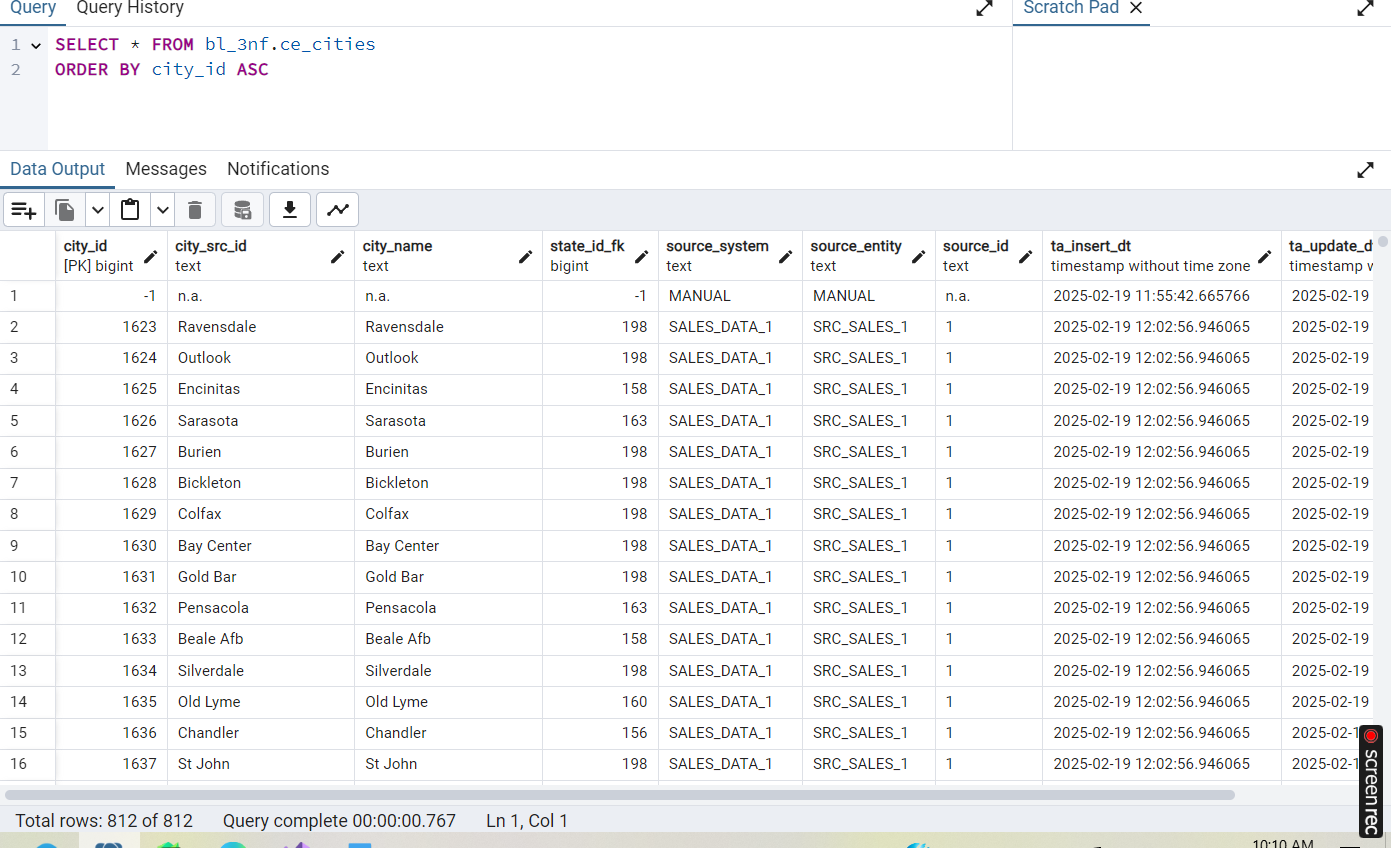
These procedures implement **incremental data loading** by ensuring **only new and valid records** are inserted into the BL\_3NF schema. They use COALESCE(), CASE statements, and WHERE NOT EXISTS to handle missing data and prevent duplicates. The design ensures data integrity, consistency, and maintainability.

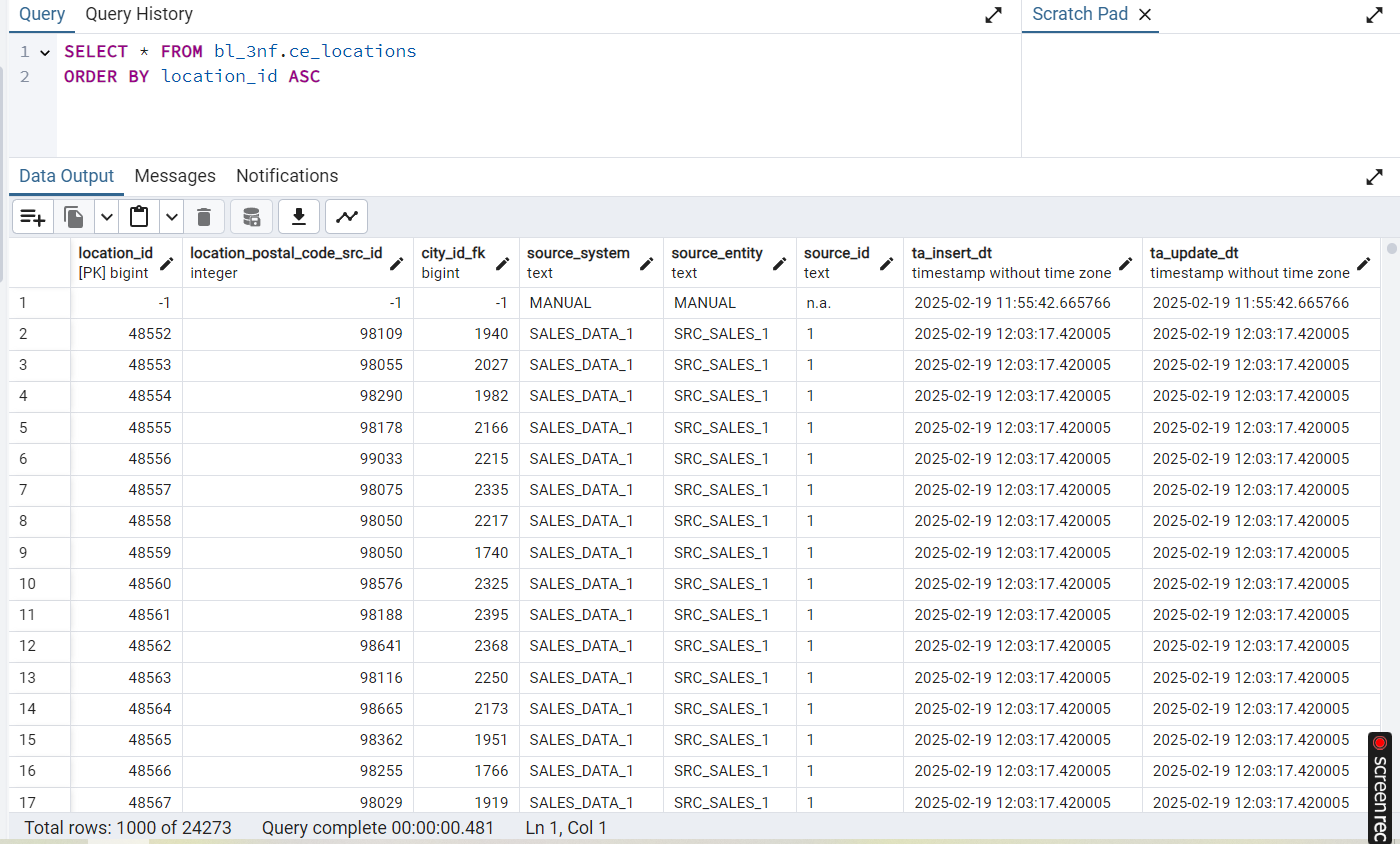


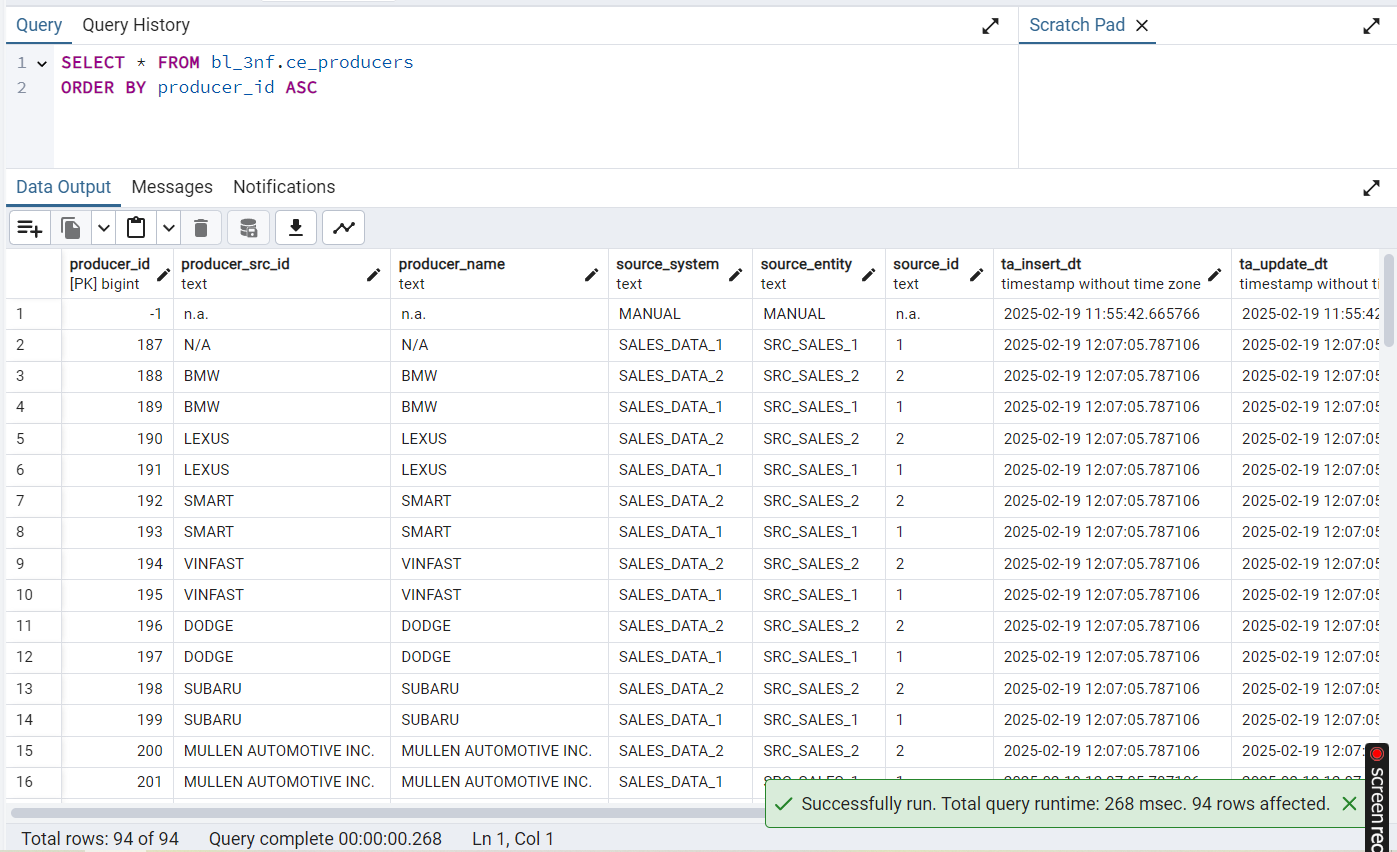


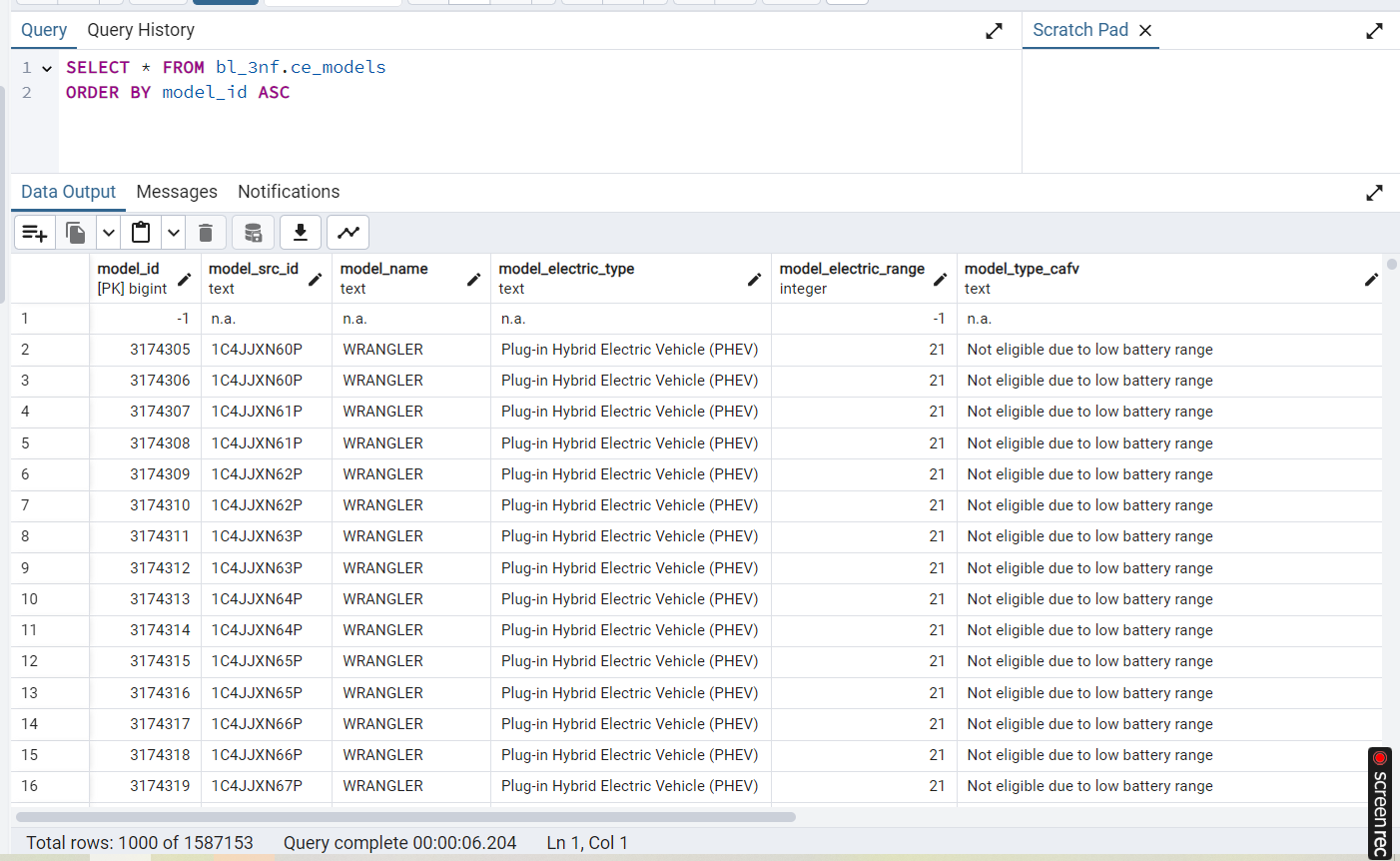


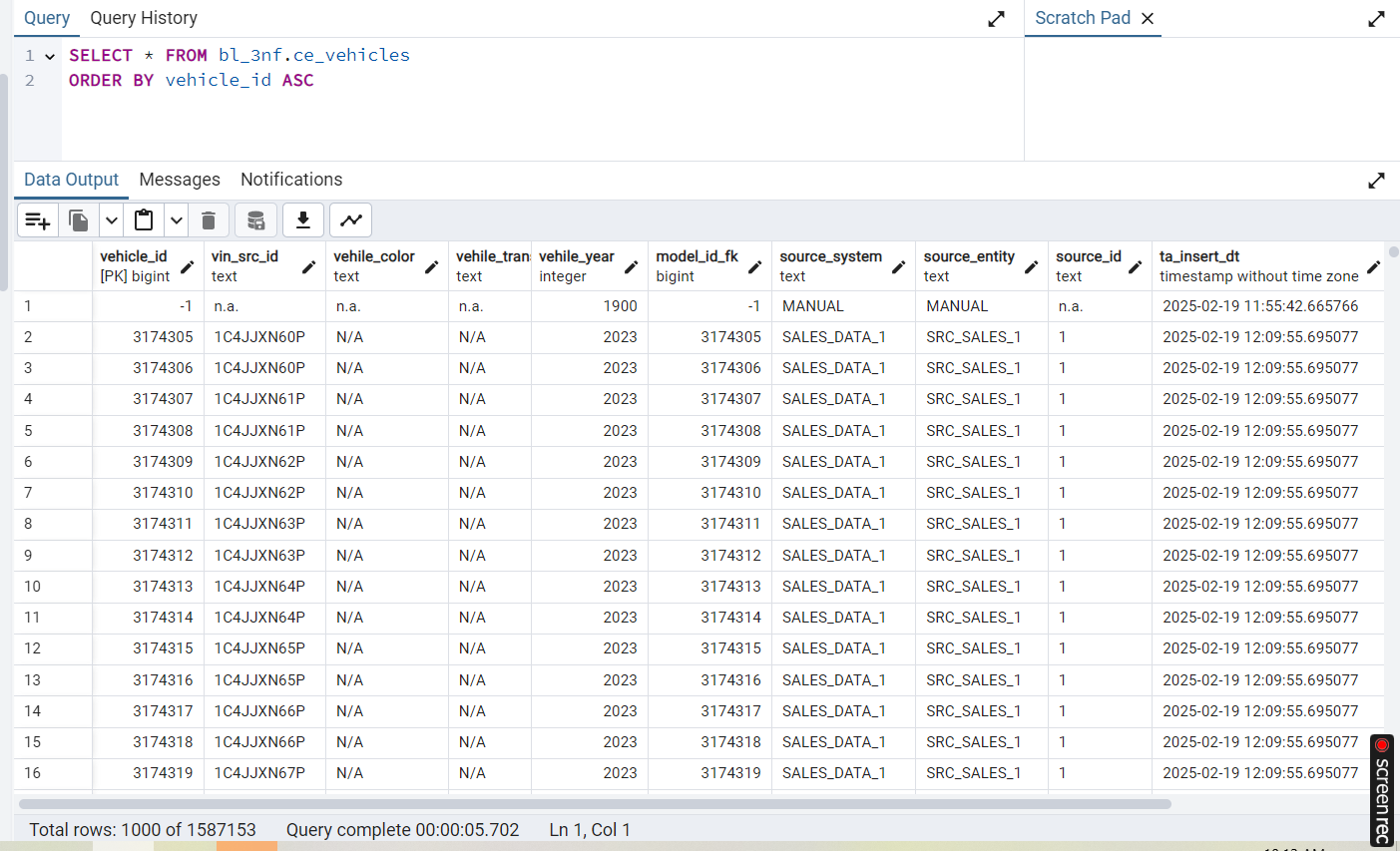


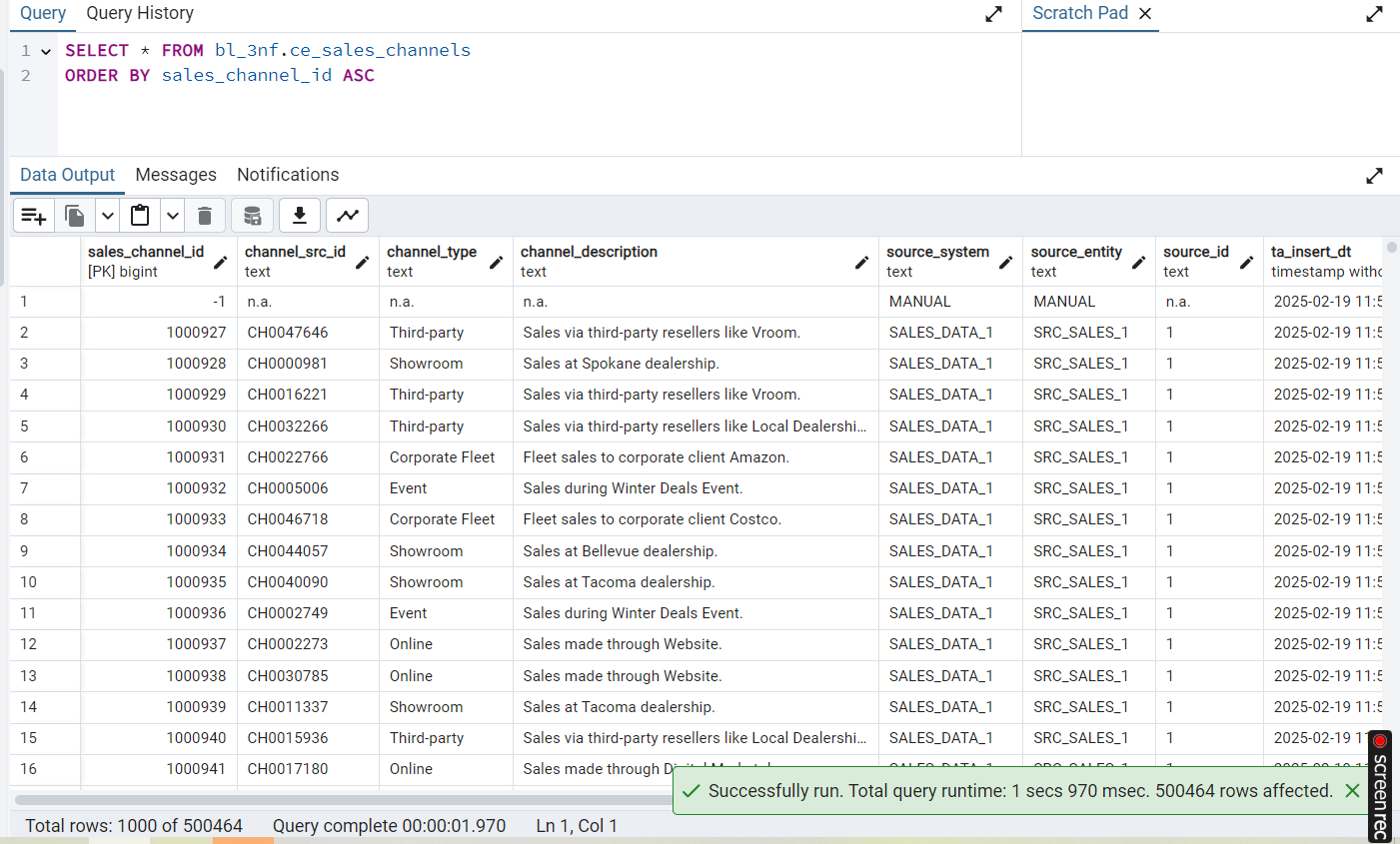


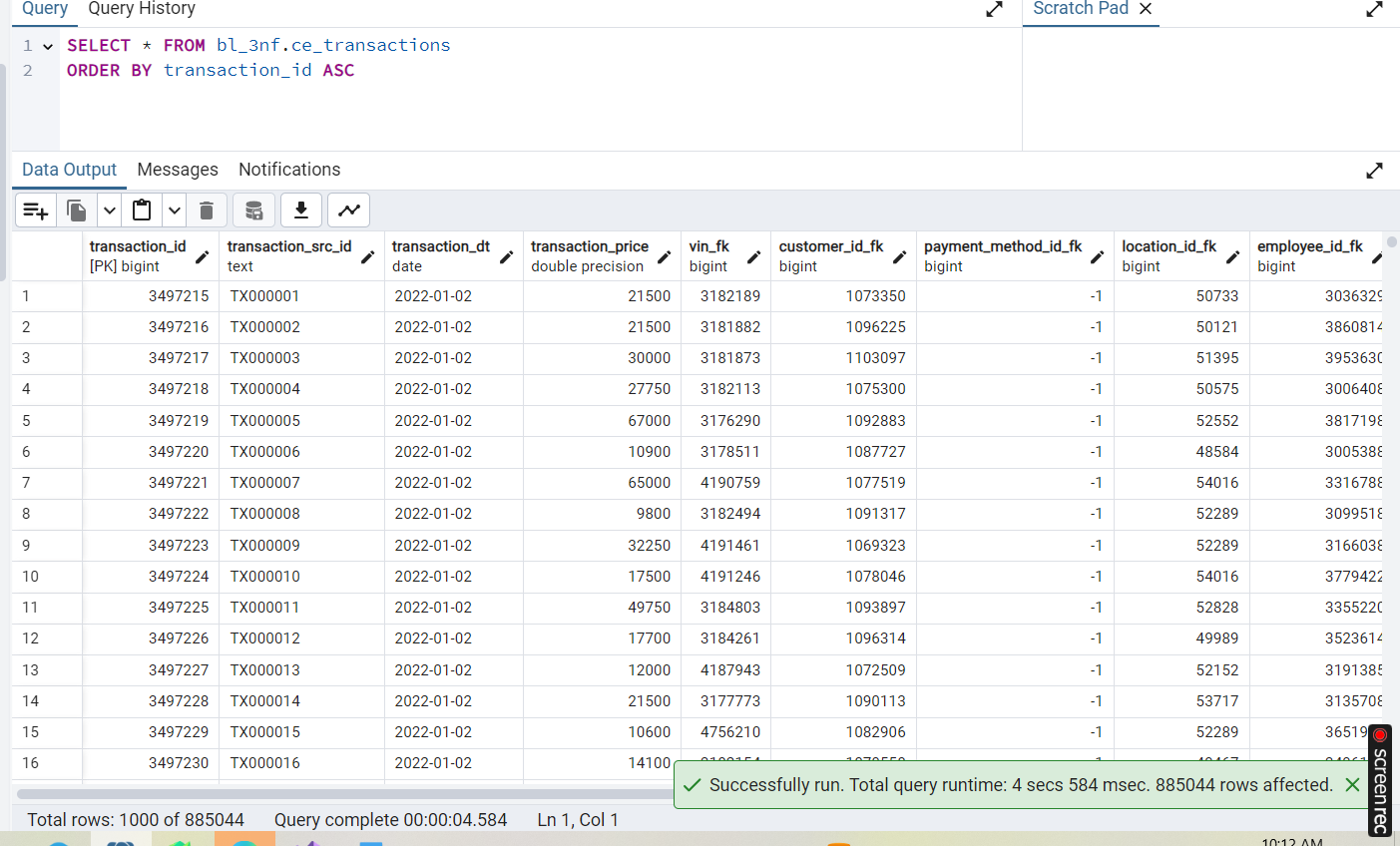












Task 2:

with sales\_data\_1

* 1st attempt: 0 because I alredy have data in ce\_transactions, that's why perform delete.
* 2nd attempt: 500461 rows from sales\_data\_1
* 3rd attempt: rows\_affected value is 0, which is correct

now the same with sales\_data\_2

* 1st attemt: 384583 new rows to transactions\_ce
* 2nd attempt: 0 rows, which is correct

