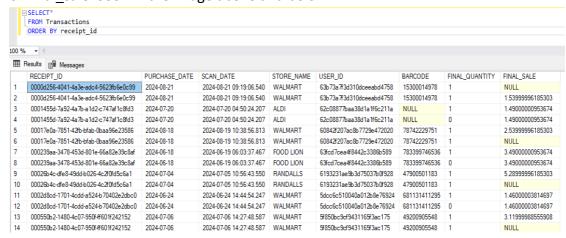
## **Data Quality Issues**

## Transactions

There are 12500 rows that have "zero" as a value in the final\_quantity field (Example below). This should not be possible as the receipt\_ids field should be numeric and should be "0", not "zero". This change was made to allow for proper ingestion into SQL database and queries are reflective of this change being made.

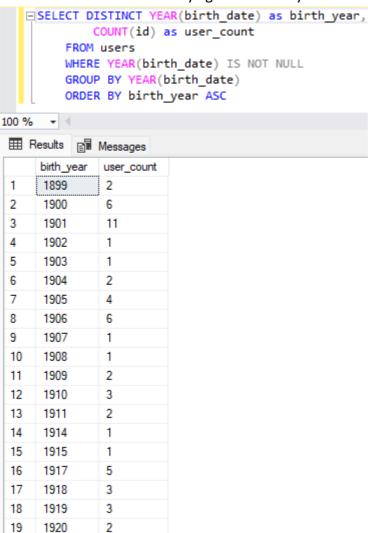
RECEIPT ID	FINΔI	QUANTITY -	Total
□ 0000d256-4041-4a3e-adc4-5623fb6e0c99	T TOTAL	1	
■ 0001455d-7a92-4a7b-a1d2-c747af1c8fd3			1.49
0001455d-7a92-4a7b-a1d2-c747af1c8fd3	zero		1.49
■ 00017e0a-7851-42fb-bfab-0baa96e23586		1	2.54
■ 000239aa-3478-453d-801e-66a82e39c8af		1	3.49
000239aa-3478-453d-801e-66a82e39c8af	zero		3.49
■ 00026b4c-dfe8-49dd-b026-4c2f0fd5c6a1		1	5.29
■ 0002d8cd-1701-4cdd-a524-b70402e2dbc0		1	1.46
0002d8cd-1701-4cdd-a524-b70402e2dbc0	zero		1.46
■ 000550b2-1480-4c07-950f-ff601f242152		1	3.12
■ 00096c49-8b04-42f9-88ce-941c5e06c4a7		1	3.59
00096c49-8b04-42f9-88ce-941c5e06c4a7	zero		3.59
■000e1d35-15e5-46c6-b6b3-33653ed3d27e		1	0.98
■ 0010d87d-1ad2-4e5e-9a25-cec736919d15		1	2.29
0010d87d-1ad2-4e5e-9a25-cec736919d15	zero		2.29
■ 00177c13-f50e-4fbe-839e-47dbe20a39f0		1	2.86
■ 0019ec79-cbb3-41ed-b84c-cd74d04553f8		1	10.99
0019ec79-cbb3-41ed-b84c-cd74d04553f8	zero		10.99
■ 001e5563-cdec-4d46-8493-0d118a55b14c		1	. 2
■ 001f2f3f-1746-4217-a98f-73c63c63bae2		1	0.97
001f2f3f-1746-4217-a98f-73c63c63bae2	zero		0.97

All receipts have at least 2 entries each. Both entries appear to have the same Receipt\_ID,
 Purchase\_Date, Scan\_Date, Store\_Name, User\_ID, and Barcode but differ in the final\_quantity or final\_sale. Seen in the image above and below.



## Users

 There are some users that have birth years that, while valid, are highly unlikely given that they take place 100+ years before the founding of Fetch. These are likely false birthdays and would need to be excluded from any age-based analyses



- There were 3,675 users with no birth\_date, 30,508 users with no language, 4,812 users with no state, and 5,892 user with no gender listed. While these are not necessarily issues, they may limit the groupings and audiences that can be developed off of non-engagement characteristics
- Additionally, only 91 of the 17,694 user\_ids in the Transactions table appear in the user table.
  Once again, this is not an issue that will cause a breakage but does limit the user-level analysis that can be done on the transaction data and implies that the User table is incomplete

## Products

0

- 4,025 rows are missing a barcode, leaving no was to tied them back to transactions and include them in analysis
- 226,472 rows have no brand or manufacturer and cannot be identified
- 2 Listerine rows are missing their manufacturer. As there are many others that feature a manufacturer, this is an extremely simple fix even if needed to be done manually