

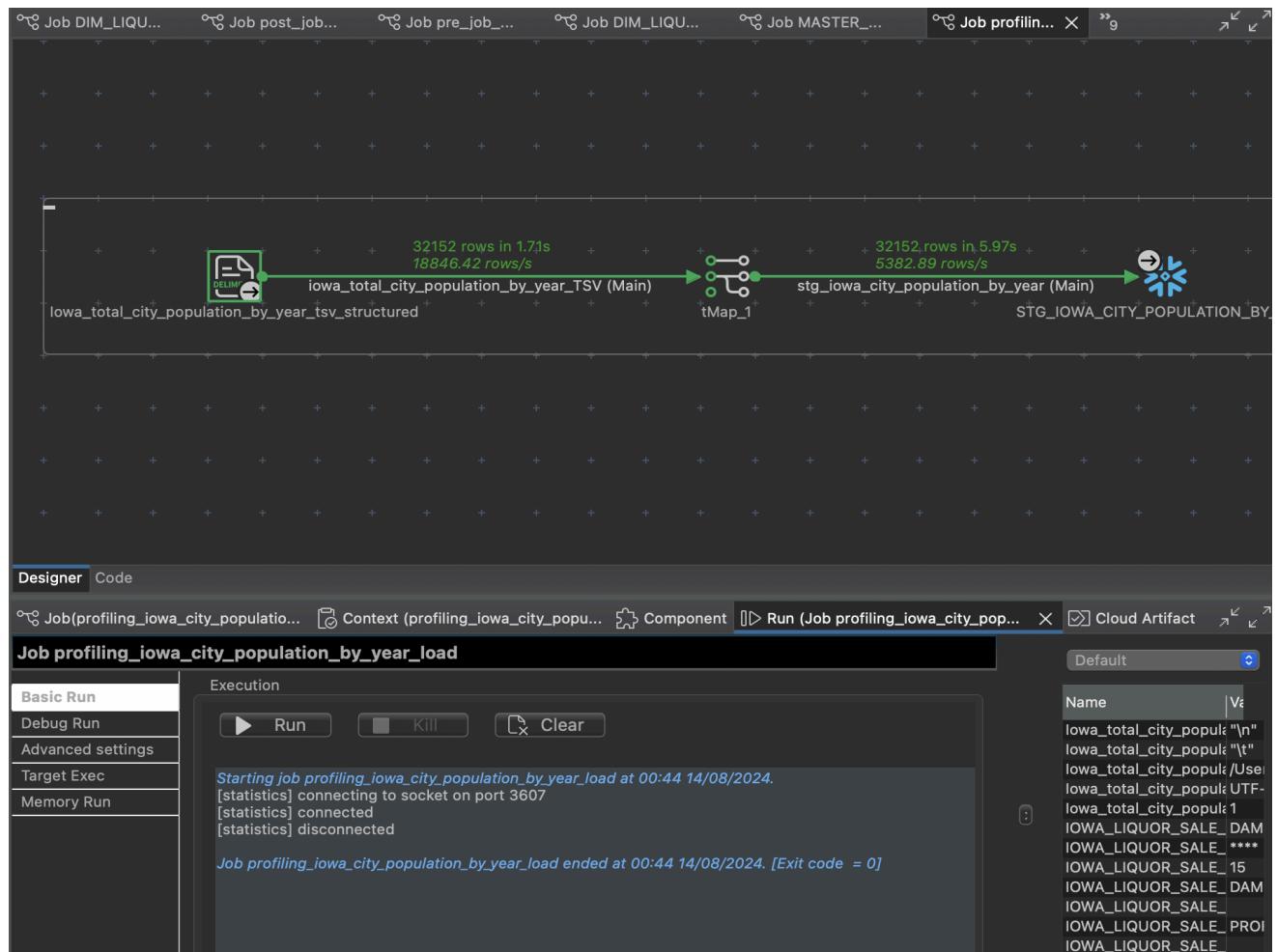
# **FINAL PROJECT - DADABI IOWA LIQUOR SALES**

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## Part 1 - (A) Loading data into Profiling:

Loading data into the Profiling schema we have implemented the PROFILING in Snowflake:

### STG\_IOWA\_CITY\_POPULATION\_BY\_YEAR:

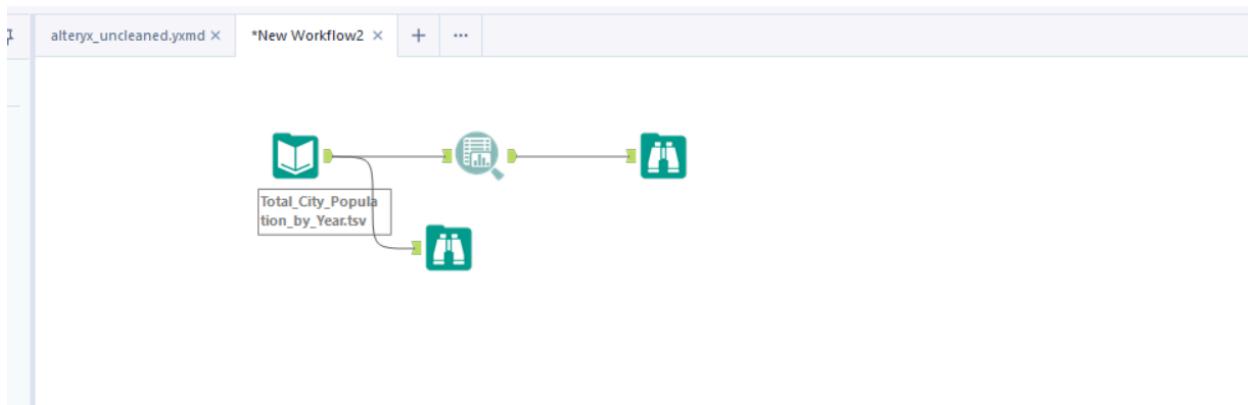


### Count in Snowflake:

The screenshot shows the Snowflake SQL editor. The code entered is:  
select count(\*) from profiling.stg\_iowa\_city\_population\_by\_year;

The results section shows the output:  
COUNT(\*)  
32152

## ALTERYX WORKFLOW:



The screenshot shows the Alteryx Workflow Designer interface. At the top, there are two tabs: "alteryx\_uncleaned.ymd" and "\*New Workflow2". Below the tabs, a workflow diagram is displayed. It starts with a green "Input" tool icon, which is connected to a blue "Total\_City\_Population\_by\_Yeartsv" data source icon. From the data source, the flow goes to a green "Search" tool icon, and then to a green "Browse" tool icon. A second green "Browse" tool icon is positioned below the first one, receiving data from the search tool. The entire workflow is contained within a light gray frame.

Results - Workflow - Messages

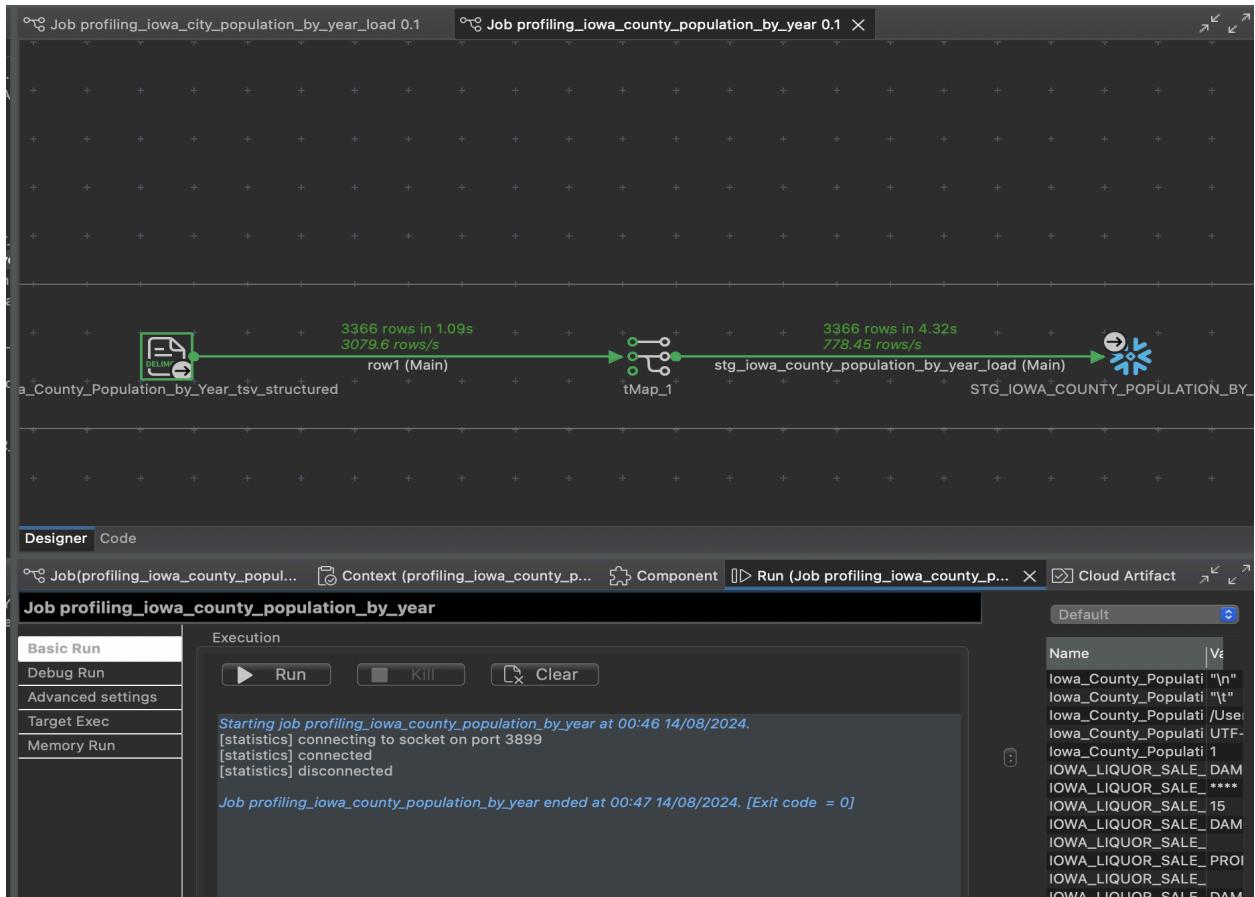
All	0 Errors	0 Conv Errors	0 Warnings	4 Info	3 Files
①	Designer x64	Started running at 08/14/2024 10:33:19			Last
①	Designer x64	The Designer x64 reported: Running at a Low Priority.			
①	Designer x64	The Designer x64 reported: Allocating requested memory would be more than available physical memory. Reverting to 484.6 MB of memory.			
①	Designer x64	The Designer x64 reported: This is AMP Engine; running 6 worker threads; memory limit 484.6 MB.			
①	Input Data (4)	Autodetected Code Page: UTF-8			
①	Input Data (4)	32152 records were read from "D:\NEU\DATA_BI\Data-IowaLiquorSales\Dataset\Total_City_Population_by_Yeartsv"			
①	Browse (3)	32,152 records			
①	Browse (1)	105 records			
①	Designer x64	Finished running in 0.9 seconds using AMP engine			

## PROFILING DETAILS:

Number of records -> 32152

Column Names	Datatype	Nulls	Max length	Cleaning steps
FIPS	INT	0	7	
CITY	VARCHAR	0	20	Upper case and Trim
YEAR	DATE	0	13	Value given is a date --> should extract year from this
POPULATION	INT	1	6	
PRIMARY POINT	VARCHAR	176	30	Primary Point consists of string combined with Latitude and Longitude

## STG\_IOWA COUNTY\_POPULATION\_BY\_YEAR:

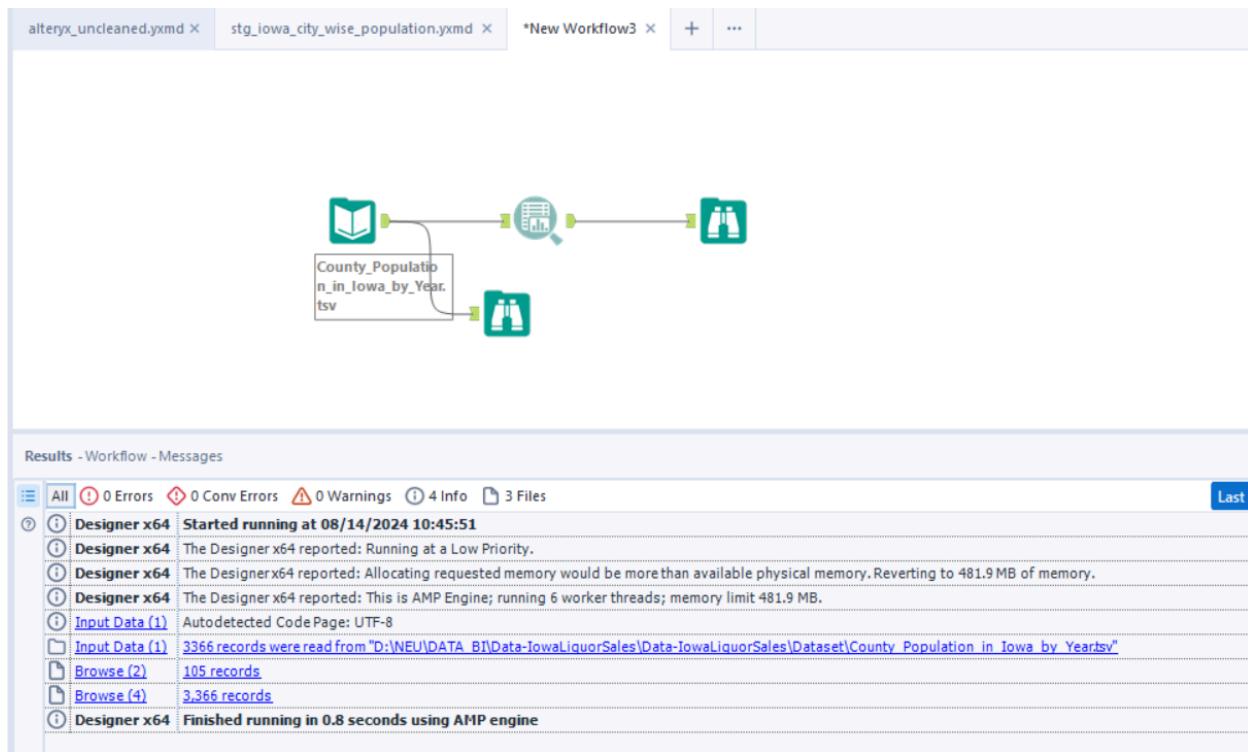


### Count in Snowflake:

A screenshot of a Snowflake query interface. The query entered is "select count(\*) from profiling.stg\_iowa\_county\_population\_by\_year;". The results pane shows one row with the column "COUNT(\*)" and value "3366".

COUNT(*)
3366

## ALTERYX WORKFLOW:

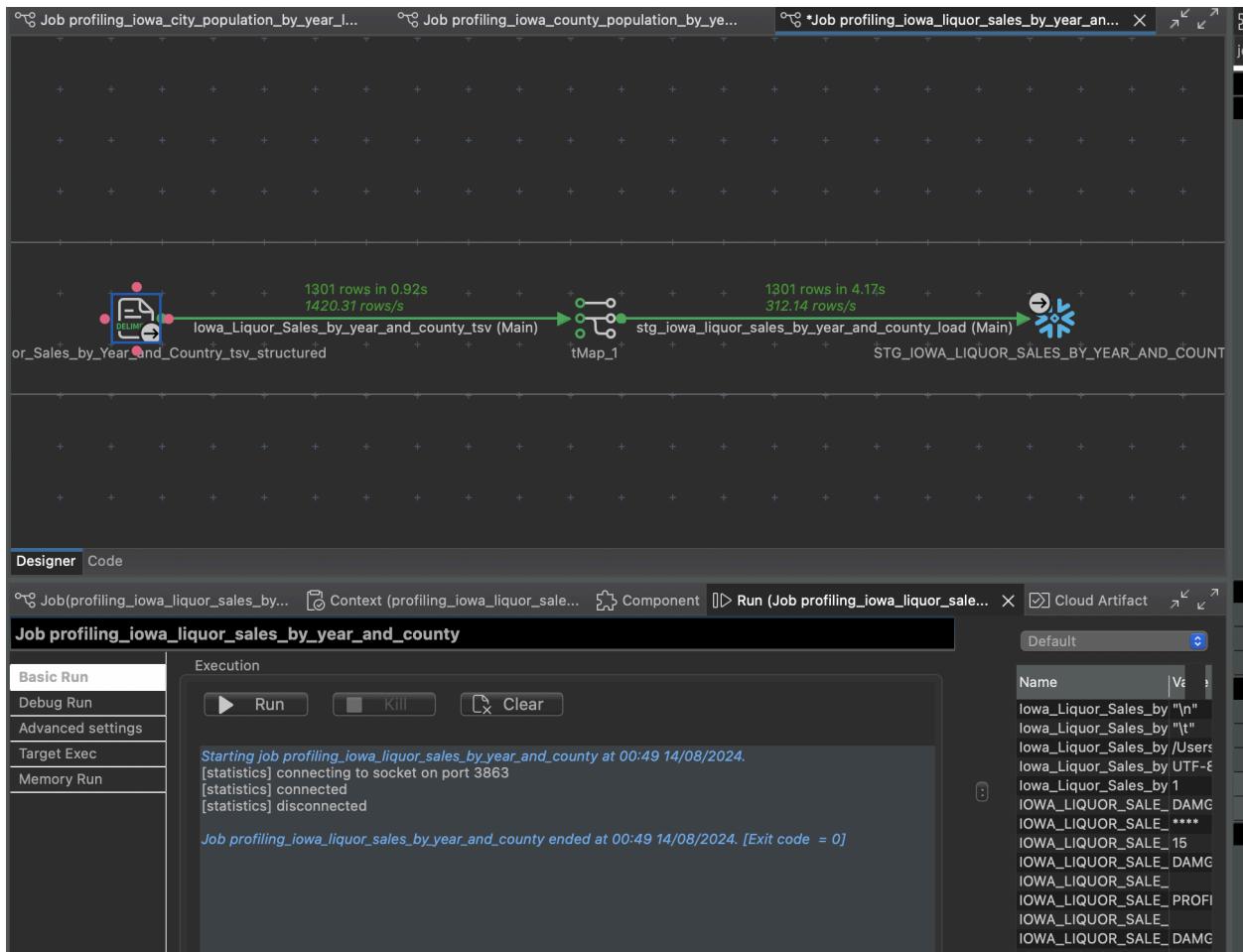


## PROFILING DETAILS:

Number of records: 3366

Column Names	Datatype	Nulls	Max length	Cleaning steps
FIPS	INTEGER	0	5	
County	VARCHAR	0	20	Upper Case and trim
Year	VARCHAR	0	13	Year value needs to be extracted to date
Population	INTEGER	0	6	
Primary Point	VARCHAR	0	30	Primary Point consists of string combined with Latitude and Longitude

## STG LIQUOR SALES BY YEAR AND COUNTY LOAD:



## COUNT IN SNOWFLAKE:

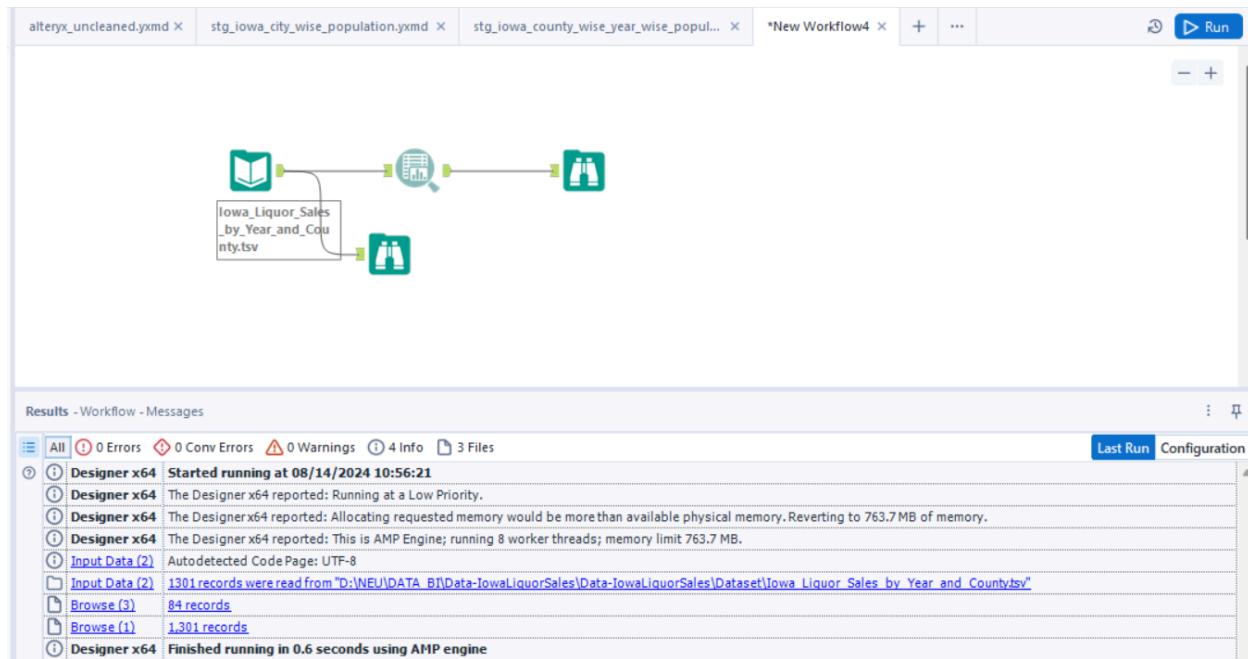
The screenshot shows the Snowflake results page for the query:

```
select count(*) from profiling.stg_iowa_liquor_sales_by_year_and_county;
```

The results table shows the following data:

COUNT(*)
1301

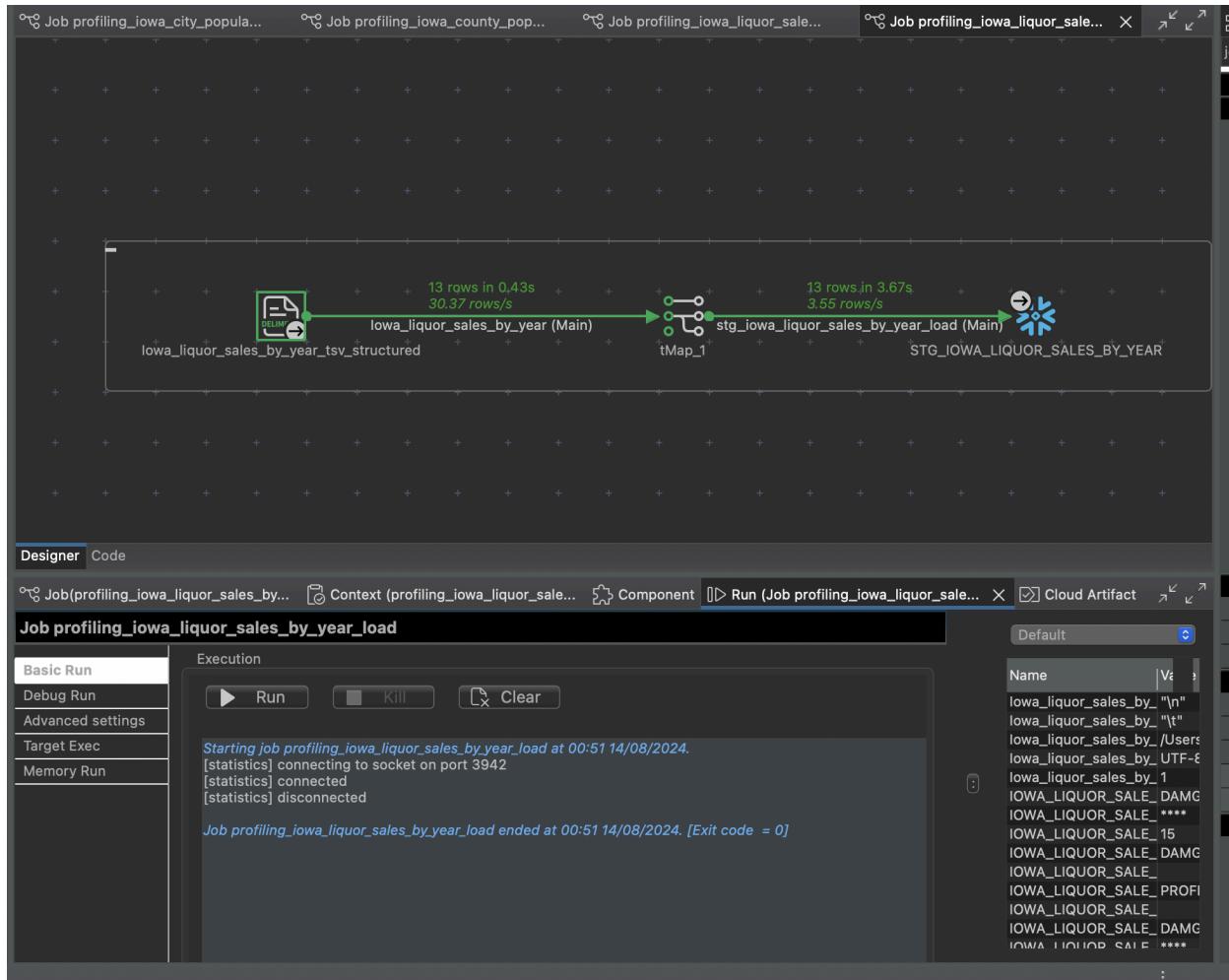
## ALTERYX WORKFLOW:



## Profiling Details:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Date	INT	0	4	Column name should be year
County	VARCHAR	13	13	
Sale (Dollars)	VARCHAR	0	12	Data type should be converted into float
Volume Sold (Gallons)	VARCHAR	0	10	Data type should be converted into float

## STG\_IOWA\_LIQUOR\_SALES\_BY\_YEAR:



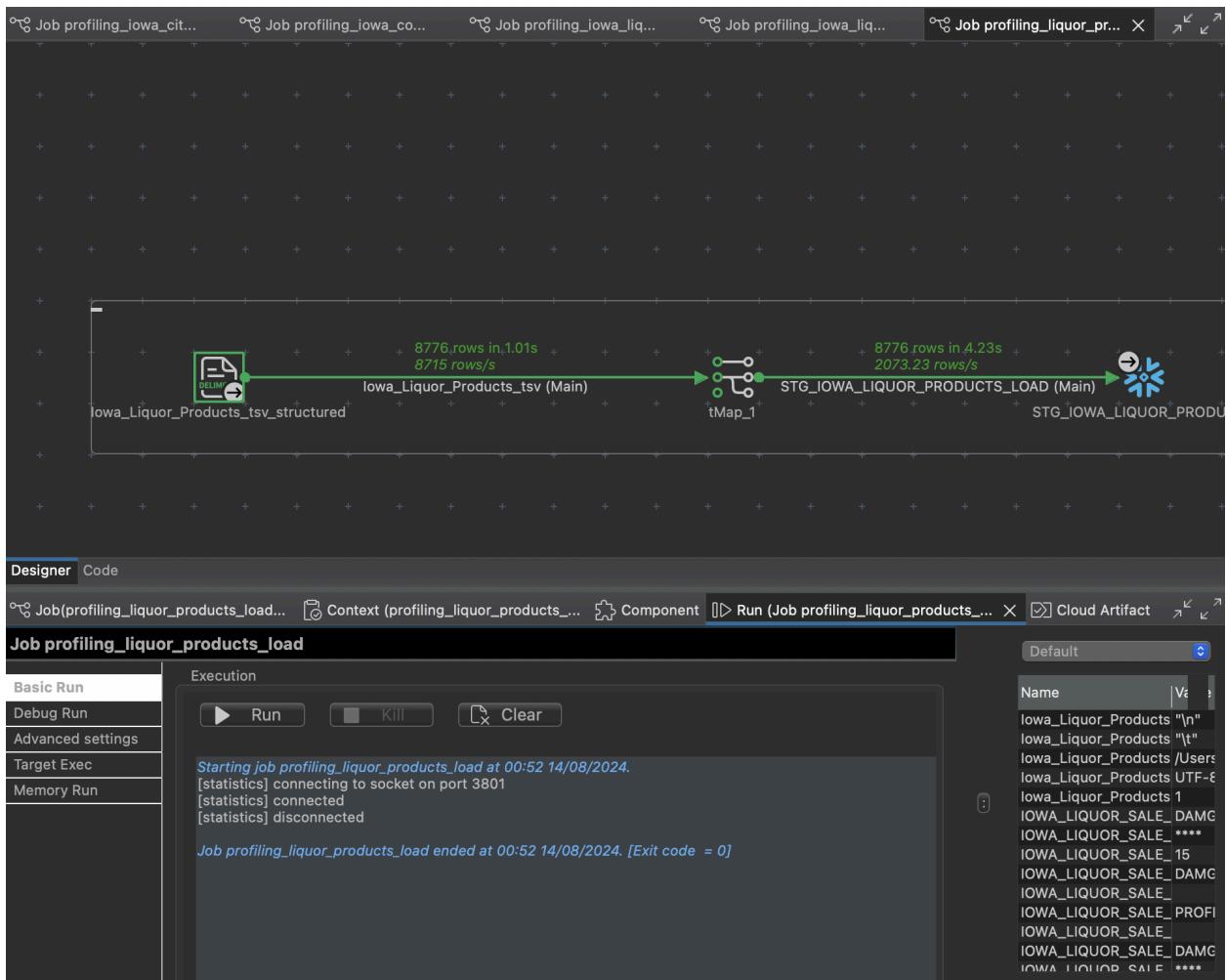
## COUNT IN SNOWFLAKE:

The screenshot shows the Snowflake results page. The query executed is:

```
select count(*) from profiling.stg_iowa_liquor_sales_by_year;
```

The results table shows one row with the column **COUNT(\*)** containing the value **13**.

## STG\_IOWA\_LIQUOR\_PRODUCTS\_LOAD:



## COUNT IN SNOWFLAKE:

The screenshot shows the Snowflake results page with the following query:

```
select count(*) from profiling.stg_iowa_liquor_products;
```

The results table shows:

COUNT(*)
8776

## ALTERYX WORKFLOW:

nd x stg\_iowa\_city\_wise\_population.yxmd x stg\_iowa\_county\_wise\_year\_wise\_popul... x stg\_iowa\_sales\_by\_county\_and\_yea

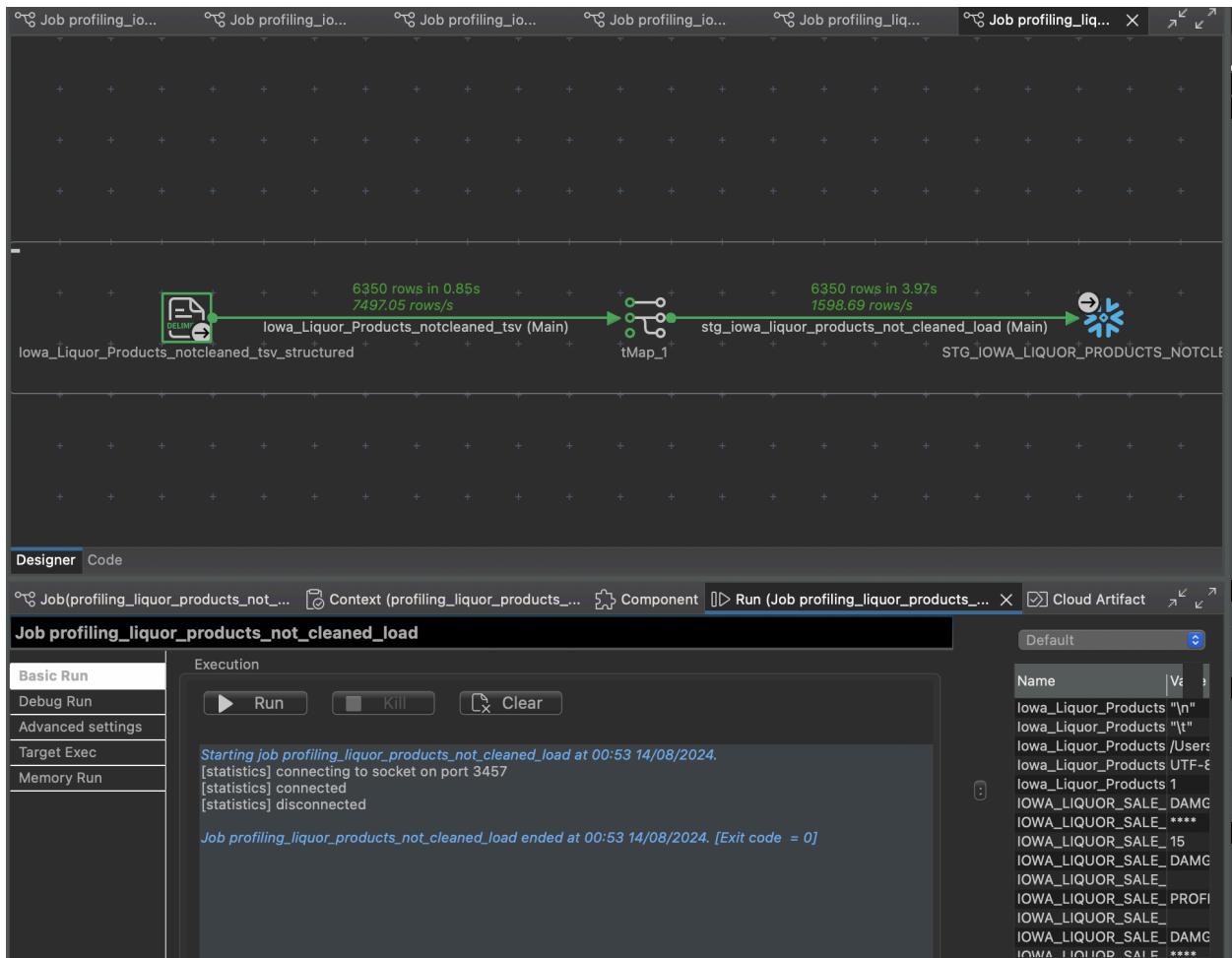


Results - Workflow - Messages	
	<span>All</span> <span>0 Errors</span> <span>0 Conv Errors</span> <span>0 Warnings</span> <span>4 Info</span> <span>3 Files</span>
①	<b>Designer x64 Started running at 08/14/2024 11:08:20</b>
①	Designer x64 The Designer x64 reported: Running at a Low Priority.
①	Designer x64 The Designer x64 reported: Allocating requested memory would be more than available physical memory. Revertin
①	Designer x64 The Designer x64 reported: This is AMP Engine; running 8 worker threads; memory limit 843.0 MB.
①	<u>Input Data (2)</u> Autodetected Code Page: UTF-8
②	8776 records were read from "D:\NEU\DATA_BI\Dataset\Iowa_Liquor_Sales\Iowa_Liquor_Sales.csv"
③	<u>Browse (1)</u> 8,776 records
④	<u>Browse (3)</u> 357 records
①	<b>Designer x64 Finished running in 0.6 seconds using AMP engine</b>

## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Item Number	VARCHAR	0	7	Since there are 2 item numbers with x appended Upper and trim
Category Name	VARCHAR	0	36	
Item Description	VARCHAR	0	60	Has some special character inside it Upper and trim
Vendor	INT	0	3	
Vendor Name	VARCHAR	0	60	Has some special character inside it
Bottle Volume (ml)	FLOAT	0	4	
Pack	INT	0	3	
Inner Pack	INT	0	3	
Age	INT	0	3	
Proof	INT	0	3	
List Date	VARCHAR	0	10	Needs to converted into Date
UPC	INT	0	12	
SCC	VARCHAR	2901	14	
State Bottle Cost	FLOAT	0	8	Convert from string to float
State Case Cost	FLOAT	0	8	Convert from string to float
State Bottle Retail	FLOAT	0	8	Convert from string to float
Report Date	DATE	0	10	

## STG\_IOWA\_LIQUOR\_PRODUCTS\_NOTCLEANED:



## COUNT IN SNOWFLAKE:

```
select count(*) from profiling.stg_iowa_liquor_products_notcleaned;
```

results

Chart

COUNT(*)
6350

## ALTERYX WORKFLOW:

Results - Workflow - Messages

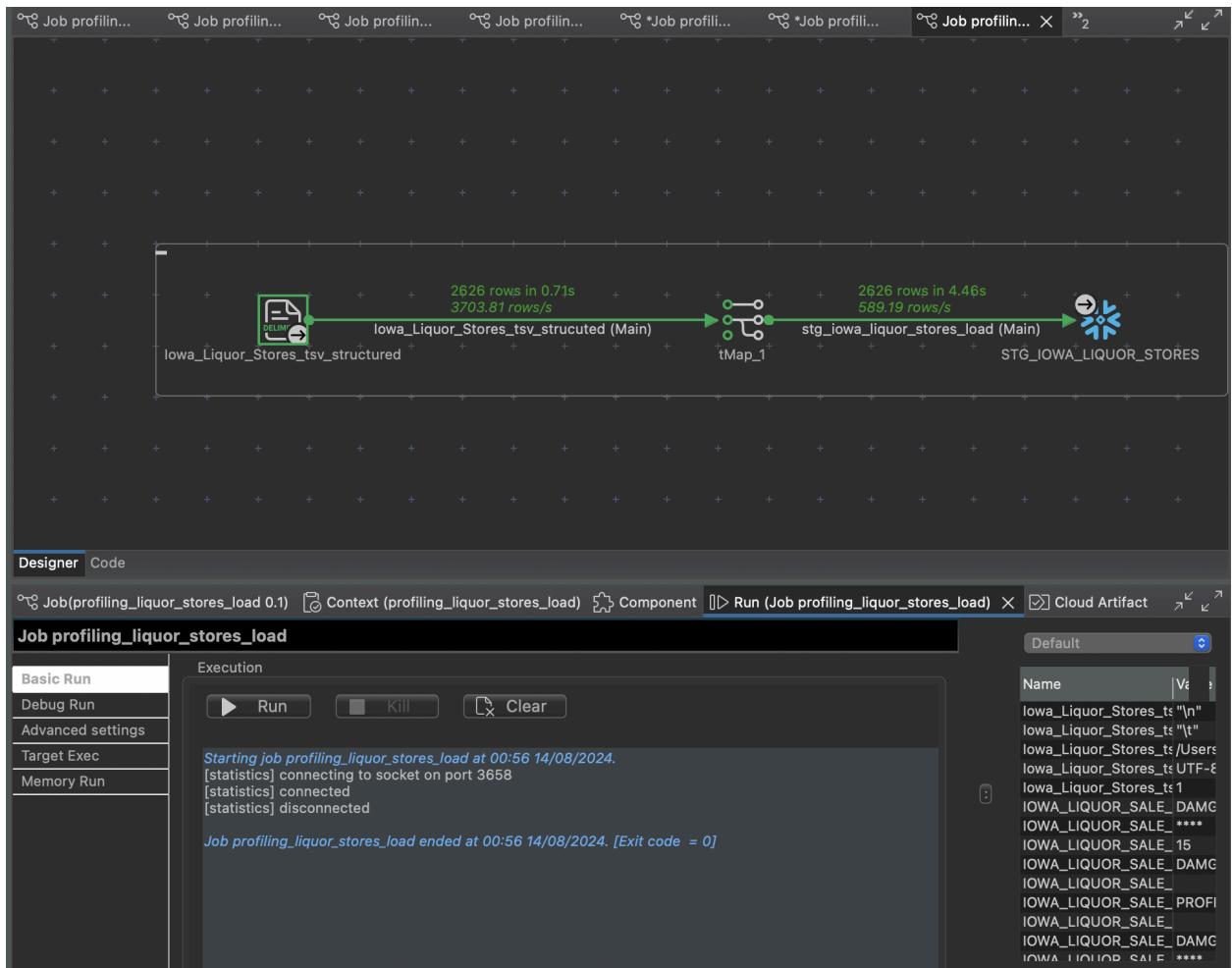
All 0 Errors 0 Conv Errors 0 Warnings 4 Info 3 Files Last Run Config

- Designer x64 Started running at 08/14/2024 11:19:52
- Designer x64 The Designer x64 reported: Running at a Low Priority.
- Designer x64 The Designer x64 reported: Allocating requested memory would be more than available physical memory. Reverting to 978.5 MB of memory.
- Designer x64 The Designer x64 reported: This is AMP Engine; running 8 worker threads; memory limit 978.5 MB.
- Input Data (2) Autodetected Code Page: UTF-8
- Input Data (2) 6350 records were read from "D:\NEU\DATA\_BI\Data-IowaLiquorSales\Data-IowaLiquorSales\Dataset\Iowa\_Liquor\_Products\_notCleaned.tsv"
- Browse (1) 6,350 records
- Browse (3) 357 records
- Designer x64 Finished running in 0.7 seconds using AMP engine

## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Item Number	VARCHAR	0	6	There are 2 item numbers with x appended
Category Name	VARCHAR	0	36	Upper and trim
Item Description	VARCHAR	0	60	Has some special character inside it
Vendor	INT	0	3	Upper and trim
Vendor Name	VARCHAR	0	60	Has some special character inside it
Bottle Volume (ml)	FLOAT	0	4	
Pack	INT	0	3	
Inner Pack	INT	0	3	
Age	INT	0	3	
Proof	INT	0	3	
List Date	VARCHAR	0	10	Needs to converted into Date
UPC	INT	7	12	
SCC	VARCHAR	0	14	
State Bottle Cost	FLOAT	0	7	Convert from string to float
State Case Cost	FLOAT	0	7	Convert from string to float
State Bottle Retail	FLOAT	0	7	Convert from string to float
Report Date	DATE	0	10	

## STG\_IOWA\_LIQUOR\_STORES:



## COUNT IN SNOWFLAKE:

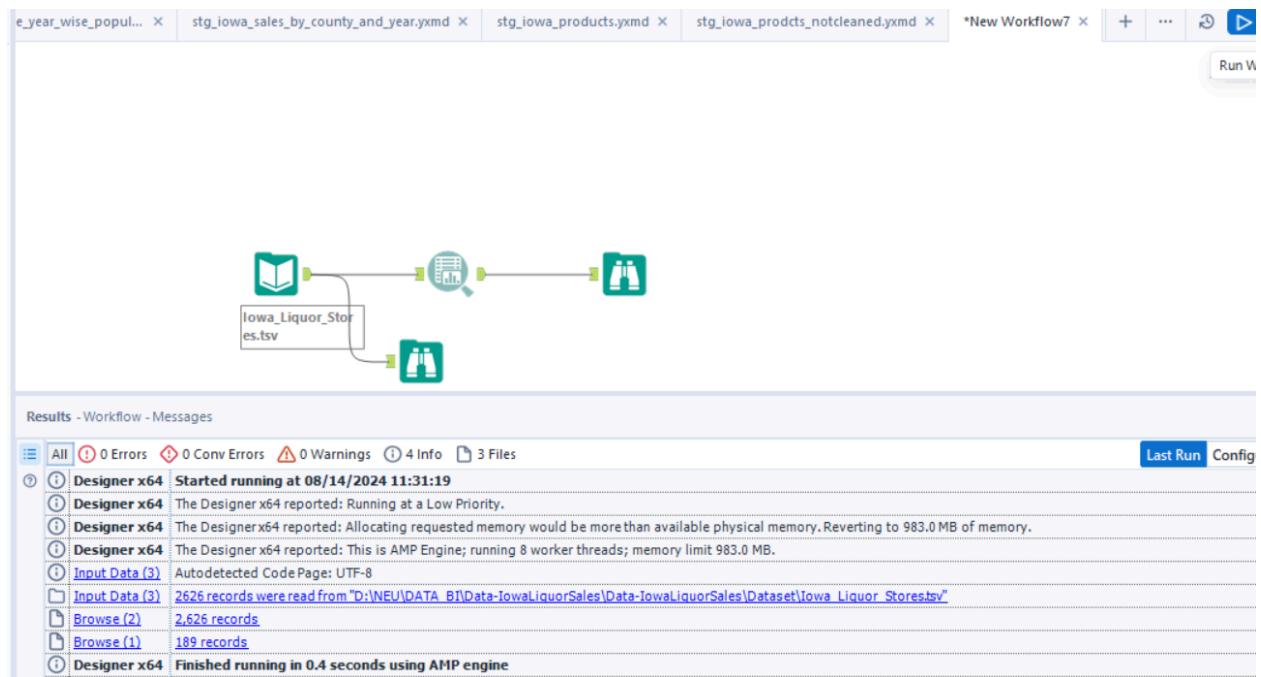
A screenshot of a Snowflake query interface showing the result of a COUNT(\*) query:

```
select count(*) from profiling.stg_iowa_liquor_stores;
```

The results table shows one row:

COUNT(*)
2626

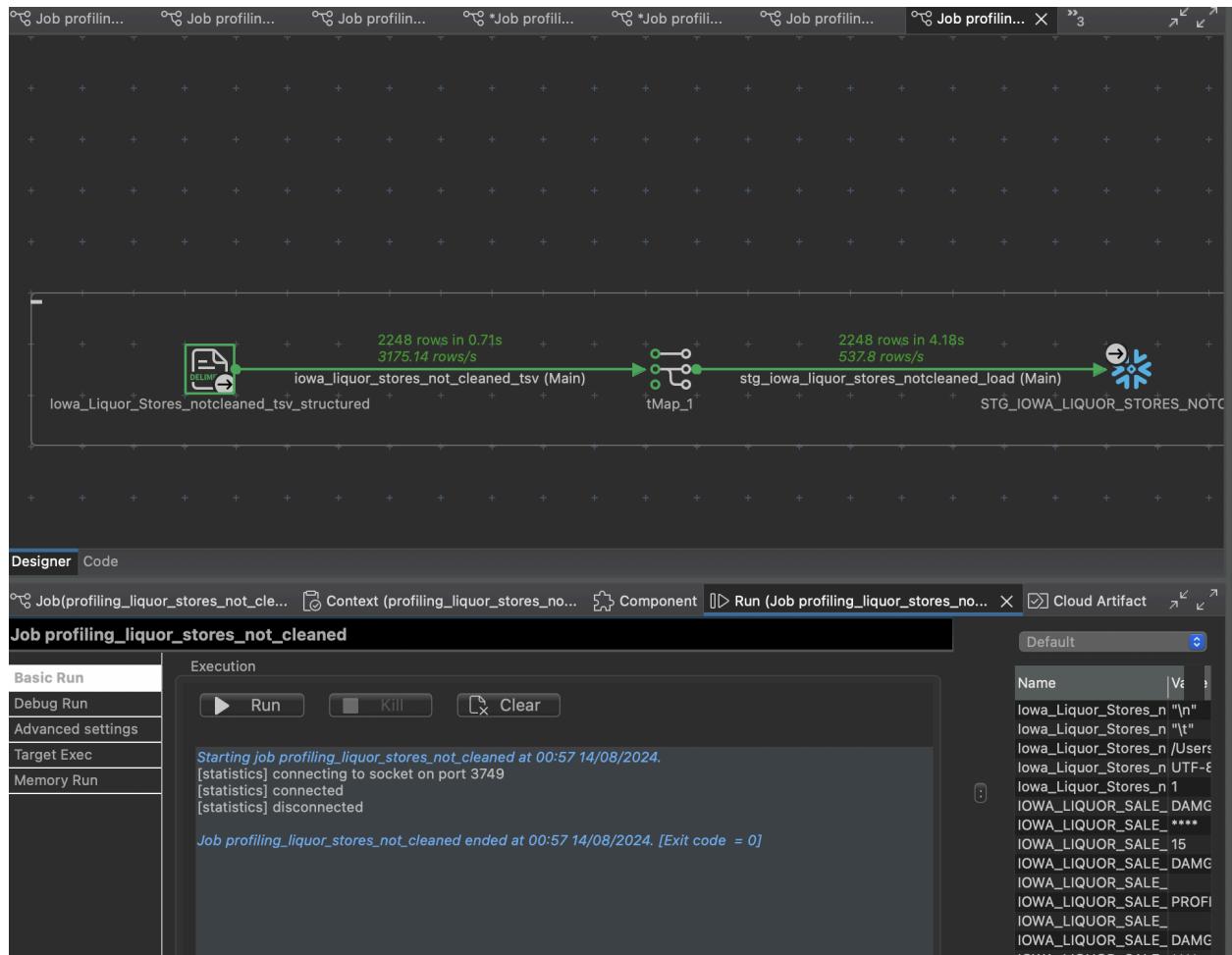
## ALTERYX WORKFLOW:



## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Store	INTEGER	0	6	
Name	VARCHAR	0	58	Upper trim
Store Status	CHAR	0	1	Upper trim
Address	VARCHAR	0	55	Upper trim
City	VARCHAR	0	17	Upper trim
State	VARCHAR	0	2	Upper trim
Zip Code	VARCHAR	0	5	
Store Address	VARCHAR	0	35	Latitude and Longitude needs to be extracted separately
Report Date	VARCHAR	0	10	Needs to be converted into Date

## STG\_IOWA\_LIQUOR\_STORES\_NOTCLEANED:



## COUNT IN SNOWFLAKE:

```
3 | select count(*) from profiling.stg_iowa_liquor_stores_notcleaned;
4
5
6
7
```

Results ↗ Chart

COUNT(*)
2248

## ALTERYX WORKFLOW:

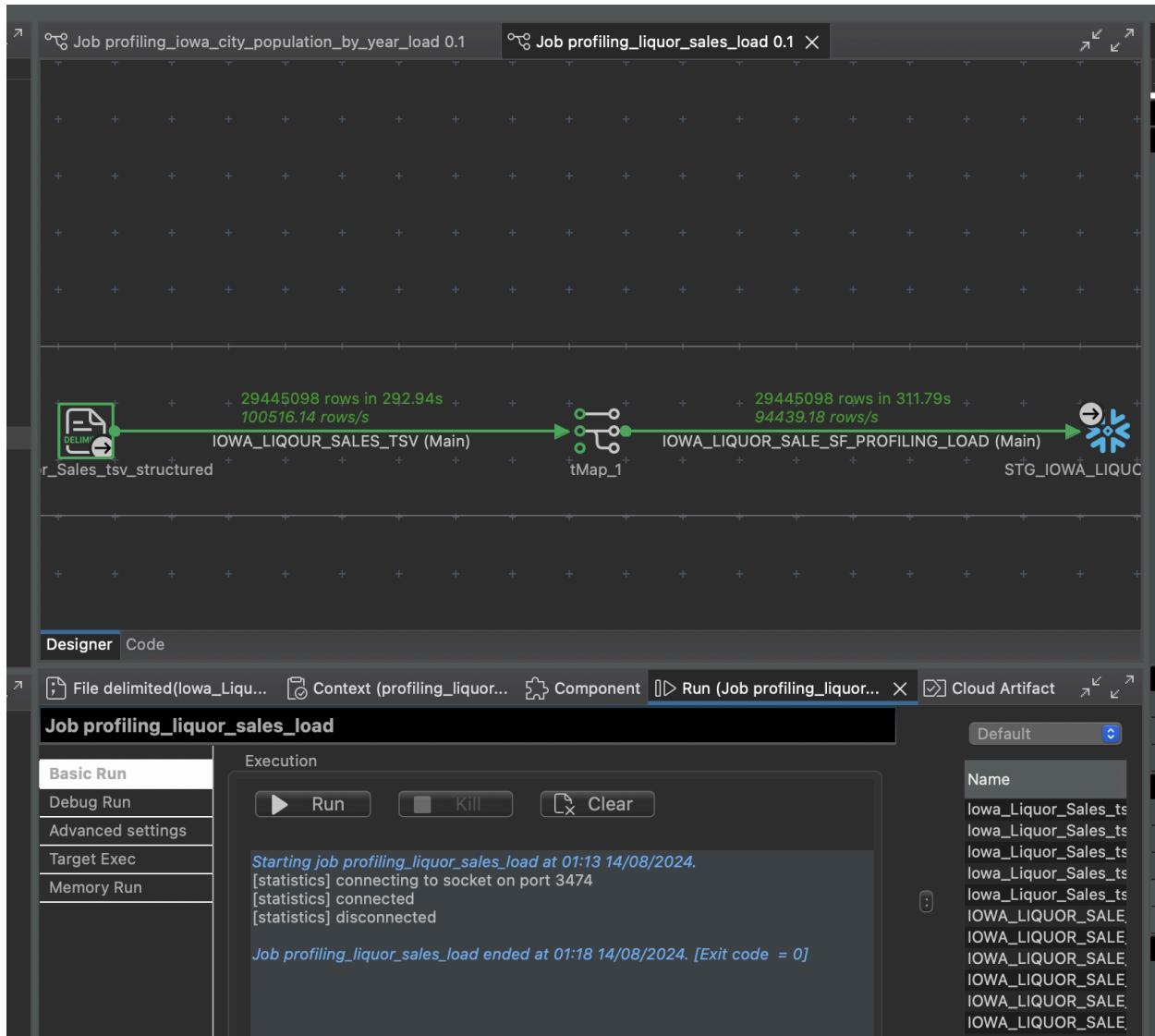
The screenshot shows the Alteryx Designer interface with the following components:

- Workflow:** A sequence of three steps: a file icon (Iowa\_Liquor\_Store\_s\_notCleaned.tsv), a search icon, and a binoculars icon.
- Results - Workflow - Messages:**
  - All: 0 Errors, 0 Conv Errors, 0 Warnings, 4 Info, 3 Files
  - Designer x64: Started running D:\NEU\DATA\_BI\FinalProject\Profiling\stg\_iowa\_stores\_notcleaned.ymd at 08/14/2024 11:33:11
  - Designer x64: The Designer x64 reported: Running at a Low Priority.
  - Designer x64: The Designer x64 reported: Allocating requested memory would be more than available physical memory. Reverting to 985.2 MB of memory.
  - Designer x64: The Designer x64 reported: This is AMP Engine; running 8 worker threads; memory limit 985.2 MB.
  - Input Data (2): Autodetected Code Page: UTF-8
  - Input Data (2): 2248 records were read from "D:\NEU\DATA\_BI\Data-IowaLiquorSales\Dataset\Iowa\_Liquor\_Stores\_notCleanedtsv"
  - Browse (3): 2,248 records
  - Browse (1): 189 records
  - Designer x64: Finished running stg\_iowa\_stores\_notcleaned.ymd in 0.6 seconds using AMP engine

## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Store	INTEGER	0	6	
Name	VARCHAR	0	58	Upper trim
Store Status	CHAR	0	1	Upper trim
Address	VARCHAR	0	42	Upper trim
City	VARCHAR	0	17	Upper trim
State	VARCHAR	0	2	Upper trim
Zip Code	VARCHAR	0	5	
Store Address	VARCHAR	119	28	Latitude and Longitude needs to be extracted separately
Report Date	VARCHAR	0	10	Needs to be converted into Date

## STG\_IOWA\_LIQUOR\_SALES:



## COUNT IN SNOWFLAKE:

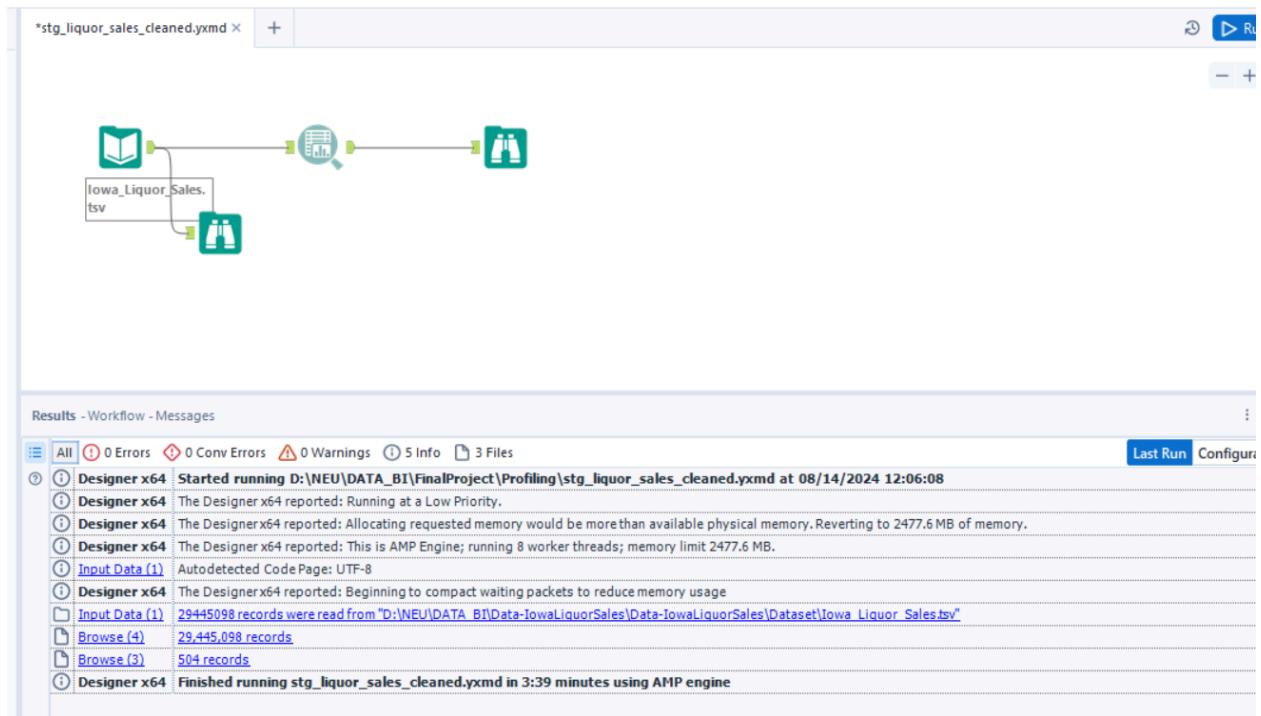
A screenshot of a Snowflake query editor showing the result of a COUNT(\*) query on the **profiling.stg\_iowa\_liquor\_sales** table.

```
select count(*) from profiling.stg_iowa_liquor_sales;
```

The results pane displays the following output:

COUNT(*)
29445098

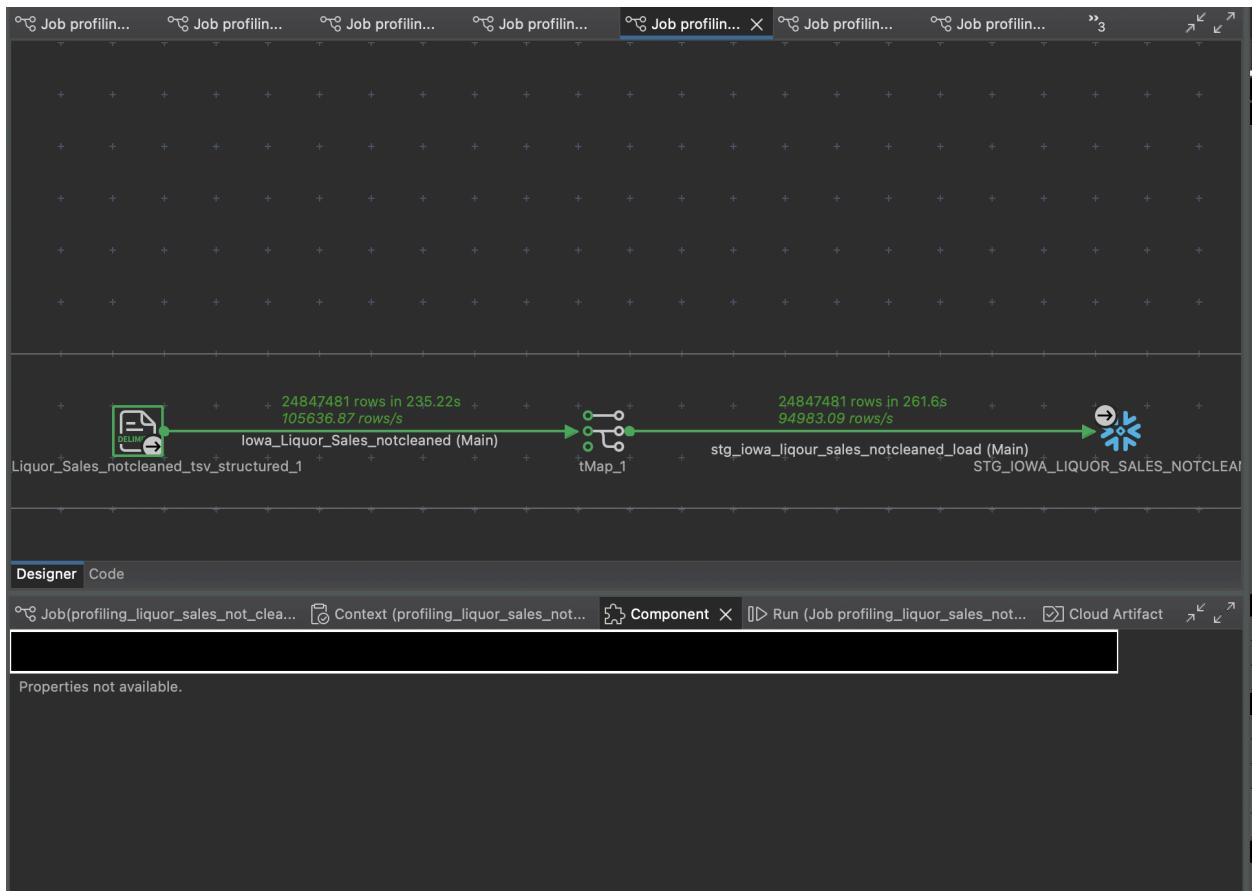
## ALTERYX WORKFLOW:



## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Invoice/Item Number	VARCHAR	0	16	
Date	DATE	0	10	Convert it into date
Store Number	INTEGER	0	6	
Store Name	VARCHAR	0	58	
Address	VARCHAR	83093	55	upper and trim
City	VARCHAR	83092	17	upper and trim
Zip Code	VARCHAR	83159	5	
Store Location	VARCHAR	2497997	45	
County Number	INTEGER	5312255	2	Extract latitude and longitude
County	VARCHAR	159895	13	upper and trim
Category	INTEGER	16974	7	
Category Name	VARCHAR	25040	36	upper and trim
Vendor Number	INTEGER	9	3	
Vendor Name	VARCHAR	7	67	Has some special characters
Item Number	VARCHAR	0	7	Have x appended in 2 values
Item Description	VARCHAR	0	63	Has some special characters
Pack	INTEGER	0	3	
Bottle Volume (ml)	FLOAT	0	6	Convert it into float
State Bottle Cost	FLOAT	10	8	Convert it into float
State Bottle Retail	FLOAT	10	8	Convert it into float
Bottles Sold	INTEGER	0	5	Convert it into integer
Sale (Dollars)	FLOAT	10	9	Convert it into float
Volume Sold (Liters)	FLOAT	0	8	Convert it into float
Volume Sold (Gallons)	FLOAT	0	7	Convert it into float

## STG\_IOWA\_LIQUOR\_SALES\_NOTCLEANED:



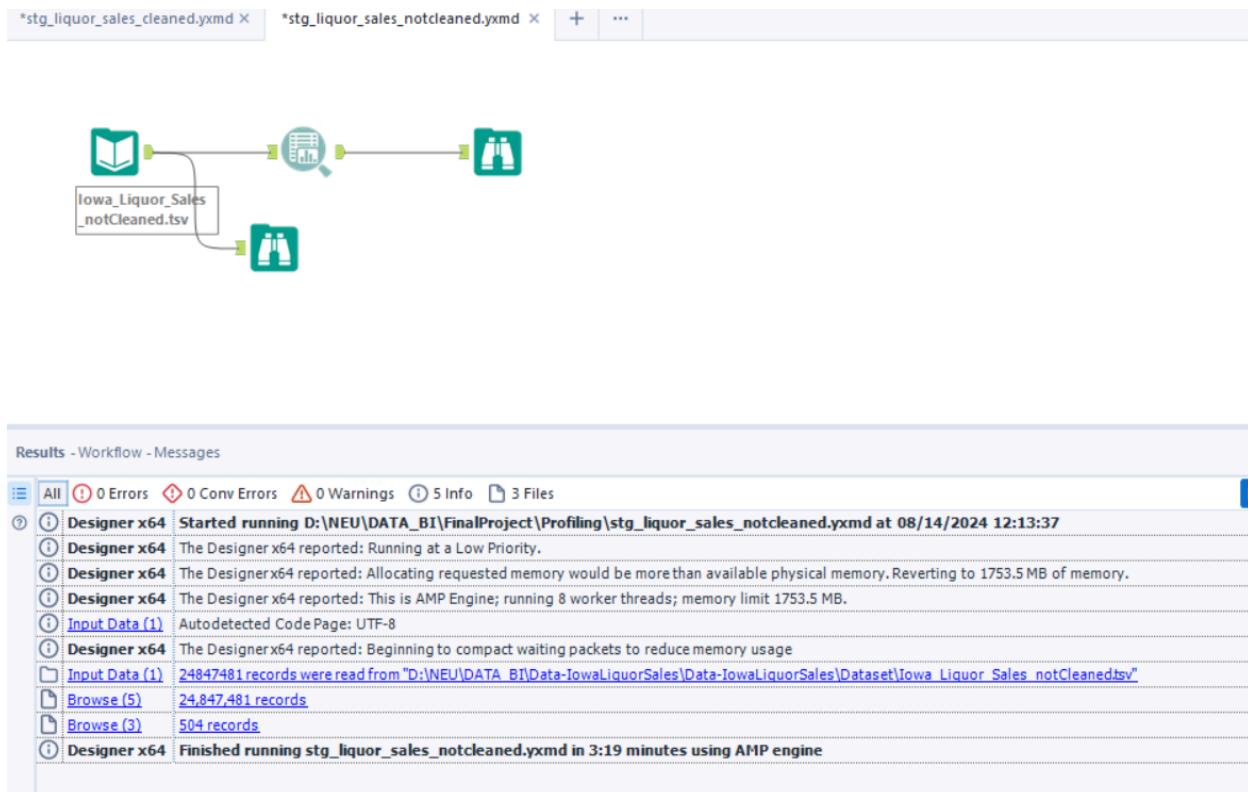
## COUNT IN SNOWFLAKE:

```
| select count(*) from profiling.stg_iowa_liquor_sales_notcleaned;
```

Results

COUNT(*)
24847472

## PROFILING IN ALTERYX:



## PROFILING DETAILS:

Column Names	Datatype	Nulls	Max length	Cleaning steps
Invoice/Item Number	VARCHAR	0	16	
Date	DATE	0	10	Convert it into date
Store Number	INTEGER	0	6	
Store Name	VARCHAR	0	58	
Address	VARCHAR	81913	55	upper and trim
City	VARCHAR	81912	17	upper and trim
Zip Code	VARCHAR	81957	5	
Store Location	VARCHAR	2450072	45	
County Number	INTEGER	714638	2	Extract latitude and longitude
County	VARCHAR	158715	13	upper and trim
Category	INTEGER	16974	7	
Category Name	VARCHAR	25040	36	upper and trim
Vendor Number	INTEGER	9	3	
Vendor Name	VARCHAR	7	67	Has some special characters
Item Number	VARCHAR	0	7	Have x appended in 2 values
Item Description	VARCHAR	0	63	Has some special characters
Pack	INTEGER	0	3	
Bottle Volume (ml)	FLOAT	0	6	Convert it into float
State Bottle Cost	FLOAT	10	7	Convert it into float
State Bottle Retail	FLOAT	10	8	Convert it into float
Bottles Sold	INTEGER	0	5	Convert it into integer
Sale (Dollars)	FLOAT	10	9	Convert it into float
Volume Sold (Liters)	FLOAT	0	8	Convert it into float
Volume Sold (Gallons)	FLOAT	0	7	Convert it into float

## DATA GAP:

### For LIQUOR SALES TABLE:

**Volume in Cleaned Table:** 29445098

**Volume in Not Cleaned Table:** 24847472

**Present only in Cleaned Table but not present in not cleaned:** 4597626

#### Query Used:

```
select count(*) from profiling.stg_iowa_liquor_sales a
left join profiling.stg_iowa_liquor_sales_notcleaned b
on a.invoice_item_number = b.invoice_item_number
where b.invoice_item_number is null;
```

**Present only in not cleaned but present in cleaned:** 0

#### Query Used:

```
select count(*) from profiling.stg_iowa_liquor_sales a
left join profiling.stg_iowa_liquor_sales_notcleaned b
on a.invoice_item_number = b.invoice_item_number
where b.invoice_item_number is null;
```

### Max and Min date in both tables:

The screenshot shows a database interface with two separate query results. Both queries use the same structure: `select max(to\_date(inv\_date)), min(to\_date(inv\_date))` followed by the table name.

**Top Result:**

MAX(TO_DATE(INV_DATE))	MIN(TO_DATE(INV_DATE))
2024-06-30	2012-01-03

**Bottom Result:**

MAX(TO_DATE(INV_DATE))	MIN(TO_DATE(INV_DATE))
2022-09-30	2012-01-03

Data is available in not cleaned table only till 2012-01-03. The major difference between these tables is because of this.

Before 2022-09-30 there are 8 records missing in the not cleaned table.

```

707
708 | select * from profiling.stg_iowa_liquor_sales a
709 | left join profiling.stg_iowa_liquor_sales_notcleaned b
710 | on a.invoice_item_number = b.invoice_item_number
711 | where b.invoice_item_number is null
712 | and to_date(a.inv_date) <= '2022-09-30';
713
714
715 | select * from profiling.stg_iowa_liquor_sales_notcleaned
716 | where invoice_item_number like '%TNV-00993400007%'.

```

Results    Chart    🔍 II

	INVOICE_ITEM_NUMBER	INV_DATE_STR	INV_DATE	STORE_NUMBER	STORE_NAME
1	INV-00993400007	10/17/2016	2016-10-17T04:00:00.000Z	2190	CENTRAL CITY LIQUOR
2	INV-33728600005	01/25/2021	2021-01-25T05:00:00.000Z	2633	HY-VEE #3 / BDI / DE
3	INV-33740700003	01/25/2021	2021-01-25T05:00:00.000Z	3773	BENZ DISTRIBUTING
4	INV-23231800001	11/14/2019	2019-11-14T05:00:00.000Z	3869	BOOTLEGGIN' BARZ
5	INV-13688900001	08/07/2018	2018-08-07T04:00:00.000Z	4167	IOWA STREET MARKET
6	INV-00993400006	10/17/2016	2016-10-17T04:00:00.000Z	2190	CENTRAL CITY LIQUOR
7	INV-35139200005	03/18/2021	2021-03-18T04:00:00.000Z	5251	NORTHSIDE LIQUOR
8	INV-12438800004	06/04/2018	2018-06-04T04:00:00.000Z	3773	BENZ DISTRIBUTING
9	INV-35973800003	04/20/2021	2021-04-20T04:00:00.000Z	6035	BOOTLEGGING BARZ

Query Details
Query duration

Rows
Query ID 01b6

Show more ▾
INVOICE\_ITEM\_NUMBER  
100% filled

INV\_DATE\_STR  
10/17/2016

Other than this major volume difference , in not cleaned file there are text which are not trimmed or in same case. Hence casing and trimming could be applied. Other than that most of the values are similar between cleaned and notcleaned.

STORE_NAME	STORE_NAME
KIMMES MANSON COUNTRY STORE #10	Kimmes Manson Country Store #10
FAREWAY STORES #019 / SIOUX CITY	Fareway Stores #019 / Sioux City
TWIN TOWN LIQUOR	Twin Town Liquor
HY-VEE WINE AND SPIRITS / DENISON	Hy-Vee Wine and Spirits / Denison
BROTHERS MARKET / GRUNDY CENTER	Brothers Market / Grundy Center
WALGREENS #11330 / STORM LAKE	Walgreens #11330 / Storm Lake
BOTTLE BOUTIQUE	Bottle Boutique
HY-VEE FOOD STORE #4 / SIOUX CITY	Hy-Vee Food Store #4 / Sioux City
HY-VEE / WINDSOR HEIGHTS	Hy-Vee / Windsor Heights

In cleaned data -> every county number is 2 digits if incase 1 digit a 0 is prefixed. But this is not the same case in not cleaned.

	COUNTY_NUMBER	:	COUNTY_NUMBER
5	58		58
6	03		3
7	10		10
8	50		50
9	20		20
0	88		88
1	87		87
2	56		56
3	05		5

TRIMMING needs to be applied on both sides as there are extra spaces in few columns → cleaned dataset as well.

There is also difference in the text processing as well.

CATEGORY_NAME	CATEGORY_NAME
AMERICAN CORDIALS & LIQUEURS	American Cordials & Liqueur

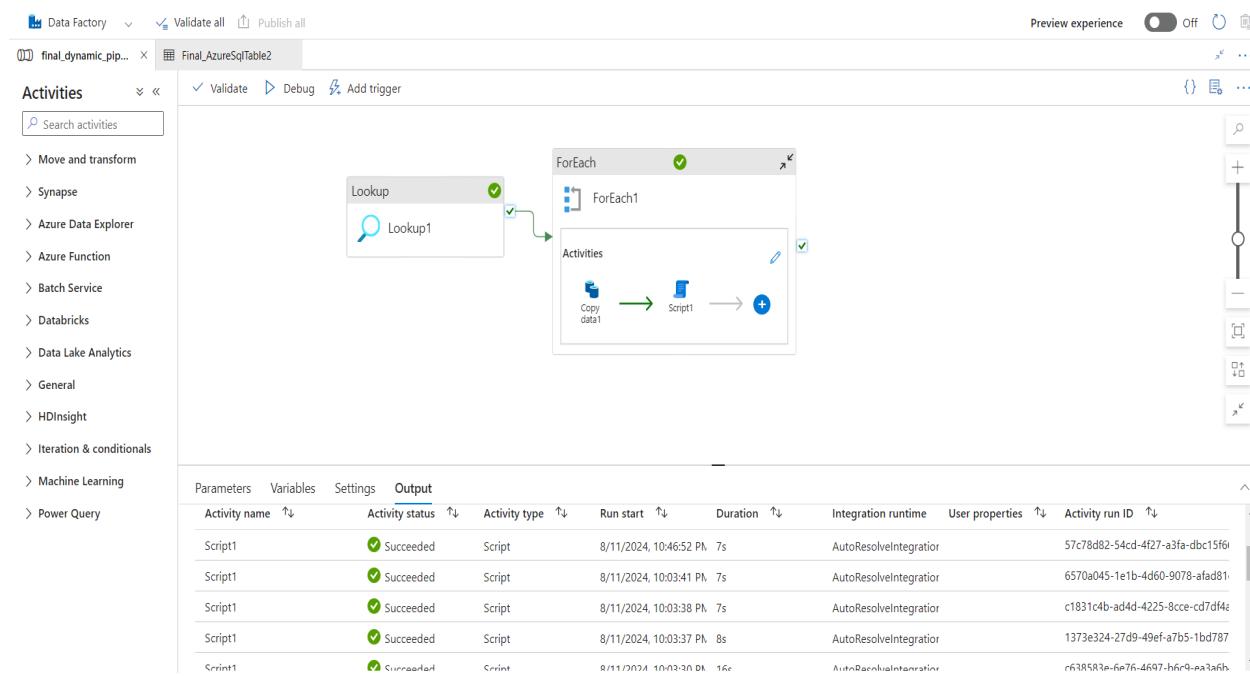
## Part 1 - (B) Loading stage table using ADF:

We have loaded our stage tables into AZURE SQL

### METADATA TABLE VALUES:

	metadatask	file_path	file_name	schema_name	table_name
1	1	raw7	Iowa_Liquor_Sales.tsv	STAGE	STG_IOWA_LIQUOR_SALES
2	2	raw7	Iowa_Liquor_Products.tsv	STAGE	STG_IOWA_LIQUOR_PRODUCTS
3	3	raw7	Iowa_Liquor_Stores.tsv	STAGE	STG_IOWA_LIQUOR_STORES
4	4	raw7	Total_City_Population_by_Year.tsv	STAGE	STG_IOWA_CITY_POPULATION_BY_YEAR
5	5	raw7	County_Population_in_Iowa_by_Year.tsv	STAGE	STG_IOWA_COUNTY_POPULATION_BY_YEAR
6	6	raw7	Iowa_Liquor_Sales_by_Year_and_County.tsv	STAGE	STG_IOWA_LIQUOR_SALES_BY_YEAR_AND_COUNTY
7	7	raw7	Iowa_Liquor_Sales_by_Year.tsv	STAGE	STG_IOWA_LIQUOR_SALES_BY_YEAR

### ADF PIPELINE EXECUTION:



**Pipeline Run Details:**

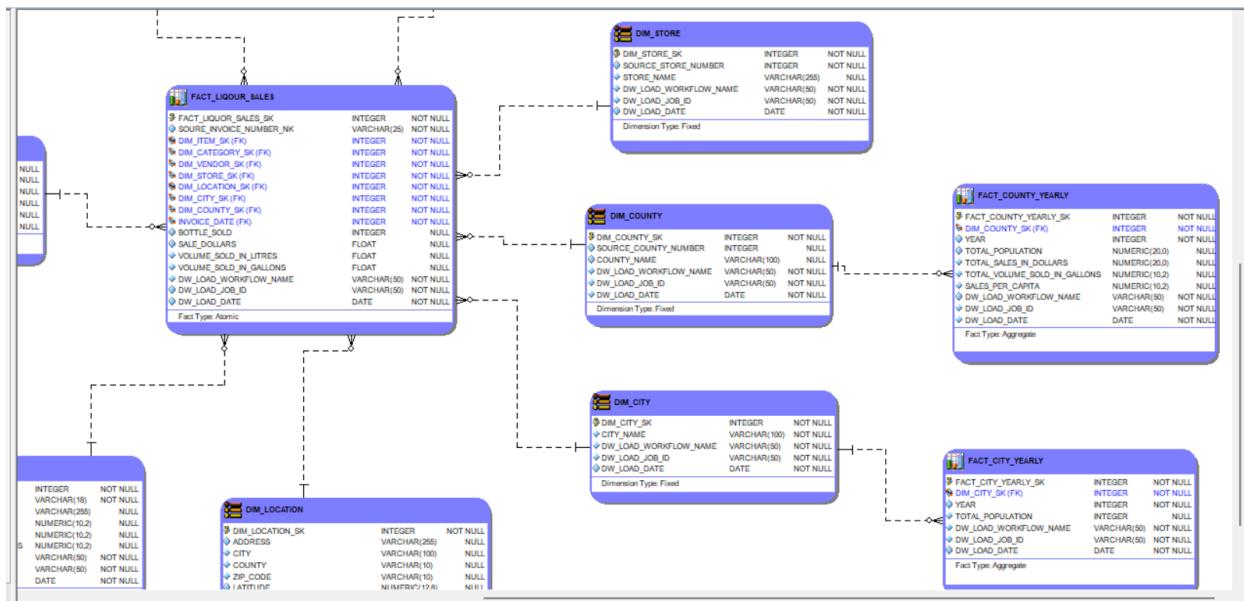
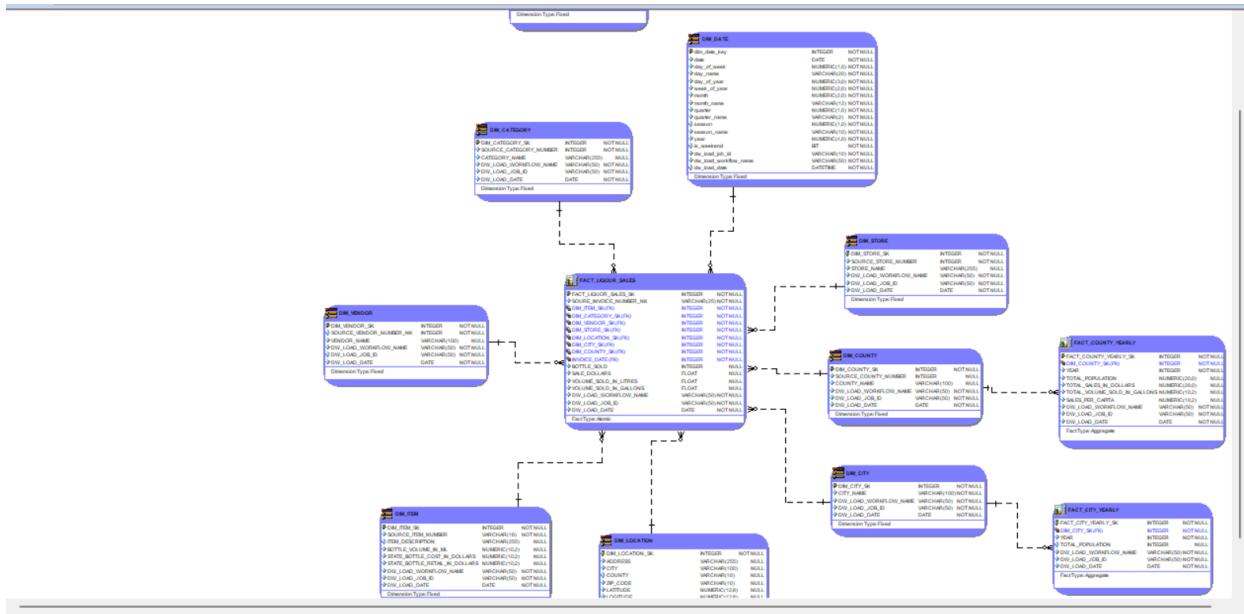
Activity	Activity Type	Run Start	Duration	Integration Runtime	User Properties
Script1	Script	8/11/2024, 10:46:52 PM	7s	AutoResolveIntegrator	57c78d82-54cd-4f27-a3fa-dbc15f61
Script1	Script	8/11/2024, 10:03:41 PM	7s	AutoResolveIntegrator	6570a045-1e1b-4d60-907b-afad01
Script1	Script	8/11/2024, 10:03:38 PM	7s	AutoResolveIntegrator	c1831c4b-ad4d-4225-8cce-cd7df4e2
Script1	Script	8/11/2024, 10:03:30 PM	8s	AutoResolveIntegrator	1373e324-27d9-49ef-a7b5-1bd787
Script1	Script	8/11/2024, 10:03:30 PM	16s	AutoResolveIntegrator	c638583e-6e76-4697-b6c9-ea3a6b
Script1	Script	8/11/2024, 10:03:30 PM	7s	AutoResolveIntegrator	d1097a39-6832-471d-85ef-6acfc189
Script1	Script	8/11/2024, 10:03:30 PM	12s	AutoResolveIntegrator	7fd9c47c-cc0c-4b3f-9429-a68a2a1
Copy data1	Copy data	8/11/2024, 10:03:16 PM	14s	AutoResolveIntegrator	a3e997e2-51d9-4432-9f9e-b62837
Copy data1	Copy data	8/11/2024, 10:03:16 PM	14s	AutoResolveIntegrator	e1d80fe-3abc-40ba-b4ce-ab5dd0
Copy data1	Copy data	8/11/2024, 10:03:16 PM	24s	AutoResolveIntegrator	d7200f97-8f2c-a474-96d7-c4eb03
Copy data1	Copy data	8/11/2024, 10:03:16 PM	43m 35s	AutoResolveIntegrator	ee8802ff-82ca-461c-af5f-c65c698b
Copy data1	Copy data	8/11/2024, 10:03:16 PM	21s	AutoResolveIntegrator	04751951-2ab7-4faa-9502-5b3db4
Copy data1	Copy data	8/11/2024, 10:03:16 PM	13s	AutoResolveIntegrator	69650661-7ea3-4cda-aec0-ee5f8d
Copy data1	Copy data	8/11/2024, 10:03:16 PM	19s	AutoResolveIntegrator	ba56f740-22db-4001-921c-6656f2
ForEach1	ForEach	8/11/2024, 10:03:15 PM	43m 45s		a0894bb3-cb45-401d-b815-42eb5
Lookup1	Lookup	8/11/2024, 10:03:12 PM	3s	AutoResolveIntegrator	02be97be-6632-404b-9be5-8cf2a1

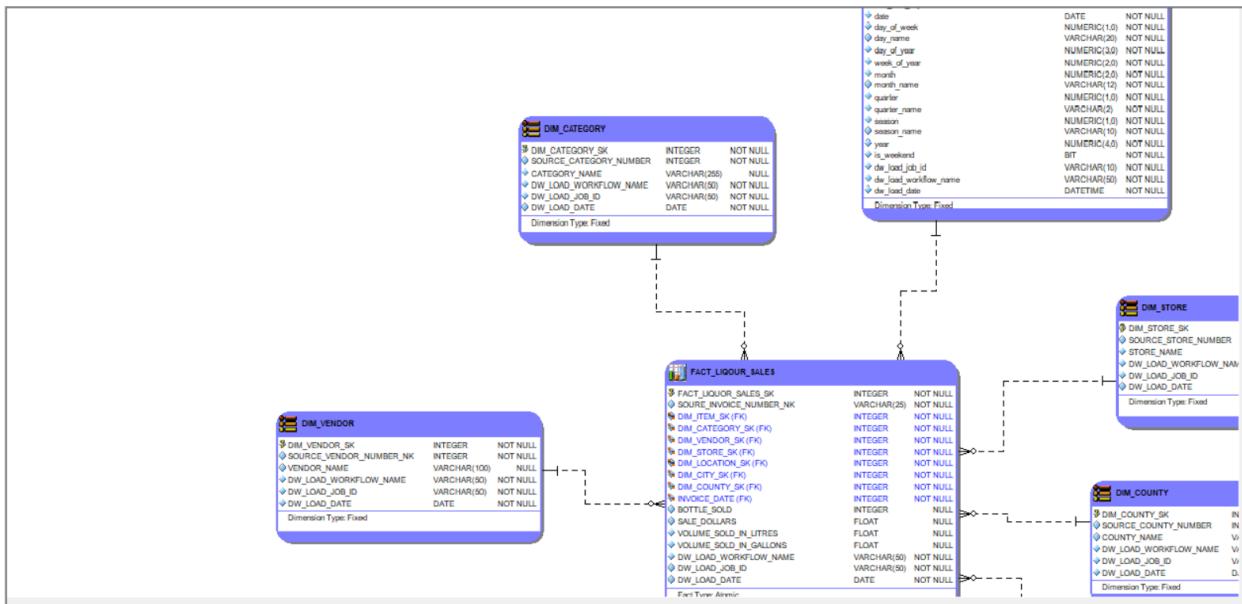
## ROWS COUNT IN METADATA\_TBL:

Results		Messages					
schema_name	table_name	file_delimiter	rows_read	rows_copied	time_duration		
STAGE	STG_IOWA_LIQUOR_SALES		29445098	29445098	2613		
STAGE	STG_IOWA_LIQUOR_PRODUCTS		8776	8776	12		
STAGE	STG_IOWA_LIQUOR_STORES		2626	2626	12		
STAGE	STG_IOWA_CITY_POPULATION_BY_YEAR		32152	32152	17		
STAGE	STG_IOWA_COUNTY_POPULATION_BY_YEAR		3366	3366	16		
STAGE	STG_IOWA_LIQUOR_SALES_BY_YEAR_AND_COUNTY		1301	1301	10		
STAGE	STG_IOWA_LIQUOR_SALES_BY_YEAR		13	13	13		

JSON File has been extracted and stored separately.

## Part 1 - ( C ) Dimensional Model:



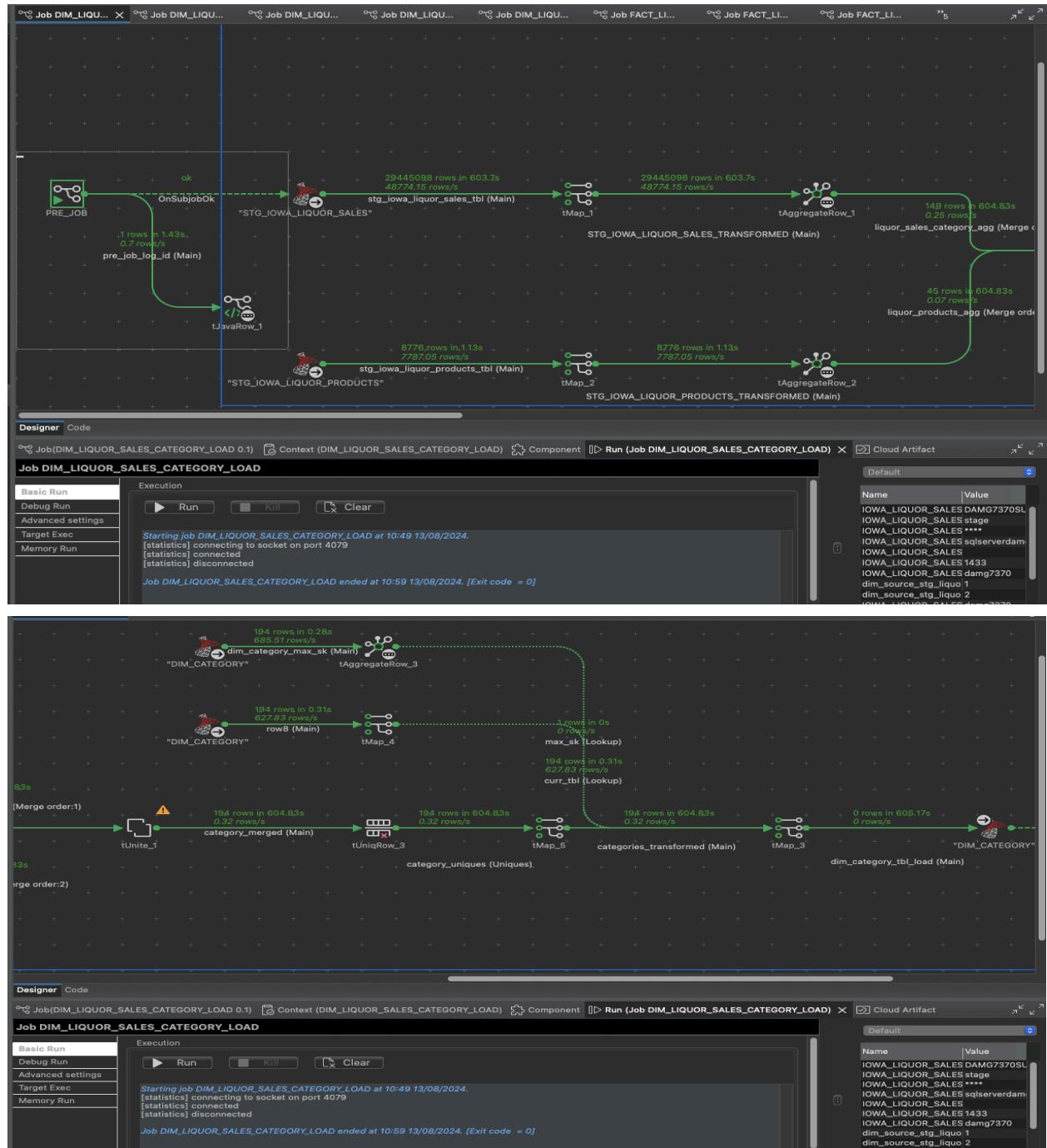


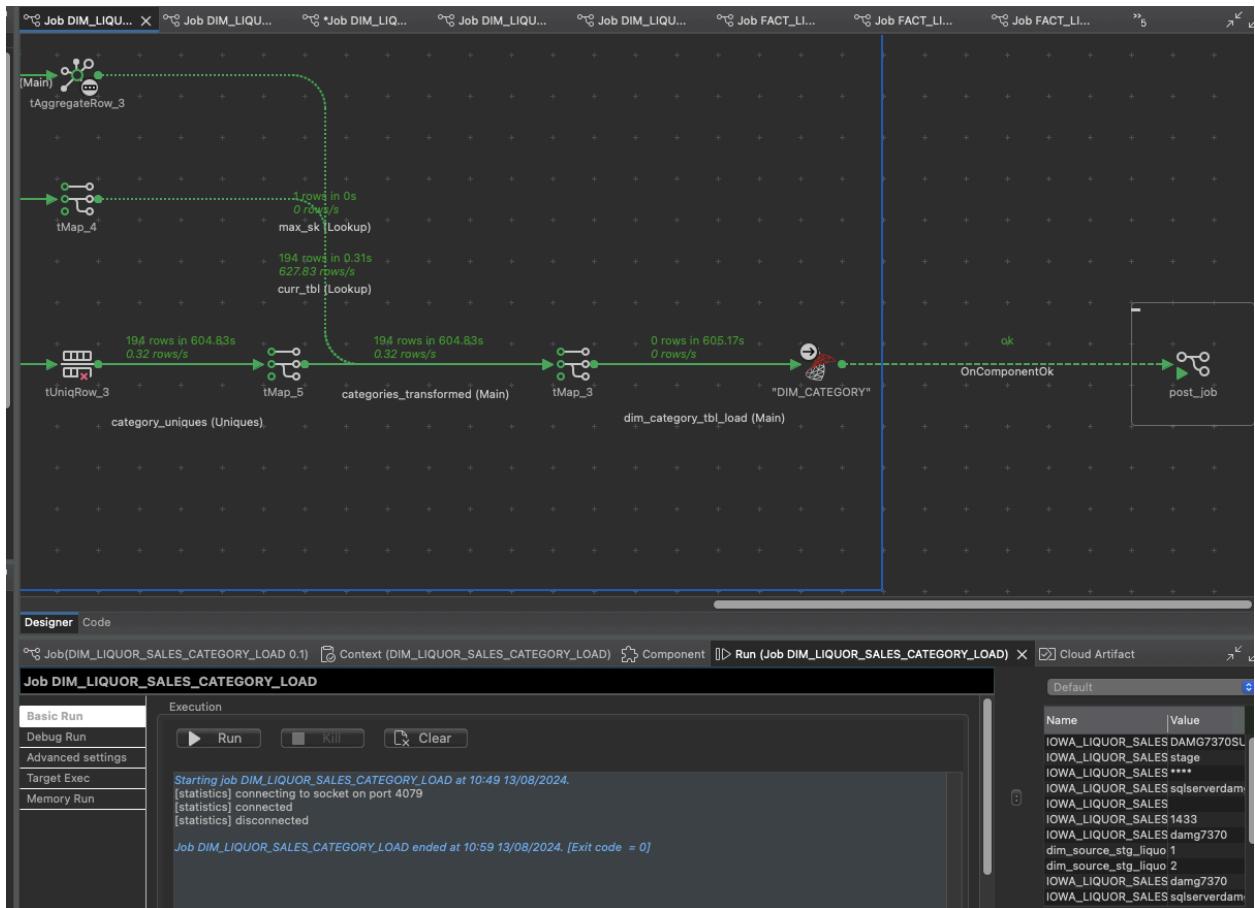
### Tables created in Azure SQL under EDW Schema:

- > EDW.DIM\_CATEGORY
- > EDW.DIM\_CITY
- > EDW.DIM\_COUNTY
- > EDW.DIM\_DATE
- > EDW.DIM\_ITEM
- > EDW.DIM\_LOCATION
- > EDW.DIM\_SOURCE
- > EDW.DIM\_STORE
- > EDW.DIM\_VENDOR
- > EDW.etl\_job
- > EDW.etl\_job\_log
- > EDW.FACT\_CITY\_YEARLY
- > EDW.FACT\_COUNTY\_YEARLY
- > EDW.FACT\_LIQUOR\_SALES

## PART 2 - Loading - Integration Schema using Talend:

### DIM\_CATEGORY LOAD:





Rows inserted : 194

### SQL Validation:

```

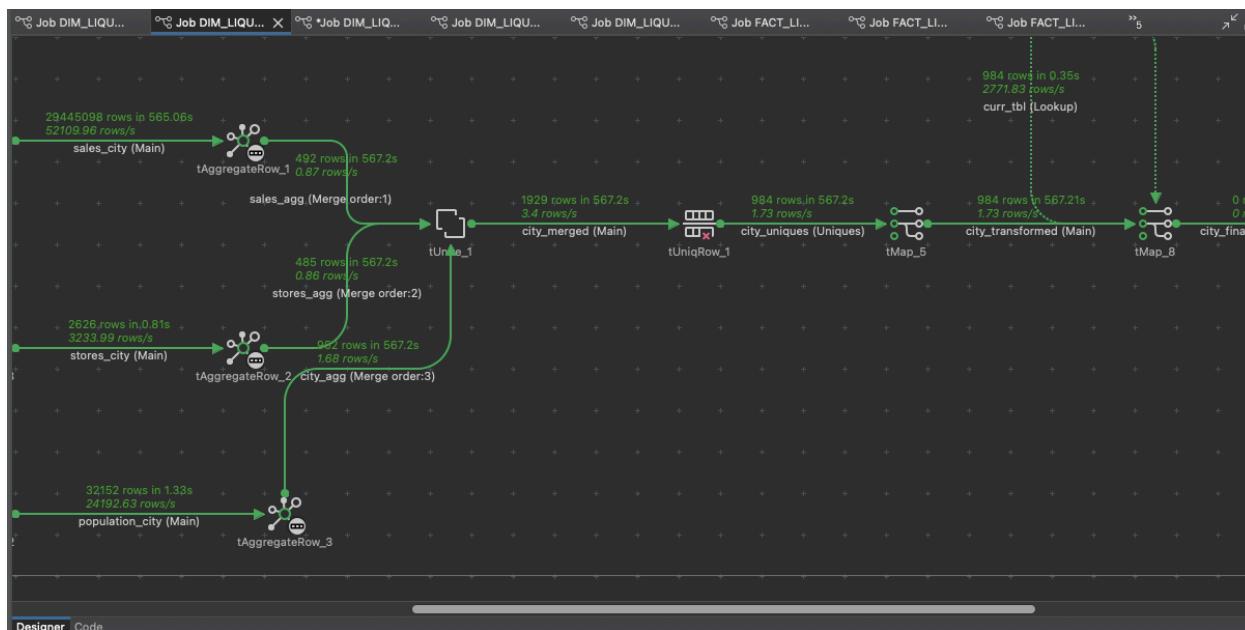
35
36 select count(*) from
37 (select distinct Category,[Category Name] from stage.STG_IOWA_LIQUOR_SALES
38 union
39 select distinct -999 as Category, [Category Name] from stage.STG_IOWA_LIQUOR_PRODUCTS)
40 a;

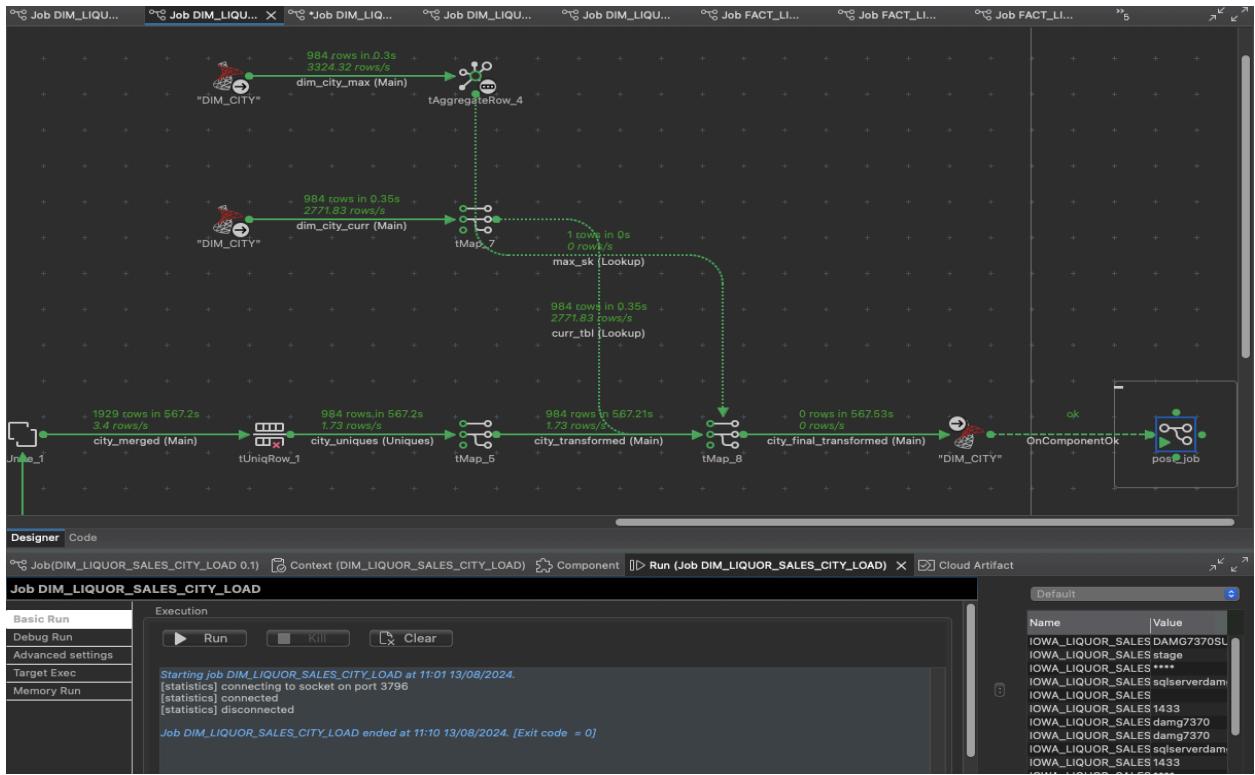
```

### Results    Messages

(No column name) ▾	
1	194

## DIM CITY LOAD:





Number of rows inserted is 984

### SQL Validation:

```

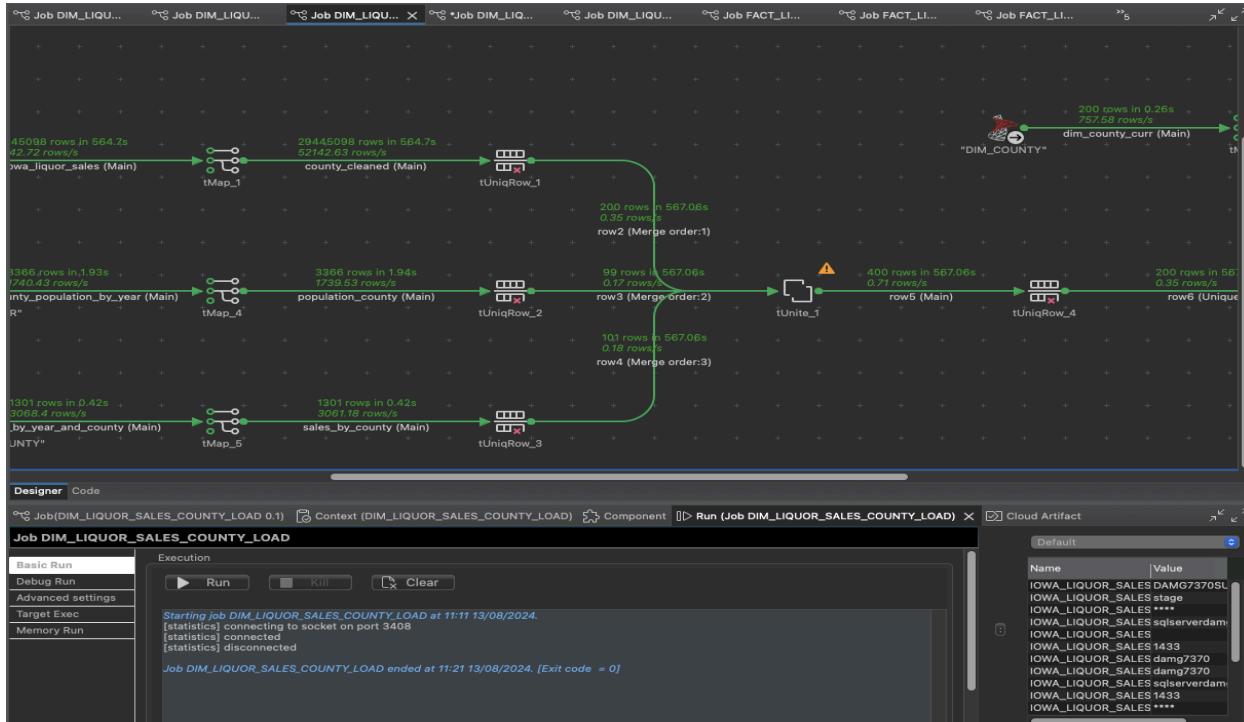
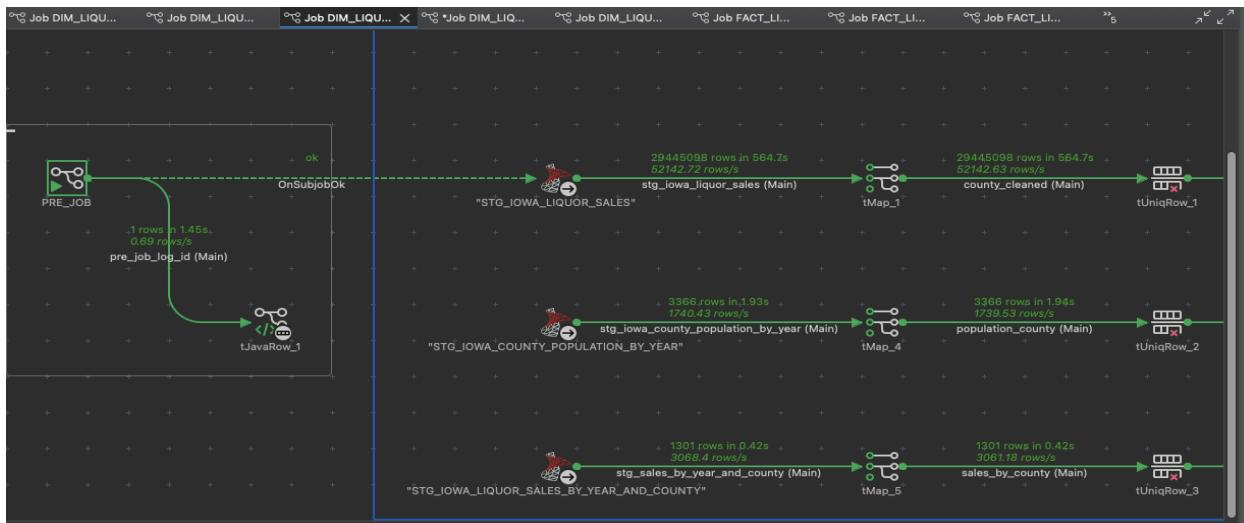
42
43     select count(*) from
44     (select distinct City from stage.STG_IOWA_LIQUOR_SALES
45     union
46     select distinct City from stage.STG_IOWA_LIQUOR_STORES
47     union
48     select distinct City from stage.STG_IOWA_CITY_POPULATION_BY_YEAR)
49   a;

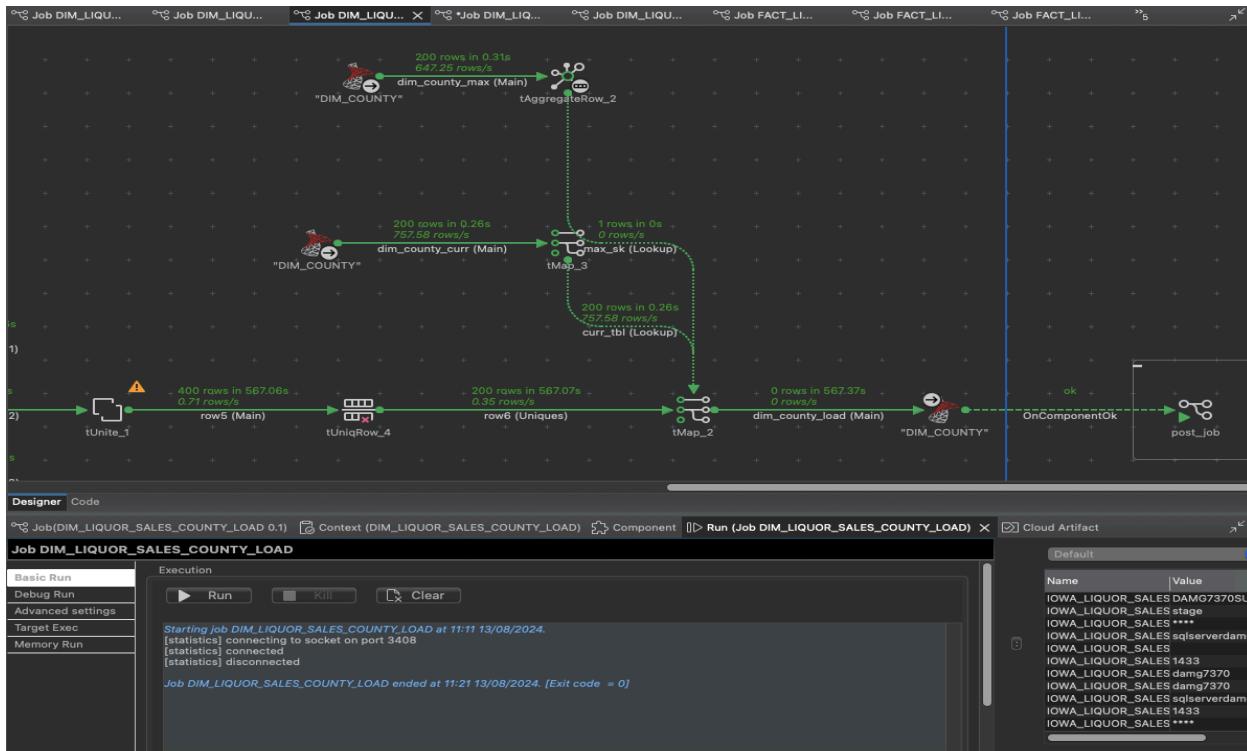
```

Results      Messages

(No column name)	▼
984	

## DIM COUNTY LOAD:





Number of rows inserted -200

### SQL Validation:

```

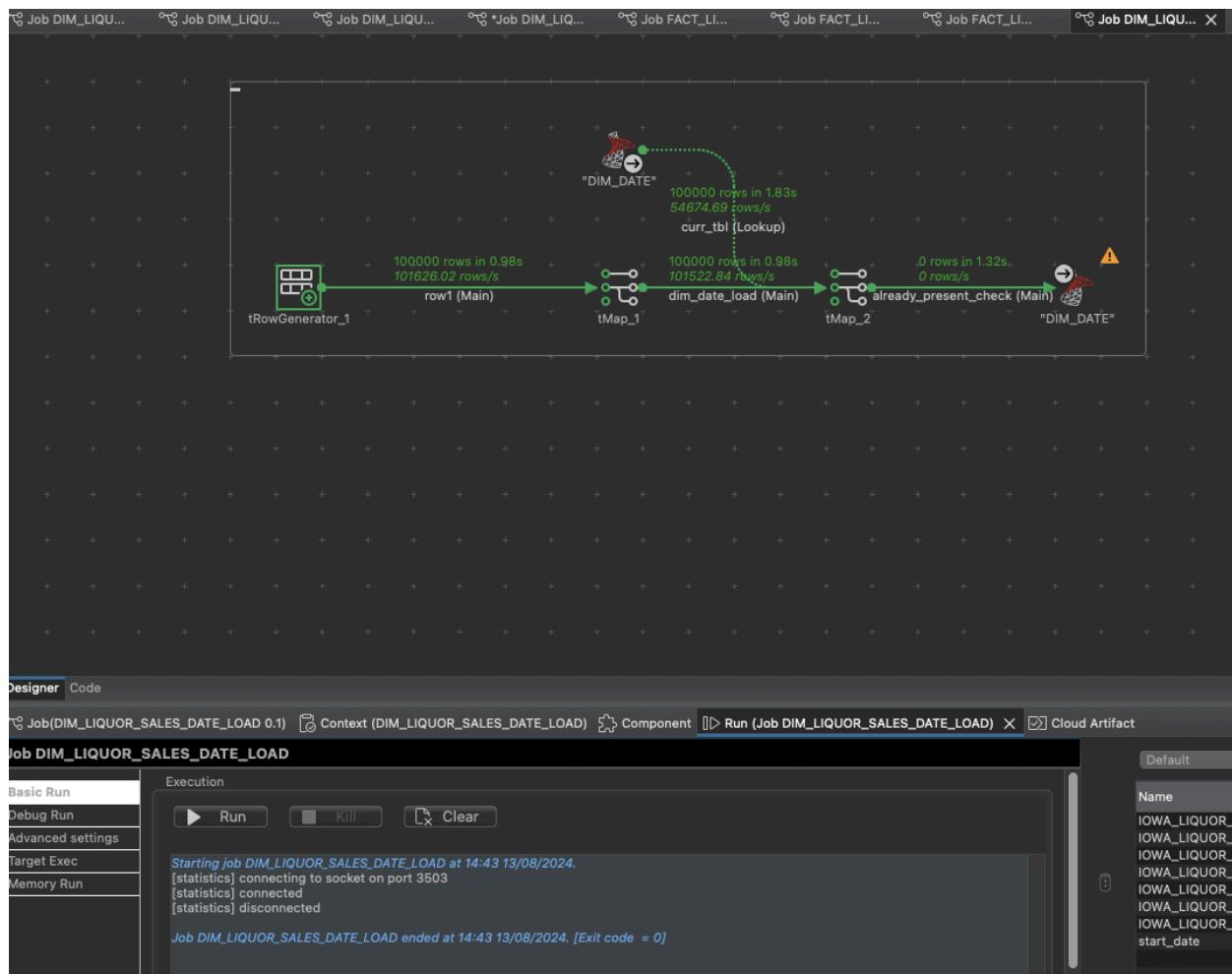
select count(*) from
(select distinct trim(upper(County)) as County from stage.STG_IOWA_LIQUOR_SALES
union
select distinct trim((County)) as County from stage.STG_IOWA COUNTY_POPULATION_BY_YEAR
union
select distinct trim((County)) as County from stage.STG_IOWA_LIQUOR_SALES_BY_YEAR_AND_COUNTY)
a;

```

### Results    Messages

(No column name)	▼
200	

## DIM DATE LOAD:



```

65
66   select count(*) from edw.dim_date;
67

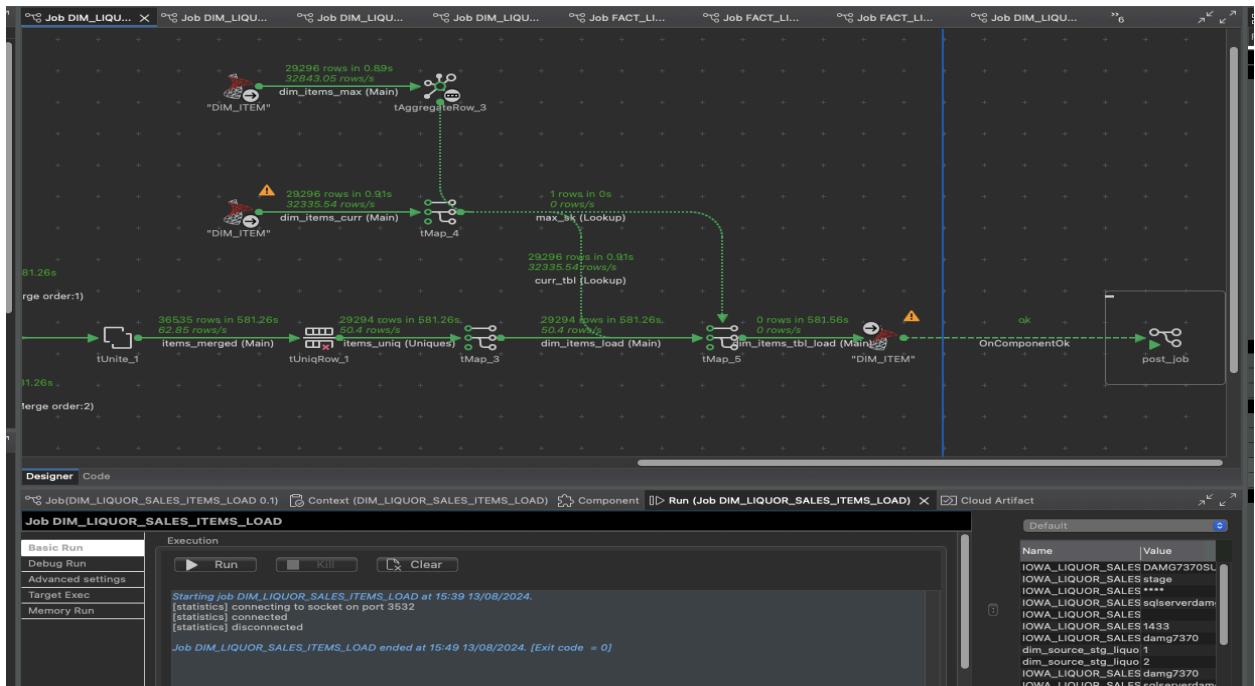
```

Results      Messages

(No column name)	
1	100000

## DIM\_ITEM:





## VALIDATION QUERIES:

```

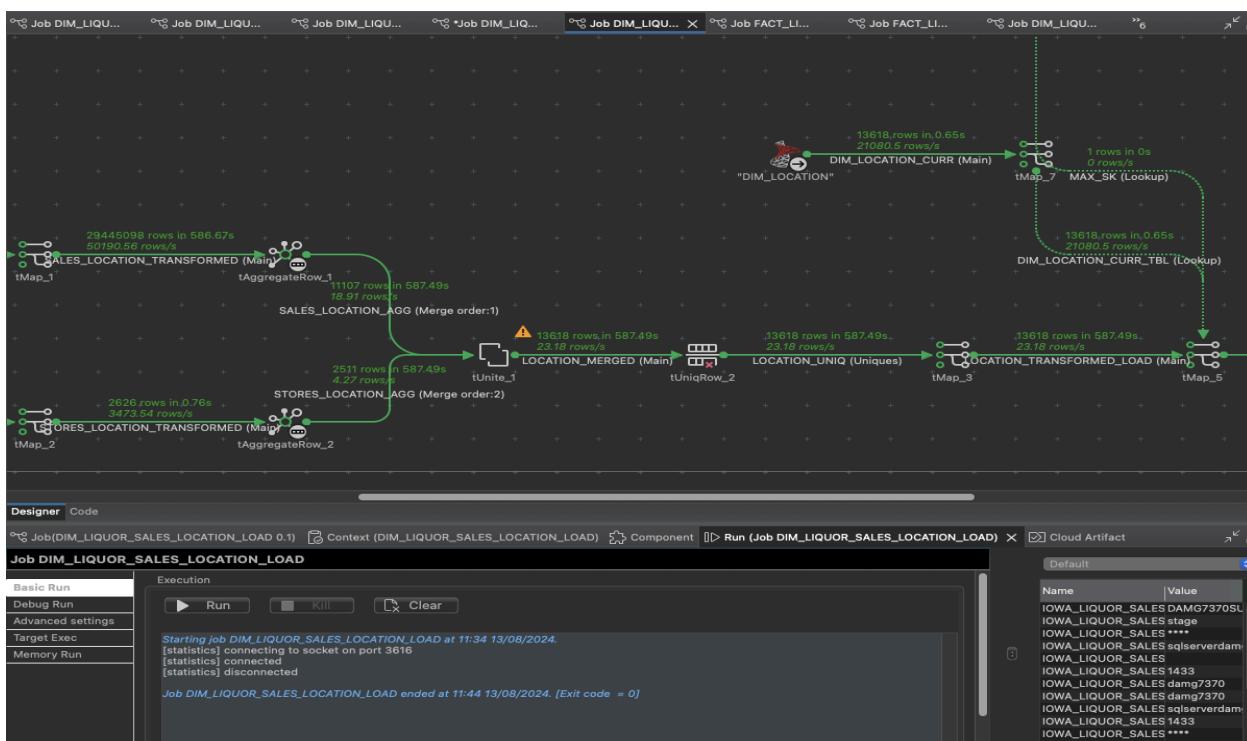
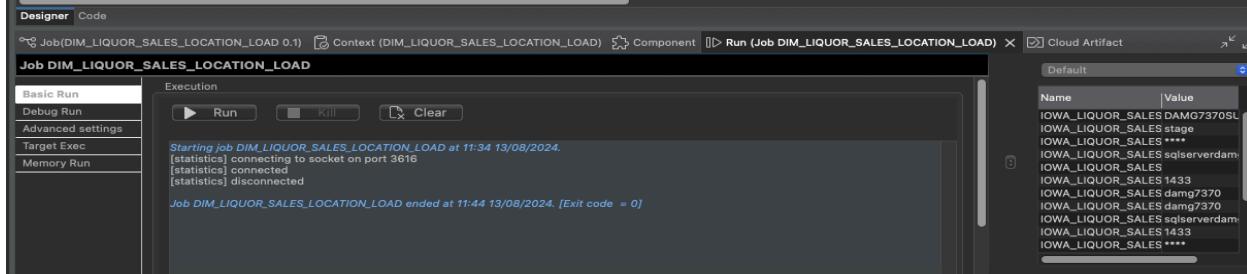
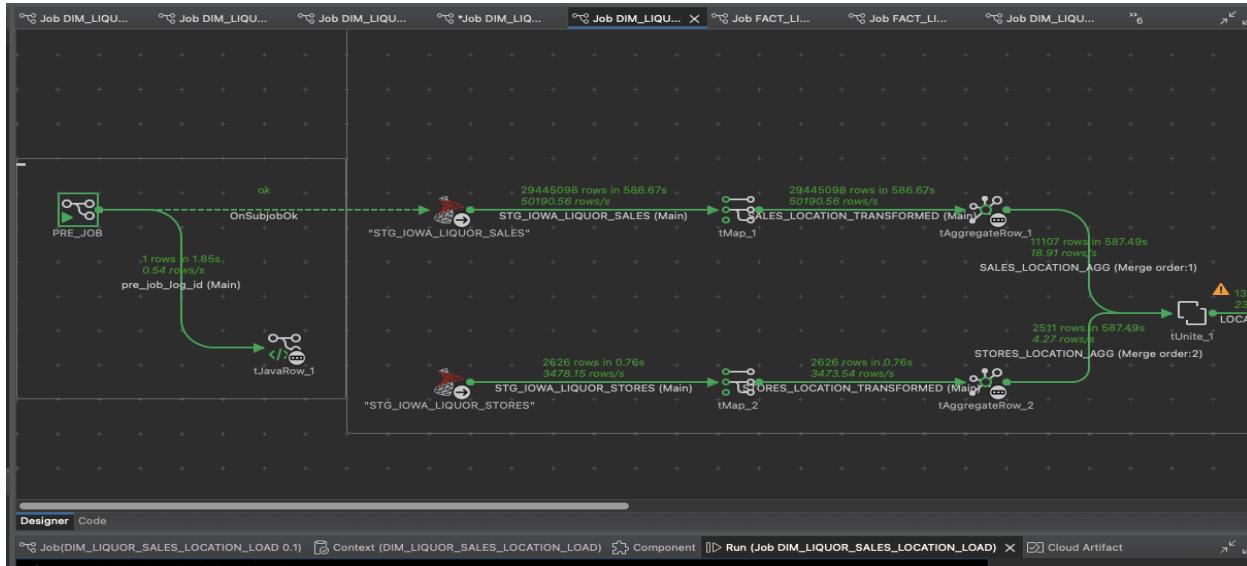
77  select count(*) from
78  (select distinct [Item Number],[Item Description],[Bottle Volume (ml)],[State Bottle Cost],
79  [State Bottle Retail] from stage.stg_iowa_liquor_sales
80  union
81  select distinct [Item Number],[Item Description],[Bottle Volume (ml)],[State Bottle Cost],
82  [State Bottle Retail] from stage.STG_IOWA_LIQUOR_PRODUCTS)
83  a;
84
85

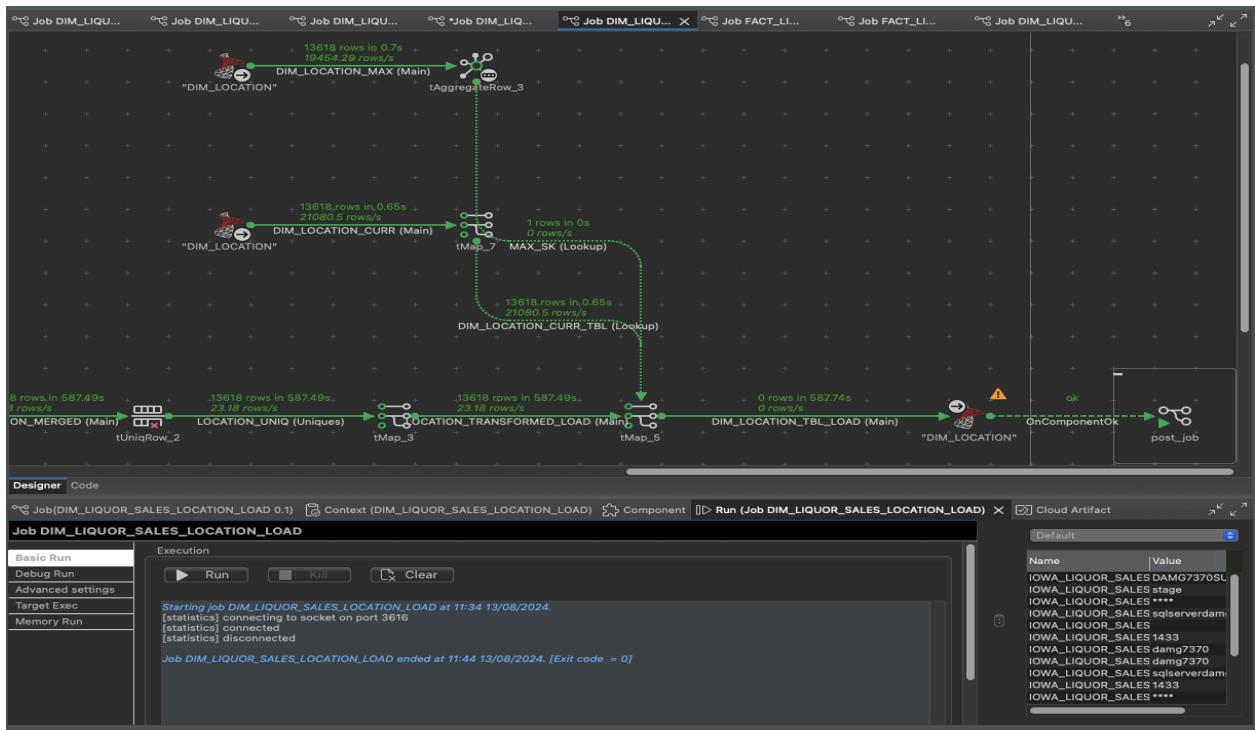
```

Results    Messages

(No column name)	▼
29290	

## DIM LOCATION:





## VALIDATION QUERIES:

```

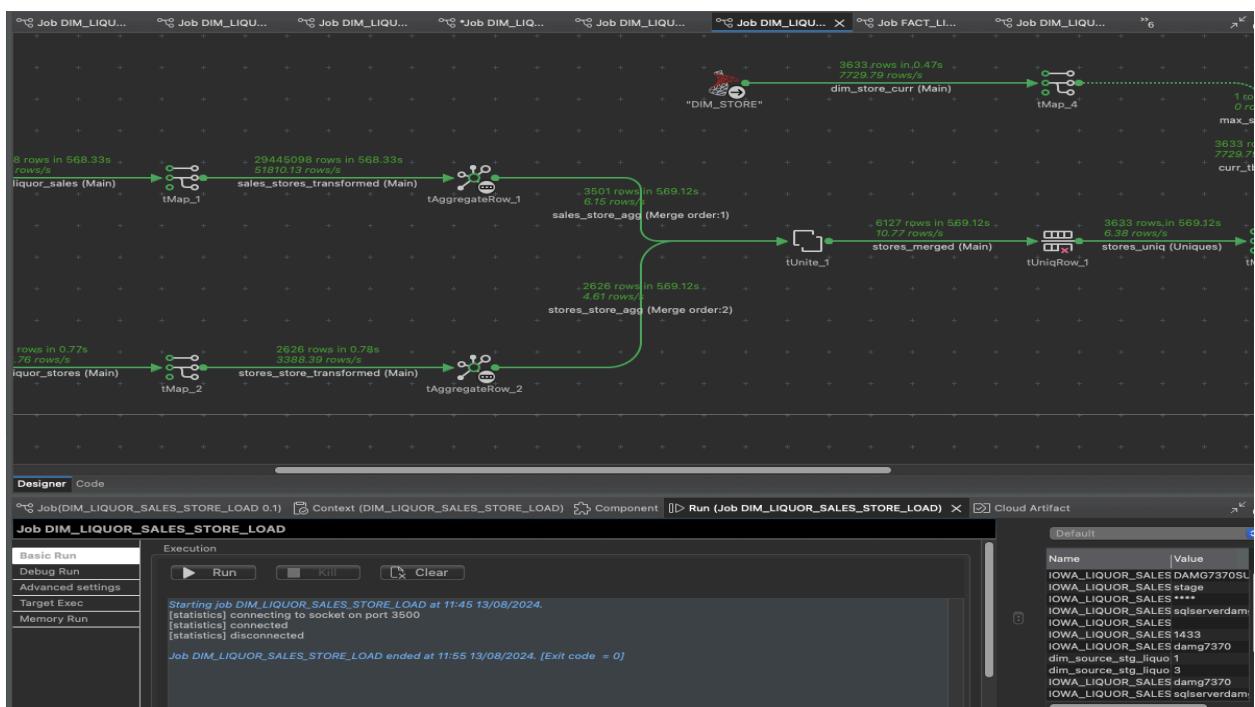
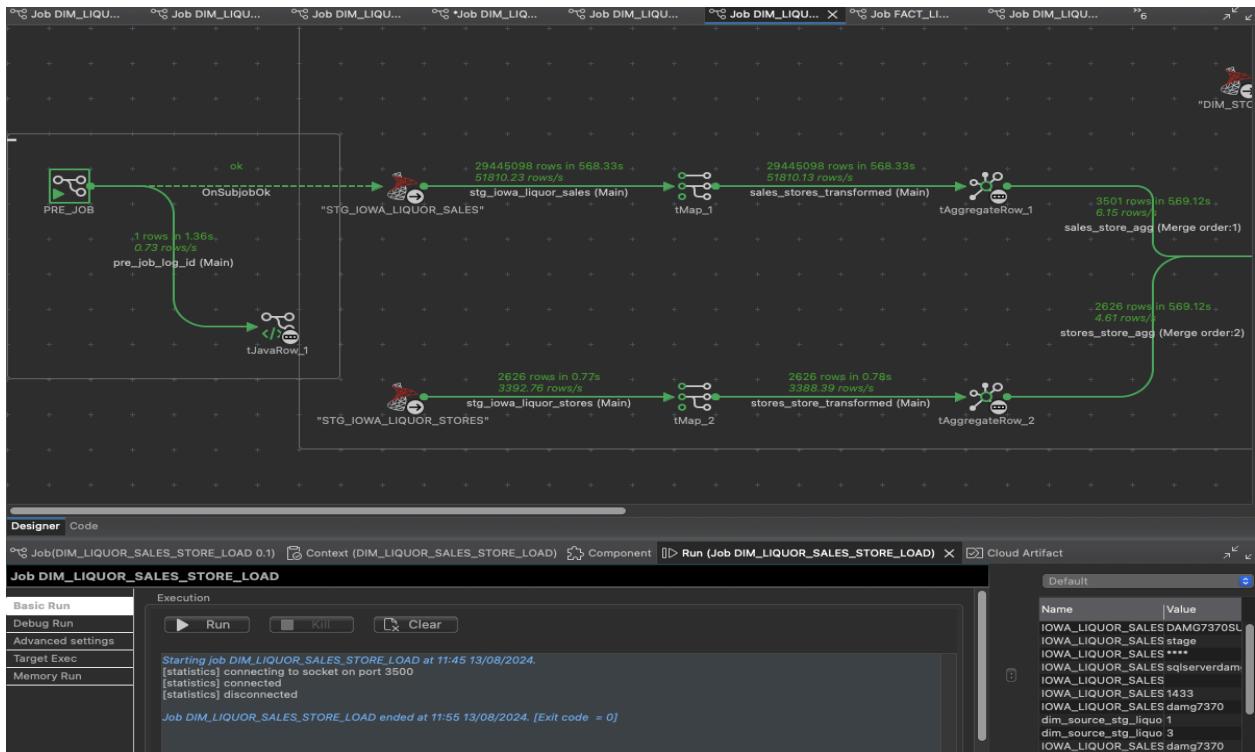
87
88  select count(*) from
89  ( select Address,City,County,[Zip Code],[Store Location] from stage.stg_iowa_liquor_sales
90  union
91  select Address,City, null as County,[Zip Code],Store from stage.STG_IOWA_LIQUOR_STORES)
92  a;
93

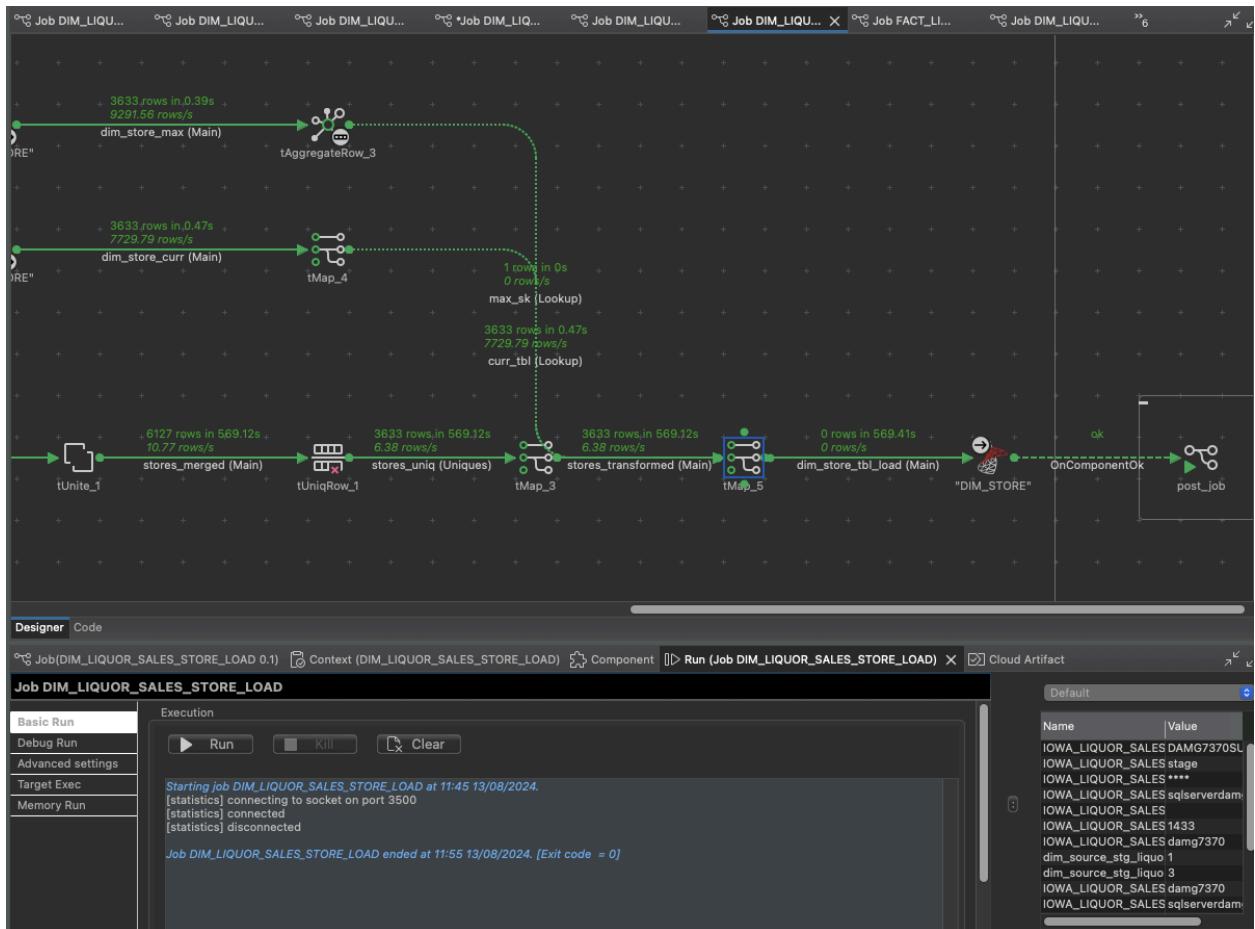
```

Results    Messages

	(No column name)	v
1	13618	

## DIM STORE:





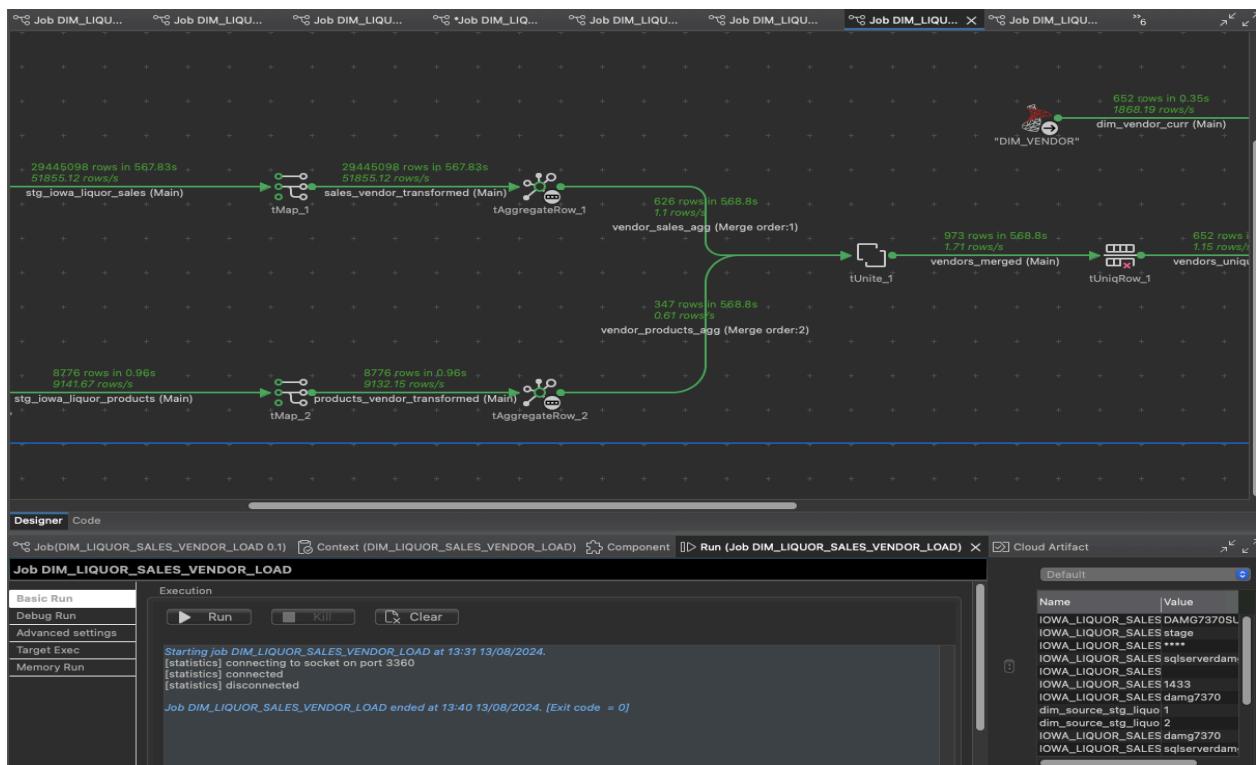
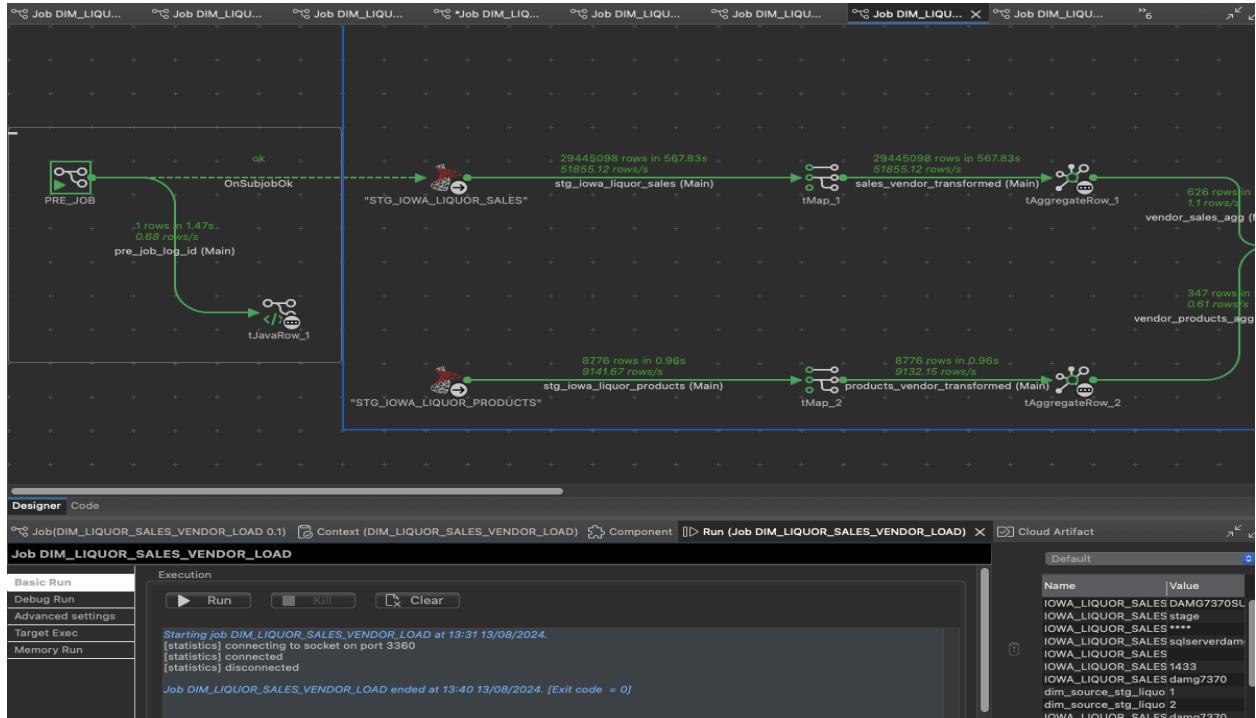
## VALIDATION QUERIES:

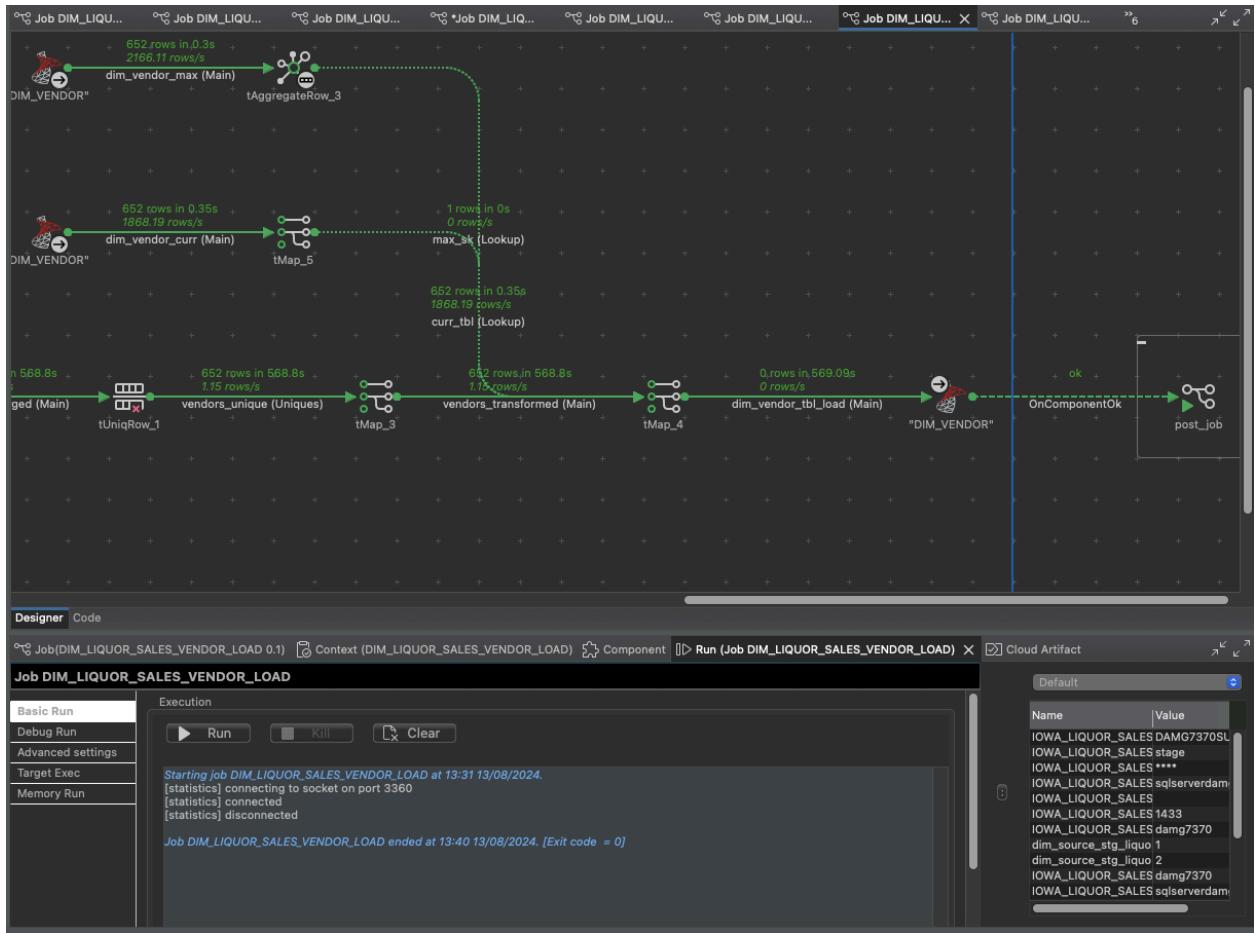
```

select count(*) from
(select distinct [Store Number],[Store Name] from stage.stg_iowa_liquor_sales
union
select distinct Store, Name from stage.STG_IOWA_LIQUOR_STORES)
a;
    
```

ults	Messages
(No column name)	3633

## DIM VENDOR:





## VALIDATION QUERIES:

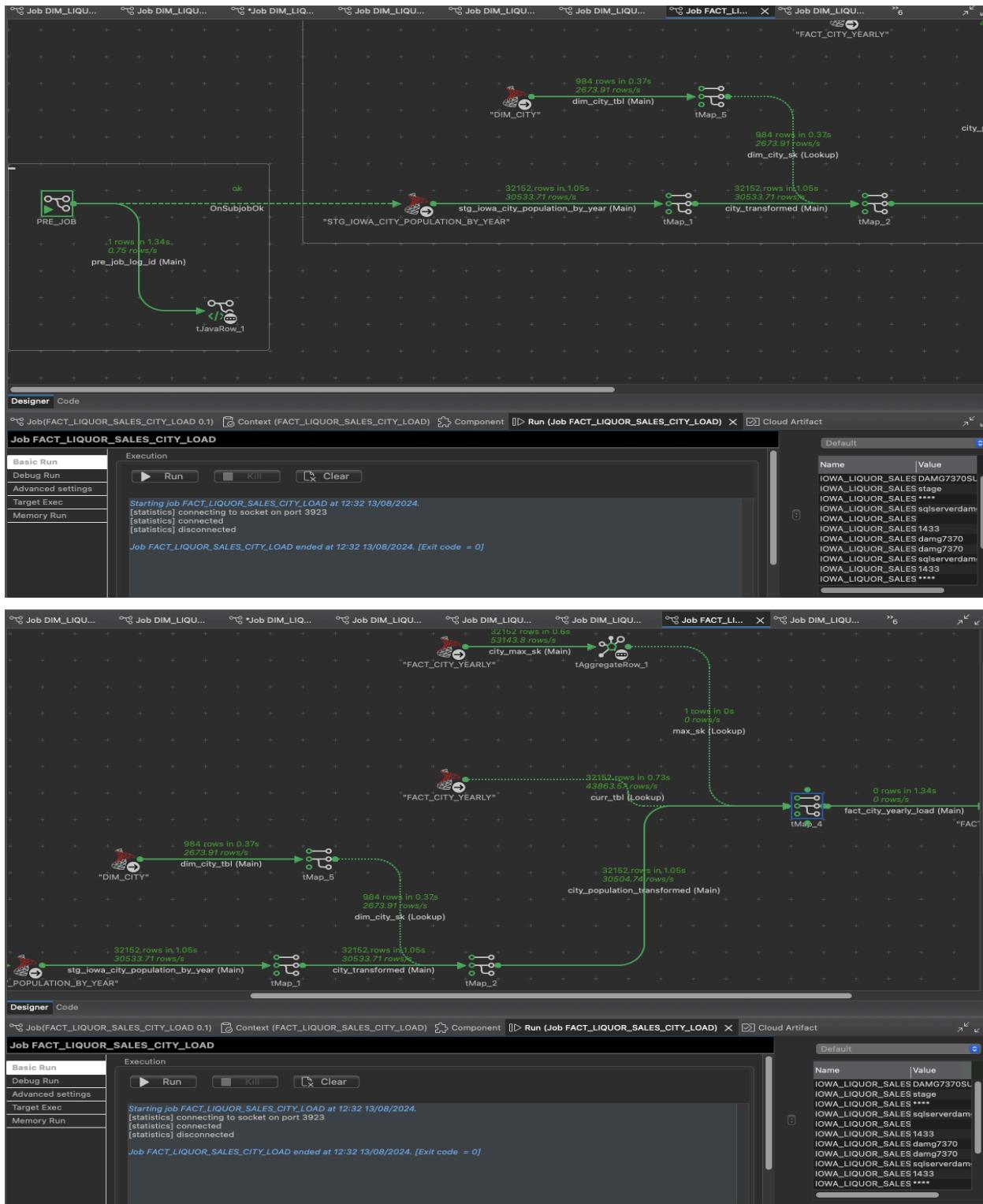
```

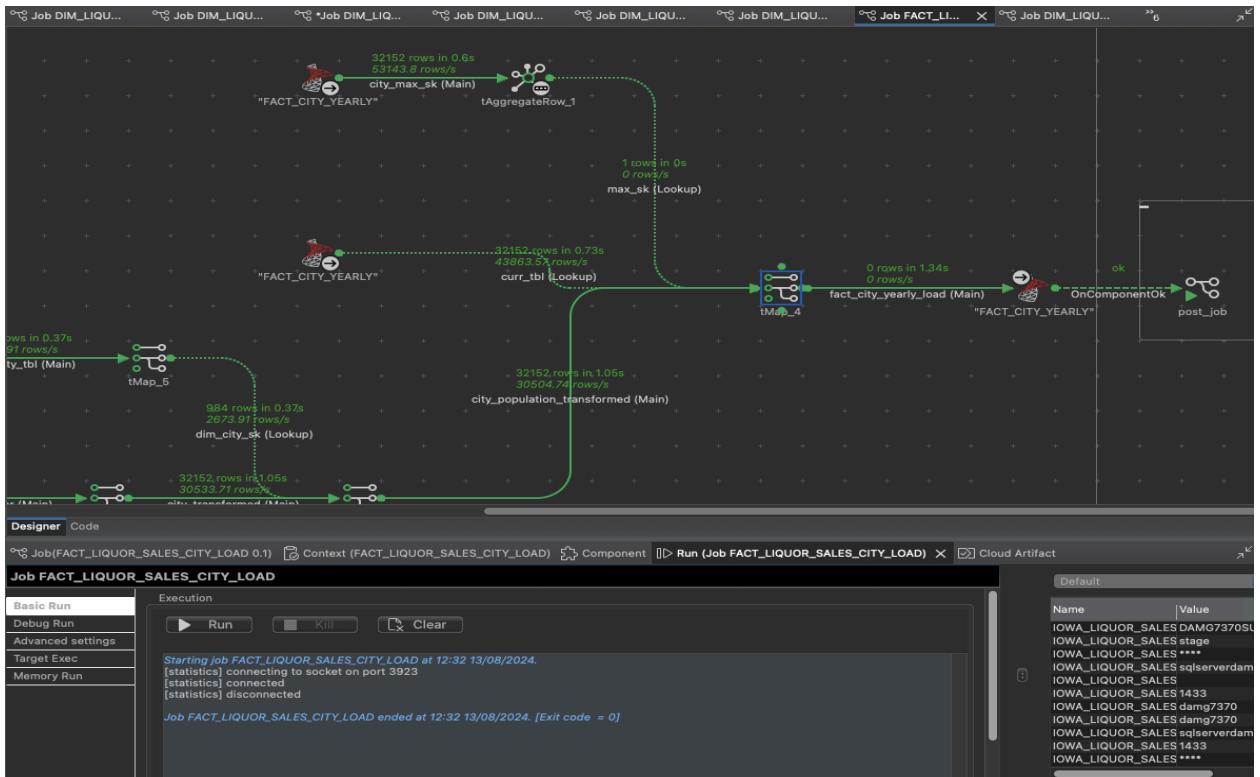
4
5   select count(*) from
6     (select distinct [Vendor Number], [Vendor Name] from stage.stg_iowa_liquor_sales
7   union
8     select distinct Vendor,[Vendor Name] from stage.STG_IOWA_LIQUOR_PRODUCTS)
9   a;

```

Results	Messages
(No column name) ▾	652

## FACT CITY LOAD:





## VALIDATION QUERIES:

```

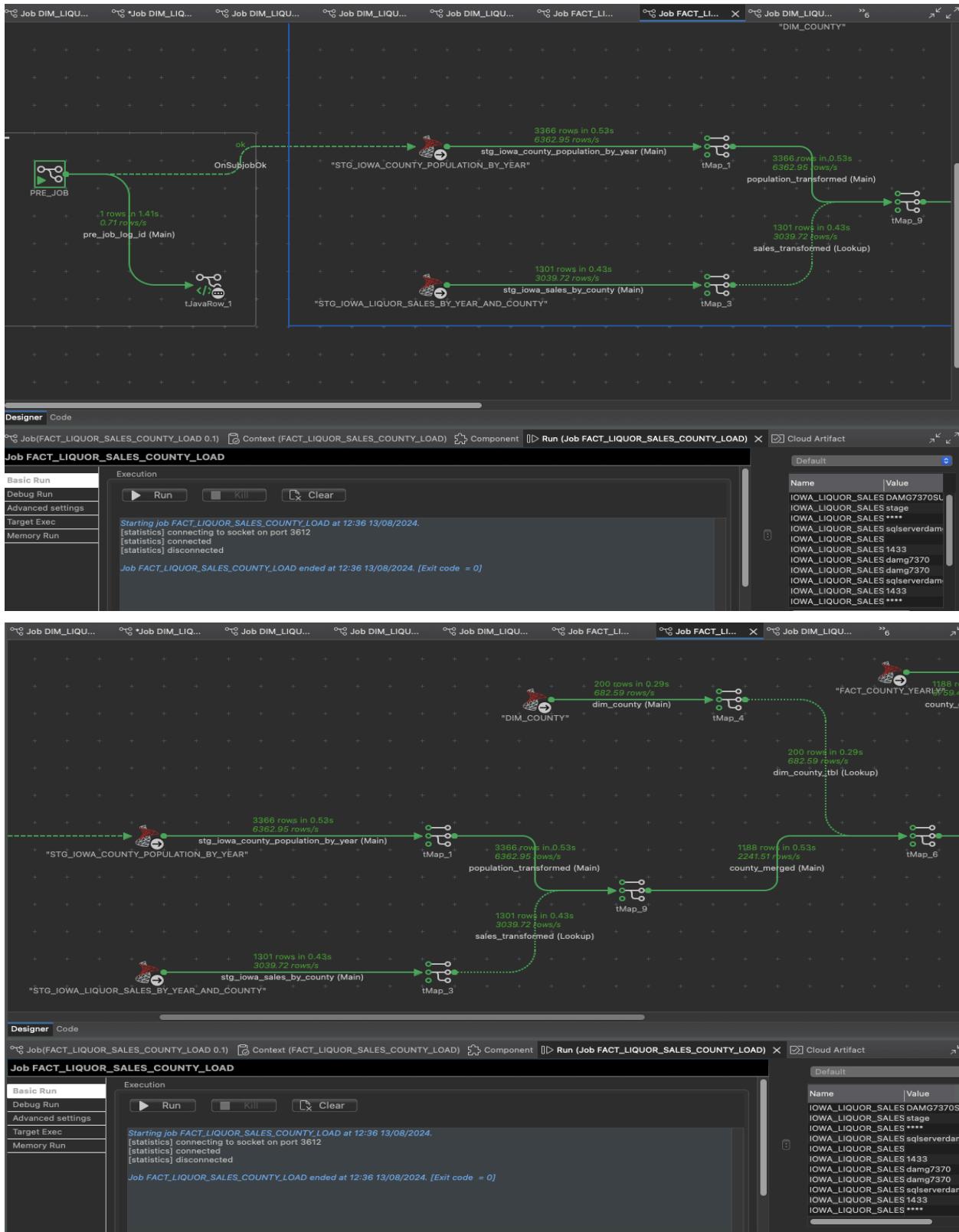
.27
.28   SELECT COUNT(*) FROM EDW.FACT_CITY_YEARLY;
.29
.30   SELECT COUNT(*) FROM STAGE.STG_IOWA_CITY_POPULATION_BY_YEAR;

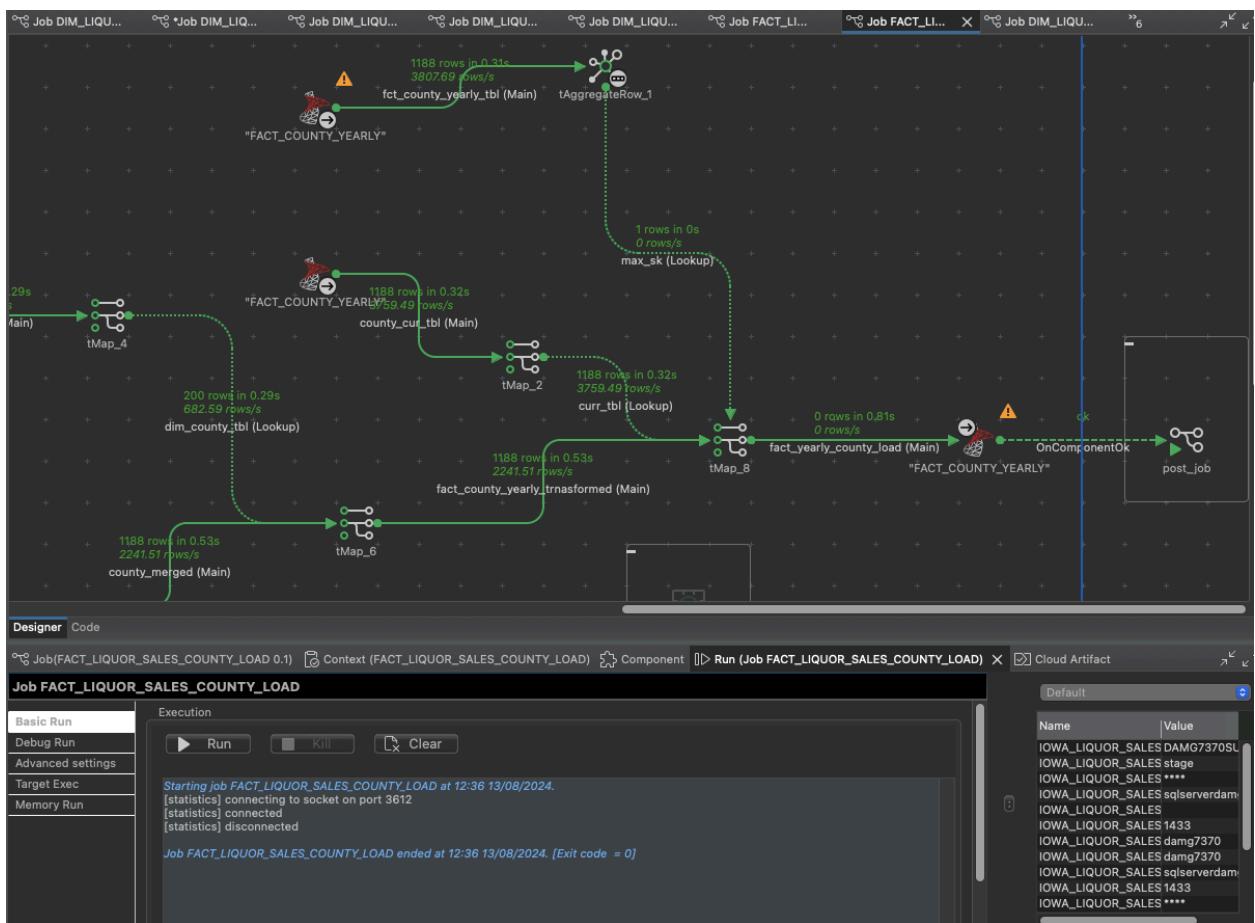
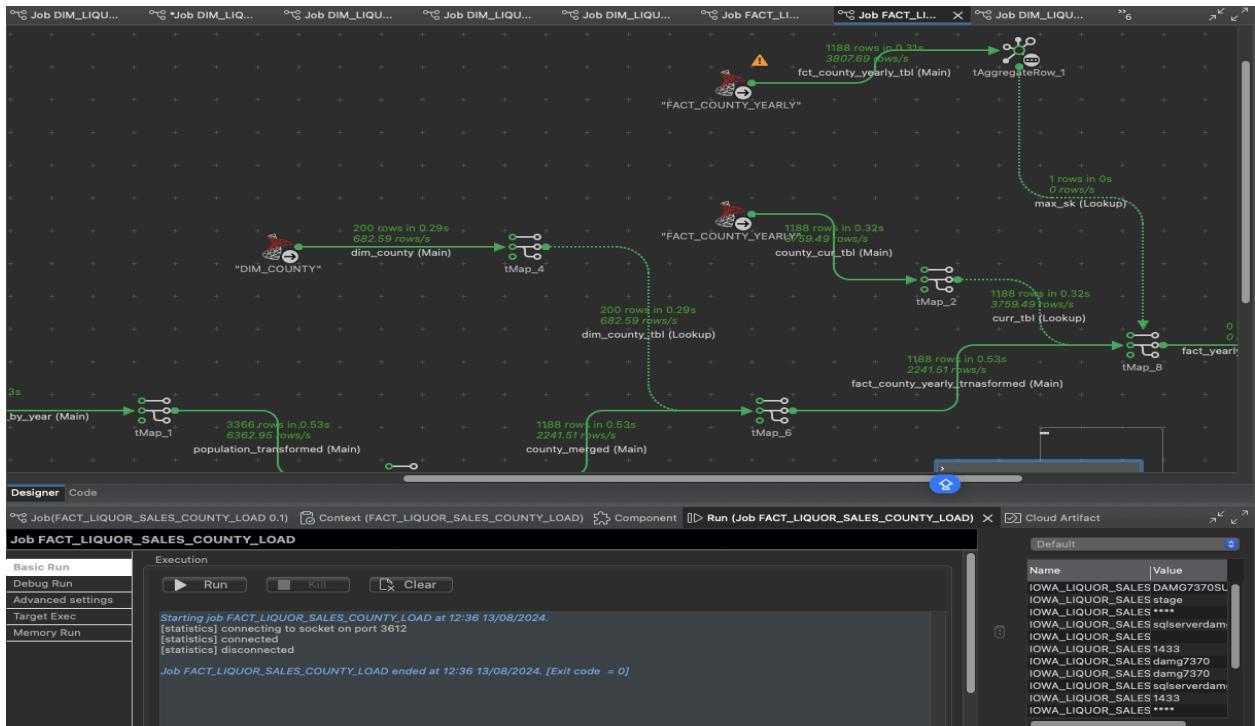
```

Results		Messages
(No column name) ▾		
32152		

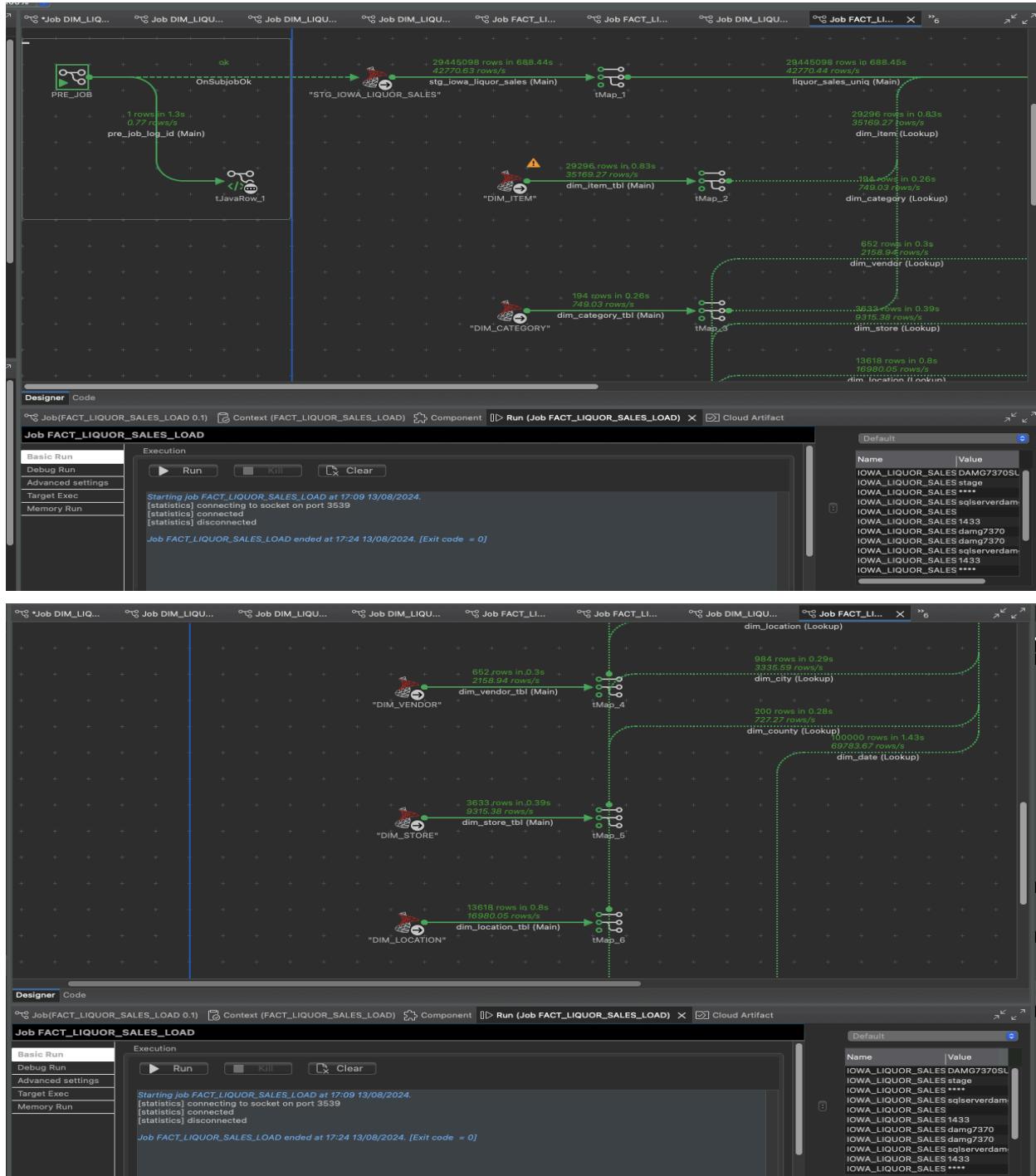
(No column name) ▾
32152

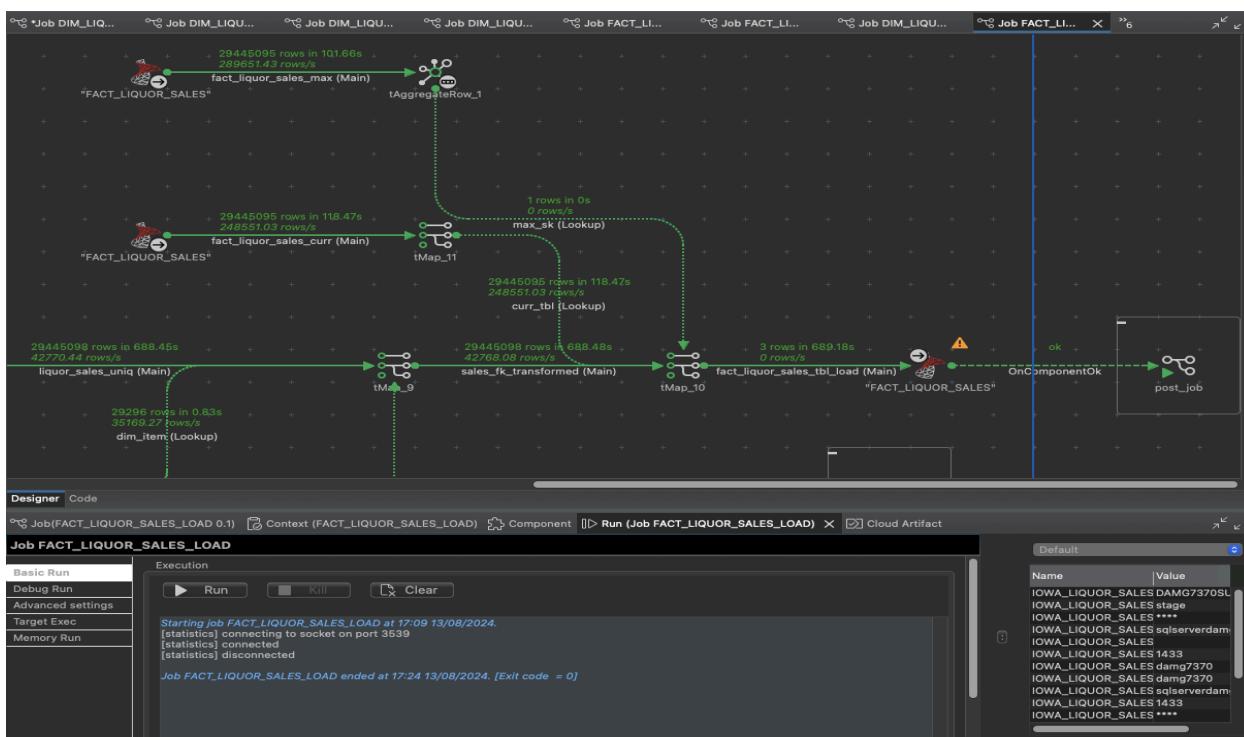
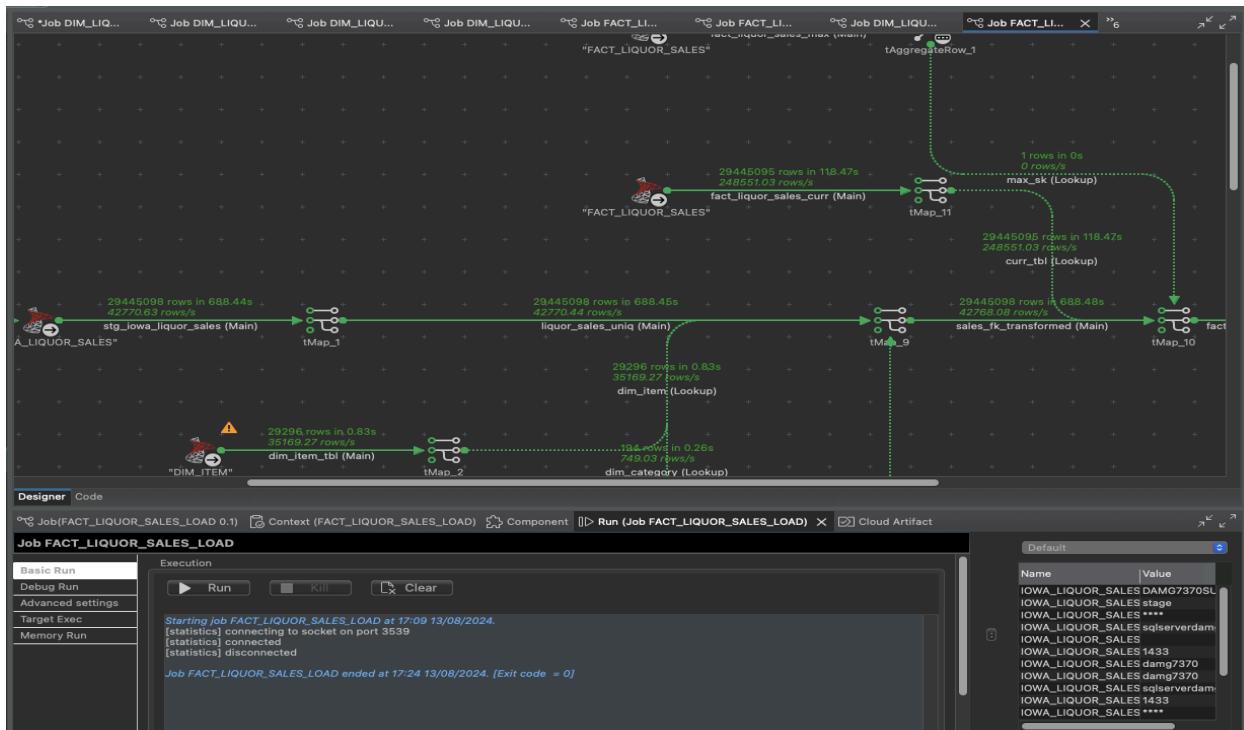
## FACT COUNTY LOAD - YEARLY:





## FACT LIQUOR SALES:





```
127  
128     SELECT COUNT(*) FROM EDW.FACT_COUNTY_YEARLY;  
129
```

**Results      Messages**

	(No column name) ▾
1	1188

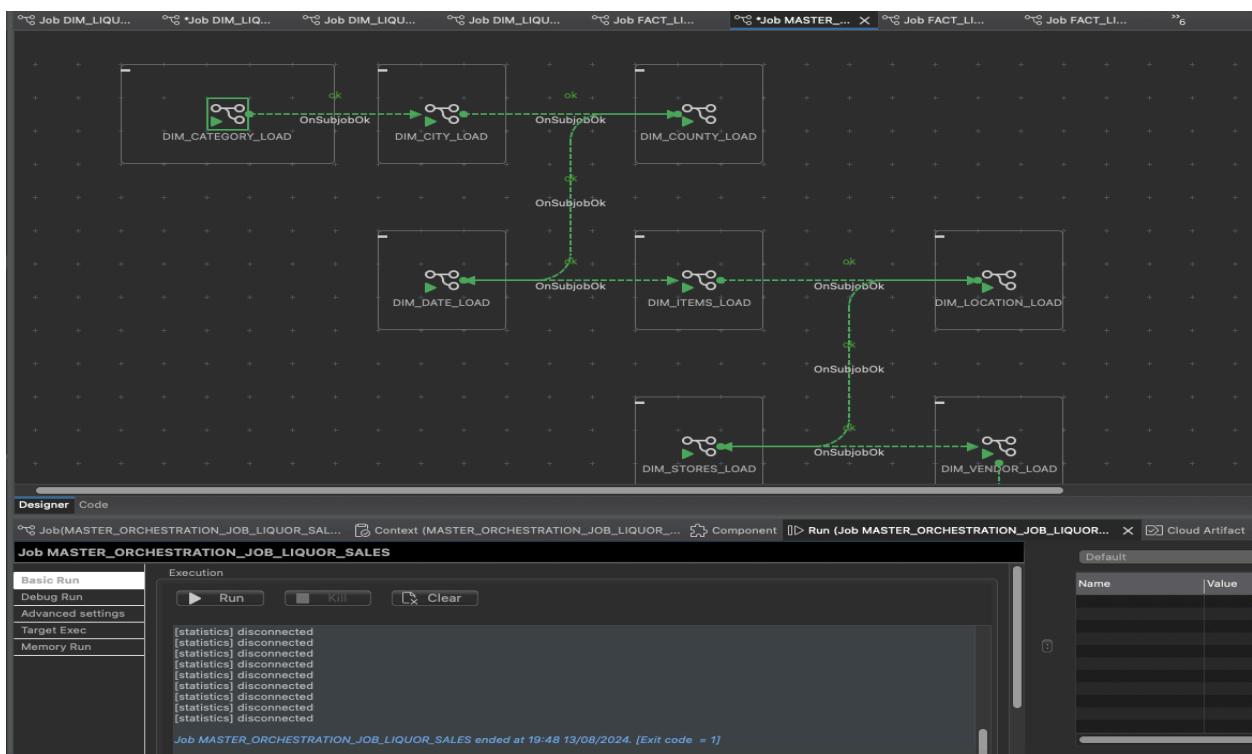
**PRE JOB:**

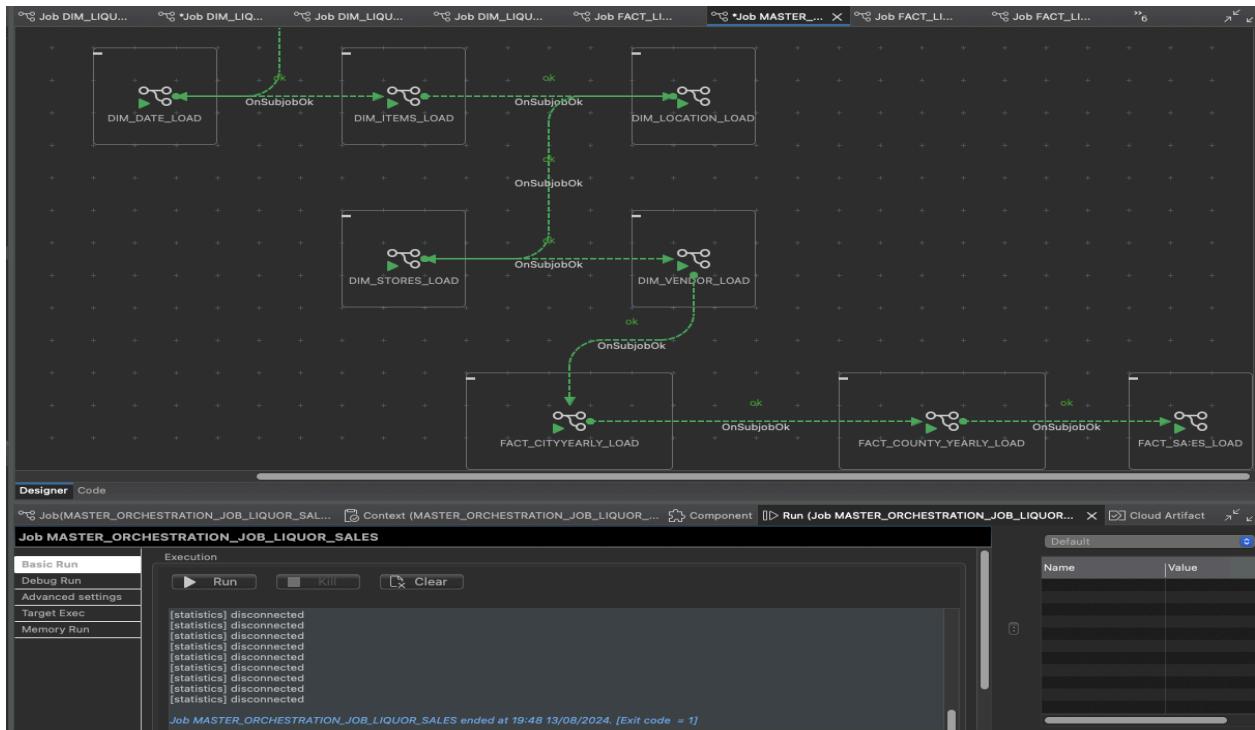


## POST JOB:



## ORCHESTRATION PIPELINE:





## BUSINESS QUERY VALIDATION:

### SALE \$:

```
131  select sum(SALE_DOLLARS) from edw.FACT_LIQUOR_SALES
132  where SALE_DOLLARS != -999.0;
```

---

### Results      Messages

(No column name)	▼
4280028009.3573475	

## **SALE VOLUME GALLONS:**

```
138
139
140    SELECT SUM(VOLUME SOLD IN GALLONS) AS TotalVolumeGallons
141    FROM EDW.FACT LIQUOR SALES;
142
143    SELECT SUM(CAST([Volume Sold (Gallons)] AS FLOAT)) AS TotalVolumeGallons
144    FROM stage.STG_IOWA_LIQUOR_SALES;
145
```

---

Results	Messages
	TotalVolumeGallons ▾
1	71063028.64830333

	TotalVolumeGallons ▾
1	71063028.49947977

## **QUANTITY SOLD:**

```
139
140    SELECT SUM(BOTTLE SOLD) AS TotalBottlesSold
141    FROM EDW.FACT LIQUOR SALES;
142
143    SELECT SUM(CAST([Bottles Sold] AS INT)) AS TotalBottlesSold
144    FROM stage.STG_IOWA_LIQUOR_SALES;
145
```

---

Results	Messages
	TotalBottlesSold ▾
1	319037503

	TotalBottlesSold ▾
1	319037503

## GROSS PROFIT:

```

139
140   SELECT
141     ... SUM((ITEM.STATE_BOTTLE_RETAIL_IN_DOLLARS - ITEM.STATE_BOTTLE_COST_IN_DOLLARS) * SALES.BOTTLE SOLD) AS GrossProfit
142   FROM
143     ... EDW.FACT_LIQUOR_SALES SALES
144   JOIN
145     ... EDW.DIM_ITEM ITEM ON SALES.DIM_ITEM_SK = ITEM.DIM_ITEM_SK;
146
147
148   SELECT
149     ...
150     ... SUM(
151       ... (CAST(REPLACE([State Bottle Retail], '$', '') AS FLOAT) -
152           CAST(REPLACE([State Bottle Cost], '$', '') AS FLOAT)) *

```

Results    Messages

GrossProfit
1430045397.95

TotalGrossProfit
1430045397.9475064

## PER CAPITA:

```

; 
;   SELECT
;     ... CITY.CITY_NAME,
;     ... SALES_BY_CITY_YEAR.YEAR,
;     ... (SALES_BY_CITY_YEAR.TotalSalesDollars / POP.TOTAL_POPULATION) AS SalesPerCapita
;   FROM
;     (
;       (
;         SELECT
;           ... SALES.DIM_CITY_SK,
;           ... DATE.[year] AS YEAR,
;           ... SUM(SALES.SALE_DOLLARS) AS TotalSalesDollars
;         FROM
;           ... EDW.FACT_LIQUOR_SALES SALES

```

Results    Messages

CITY_NAME	YEAR	SalesPerCapita
CHARITON	2012	63.25628324177713
WEST DES MOINES	2015	162.22645099036302
PAULLINA	2012	88.87070938595994
MARSHALLTOWN	2012	95.16212081568591
NEVADA	2012	62.079682462083674
TRIPOLI	2012	179.74719818109443
MAQUOKETA	2015	143.36523960558353
HAWARDEN	2012	50.64850377872797
JOHNSTON	2012	70.76364953606726
WESLEY	2015	618.3864361558062
WILTON	2014	26.600589487212776
PELLA	2012	77.49169464309627
ARNOLDS PARK	2013	340.4646379442312
STUART	2015	118.69504106849939
PLEASANT HILL	2012	69.76837717799013
OSCEOLA	2015	134.6466833173558

⊕ Battery saver  
Battery saver is on  
Consider plugging in

## Liquor Sales by time:

### Total:

```
189  
190  
191     SELECT SUM(TRADE_DOLLARS) AS TotalSales  
192     FROM EDW.FACT_LIQUOR_SALES;  
193
```

### Results    Messages

	TotalSales	▼
.	4280018019.3573465	

### By Year:

```
190  
191     SELECT  
192     DATE.[year] AS Year,  
193     SUM(TRADE_DOLLARS) AS TotalSales  
194     FROM  
195     EDW.FACT_LIQUOR_SALES SALES  
196     JOIN  
197     EDW.DIM_DATE DATE ON SALES.INVOICE_DATE = DATE.dim_date_key  
198     GROUP BY  
199     DATE.[year];  
200
```

### Results    Messages

	Year	▼	TotalSales	▼
1	2020		396663131.9963387	
2	2016		299447565.1242076	
3	2024		214752459.96569467	
4	2013		258103793.45392296	
5	2014		270587738.21201175	
6	2015		284328572.15670794	
7	2019		349220341.8437954	
8	2023		446070663.715027	
9	2022		428780004.61852825	
10	2021		428123535.7494005	
11	2012		255193324.09003404	
12	2017		314530045.1795839	
13	2018		334216843.2520865	

## Year,Month:

```

212
213    SELECT -
214      date.[year] AS Year,
215      date.month_name AS Month,
216      SUM(SALE_DOLLARS) AS TotalSales
217  FROM -
218    EDW.FACT_LIQUOR_SALES SALES
219  JOIN
220    EDW.DIM_DATE DATE ON SALES.INVOICE_DATE = DATE.dim_date_key
221  GROUP BY -
222    date.[year],date.month_name;

```

### Results    Messages

	Year	Month	TotalSales
1	2012	March	18139545.76689173
2	2013	April	22162040.758391544
3	2014	December	30625542.414892737
4	2015	December	30683137.920225367
5	2017	December	31385430.7941674
6	2019	March	24982728.386154532
7	2020	February	25720303.910183668
8	2021	April	34734921.8734591
9	2021	May	33659554.97171426
10	2021	June	38890929.27127135
11	2023	May	39684934.08327007
12	2023	September	35096964.04442692
13	2021	November	38007977.923683286
14	2021	December	42290767.11088228
15	2024	March	34164169.39604998

## YOY SALES:

```

!28
!29  SELECT -
!30    DATE.[year] AS Year,
!31    SUM(SALE_DOLLARS) AS TotalSales,
!32    SUM(SALE_DOLLARS) - LAG(SUM(SALE_DOLLARS)) OVER (ORDER BY DATE.[year]) AS YoYChange
!33  FROM -
!34    EDW.FACT_LIQUOR_SALES SALES
!35  JOIN
!36    EDW.DIM_DATE DATE ON SALES.INVOICE_DATE = DATE.dim_date_key
!37  GROUP BY DATE.[year];

```

### Results    Messages

	Year	TotalSales	YoYChange
	2012	255193324.09003404	NULL
	2013	258103793.45392296	2910469.3638889194
	2014	270587738.21201175	12483944.758088797
	2015	284328572.15670794	13740833.944696188
	2016	299447565.1242076	15118992.967499673
	2017	314530045.1795839	15082480.055376291
	2018	334216843.2520865	19686798.072502613
	2019	349220341.8437954	15003498.591708899
	2020	396663131.9963387	47442790.15254331
	2021	428123535.7494005	31460403.75306177
	2022	428780004.61852825	656468.8691277504
	2023	446070663.715027	17290659.096498728
	2024	214752459.96569467	-231318203.7493323

## Volume by Store:

```
227  
228  
229    SELECT  
230        ... STORE.STORE_NAME,  
231        ... SUM(SALE_DOLLARS) AS TotalSales  
232    FROM  
233        ... EDW.FACT_LIQUOR_SALES SALES  
234    JOIN  
235        ... EDW.DIM_STORE STORE ON SALES.DIM_STORE_SK = STORE.DIM_STORE_SK  
236    GROUP BY  
237        ... STORE.STORE_NAME;  
238
```

### Results    Messages

	STORE_NAME	TotalSales
1	HY-VEE FOOD STORE / MOUNT AYR	1321783.9623650408
2	CVS PHARMACY #8547 / IOWA CITY	880422.9812924195
3	MCCOY'S 1447	504719.00962693687
4	8 SECONDS / SIDNEY	186209.33052706718
5	AINSWORTH FOUR CORNERS / AINSWORTH	105845.66067504883
6	CASEY'S GENERAL STORE #20 / ALDEN	276602.81058887485
7	IOWA MINI MART	1489419.265696764
8	HY-VEE WINE AND SPIRITS (1544) / RED OAK	913906.602973938
9	OAK STREET STATION LLC	479287.3114795685
10	RIVERSIDE CASINO AND RESORT	1530842.9448448562
11	WAL-MART 2714 / SPENCER	4737830.927213497
12	FAREWAY STORES #554 / WASHINGTON	1145492.1611363983
13	YESWAY STORE # 10016/ FORT DODGE	59502.96012067795
14	WORLD CLASS LIQUOR AND TOBACCO / BONDURANT	228577.50075244904
15	WAL-MART 1005 / WAVERLY	3306511.914318924

## Volume by County:

```
248  
249    SELECT  
250        ... COUNTY.COUNTY_NAME,  
251        ... SUM(SALE_DOLLARS) AS TotalSales  
252    FROM  
253        ... EDW.FACT_LIQUOR_SALES SALES  
254    JOIN  
255        ... EDW.DIM_COUNTY COUNTY ON SALES.DIM_COUNTRY_SK = COUNTY.DIM_COUNTRY_SK  
256    GROUP BY  
257        ... COUNTY.COUNTY_NAME;
```

### Results    Messages

COUNTY_NAME	TotalSales
GRUNDY	4358455.000899353
OSCEOLA	3556720.4013982727
HARRISON	7586006.356584596
CLINTON	69447393.6125218
CASS	16543165.293222947
CLAY	22282446.657522332
MUSCATINE	45691098.57554239
DUBUQUE	125544679.62186778
POTTAWATTAMIE	152927534.3862543
WRIGHT	9576229.457868915
PAGE	16717784.865060467
MITCHELL	6084732.976040058

### Volume by City:

```
248
249  SELECT ...
250    ... CITY.CITY_NAME,
251    ... SUM(SALE_DOLLARS) AS TotalSales
252  FROM ...
253    ... EDW.FACT_LIQUOR_SALES SALES
254  JOIN ...
255    ... EDW.DIM_CITY CITY ON SALES.DIM_CITY_SK = CITY.DIM_CITY_SK
256  GROUP BY ...
257    ... CITY.CITY_NAME;
```

Results    Messages

	CITY_NAME	TotalSales
	FORT DODGE	49905755.82487713
	BLAIRSTOWN	146722.5005683899
	WEST UNION	3378079.1026842976
	HOLSTEIN	3527728.050129213
	BAXTER	490912.9300597381
	MIDDLETON	162822.4605231285
	CARLISLE	3182201.446432934
	DUBUQUE	112591003.63046123
	MCGREGOR	84426.16006004333
0	DANVILLE	146947.08055252075

### Volume by Category:

```
267
268  SELECT ...
269    ... CATEGORY.CATEGORY_NAME,
270    ... SUM(SALE_DOLLARS) AS TotalSales
271  FROM ...
272    ... EDW.FACT_LIQUOR_SALES SALES
273  JOIN ...
274    ... EDW.DIM_CATEGORY CATEGORY ON SALES.DIM_CATEGORY_SK = CATEGORY.DIM_CATEGORY
275  GROUP BY ...
276    ... CATEGORY.CATEGORY_NAME;
```

Results    Messages

	CATEGORY_NAME	TotalSales
1	WATERMELON SCHNAPPS	1705878.7388405614
2	TEQUILA	68479198.90052748
3	RASPBERRY SCHNAPPS	599720.012416916
4	GREEN CREME DE MENTHE	314298.3767780304
5	MISCELLANEOUS SCHNAPPS	1775350.1092451052
6	COFFEE LIQUEURS	24316713.84280516
7	IMPORTED GRAPE BRANDIES	25586569.912548006
8	PEACH BRANDIES	767577.5633874893
9	HOLIDAY VAP	3637.5200843811035
10	TROPICAL FRUIT SCHNAPPS	430689.14580186846
11	IMPORTED VODKA - MISC	29632934.096739266

### Volume by Item:

```
2
3     ... SELECT ...
4     ... ITEM.ITEM_DESCRIPTION,
5     ... SUM(SALE_DOLLARS) AS TotalSales
6   < FROM ...
7   ... EDW.FACT_LIQUOR_SALES SALES
8   < JOIN ...
9   ... EDW.DIM_ITEM ITEM ON SALES.DIM_ITEM_SK = ITEM.DIM_ITEM_SK
0   < GROUP BY ...
1     ... ITEM.ITEM_DESCRIPTION;
2
```

results Messages

ITEM_DESCRIPTION	TotalSales
JOSE CUERVO AUTHENTIC WATERMELON MARGARITA	970366.3192381859
CEDAR RIDGE SINGLE BARREL THE QUINTESSENTIAL SINGLE MALT	161401.5
FEW SPIRITS STRAIGHT AMERICAN WHISKEY	4185
OAK & EDEN 4-GRAIN & SPIRE	29712.5
DIEP9 YOUNG GENEVER	625.6799926757812
SMIRNOFF VODKA 100 PRF	935860.3741173173
JIM BEAM VANILLA MINI	258248.0986480713
SEAGRAMS EXTRA DRY GIN	12217680.649551429
BACARDI COCO MINI	6377.25
2XO KIAWAH BLEND	31725
MARIE BRIZARD APRY	829.0199890136719
FORBIDDEN SECRET COFFEE PACK	6518.85003414154

### Volume by Vendor:

```
97
98   < SELECT
99     | VENDOR.VENDOR_NAME,
10    | SUM(SALE_DOLLARS) AS TotalSales
11   < FROM ...
12   | EDW.FACT_LIQUOR_SALES SALES
13   < JOIN ...
14   | EDW.DIM_VENDOR VENDOR ON SALES.DIM_VENDOR_SK = VENDOR.DIM_VENDOR_SK
15   < GROUP BY
16     | VENDOR.VENDOR_NAME;
17
```

results Messages

VENDOR_NAME	TotalSales
LEATHERBEE DISTILLERS	567.1199951171875
QUADRO GROUP LLC	111735.62988098143
MASON DIXON SPIRITS LLC	225
STERN BEVERAGE	29055
FIFTH GENERATION INC.	11837277.302263869
HAMILTON DISTILLERS GROUP, INC	342
GREEN RIVER DISTILLING COMPANY	21471.359619140625
3-OAKS DISTILLERY, LLC	50461.19979095459
GRAND PRIX BEVERAGE LLC	368747.49053382874

### Overall consumption year-wise:

```
313
314     SELECT ...
315     ... DATE.[year] AS Year,
316     ... SUM(VOLUME SOLD IN GALLONS) AS TotalConsumption
317   <-- FROM ...
318   ... EDW.FACT LIQUOR SALES SALES
319   <-- JOIN ...
320   ... EDW.DIM_DATE DATE ON SALES.INVOICE_DATE = DATE.dim_date_key
321   <-- GROUP BY ...
322   ... DATE.[year];
323
```

Results    Messages

	Year	TotalConsumption
1	2024	2991130.8365394976
2	2023	6253366.250995424
3	2020	6381500.034923336
4	2022	6210901.060866145
5	2021	6524942.849944968
6	2013	4907690.926531259
7	2014	5061262.588244329
8	2015	5182900.49045716
9	2012	4954851.876064091
10	2017	5573698.6098978985
11	2018	5779170.83955726
12	2016	5363089.019261176
13	2019	5878523.265018465

### Spirit/Liquor with more sale:

```
332
333     SELECT TOP 1
334     ... CATEGORY.CATEGORY_NAME,
335     ... SUM(SALE_DOLLARS) AS TotalSales
336   FROM ...
337   ... EDW.FACT LIQUOR SALES SALES
338   JOIN ...
339   ... EDW.DIM_CATEGORY CATEGORY ON SALES.DIM_CATEGORY_SK = CATEGORY.DIM_CATEGORY_SK
340   GROUP BY ...
341   ... CATEGORY.CATEGORY_NAME
342   ORDER BY ...
343   ... TotalSales DESC; ...
```

Results    Messages

	CATEGORY_NAME	TotalSales
1	CANADIAN WHISKIES	503453111.3609573

### **TOP 3 LIQUOR TYPES:**

```
47  SELECT TOP 3
48    |     ITEM.ITEM_DESCRIPTION,
49    |     SUM(SALE_DOLLARS) AS TotalSales
50  FROM
51    |     EDW.FACT_LIQUOR_SALES SALES
52  JOIN
53    |     EDW.DIM_ITEM ITEM ON SALES.DIM_ITEM_SK = ITEM.DIM_ITEM_SK
54  GROUP BY
55    |     ITEM.ITEM_DESCRIPTION
56  ORDER BY
57    |     TotalSales DESC;
58
```

Results    Messages

ITEM_DESCRIPTION	TotalSales
TITOS HANDMADE VODKA	173858371.846642
BLACK VELVET	152991174.4527935
FIREBALL CINNAMON WHISKEY	100251768.4777385

### **BOTTLE SIZE FAVOURABLE:**

```
366
367  SELECT *
368
369  TOP 1
370  ....ITEM.BOTTLE_VOLUME_IN_ML,
371  ....SUM(SALE_DOLLARS) AS TotalSales
372  FROM
373  ....EDW.FACT_LIQUOR_SALES SALES
374  JOIN
375  ....EDW.DIM_ITEM ITEM ON SALES.DIM_ITEM_SK = ITEM.DIM_ITEM_SK
376  GROUP BY
377  ....ITEM.BOTTLE_VOLUME_IN_ML
378  ORDER BY
```

Results    Messages

	BOTTLE_VOLUME_IN_ML	TotalSales
1	750.00	1789693935.981517

## **TOP 20 Stores:**

```
7
8  SELECT
9  TOP 20
0    ... STORE.STORE_NAME,
1    ... SUM(SALE_DOLLARS) AS TotalSales
2  FROM-
3    ... EDW.FACT_LIQUOR_SALES SALES
4  JOIN-
5    ... EDW.DIM_STORE STORE ON SALES.DIM_STORE_SK = STORE.DIM_STORE_SK
6  GROUP BY-
7    ... STORE.STORE_NAME
8  ORDER BY-
9    ... TotalSales DESC;
```

results Messages

STORE_NAME	TotalSales
HY-VEE #3 / BDI / DES MOINES	136984658.60036552
CENTRAL CITY 2	120808752.81066549
HY-VEE WINE AND SPIRITS / IOWA CITY	48768628.41721025
SAM'S CLUB 8162 / CEDAR RAPIDS	43930978.11664818
SAM'S CLUB 6344 / WINDSOR HEIGHTS	42413927.56599152
BENZ DISTRIBUTING	38936020.06551716
WILKIE LIQUORS	36964529.868921414
LOT-A-SPIRITS	30922851.603161603
SAM'S CLUB 8238 / DAVENPORT	29923041.74768822
CENTRAL CITY LIQUOR, INC.	28779986.26959592
I-80 LIQUOR / COUNCIL BLUFFS	27898374.12235921

## **TOP 20 Cities:**

```
3  SELECT
4  TOP 20
5    ... CITY.CITY_NAME,
6    ... SUM(SALE_DOLLARS) AS TotalSales
7  FROM-
8    ... EDW.FACT_LIQUOR_SALES SALES
9  JOIN-
0    ... EDW.DIM_CITY CITY ON SALES.DIM_CITY_SK = CITY.DIM_CITY_SK
1  GROUP BY
2    ... CITY.CITY_NAME
3  ORDER BY
4    ... TotalSales DESC;
```

results Messages

STORE_NAME	TotalSales
HY-VEE #3 / BDI / DES MOINES	136984658.60036552
CENTRAL CITY 2	120808752.81066549
HY-VEE WINE AND SPIRITS / IOWA CITY	48768628.41721025
SAM'S CLUB 8162 / CEDAR RAPIDS	43930978.11664818
SAM'S CLUB 6344 / WINDSOR HEIGHTS	42413927.56599152
BENZ DISTRIBUTING	38936020.06551716
WILKIE LIQUORS	36964529.868921414
LOT-A-SPIRITS	30922851.603161603
SAM'S CLUB 8238 / DAVENPORT	29923041.74768822

### Top 10 Counties:

```
14  <-- SELECT TOP 10
15  <--   COUNTY.COUNTY_NAME,
16  <--   SUM(SALE_DOLLARS) AS TotalSales
17  <-- FROM
18  <--   EDW.FACT_LIQUOR_SALES SALES
19  <-- JOIN
20  <--   EDW.DIM_COUNTY COUNTY ON SALES.DIM_COUNTRY_SK = COUNTY.DIM_COUNTRY_SK
21  <-- GROUP BY
22  <--   COUNTY.COUNTY_NAME
23  <-- ORDER BY
24  <--   TotalSales DESC;
```

results Messages

COUNTY_NAME	TotalSales
POLK	976560233.3268182
LINN	368604084.69133943
SCOTT	297681781.13049495
JOHNSON	251100138.8685602
BLACK HAWK	235551704.09769827
POTTAWATTAMIE	152927534.38625434
WOODBURY	146533868.8044614
STORY	127300801.69624087
DUBUQUE	125544679.62186776
DALLAS	102293878.16243309

### Top 10 Categories:

```
155
156
157 <-- SELECT TOP 20
158 <--   CATEGORY.CATEGORY_NAME,
159 <--   SUM(SALE_DOLLARS) AS TotalSales
160 <-- FROM
161 <--   EDW.FACT_LIQUOR_SALES SALES
162 <-- JOIN
163 <--   EDW.DIM_CATEGORY CATEGORY ON SALES.DIM_CATEGORY_SK = CATEGORY.DIM_CATEGORY_SK
164 <-- GROUP BY
165 <--   CATEGORY.CATEGORY_NAME
166 <-- ORDER BY
167 <--   TotalSales DESC;
```

results Messages

CATEGORY_NAME	TotalSales
CANADIAN WHISKIES	503453111.3609573
AMERICAN VODKAS	441849577.92382574
STRAIGHT BOURBON WHISKIES	294295788.360106
SPICED RUM	275065676.37911046
WHISKEY LIQUEUR	223934567.8961923
IMPORTED VODKAS	193883336.28063643
TENNESSEE WHISKIES	177918740.66964948
100% AGAVE TEQUILA	155268283.40017843
VODKA 80 PROOF	145757895.2490492
BLENDED WHISKIES	119420447.85301821
IMPORTED BRANDIES	97958186.69607115