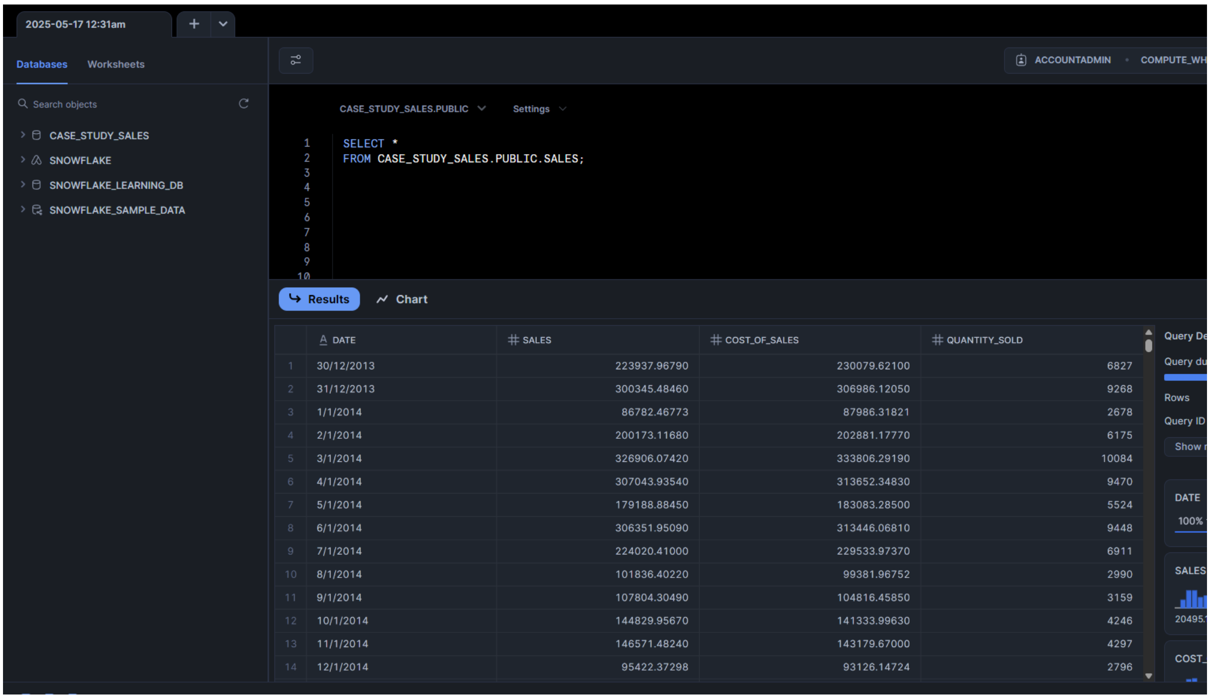
# METHODOLOGY

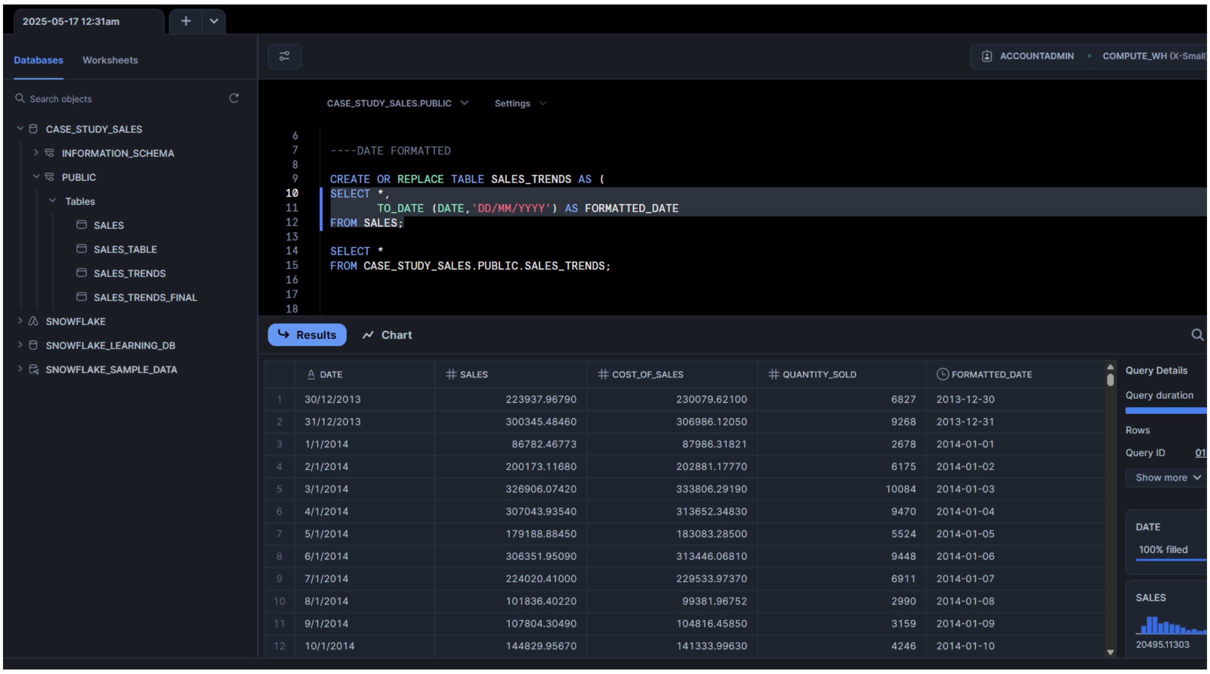
1. Verifying the data.



```sql
SELECT *
FROM CASE_STUDY_SALES.PUBLIC.SALES;
```

| | DATE | SALES | COST_OF_SALES | QUANTITY_SOLD |
|---|---|---|---|---|
| 1 | 30/12/2013 | 223937.96790 | 230079.62100 | 6827 |
| 2 | 31/12/2013 | 300345.48460 | 306986.12050 | 9268 |
| 3 | 1/1/2014 | 86782.46773 | 87986.31821 | 2678 |
| 4 | 2/1/2014 | 200173.11680 | 202881.17770 | 6175 |
| 5 | 3/1/2014 | 326906.07420 | 333806.29190 | 10084 |
| 6 | 4/1/2014 | 307043.93540 | 313652.34830 | 9470 |
| 7 | 5/1/2014 | 179188.88450 | 183083.28500 | 5524 |
| 8 | 6/1/2014 | 306351.95090 | 313446.06810 | 9448 |
| 9 | 7/1/2014 | 224020.41000 | 229533.97370 | 6911 |
| 10 | 8/1/2014 | 101836.40220 | 99381.96752 | 2990 |
| 11 | 9/1/2014 | 107804.30490 | 104816.45850 | 3159 |
| 12 | 10/1/2014 | 144829.95670 | 141333.99630 | 4246 |
| 13 | 11/1/2014 | 146571.48240 | 143179.67000 | 4297 |
| 14 | 12/1/2014 | 95422.37298 | 93126.14724 | 2796 |

2. Formatting date and creating a new table .



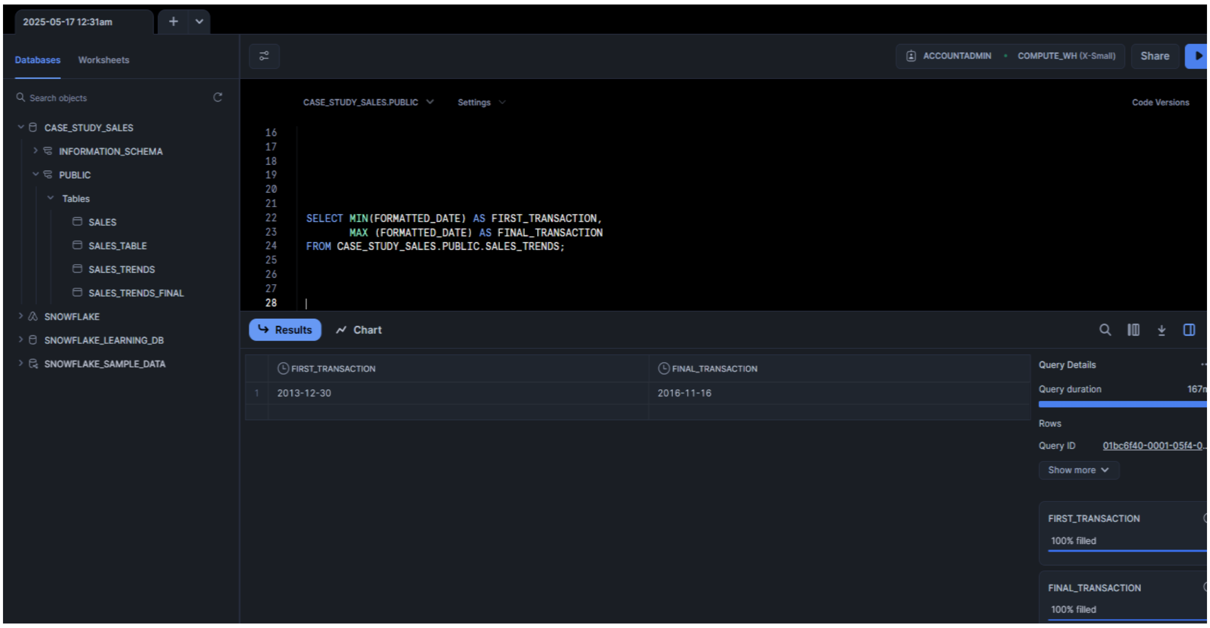
```sql
----DATE FORMATTED

CREATE OR REPLACE TABLE SALES_TRENDS AS (
SELECT *,
      TO_DATE (DATE,'DD/MM/YYYY') AS FORMATTED_DATE
FROM SALES);

SELECT *
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS;
```

| | DATE | SALES | COST_OF_SALES | QUANTITY_SOLD | FORMATTED_DATE |
|---|---|---|---|---|---|
| 1 | 30/12/2013 | 223937.96790 | 230079.62100 | 6827 | 2013-12-30 |
| 2 | 31/12/2013 | 300345.48460 | 306986.12050 | 9268 | 2013-12-31 |
| 3 | 1/1/2014 | 86782.46773 | 87986.31821 | 2678 | 2014-01-01 |
| 4 | 2/1/2014 | 200173.11680 | 202881.17770 | 6175 | 2014-01-02 |
| 5 | 3/1/2014 | 326906.07420 | 333806.29190 | 10084 | 2014-01-03 |
| 6 | 4/1/2014 | 307043.93540 | 313652.34830 | 9470 | 2014-01-04 |
| 7 | 5/1/2014 | 179188.88450 | 183083.28500 | 5524 | 2014-01-05 |
| 8 | 6/1/2014 | 306351.95090 | 313446.06810 | 9448 | 2014-01-06 |
| 9 | 7/1/2014 | 224020.41000 | 229533.97370 | 6911 | 2014-01-07 |
| 10 | 8/1/2014 | 101836.40220 | 99381.96752 | 2990 | 2014-01-08 |
| 11 | 9/1/2014 | 107804.30490 | 104816.45850 | 3159 | 2014-01-09 |
| 12 | 10/1/2014 | 144829.95670 | 141333.99630 | 4246 | 2014-01-10 |

3. Min and Max dates to understand the time frame.

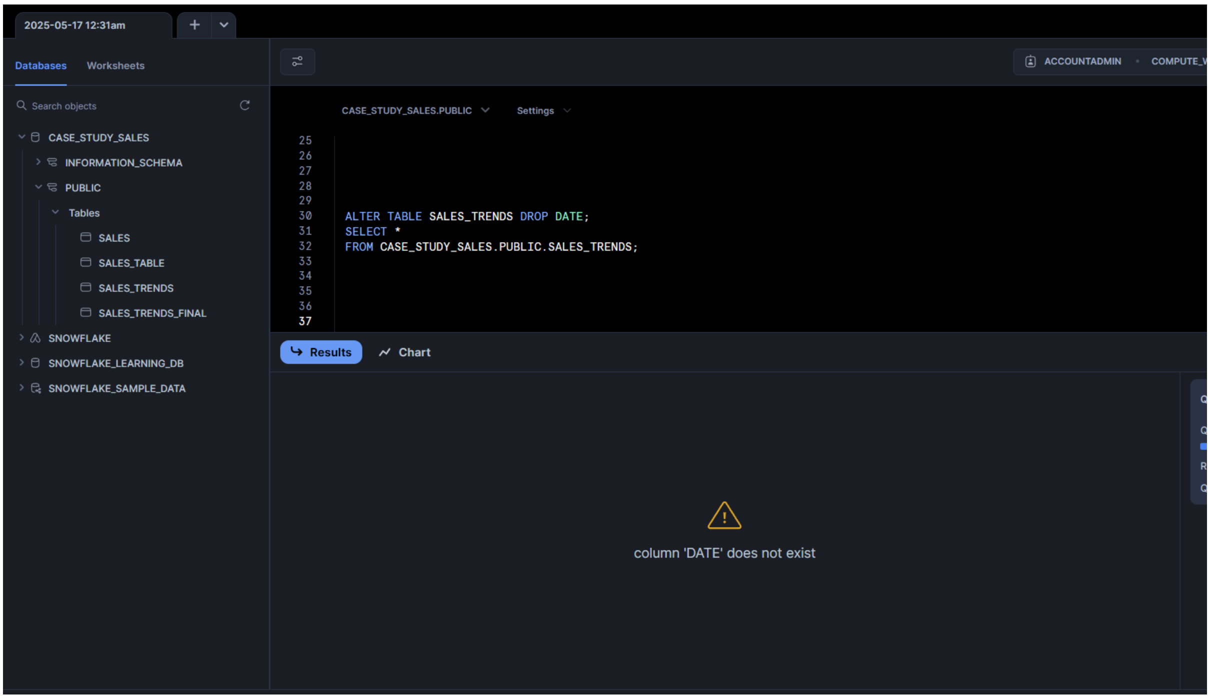


```
SELECT MIN(FORMATTED_DATE) AS FIRST_TRANSACTION,
       MAX (FORMATTED_DATE) AS FINAL_TRANSACTION
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS;
```

|  | FIRST_TRANSACTION | FINAL_TRANSACTION |
|---|---|---|
| 1 | 2013-12-30 | 2016-11-16 |

Query Details
Query duration 167m
Rows
Query ID 01bc6f40-0001-05f4-0...
Show more
FIRST_TRANSACTION 100% filled
FINAL_TRANSACTION 100% filled

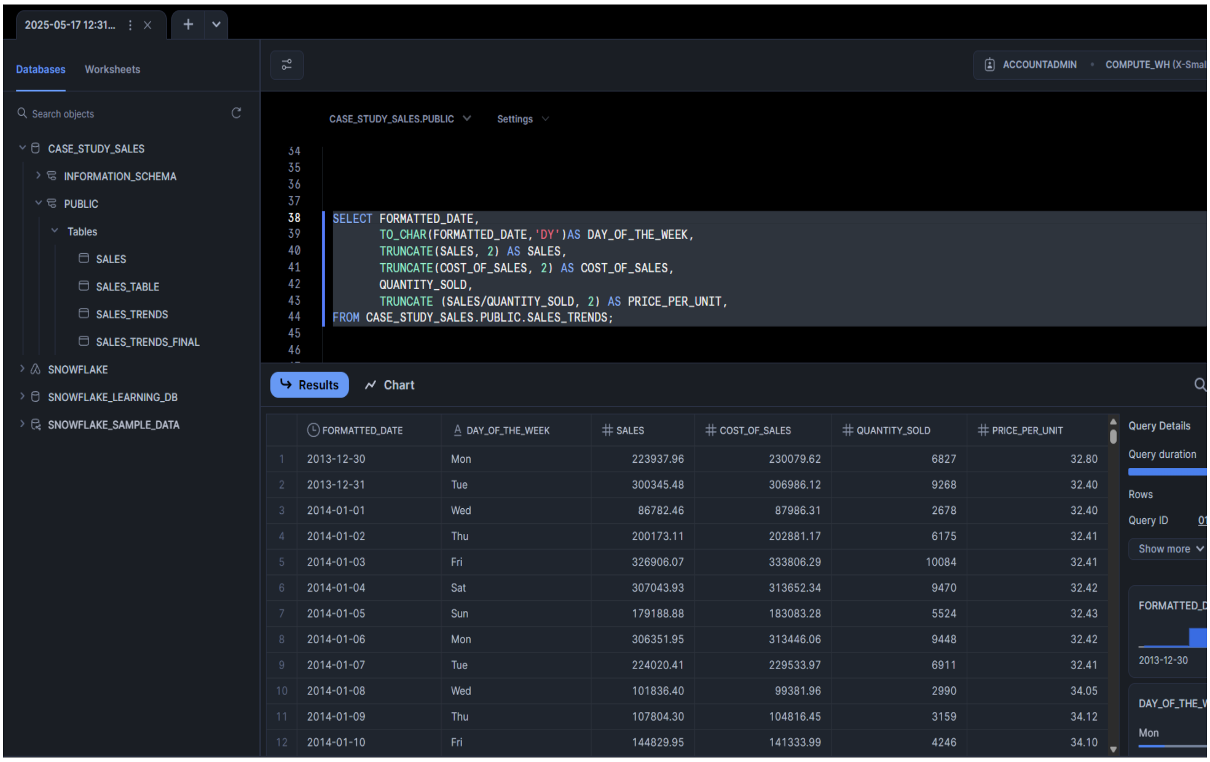
4. Dropping the old date and leaving the new, formatted date.



```
ALTER TABLE SALES_TRENDS DROP DATE;
SELECT *
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS;
```

column 'DATE' does not exist

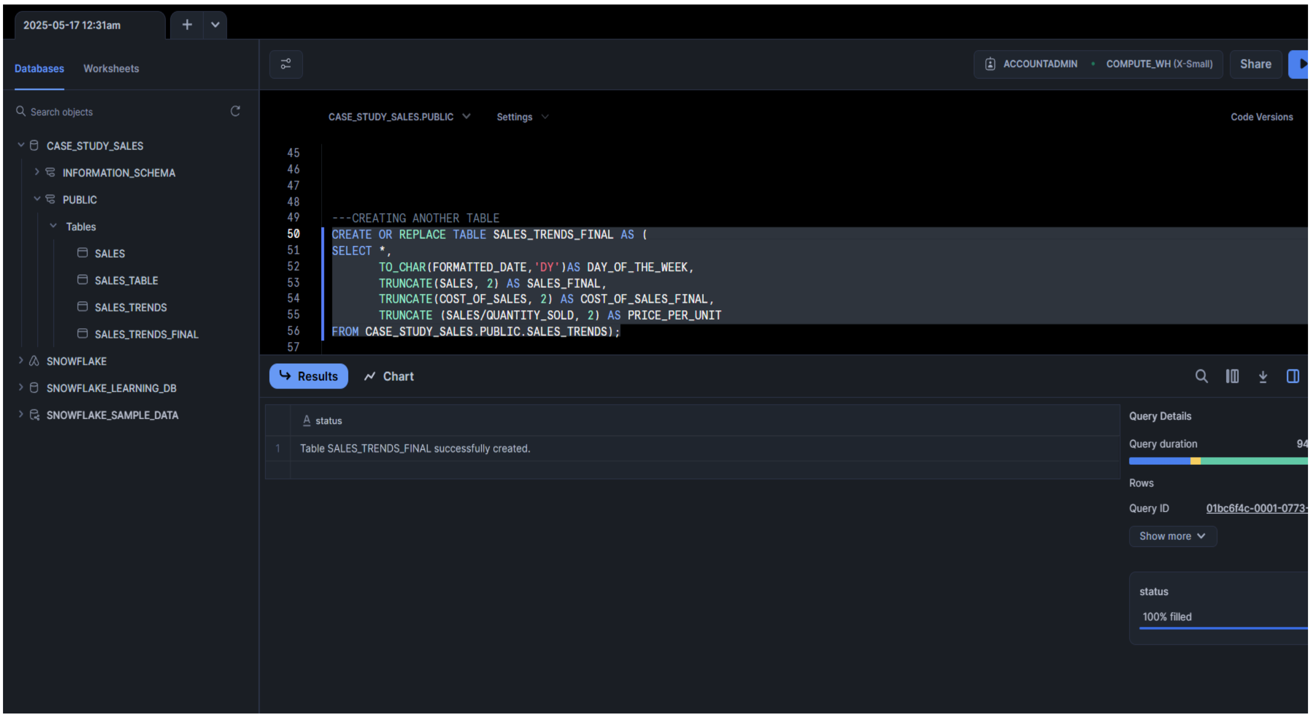
5. Moving to two decimals for monetary values and were applicable to.



```sql
SELECT FORMATTED_DATE,
       TO_CHAR(FORMATTED_DATE,'DY')AS DAY_OF_THE_WEEK,
       TRUNCATE(SALES, 2) AS SALES,
       TRUNCATE(COST_OF_SALES, 2) AS COST_OF_SALES,
       QUANTITY_SOLD,
       TRUNCATE (SALES/QUANTITY_SOLD, 2) AS PRICE_PER_UNIT,
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS;
```

|  | FORMATTED_DATE | DAY_OF_THE_WEEK | SALES | COST_OF_SALES | QUANTITY_SOLD | PRICE_PER_UNIT |
|---|---|---|---|---|---|---|
| 1 | 2013-12-30 | Mon | 223937.96 | 230079.62 | 6827 | 32.80 |
| 2 | 2013-12-31 | Tue | 300345.48 | 306986.12 | 9268 | 32.40 |
| 3 | 2014-01-01 | Wed | 86782.46 | 87986.31 | 2678 | 32.40 |
| 4 | 2014-01-02 | Thu | 200173.11 | 202881.17 | 6175 | 32.41 |
| 5 | 2014-01-03 | Fri | 326906.07 | 333806.29 | 10084 | 32.41 |
| 6 | 2014-01-04 | Sat | 307043.93 | 313652.34 | 9470 | 32.42 |
| 7 | 2014-01-05 | Sun | 179188.88 | 183083.28 | 5524 | 32.43 |
| 8 | 2014-01-06 | Mon | 306351.95 | 313446.06 | 9448 | 32.42 |
| 9 | 2014-01-07 | Tue | 224020.41 | 229533.97 | 6911 | 32.41 |
| 10 | 2014-01-08 | Wed | 101836.40 | 99381.96 | 2990 | 34.05 |
| 11 | 2014-01-09 | Thu | 107804.30 | 104816.45 | 3159 | 34.12 |
| 12 | 2014-01-10 | Fri | 144829.95 | 141333.99 | 4246 | 34.10 |

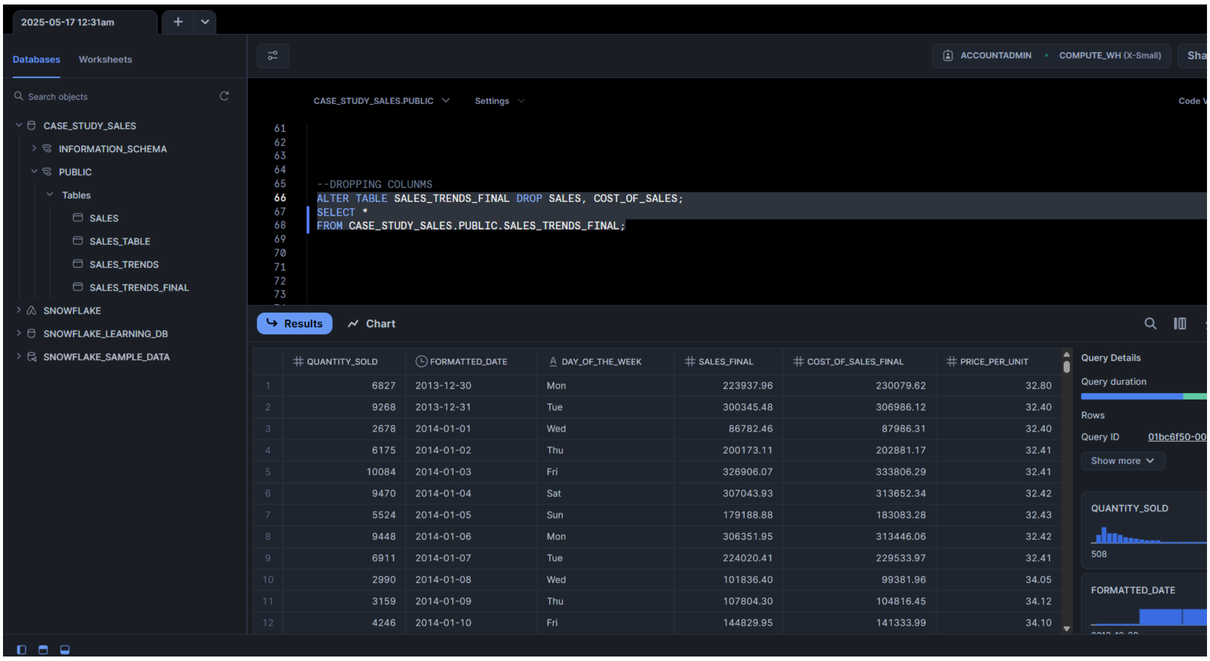
6. Creating a new table to include all the changes



```sql
---CREATING ANOTHER TABLE
CREATE OR REPLACE TABLE SALES_TRENDS_FINAL AS (
SELECT *,
       TO_CHAR(FORMATTED_DATE,'DY')AS DAY_OF_THE_WEEK,
       TRUNCATE(SALES, 2) AS SALES_FINAL,
       TRUNCATE(COST_OF_SALES, 2) AS COST_OF_SALES_FINAL,
       TRUNCATE (SALES/QUANTITY_SOLD, 2) AS PRICE_PER_UNIT
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS);
```

|  | status |
|---|---|
| 1 | Table SALES_TRENDS_FINAL successfully created. |

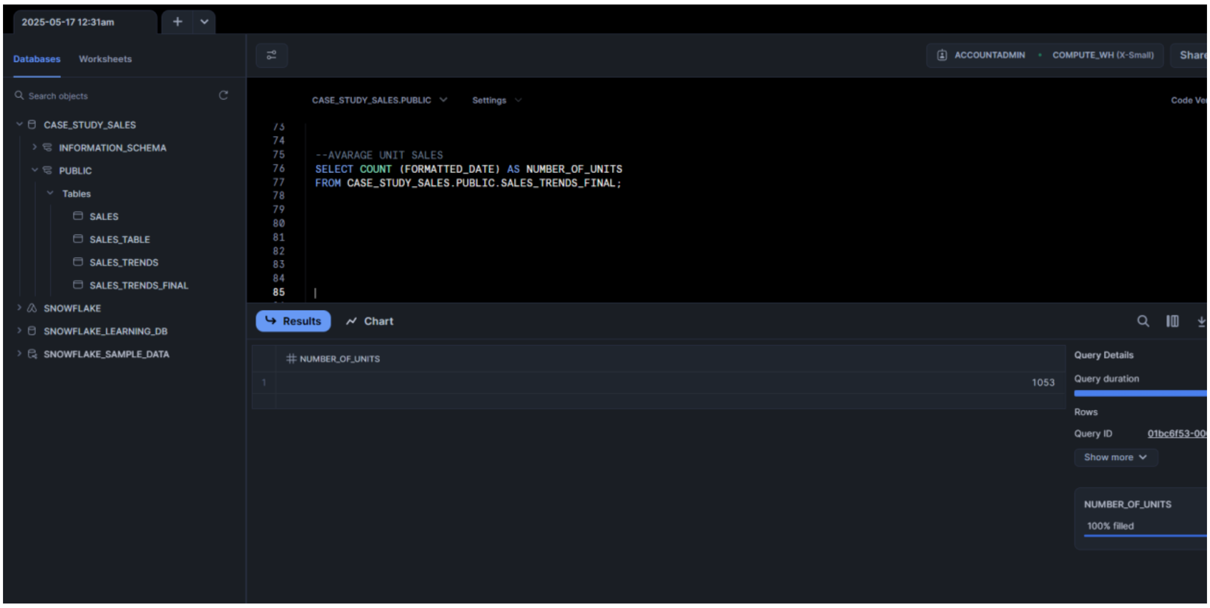
7. Dropping columns to leave on the final column of COS and SALES.



```sql
--DROPPING COLUNMS
ALTER TABLE SALES_TRENDS_FINAL DROP SALES, COST_OF_SALES;
SELECT *
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

|  | QUANTITY_SOLD | FORMATTED_DATE | DAY_OF_THE_WEEK | SALES_FINAL | COST_OF_SALES_FINAL | PRICE_PER_UNIT |
|---|---|---|---|---|---|---|
| 1 | 6827 | 2013-12-30 | Mon | 223937.96 | 230079.62 | 32.80 |
| 2 | 9268 | 2013-12-31 | Tue | 300345.48 | 306986.12 | 32.40 |
| 3 | 2678 | 2014-01-01 | Wed | 86782.46 | 87986.31 | 32.40 |
| 4 | 6175 | 2014-01-02 | Thu | 200173.11 | 202881.17 | 32.41 |
| 5 | 10084 | 2014-01-03 | Fri | 326906.07 | 333806.29 | 32.41 |
| 6 | 9470 | 2014-01-04 | Sat | 307043.93 | 313652.34 | 32.42 |
| 7 | 5524 | 2014-01-05 | Sun | 179188.88 | 183083.28 | 32.43 |
| 8 | 9448 | 2014-01-06 | Mon | 306351.95 | 313446.06 | 32.42 |
| 9 | 6911 | 2014-01-07 | Tue | 224020.41 | 229533.97 | 32.41 |
| 10 | 2990 | 2014-01-08 | Wed | 101836.40 | 99381.96 | 34.05 |
| 11 | 3159 | 2014-01-09 | Thu | 107804.30 | 104816.45 | 34.12 |
| 12 | 4246 | 2014-01-10 | Fri | 144829.95 | 141333.99 | 34.10 |

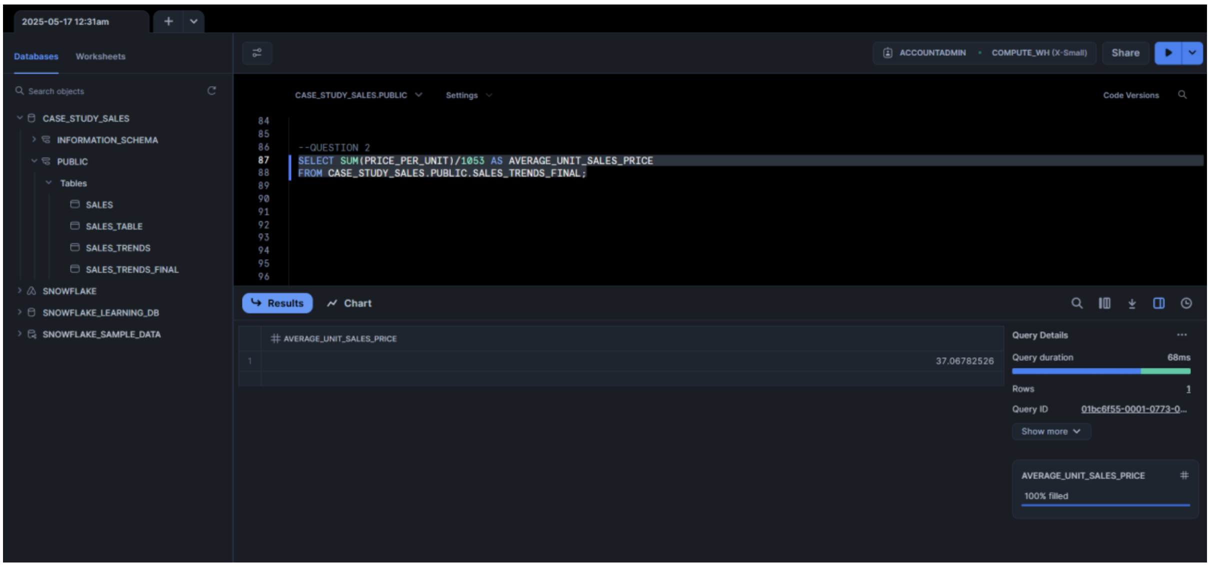
8. Counting the number of days.



```sql
--AVARAGE UNIT SALES
SELECT COUNT (FORMATTED_DATE) AS NUMBER_OF_UNITS
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

|  | NUMBER_OF_UNITS |
|---|---|
| 1 | 1053 |

9. Answering question 2 from the case study.



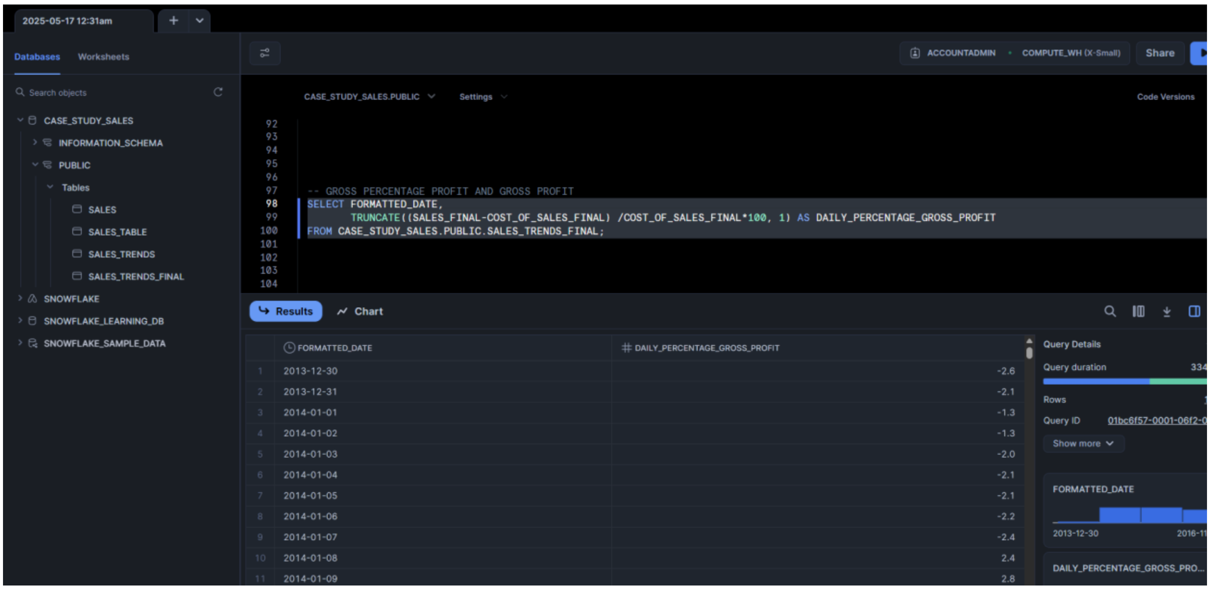
```sql
--QUESTION 2
SELECT SUM(PRICE_PER_UNIT)/1053 AS AVERAGE_UNIT_SALES_PRICE
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

|  | AVERAGE_UNIT_SALES_PRICE |
|---|---|
| 1 | 37.06782526 |

Query Details
Query duration 68ms
Rows 1
Query ID 01bc6f55-0001-0773-0...
Show more

AVERAGE_UNIT_SALES_PRICE
100% filled

10. Answering question 3 from the case study.



```sql
-- GROSS PERCENTAGE PROFIT AND GROSS PROFIT
SELECT FORMATTED_DATE,
       TRUNCATE((SALES_FINAL-COST_OF_SALES_FINAL) /COST_OF_SALES_FINAL*100, 1) AS DAILY_PERCENTAGE_GROSS_PROFIT
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

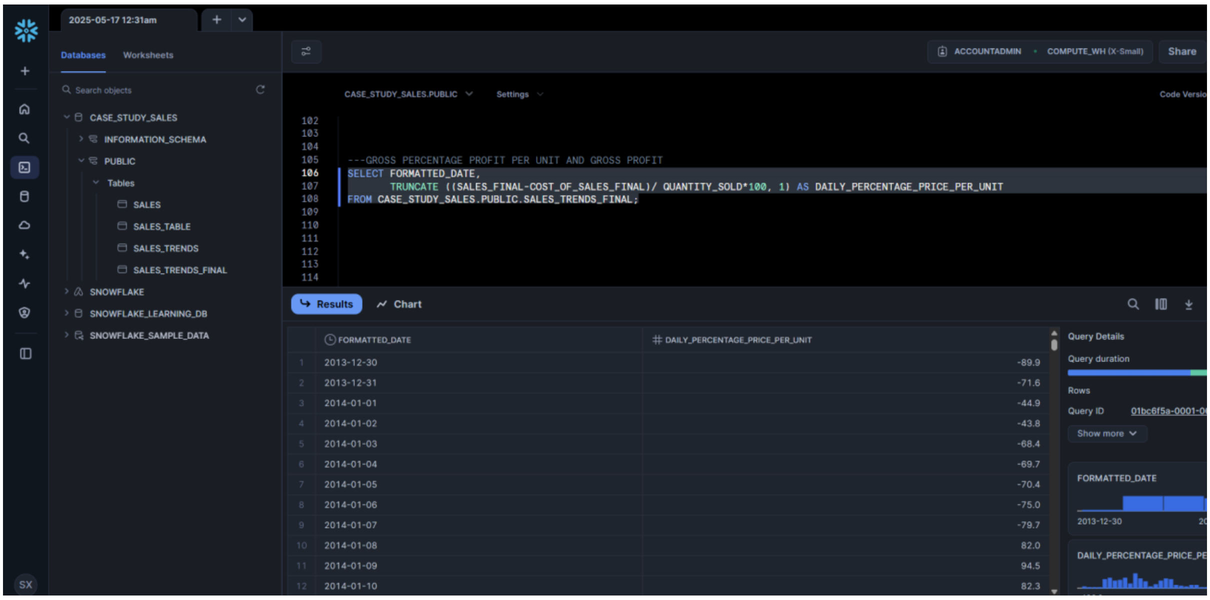
|  | FORMATTED_DATE | DAILY_PERCENTAGE_GROSS_PROFIT |
|---|---|---|
| 1 | 2013-12-30 | -2.6 |
| 2 | 2013-12-31 | -2.1 |
| 3 | 2014-01-01 | -1.3 |
| 4 | 2014-01-02 | -1.3 |
| 5 | 2014-01-03 | -2.0 |
| 6 | 2014-01-04 | -2.1 |
| 7 | 2014-01-05 | -2.1 |
| 8 | 2014-01-06 | -2.2 |
| 9 | 2014-01-07 | -2.4 |
| 10 | 2014-01-08 | 2.4 |
| 11 | 2014-01-09 | 2.8 |

Query Details
Query duration 334
Rows 1
Query ID 01bc6f57-0001-06f2-0
Show more

FORMATTED_DATE

DAILY_PERCENTAGE_GROSS_PRO...

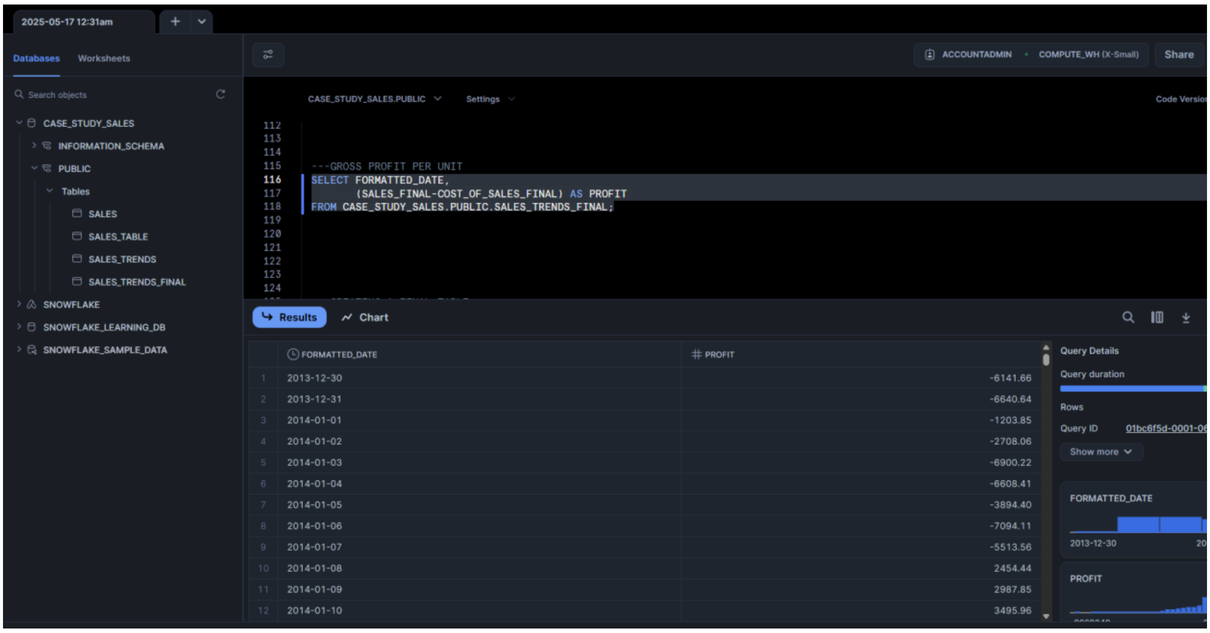
11. Answering question 4 from the case study.



```sql
---GROSS PERCENTAGE PROFIT PER UNIT AND GROSS PROFIT
SELECT FORMATTED_DATE,
       TRUNCATE ((SALES_FINAL-COST_OF_SALES_FINAL)/ QUANTITY_SOLD*100, 1) AS DAILY_PERCENTAGE_PRICE_PER_UNIT
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

|  | FORMATTED_DATE | DAILY_PERCENTAGE_PRICE_PER_UNIT |
|---|---|---|
| 1 | 2013-12-30 | -89.9 |
| 2 | 2013-12-31 | -71.6 |
| 3 | 2014-01-01 | -44.9 |
| 4 | 2014-01-02 | -43.8 |
| 5 | 2014-01-03 | -68.4 |
| 6 | 2014-01-04 | -69.7 |
| 7 | 2014-01-05 | -70.4 |
| 8 | 2014-01-06 | -75.0 |
| 9 | 2014-01-07 | -79.7 |
| 10 | 2014-01-08 | 82.0 |
| 11 | 2014-01-09 | 94.5 |
| 12 | 2014-01-10 | 82.3 |

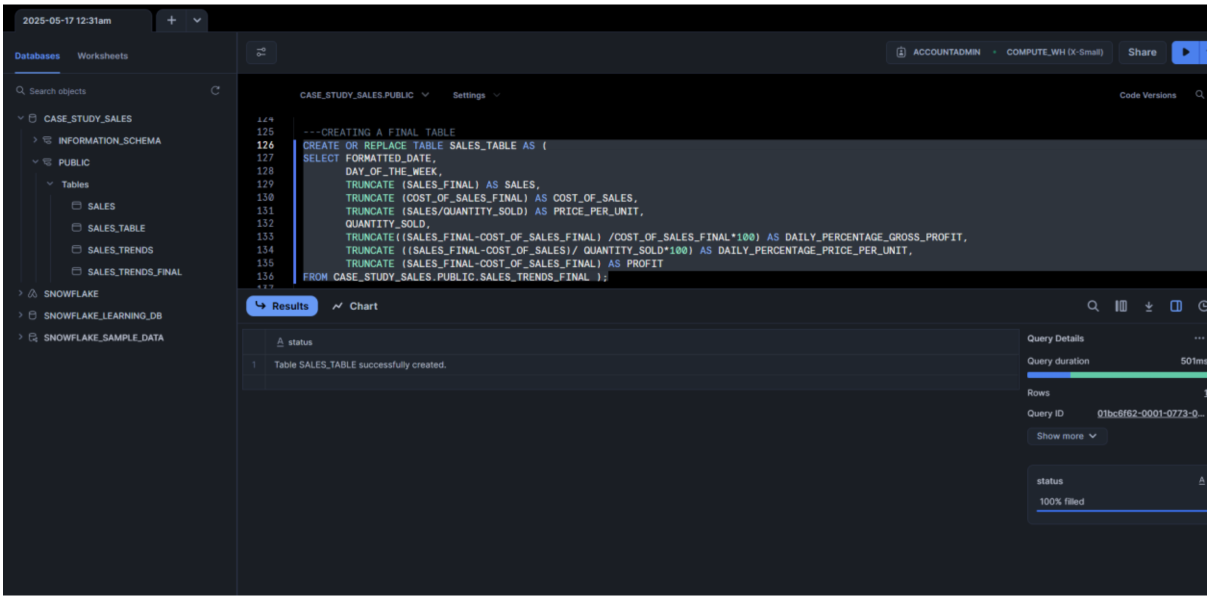
12. Calculating profit for the final output table.



```sql
---GROSS PROFIT PER UNIT
SELECT FORMATTED_DATE,
       (SALES_FINAL-COST_OF_SALES_FINAL) AS PROFIT
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL;
```

|  | FORMATTED_DATE | PROFIT |
|---|---|---|
| 1 | 2013-12-30 | -6141.66 |
| 2 | 2013-12-31 | -6640.64 |
| 3 | 2014-01-01 | -1203.85 |
| 4 | 2014-01-02 | -2708.06 |
| 5 | 2014-01-03 | -6900.22 |
| 6 | 2014-01-04 | -6608.41 |
| 7 | 2014-01-05 | -3894.40 |
| 8 | 2014-01-06 | -7094.11 |
| 9 | 2014-01-07 | -5513.56 |
| 10 | 2014-01-08 | 2454.44 |
| 11 | 2014-01-09 | 2987.85 |
| 12 | 2014-01-10 | 3495.96 |

13. This is the final output table that will be used in Excel for pivot tables and graphs.



```
---CREATING A FINAL TABLE
CREATE OR REPLACE TABLE SALES_TABLE AS (
SELECT FORMATTED_DATE,
       DAY_OF_THE_WEEK,
       TRUNCATE (SALES_FINAL) AS SALES,
       TRUNCATE (COST_OF_SALES_FINAL) AS COST_OF_SALES,
       TRUNCATE (SALES/QUANTITY_SOLD) AS PRICE_PER_UNIT,
       QUANTITY_SOLD,
       TRUNCATE((SALES_FINAL-COST_OF_SALES_FINAL) /COST_OF_SALES_FINAL*100) AS DAILY_PERCENTAGE_GROSS_PROFIT,
       TRUNCATE ((SALES_FINAL-COST_OF_SALES)/ QUANTITY_SOLD*100) AS DAILY_PERCENTAGE_PRICE_PER_UNIT,
       TRUNCATE (SALES_FINAL-COST_OF_SALES_FINAL) AS PROFIT
FROM CASE_STUDY_SALES.PUBLIC.SALES_TRENDS_FINAL );
```

| | status |
|---|---|
| 1 | Table SALES_TABLE successfully created. |

Query duration 501ms

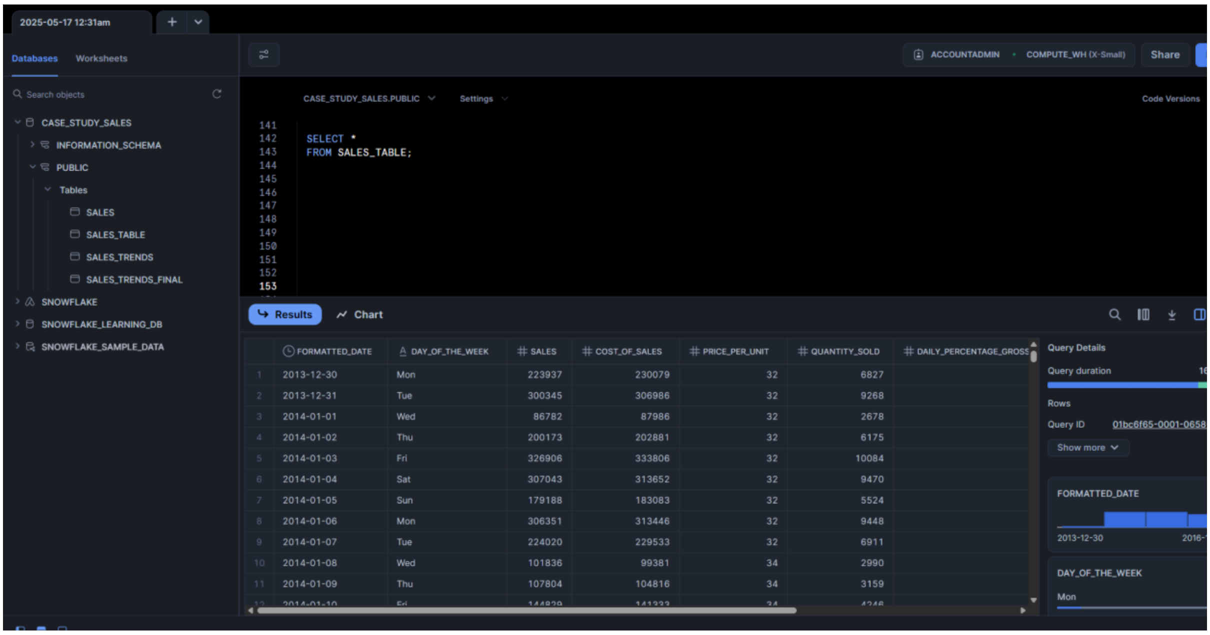
Rows

Query ID 01bc6f62-0001-0773-0...

status

100% filled

14. Verifying the final output table.



```
SELECT *
FROM SALES_TABLE;
```

| | FORMATTED_DATE | DAY_OF_THE_WEEK | SALES | COST_OF_SALES | PRICE_PER_UNIT | QUANTITY_SOLD | DAILY_PERCENTAGE_GROSS |
|---|---|---|---|---|---|---|---|
| 1 | 2013-12-30 | Mon | 223937 | 230079 | 32 | 6827 | |
| 2 | 2013-12-31 | Tue | 300345 | 306986 | 32 | 9268 | |
| 3 | 2014-01-01 | Wed | 86782 | 87986 | 32 | 2678 | |
| 4 | 2014-01-02 | Thu | 200173 | 202881 | 32 | 6175 | |
| 5 | 2014-01-03 | Fri | 326906 | 333806 | 32 | 10084 | |
| 6 | 2014-01-04 | Sat | 307043 | 313652 | 32 | 9470 | |
| 7 | 2014-01-05 | Sun | 179188 | 183083 | 32 | 5524 | |
| 8 | 2014-01-06 | Mon | 306351 | 313446 | 32 | 9448 | |
| 9 | 2014-01-07 | Tue | 224020 | 229533 | 32 | 6911 | |
| 10 | 2014-01-08 | Wed | 101836 | 99381 | 34 | 2990 | |
| 11 | 2014-01-09 | Thu | 107804 | 104816 | 34 | 3159 | |
| 12 | 2014-01-10 | Fri | 144829 | 141333 | 34 | 4246 | |

Query duration 16

Rows

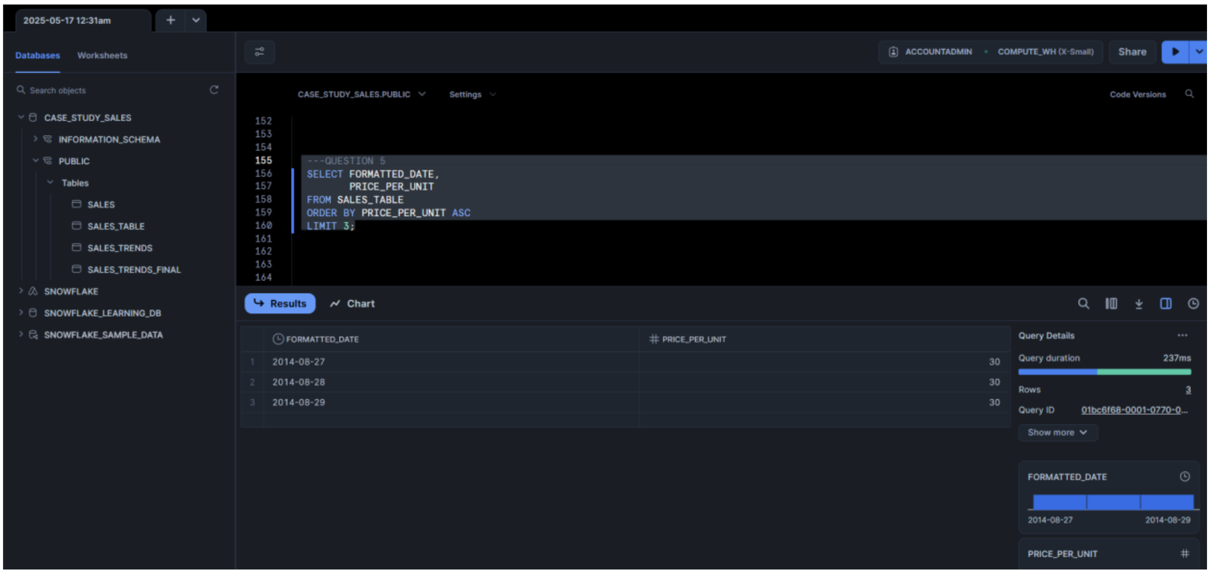
Query ID 01bc6f65-0001-0658

FORMATTED_DATE

DAY_OF_THE_WEEK

Mon

15. Answering question 5 from the case study.



```sql
---QUESTION 5
SELECT FORMATTED_DATE,
       PRICE_PER_UNIT
FROM SALES_TABLE
ORDER BY PRICE_PER_UNIT ASC
LIMIT 3;
```

| | FORMATTED_DATE | PRICE_PER_UNIT |
|---|---|---|
| 1 | 2014-08-27 | 30 |
| 2 | 2014-08-28 | 30 |
| 3 | 2014-08-29 | 30 |

Query Details

Query duration 237ms

Rows 3

Query ID 01bc6f68-0001-0770-0...