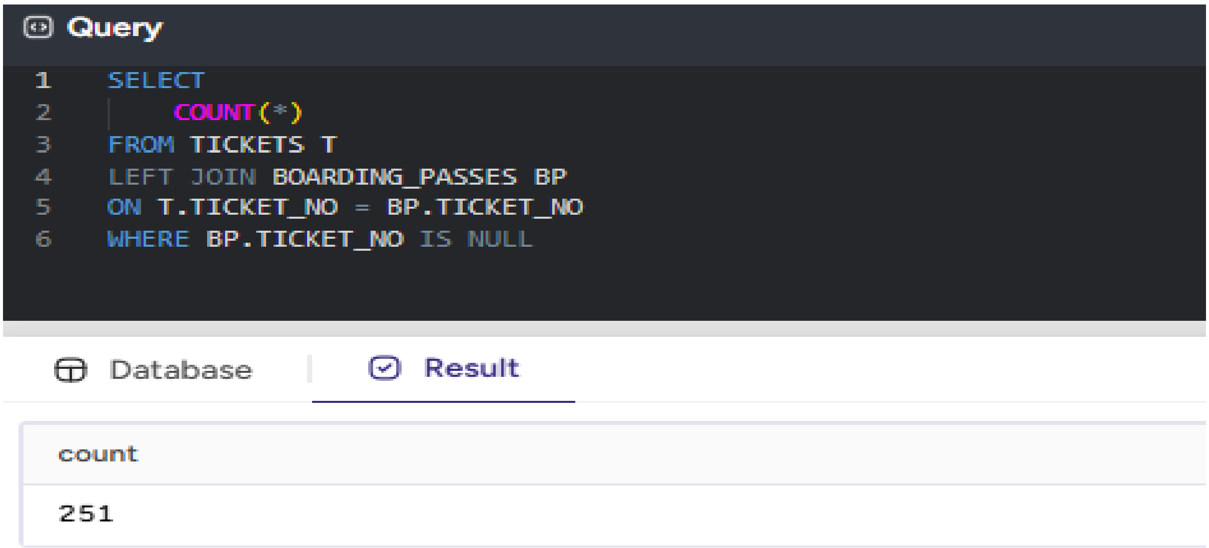
SQL PROJECT ANALYSIS

PROBLEM STATEMENT

How many tickets are there without boarding passes?

Expected Output: just one number is required.



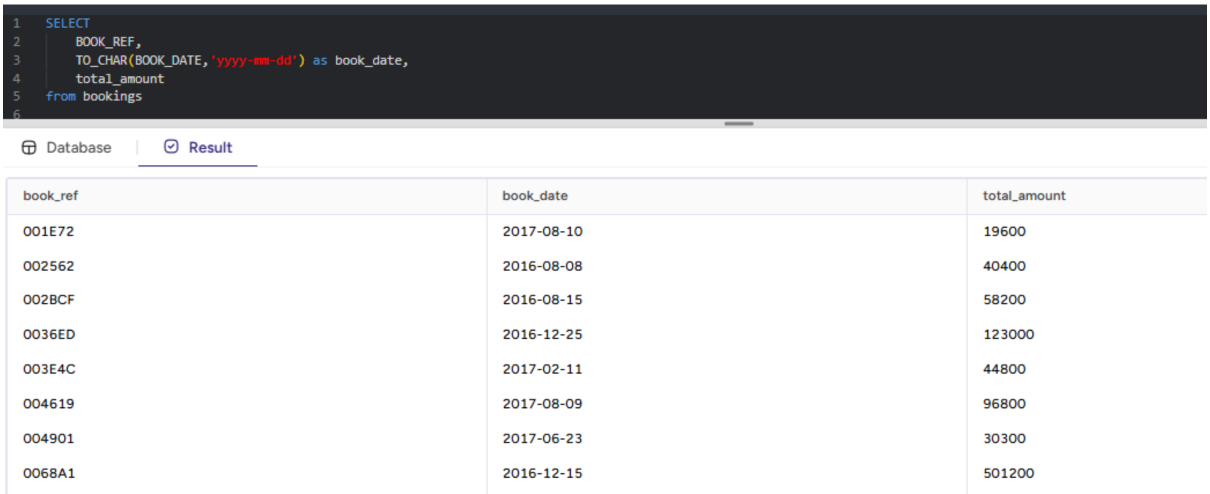
```
SELECT
    COUNT(*)
FROM TICKETS T
LEFT JOIN BOARDING_PASSES BP
ON T.TICKET_NO = BP.TICKET_NO
WHERE BP.TICKET_NO IS NULL
```

count
251

PROBLEM STATEMENT

Represent the "book_date" column in "yyyy-mm-dd" format using Bookings table.

Expected output: book_ref, book_date (in "yyyy-mm-dd" format)& total amount. Output columns should be in Exact same sequence as given in Expected Output.



```sql
SELECT
    BOOK_REF,
    TO_CHAR(BOOK_DATE,'yyyy-mm-dd') as book_date,
    total_amount
from bookings
```

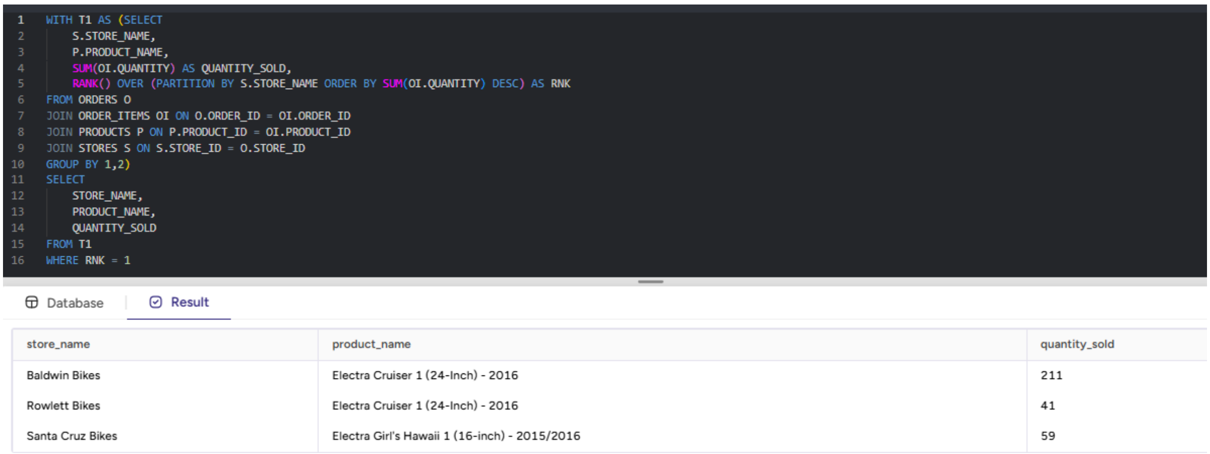
book_ref	book_date	total_amount
001E72	2017-08-10	19600
002562	2016-08-08	40400
002BCF	2016-08-15	58200
0036ED	2016-12-25	123000
003E4C	2017-02-11	44800
004619	2017-08-09	96800
004901	2017-06-23	30300
0068A1	2016-12-15	501200

PROBLEM STATEMENT

Identify the most popular product in each store based on quantity sold.

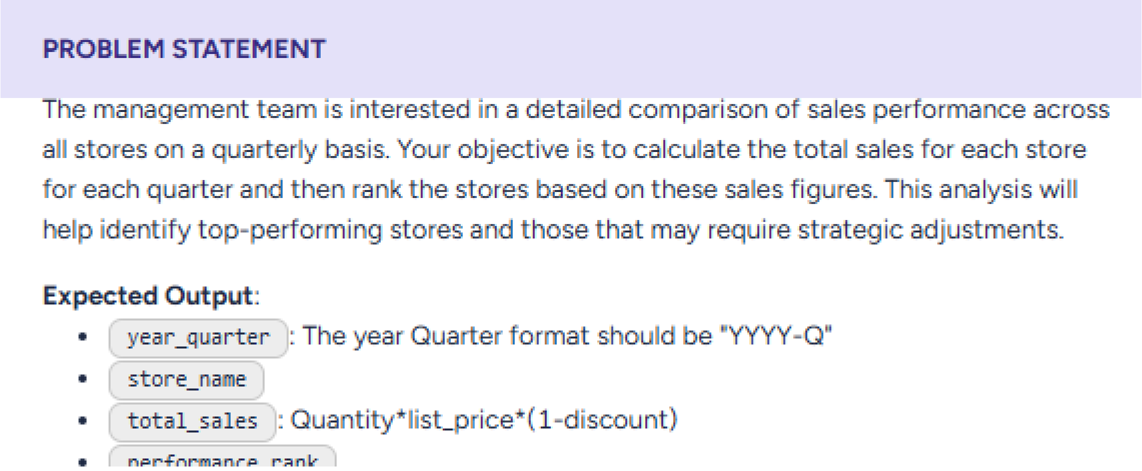
`Expected Output` `: store_name, product_name, quantity_sold`

Expected Output columns should be exactly in the same sequence.



```sql
WITH T1 AS (SELECT
    S.STORE_NAME,
    P.PRODUCT_NAME,
    SUM(OI.QUANTITY) AS QUANTITY_SOLD,
    RANK() OVER (PARTITION BY S.STORE_NAME ORDER BY SUM(OI.QUANTITY) DESC) AS RNK
FROM ORDERS O
JOIN ORDER_ITEMS OI ON O.ORDER_ID = OI.ORDER_ID
JOIN PRODUCTS P ON P.PRODUCT_ID = OI.PRODUCT_ID
JOIN STORES S ON S.STORE_ID = O.STORE_ID
GROUP BY 1,2)
SELECT
    STORE_NAME,
    PRODUCT_NAME,
    QUANTITY_SOLD
FROM T1
WHERE RNK = 1
```

store_name	product_name	quantity_sold
Baldwin Bikes	Electra Cruiser 1 (24-Inch) - 2016	211
Rowlett Bikes	Electra Cruiser 1 (24-Inch) - 2016	41
Santa Cruz Bikes	Electra Girl's Hawaii 1 (16-inch) - 2015/2016	59

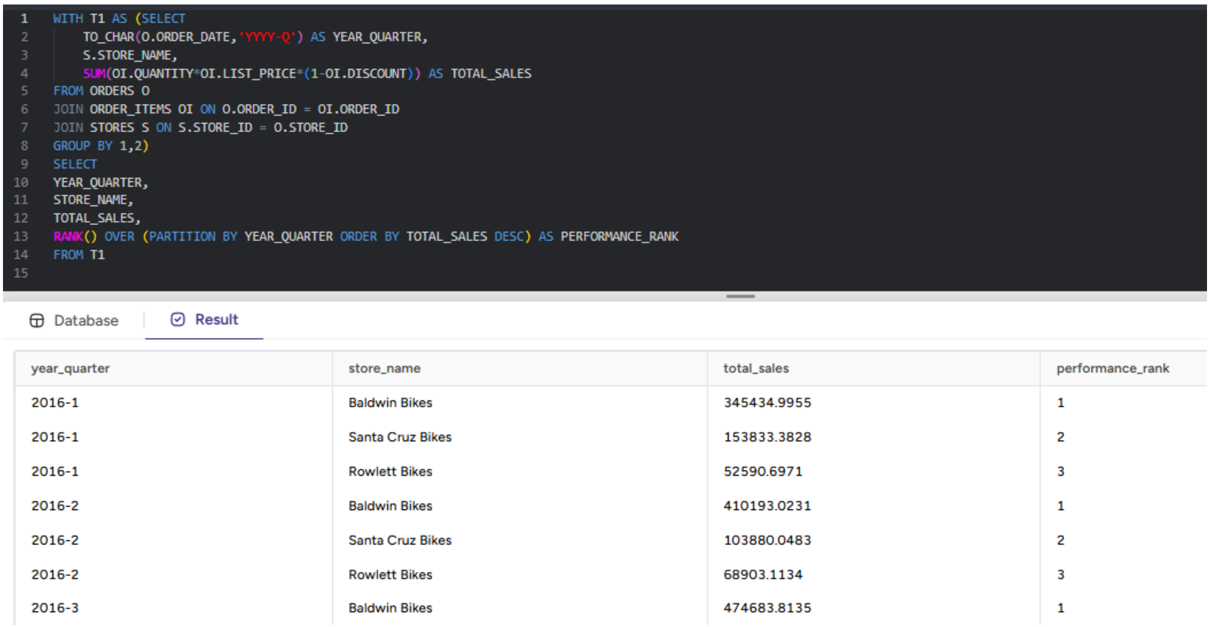


PROBLEM STATEMENT

The management team is interested in a detailed comparison of sales performance across all stores on a quarterly basis. Your objective is to calculate the total sales for each store for each quarter and then rank the stores based on these sales figures. This analysis will help identify top-performing stores and those that may require strategic adjustments.

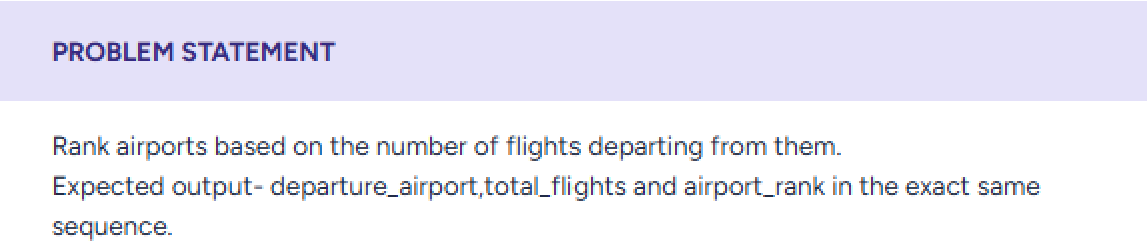
Expected Output:

- `year_quarter`: The year Quarter format should be "YYYY-Q"
- `store_name`
- `total_sales`: Quantity*list_price*(1-discount)
- `performance_rank`



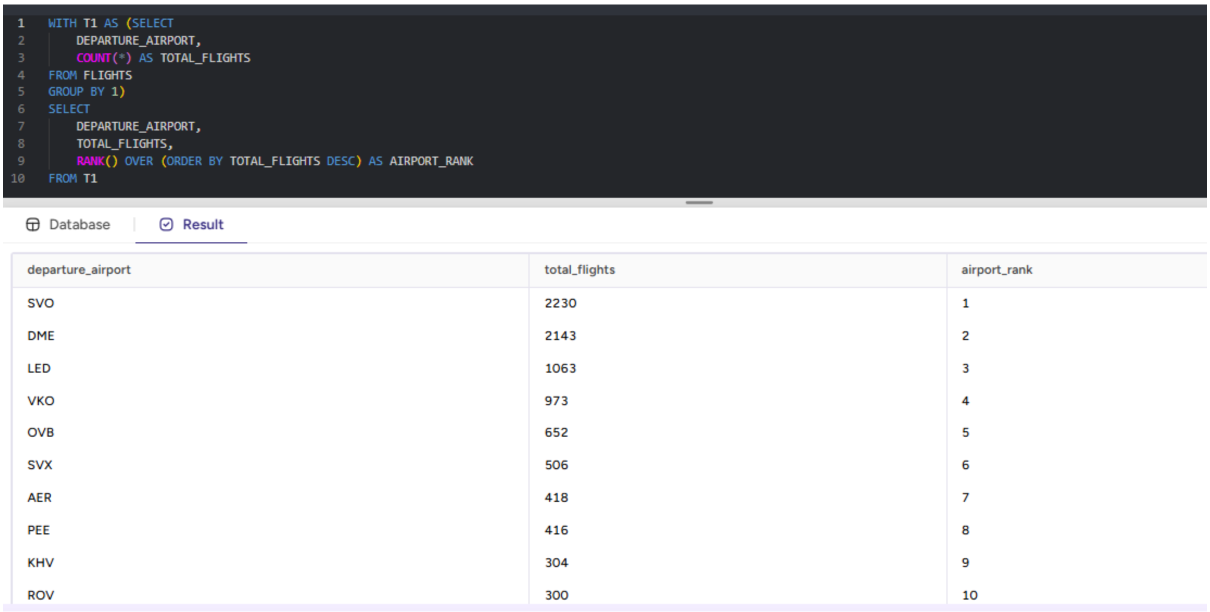
```sql
WITH T1 AS (SELECT
    TO_CHAR(O.ORDER_DATE,'YYYY-Q') AS YEAR_QUARTER,
    S.STORE_NAME,
    SUM(OI.QUANTITY*OI.LIST_PRICE*(1-OI.DISCOUNT)) AS TOTAL_SALES
FROM ORDERS O
JOIN ORDER_ITEMS OI ON O.ORDER_ID = OI.ORDER_ID
JOIN STORES S ON S.STORE_ID = O.STORE_ID
GROUP BY 1,2)
SELECT
YEAR_QUARTER,
STORE_NAME,
TOTAL_SALES,
RANK() OVER (PARTITION BY YEAR_QUARTER ORDER BY TOTAL_SALES DESC) AS PERFORMANCE_RANK
FROM T1

```

year_quarter	store_name	total_sales	performance_rank
2016-1	Baldwin Bikes	345434.9955	1
2016-1	Santa Cruz Bikes	153833.3828	2
2016-1	Rowlett Bikes	52590.6971	3
2016-2	Baldwin Bikes	410193.0231	1
2016-2	Santa Cruz Bikes	103880.0483	2
2016-2	Rowlett Bikes	68903.1134	3
2016-3	Baldwin Bikes	474683.8135	1



PROBLEM STATEMENT

Rank airports based on the number of flights departing from them.
Expected output- departure_airport,total_flights and airport_rank in the exact same sequence.



```sql
WITH T1 AS (SELECT
    DEPARTURE_AIRPORT,
    COUNT(*) AS TOTAL_FLIGHTS
FROM FLIGHTS
GROUP BY 1)
SELECT
    DEPARTURE_AIRPORT,
    TOTAL_FLIGHTS,
    RANK() OVER (ORDER BY TOTAL_FLIGHTS DESC) AS AIRPORT_RANK
FROM T1
```

departure_airport	total_flights	airport_rank
SVO	2230	1
DME	2143	2
LED	1063	3
VKO	973	4
OVB	652	5
SVX	506	6
AER	418	7
PEE	416	8
KHV	304	9
ROV	300	10