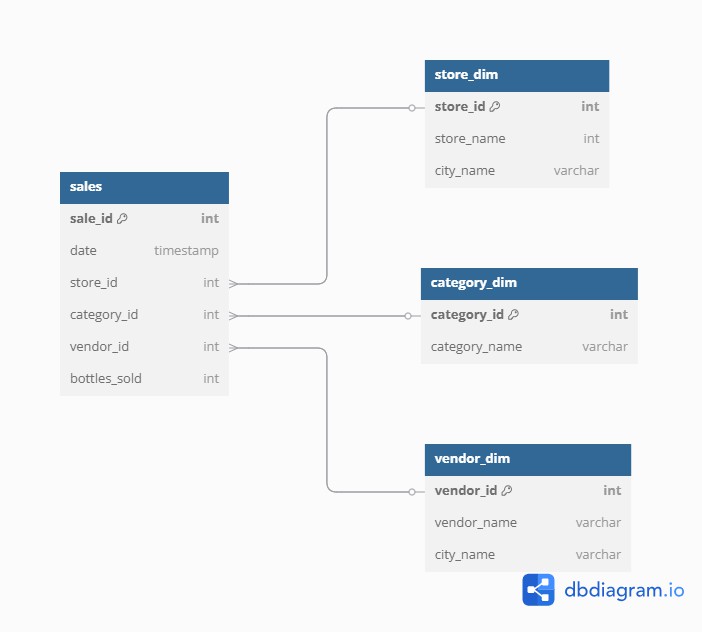
Processing build dashboard

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1. **Data Management**
   * Schema Design: using a Star Schema structure, with a Fact Table linked to several Dimension Tables.
   * Difficulty: Store Name was inconsistent; City field was unclear between store and vendor.
   * Assumption: that the store's city and the vendor's city are different, and used this rule throughout the analysis to avoid confusion.
2. **SQL**

---1.Total Bottles Sold per Year: Calculate the total number of bottles sold each year from 2017 to 2023.

select extract(year from date) as year, sum(bottles\_sold) as total\_bottles\_sold

from sales\_data.sales

where bottles\_sold > 0

group by 1

order by 1

--- 2.Top 3 Vendors per City: Identify the top three vendors (Vendor Name) with the highest sales (by bottle count) in each city.

with ranked\_vendors as (

    select city\_name, vendor\_name, sum(bottles\_sold) as total\_bottles\_sold,

        row\_number() over (partition by city\_name order by sum(bottles\_sold) desc) as rank

    from sales\_data.sales as s

    left join sales\_data.vendor\_dim as v

        on s.vendor\_id = v.vendor\_id

    WHERE bottles\_sold > 0

    GROUP BY 1,2

)

select city\_name, vendor\_name, total\_bottles\_sold,rank

from ranked\_vendors

where rank <= 3

-- 3.Sales Analysis by Category: Analyze the sales trends for the top-selling wine categories (Category Name) year by year.

-- top 3

with top\_3\_cat as (

select category\_name, sum(bottles\_sold) as total\_bottles\_sold

from sales\_data.sales as sales

left join sales\_data.category\_dim as cat

on sales.category\_id = cat.category\_id

where bottles\_sold > 0

group by 1

order by 1 desc

limit 3

)

select category\_name, EXTRACT(YEAR FROM date) AS year, sum(bottles\_sold) as total\_bottles\_sold

from sales\_data.sales as sales left join

sales\_data.category\_dim as cat

on sales.category\_id = cat.category\_id

where category\_name in (select category\_name

                        from top\_3\_cat)

group by 1,2

order by 1,2

-- 4.Top Stores by Sales per City: Identify the stores (Store Name) with the highest wine sales in each city in the most recent year (2023).

with stores\_rank as (

select store\_name, city\_name, sum(bottles\_sold) as total\_bottles\_sold,

row\_number() over(partition by city\_name order by sum(bottles\_sold) desc) as rank

from sales\_data.sales as s

left join sales\_data.store\_dim as st

on s.store\_id = st.store\_id

where bottles\_sold > 0 and EXTRACT(YEAR FROM date) = 2023

group by 1, 2

order by 1, 2

)

select store\_name, city\_name, total\_bottles\_sold

from stores\_rank

where rank = 1

-- 5.Vendor Sales Share: Calculate the percentage of total sales for each vendor (Vendor Name) compared to the overall sales of all vendors across the entire time period (2017-2023).

with vendor\_sales as (

select vendor\_name, sum(bottles\_sold) as total\_bottles\_sold

from sales\_data.sales as s

left join sales\_data.vendor\_dim as v

on s.vendor\_id = v.vendor\_id

where bottles\_sold > 0

group by 1

),

total\_sales as

(select sum(total\_bottles\_sold) as overall\_bottles\_sold

from vendor\_sales

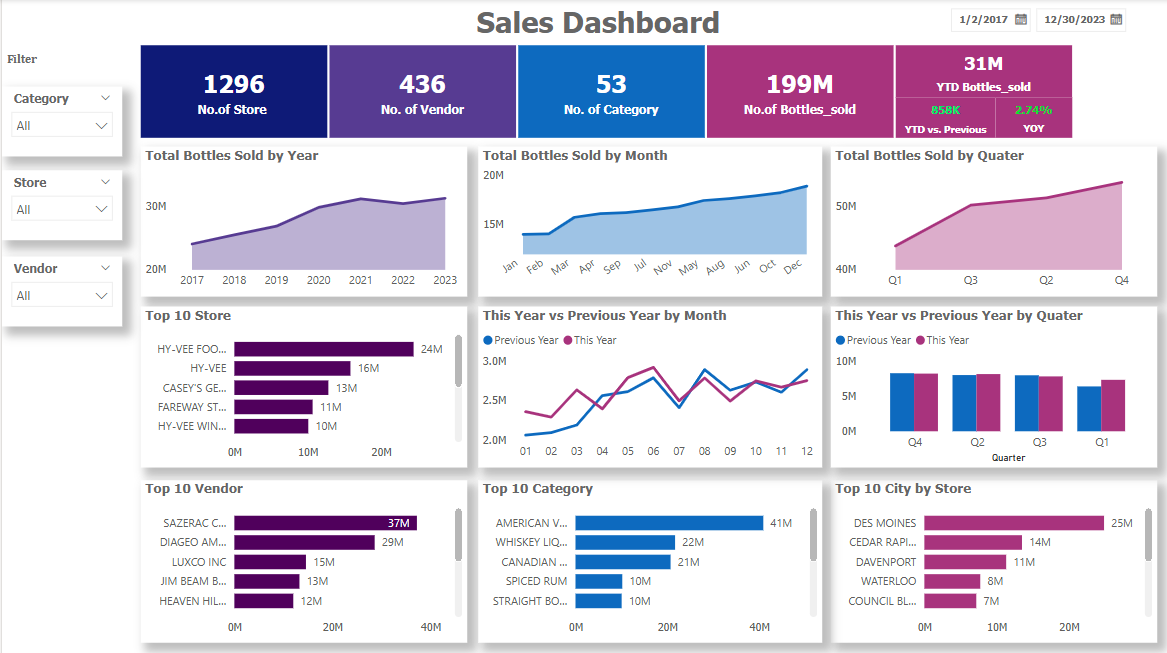
)

select v.vendor\_name, v.total\_bottles\_sold, ROUND((v.total\_bottles\_sold \* 100.0) / t.overall\_bottles\_sold , 2) AS sales\_share\_percentage

FROM vendor\_sales v, total\_sales t

ORDER BY sales\_share\_percentage desc

1. **Dashboard with Power BI**

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