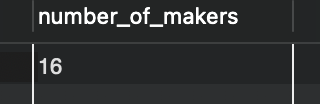
**-- Question 1: How many unique manufacturers / makers are there in the 2-wheeler category?**

SELECT

COUNT(DISTINCT maker) AS number\_of\_makers

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_makers

WHERE vehicle\_category = '2-Wheelers'



**-- Question 2: List the top 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.**

SELECT maker,

SUM(electric\_vehicles\_sold) AS total\_sold

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_makers evm

JOIN dim\_date

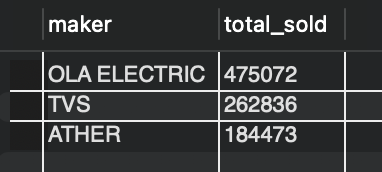
USING(date)

WHERE vehicle\_category = '2-Wheelers' AND fiscal\_year IN (2023, 2024)

GROUP BY maker

ORDER BY total\_sold DESC

LIMIT 3



**-- Question 3: What is the average number of total vehicles sold per month in fiscal year 2024?**

WITH CTE AS (

SELECT

EXTRACT(MONTH FROM dd.date) AS month,

SUM(evs.total\_vehicles\_sold) AS total\_vehicle\_sales

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_state evs

JOIN ev\_sales\_db.dim\_date dd ON evs.date = dd.date

WHERE dd.fiscal\_year = 2024

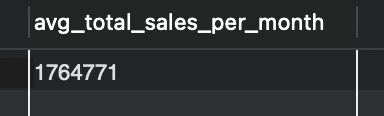
GROUP BY month

)

SELECT

round(AVG(total\_vehicle\_sales),0) AS avg\_total\_sales\_per\_month

FROM CTE



**-- Question 4: Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.**

SELECT

state,

round((SUM(electric\_vehicles\_sold) / SUM(total\_vehicles\_sold)) \* 100 , 2) AS penetration\_rate

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_state evs

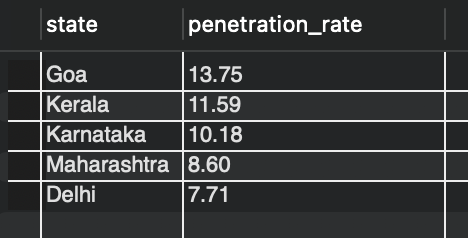
JOIN ev\_sales\_db.dim\_date dd ON evs.date = dd.date

WHERE fiscal\_year = 2024 AND vehicle\_category IN ('2-Wheelers', '4-Wheelers')

GROUP BY state

ORDER BY penetration\_rate DESC

LIMIT 5



**-- Question 5: Which states recorded the highest and lowest total vehicle sales in fiscal year 2023?**

WITH CTE AS (

SELECT

evs.state,

SUM(evs.total\_vehicles\_sold) AS total\_vehicle\_sales

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_state evs

JOIN ev\_sales\_db.dim\_date dd ON evs.date = dd.date

WHERE dd.fiscal\_year = 2023

GROUP BY evs.state

)

SELECT

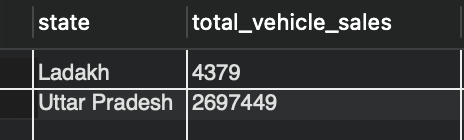
ss.state,

ss.total\_vehicle\_sales

FROM CTE ss

WHERE ss.total\_vehicle\_sales = (SELECT MAX(total\_vehicle\_sales) FROM CTE)

OR ss.total\_vehicle\_sales = (SELECT MIN(total\_vehicle\_sales) FROM CTE)



**-- Question 6: What are the peak and low season months for EV sales based on the data from 2022 to 2024?**

SELECT

DATE\_FORMAT(date, '%M') AS month\_name,

SUM(evs.electric\_vehicles\_sold) AS total\_ev\_sales

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_state evs

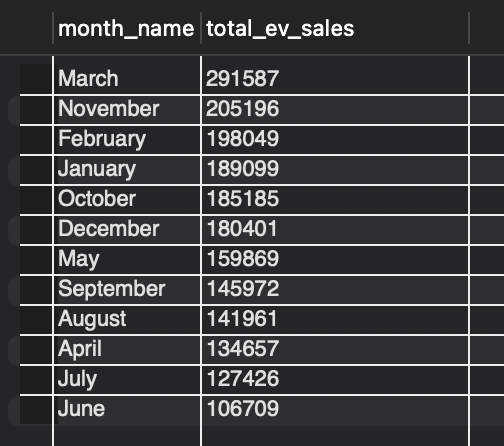
JOIN dim\_date dd

USING(date)

WHERE dd.fiscal\_year BETWEEN 2022 AND 2024

GROUP BY month\_name

ORDER BY total\_ev\_sales DESC



**-- Question 7: List the compounded annual growth rate (CAGR) in 2-wheelers units for the top 4 makers from 2022 to 2024.**

WITH cagr\_data AS (

SELECT

maker,

SUM(CASE WHEN fiscal\_year = 2022 THEN electric\_vehicles\_sold ELSE 0 END) AS start\_value,

SUM(CASE WHEN fiscal\_year = 2024 THEN electric\_vehicles\_sold ELSE 0 END) AS end\_value

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_makers evm

JOIN ev\_sales\_db.dim\_date dd ON evm.date = dd.date

WHERE vehicle\_category = '2-Wheelers'

GROUP BY maker

ORDER BY end\_value DESC

LIMIT 4

)

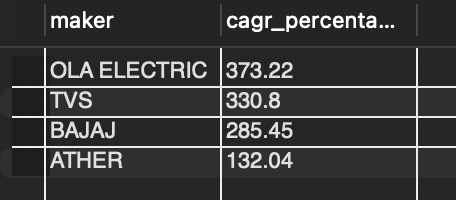
SELECT

maker,

round((POWER((end\_value / start\_value), 1 / 2.0) - 1) \* 100, 2) AS cagr\_percentage

FROM cagr\_data

ORDER BY cagr\_percentage DESC



**Question 8: Categorize the states based on electric vehicle penetration rates in fiscal year 2024, with classifications of Above 7%, Above 5%, Above 3%, Above 1%, and Below 1%**

SELECT

evs.state,

SUM(evs.electric\_vehicles\_sold) AS total\_ev\_sales,

SUM(evs.total\_vehicles\_sold) AS total\_vehicles\_sold,

SUM(evs.electric\_vehicles\_sold) / SUM(evs.total\_vehicles\_sold) \* 100 AS penetration\_rate,

CASE

WHEN (SUM(evs.electric\_vehicles\_sold) / SUM(evs.total\_vehicles\_sold)) \* 100 > 7 THEN 'Above 7%'

WHEN (SUM(evs.electric\_vehicles\_sold) / SUM(evs.total\_vehicles\_sold)) \* 100 > 5 THEN 'Above 5%'

WHEN (SUM(evs.electric\_vehicles\_sold) / SUM(evs.total\_vehicles\_sold)) \* 100 > 3 THEN 'Above 3%'

WHEN (SUM(evs.electric\_vehicles\_sold) / SUM(evs.total\_vehicles\_sold)) \* 100 > 1 THEN 'Above 1%'

ELSE 'Below 1%'

END AS penetration\_category

FROM ev\_sales\_db.electric\_vehicle\_sales\_by\_state evs

JOIN ev\_sales\_db.dim\_date dd ON evs.date = dd.date

WHERE dd.fiscal\_year = 2024

GROUP BY evs.state

ORDER BY penetration\_rate DESC

