**SQL PROGRAMS TO VALIDATE CAR SALES DATA**

**KPI’s:**

1. **Sales Overview:-**

**YTD Total Sales**

select sum(price) as YTD\_Total\_Sales

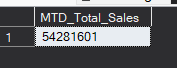
from Car\_Sales\_Data where YEAR(date) = 2021

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**MTD Total Sales**

select sum(price) as MTD\_Total\_Sales

from Car\_Sales\_Data where YEAR(date) = 2021 and MONTH(date) = 12

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**YTD – PYTD Total Sales**

with cte as

(

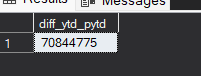
select sum(case when year(date) = 2021 then price else 0 end) as YTD\_Total\_Sales

, sum(case when year(date) = 2020 then price else 0 end) as PYTD\_Total\_Sales

from Car\_Sales\_Data)

select ytd\_total\_sales - pytd\_total\_sales as diff\_ytd\_pytd

from cte

****

**YoY Growth Total Sales**

with cte as

(

select sum(case when year(date) = 2021 then price else 0 end) as YTD\_Total\_Sales

, sum(case when year(date) = 2020 then price else 0 end) as PYTD\_Total\_Sales

from Car\_Sales\_Data)

select

cast(((ytd\_total\_sales - pytd\_total\_sales)\*1.0/PYTD\_Total\_Sales)\*100 as decimal(10,2)) as YoY\_growth

from cte

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1. **Average Price Analysis:**

**YTD Avg Price**

select avg(price) as YTD\_Avg\_Price

from Car\_Sales\_Data where YEAR(date) = 2021



**MTD Avg Price**

select AVG(price) as MTD\_avg\_price

from Car\_Sales\_Data where YEAR(date) = 2021 and MONTH(date) = 12

****

**YTD – PYTD Avg Price**

with cte as(

select id = 1, AVG(price) as ytd from Car\_Sales\_Data where year(date) = 2021)

,cte2 as(

select id = 1, AVG(price) as pytd from Car\_Sales\_Data where YEAR(date) = 2020)

select ytd - pytd as Diff\_YTD\_PYTD\_Avg\_Price

from cte join cte2 on cte.id = cte2.id

****

**YoY Growth Avg Price**

with cte as(

select id = 1, AVG(price) as ytd from Car\_Sales\_Data where year(date) = 2021)

,cte2 as(

select id = 1, AVG(price) as pytd from Car\_Sales\_Data where YEAR(date) = 2020)

select cast(((ytd - pytd)\*1.0/pytd)\*100 as decimal(10,2)) as Diff\_YTD\_PYTD\_Avg\_Price

from cte join cte2 on cte.id = cte2.id

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**3) Cars Sold Metrics:**

**YTD Cars Sold**

select count(car\_id) as YTD\_Cars\_Sold

from car\_sales\_data where year(date) = 2021



**MTD Cars Sold**

select count(car\_id) as MTD\_Cars\_Sold

from car\_sales\_data where year(date) = 2021 and month(date) = 12

****

**YTD-PYTD Cars Sold**

with cte as(

select id=1, count(car\_id) as YTD from car\_sales\_data where year(date) = 2021)

,cte2 as( select id=1, count(car\_id) as PYTD

from car\_sales\_data where year(date) = 2020)

select ytd-pytd as Diff\_YTD\_PYTD\_Cars\_Sold

from cte join cte2 on cte.id = cte2.id

****

**YoY Growth Cars Sold**

with cte as(

select id=1, count(car\_id) as YTD from car\_sales\_data where year(date) = 2021)

,cte2 as( select id=1, count(car\_id) as PYTD

from car\_sales\_data where year(date) = 2020)

select cast(((ytd-pytd)\*1.0/PYTD)\*100 as decimal(10,2)) as YoY\_Growth\_Cars\_Sold

from cte join cte2 on cte.id = cte2.id

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**CHARTS REQUIREMENTS:**

**1) YTD Sales Weekly Trend:**

select DATEPART(week, date) as weeks

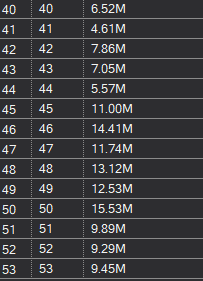
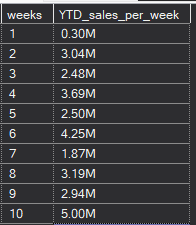
, cast(cast(sum(price)\*1.0/ 1000000 as decimal(10,2)) as varchar(10)) + 'M' as YTD\_sales\_per\_week

from Car\_Sales\_Data

where YEAR(date) = 2021

group by DATEPART(week, date)

order by weeks

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**YTD Total Sales by Body Style:**

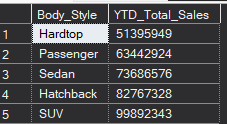
select Body\_Style, sum(price) as YTD\_Total\_Sales

from Car\_Sales\_Data

where year(date) = 2021

group by Body\_Style

order by YTD\_Total\_Sales

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**YTD Total Sales by Color:**

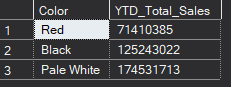
select Color, sum(price) as YTD\_Total\_Sales

from Car\_Sales\_Data

where year(date) = 2021

group by Color

order by YTD\_Total\_Sales

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**YTD Cars Sold by Dealer Region:**

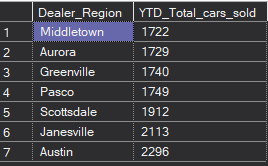
select Dealer\_Region, count(car\_id) as YTD\_Total\_cars\_sold

from Car\_Sales\_Data

where year(date) = 2021

group by Dealer\_Region

order by YTD\_Total\_cars\_sold

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**Company-Wise Sales Trend in Grid Form:**

with cte as(

select company

,avg(price)\*1.0 as YTD\_Avg\_Price

,COUNT(car\_id) as YTD\_Cars\_Sold

,sum(price) as YTD\_Total\_Sales

from Car\_Sales\_Data

where year(date) = 2021

group by company)

, cte2 as(

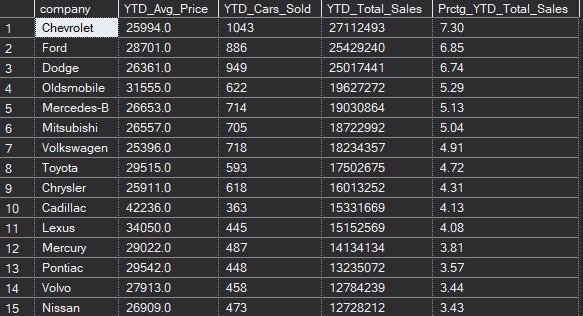
select sum(price) as total\_sales

from Car\_Sales\_Data where year(date) = 2021)

select cte.\*, cast((cte.YTD\_Total\_Sales\*1.0/cte2.total\_sales)\*100 as decimal(10,2)) as Prctg\_YTD\_Total\_Sales

from cte cross join cte2

order by Prctg\_YTD\_Total\_Sales desc

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