```sql
--                          Basic And Intermediate Questions

-- Que-1. What are total sales and total profits of each year?

select year(orderdate) as year,round(sum(sales),2) as Total_sales,
round(sum(profit),2) as Total_profit from dbo.superstore
group by year(orderdate)
order by year(orderdate) asc;




-- Que-2. What are the total profits and total sales per quarter?
select datepart(year,orderdate) as year,
datepart(quarter,orderdate) as quarter,
round(sum(sales),2) as Total_sales,
round(sum(profit),2) as total_profit
from superstore
group by datepart(year,orderdate),datepart(quarter,orderdate)
order by datepart(year,orderdate),datepart(quarter,orderdate);




-- Que-3. What region generates the highest sales and profits ?

select region,sum(sales) as Total_sales,sum(profit) as Total_profit
from superstore
group by region
order by sum(sales) desc, sum(profit) desc;


--Que-4. What state  brings in the highest sales and profits ?

select state,sum(sales) as Total_sales,sum(profit) as Total_profit
from superstore
group by state
order by sum(sales) desc, sum(profit) desc;
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--Que-5. What city  brings in the highest sales and profits ?

select city,sum(sales) as Total_sales,sum(profit) as Total_profit
from superstore
group by city
order by sum(sales) desc, sum(profit) desc;

-- Que-6.Find the Most discounted Categories;

select category,sum(discount) as Total_discount
from superstore
group by category
order by sum(discount) desc;


-- Que-7.Find the Most discounted SubCategories;
select category,subcategory,sum(discount) as Total_discount
from superstore
group by subcategory,category
order by sum(discount) desc;

-- Que-8. What category generates the highest sales and profits in each region and state ?

select category,region,state,sum(sales) as Total_sales,sum(profit) as Total_profit
from superstore
group by region,state,Category
order by sum(profit) desc,sum(sales) desc;

-- Que-9 What subcategory generates the highest sales and profits in each region and state ?
select subcategory,region,state,sum(sales) as Total_sales,sum(profit) as Total_profit
from superstore
group by region,state,subCategory
order by sum(profit) desc,sum(sales) desc;

-- Que-10 What are the names of the products that are the most and least profitable to us?
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-- most profitable
select top 1 productname,sum(profit) as Total_profit
from superstore
group by productname
order by sum(profit) desc;

-- least profitable
select top 1 productname,sum(profit) as Total_profit
from superstore
group by productname
order by sum(profit) asc;

-- Que-11. What segment makes the most of our profits and sales ?

select segment,sum(profit) as Total_profit,sum(sales) as Total_sales
from superstore
group by segment
order by sum(profit) desc;

-- Que-12. How many customers do we have (unique customer IDs) in total and how much per region and  state?
-- state wise
select state,count(distinct customerid)  as no_of_customer
from superstore
group by state
order by count(distinct customerid) desc ;

--region wise
select region,count(distinct customerid)  as no_of_customer
from superstore
group by region
order by count(distinct customerid) desc ;

-- Que-13. Average shipping time per class and in total
SELECT shipmode,AVG(datediff(day,orderdate,shipdate)) AS avg_shipping_time
FROM superstore
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GROUP BY shipmode
ORDER BY avg_shipping_time;

--                                      Advanced Questions


/* Que-14 .Calculate the Year-over-Year (YoY) percentage growth
in total sales and profit for each year. */

with salesdata as
    (select datepart(year, orderdate) as year,
    sum(sales) as total_sales,
    sum(profit) as total_profit from superstore
    group by datepart(year, orderdate))
select year, total_sales, total_profit,
    lag(total_sales) over (order by year) as previous_year_sales,
    lag(total_profit) over (order by year) as previous_year_profit,
    round((total_sales - lag(total_sales) over (order by year)) * 100.0 / nullif(lag(total_sales) over (order by
        year), 0), 2) as sales_growth_percentage,
    round((total_profit - lag(total_profit) over (order by year)) * 100.0 / nullif(lag(total_profit) over (order by
        year), 0), 2) as profit_growth_percentage
        from salesdata;

/* Que-15.Identify the top 5 most profitable products in each region. */

with product_ranking as
    (select region, productname, sum(profit) as total_profit,
    rank() over (partition by region order by sum(profit) desc) as rank
    from superstore group by region, productname)
select region, productname, total_profit
    from product_ranking
    where rank <= 5
    order by region, rank;
```

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/* Que-16.Find customers who placed more than one order and calculate the average
days between their orders. */

with customerorders as
    (select customerid, orderid, orderdate,
    lead(orderdate) over (partition by customerid order by orderdate) as next_order_date
    from superstore)
select
    customerid, count(orderid) as total_orders,
    avg(datediff(day, orderdate, next_order_date)) as avg_days_between_orders
    from customerorders
    where next_order_date is not null
    group by customerid
    order by total_orders desc;
```