**QUESTIONS AND ANSWERS ON**

**On E-Commerce Platform**

**1.Find the second highest product price in the 'Electronics' category?**

select ProductName,max(Price) as Highest\_price from products

where price <(SELECT max(price) from products) and Category= 'Electronics'

group by ProductName;

**2.Calculate the percentage of total orders made for each product?**

select P.ProductID,P.ProductName,

(sum(O.Quantity)\*100)/(select sum(O.Quantity) FROM orders O) AS Percentage\_Total\_Orders

FROM orders O join products P on P.ProductID=O.ProductID

group by P.ProductID,P.ProductName;

**3.List all customers who have placed more than one order in the last 6 months?**

select C.CustomerName,count(O.OrderID) as Order\_count From customers C

JOIN orders O on C.CustomerID=O.CustomerID

where O.OrderDate>=current\_date()-interval 6 month

group by C.CustomerName

having Count(O.OrderID)>=1;

**4.Find the products that have never been ordered?**

select P.ProductName FROM orders O join products P on P.ProductID=O.ProductID

where P.ProductID NOT IN(SELECT ProductID FROM products);

**5.Find the total revenue generated by each city from the orders placed by its customers?**

SELECT C.City,Sum(TotalAmount) as Total\_Revenue From customers C

JOIN orders O on C.CustomerID=O.CustomerID

group by C.City;

**6.Identify the most ordered product in each category?**

select P.Category,P.ProductName

FROM orders O join products P on P.ProductID=O.ProductID

group by P.Category,P.ProductName

order by sum(O.Quantity) Desc

LIMIT 1;

**7.Calculate the cumulative total revenue generated by each customer, ordered by the date of their orders?**

SELECT C.CustomerName,

SUM(C.TotalSpent) OVER(partition by C.CustomerName order by O.OrderDate ) as cumulative\_total\_revenue

From customers C

JOIN orders O on C.CustomerID=O.CustomerID;

**8.Find the rank of each product based on its total quantity sold, within its category?**

SELECT P.Category,P.ProductID,

P.ProductName,

SUM(O.Quantity) as Product\_sum,

rank() over (order by SUM(O.Quantity)) as Ranks

FROM orders O join products P on P.ProductID=O.ProductID

group by P.Category,P.ProductID,

P.ProductName;

**9. Calculate the moving average of total order amounts over the last 3 orders for each customer?**

SELECT CustomerID, OrderID, OrderDate, TotalAmount,

AVG(TotalAmount) OVER (PARTITION BY CustomerID ORDER BY OrderDate ROWS BETWEEN 2 PRECEDING AND CURRENT ROW) AS MovingAvgTotalAmount

FROM Orders

ORDER BY CustomerID, OrderDate;

**10.For each customer, find their rank based on total spending, and within each city, rank the customers by their total spending?**

SELECT CustomerID,

CustomerName,

City,

TotalSpent,

RANK() OVER (ORDER BY TotalSpent DESC) AS OverallRank,

RANK() OVER (PARTITION BY City ORDER BY TotalSpent DESC) AS CityRank

FROM Customers;