

## TASK – 6

### SUBQURIES

#### Queries and Output

-- Single Row Subqueries =

-- Find products Maximum Price

SELECT Product\_Name, price

FROM

Products

WHERE

price = (SELECT Max(Price) FROM Products) ;

Product_Name	price
Gaming PC Xtreme	150000.00

-- Multi Row Subqueries IN

--Find Orders less than 700 price

SELECT Order\_Id , Product\_Id , Amount

FROM

Orders

WHERE Amount IN ( SELECT Amount FROM Orders WHERE Amount<=700) ;

Order_Id	Product_Id	Amount
7	149	450.00
8	135	500.00
11	166	350.00
18	185	300.00
20	195	400.00
26	138	480.00
35	201	450.00
38	204	600.00
40	199	500.00
NULL	NULL	NULL

-- Multi Row Subqueries ANY

-- Find products that are cheaper than at least one product in the 'Apparel' category.

SELECT Product\_Name, Price, category

FROM

Products

WHERE Price < ANY ( SELECT Price FROM Products WHERE Category = 'Apparel')

AND Category != 'Apparel' ORDER BY Price DESC;

Product_Name	Price	category
Bookshelf (5-tier)	7000.00	Furniture
Mechanical Keyboard G9	5000.00	Electronics
Camping Tent 2-person	5000.00	Sports & Outdoors
Toaster Oven	5000.00	Kitchen & Dining
Induction Cooktop	4800.00	Home Appliances
Electric Rice Cooker	4500.00	Home Appliances
Dumbbell Set 10kg	4500.00	Sports & Outdoors
Portable Bluetooth Speaker	4000.00	Electronics
Humidifier Cool Mist	4000.00	Home Appliances
Hiking Boots	4000.00	Sports & Outdoors

-- Multi Row Subqueries JOIN

-- Find customer fullname address order Amount is more than 50k and less than 80k.

SELECT c.Customer\_Id , c.Full\_Name, c.Address FROM Customers c

JOIN

Orders o ON c.Customer\_Id = o.Customer\_Id

WHERE

o.Amount IN (

SELECT Amount FROM Orders WHERE Amount >= 50000 AND Amount <= 80000 );

Customer_Id	Full_Name	Address
222	Zoya Gupta	2323, Viman Nagar, Pune
227	Esha Deshpande	2828, Pimpri, Pune
202	Bhavna Singh	456, Nehru Road, Delhi

-- Multi Row Subqueries JOIN GROUP BY

-- Retrieve the Full\_Name and Address of all customers who have placed an order with a product from the 'Furniture' category.

SELECT c.Full\_Name, c.Address FROM Customers c

INNER JOIN

Orders o ON c.Customer\_Id = o.Customer\_Id

INNER JOIN

Products p ON o.Product\_Id = p.Product\_Id

WHERE

p.Category = 'Furniture'

GROUP BY

c.Customer\_Id, c.Full\_Name, c.Address;

Full_Name	Address
Mahesh Jadhav	404, Main Market, Jaipur

-- Scale Subqueries

-- Retrieve the Product\_Name, Price, and Stock\_quantity for products that have a stock quantity greater than the average stock quantity of all products.

SELECT Product\_Name, Price, Stock\_quantity FROM Products WHERE

Stock\_quantity > ( SELECT AVG(Stock\_quantity) FROM Products )

ORDER BY Stock\_quantity DESC;

Product_Name	Price	Stock_quantity
Vintage Graphic T-Shirt	900.00	500
Water Bottle Insulated	400.00	500
Yoga Block	300.00	450
Razor Set	400.00	400
Cotton Polo Shirt	1200.00	400
Swim Trunks	700.00	400
The Alchemist	350.00	400
Running Shorts Performance	800.00	350
Skipping Rope	300.00	350
Body Lotion Shea Butter	550.00	350

-- List the Order\_Id, Customer\_Id, and Amount for the last 5 orders, and include the average order amount across all orders in a separate column for comparison.

SELECT Order\_Id, Customer\_Id, Amount,

( SELECT AVG(Amount) FROM Orders ) AS Overall\_Avg\_Amount

FROM

Orders ORDER BY Order\_Date DESC LIMIT 5 ;

Order_Id	Customer_Id	Amount	Overall_Avg_Amount
40	210	500.00	19848.725000
39	250	6000.00	19848.725000
38	240	600.00	19848.725000
37	205	25000.00	19848.725000
36	265	1100.00	19848.725000

-- Correlated Subquery

-- Identify products whose Stock\_quantity is lower than the minimum stock quantity of any other product within the same Category that is also priced above ₹500.

```
SELECT p1.Product_Name, p1.Category, p1.Stock_quantity FROM Products p1
WHERE
p1.Stock_quantity < ( SELECT MIN(p2.Stock_quantity) FROM Products p2
WHERE
p2.Category = p1.Category AND p2.Product_Id != p1.Product_Id AND p2.Price > 500 )
ORDER BY
p1.Category, p1.Stock_quantity;
```

Product_Name	Category	Stock_quantity
Womens Formal Dress	Apparel	90
Educated: A Memoir	Books	190
Smart TV 55-inch	Electronics	25
Sectional Sofa	Furniture	15
Hair Dryer Professional	Health & Beauty	90
Refrigerator Double Door	Home Appliances	20
Cookware Set Non-stick	Kitchen & Dining	60
Mountain Bike 21-speed	Sports & Outdoors	40

-- Correlated Subquery EXISTS

-- List the Product\_Name and Price for products that have been included in at least one order where the order amount was over ₹50,000.

```
SELECT p.Product_Name, p.Price FROM Products p WHERE
EXISTS (
SELECT 1 FROM Orders o
WHERE
o.Product_Id = p.Product_Id AND o.Amount > 50000 )
ORDER BY p.Price DESC;
```

Product_Name	Price
Gaming PC Xtreme	150000.00
Laptop Pro 15-inch	120000.00
Smart TV 55-inch	55000.00
Smartwatch Fitness	12000.00

-- Correlated Subquery JOIN Aggregate Fun

-- Retrieve the Full\_Name of customers who have placed orders, but none of their orders have a 'Paid' status (meaning all are 'Unpaid' or 'Cancelled').

```
SELECT DISTINCT c.Full_Name FROM Customers c
    INNER JOIN
        Orders o ON c.Customer_Id = o.Customer_Id
    LEFT JOIN ( SELECT DISTINCT o_paid.Customer_Id
        FROM Orders o_paid
        JOIN Payments p_paid ON o_paid.Order_Id = p_paid.Order_Id
        WHERE p_paid.Payment_Status = 'Paid' ) AS PaidCustomers
    ON c.Customer_Id = PaidCustomers.Customer_Id
    WHERE PaidCustomers.Customer_Id IS NULL -- Exclude any customer found in the PaidCustomers list
    ORDER BY c.Full_Name;
```

Full_Name
Bhavna Singh
Deepak Patel
Harshita Jain
Janki Mehta
Tarun Saini
Xenia Kumar

-- Advanced Subquerys

-- Retrieve the Order\_Id, Customer\_Id, Amount, and Order\_Date for orders where the order amount was greater than the average amount of all orders placed on the exact same date

```
SELECT o1.Order_Id, o1.Customer_Id, o1.Amount, o1.Order_Date
    FROM
        Orders o1
    WHERE
        o1.Amount > ( SELECT AVG(o2.Amount) FROM Orders o2 WHERE DATE(o2.Order_Date) =
DATE(o1.Order_Date) )
    ORDER BY
        o1.Order_Date DESC, o1.Amount DESC ;
```

Order_Id	Customer_Id	Amount	Order_Date
37	205	25000.00	2025-09-19 08:00:00
36	265	1100.00	2025-09-18 18:30:00
34	204	8000.00	2025-09-17 14:20:00
32	244	150000.00	2025-09-16 11:45:00
30	202	50000.00	2025-09-15 14:00:00
27	227	55000.00	2025-09-14 10:30:00
25	225	999.00	2025-09-13 11:00:00
23	212	40000.00	2025-09-12 09:00:00
22	222	55000.00	2025-09-11 14:00:00
19	219	1800.00	2025-09-10 12:00:00