

SQL Analytics & Queries

1. Monthly sales per product category per region

```
SELECT
    d.YEAR,
    d.MONTH,
    d.MONTH_NAME,
    f.SHIPPING_REGION AS REGION,
    p.CATEGORY,
    SUM(f.QUANTITY) AS TOTAL_QUANTITY_SOLD,
    SUM(f.TOTAL_AMOUNT) AS TOTAL_SALES,
    ROUND(SUM(f.TOTAL_AMOUNT) / NULLIF(SUM(f.QUANTITY), 0), 2) AS AVG_PRICE_PER_ITEM
FROM
    FACT_ORDERS f
JOIN DIM_PRODUCT p ON f.PRODUCT_KEY = p.PRODUCT_KEY
JOIN DIM_DATE d ON f.DATE_KEY = d.DATE_KEY
GROUP BY
    d.YEAR, d.MONTH, d.MONTH_NAME, f.SHIPPING_REGION, p.CATEGORY
ORDER BY
    d.YEAR, d.MONTH, TOTAL_SALES DESC;
```

Results		Chart							
	# YEAR	# MONTH	Δ MONTH_NAME	Δ REGION	Δ CATEGORY	# TOTAL_QUANTITY_SOLD	# TOTAL_SALES	# AVG_PRICE_PER_ITEM	
1	2025	3	March	Punjab	Accessories	61	292500.00	4795.08	
2	2025	3	March	Sindh	Accessories	28	126000.00	4500.00	
3	2025	3	March	Balochistan	Accessories	27	40500.00	1500.00	
4	2025	3	March	KPK	Accessories	45	36000.00	800.00	
5	2025	4	April	Punjab	Accessories	182	721000.00	3961.54	
6	2025	4	April	Sindh	Accessories	80	360000.00	4500.00	
7	2025	4	April	Balochistan	Accessories	108	162000.00	1500.00	
8	2025	4	April	KPK	Accessories	71	56800.00	800.00	

2. Top 5 repeat customers in the last 30 days

```
WITH RecentOrders AS (  
    SELECT  
        c.CUSTOMER_ID,  
        c.CUSTOMER_NAME,  
        COUNT(DISTINCT f.ORDER_ID) AS ORDER_COUNT,  
        SUM(f.TOTAL_AMOUNT) AS TOTAL_SPEND,  
    FROM  
        FACT_ORDERS f  
    JOIN DIM_CUSTOMER c ON f.CUSTOMER_KEY = c.CUSTOMER_KEY  
    JOIN DIM_DATE d ON f.DATE_KEY = d.DATE_KEY  
    WHERE  
        d.DATE >= DATEADD(day, -30, CURRENT_DATE())  
    GROUP BY  
        c.CUSTOMER_ID, c.CUSTOMER_NAME  
)  
SELECT  
    CUSTOMER_ID,  
    CUSTOMER_NAME,  
    ORDER_COUNT,  
    TOTAL_SPEND,  
FROM  
    RecentOrders  
ORDER BY  
    ORDER_COUNT DESC, TOTAL_SPEND DESC  
LIMIT 5;
```

Results		Chart			
	A CUSTOMER_ID	A CUSTOMER_NAME	# ORDER_COUNT	# TOTAL_SPEND	
1	C989	Ahmed Malik	46	452400.00	
2	C990	Sara Ahmed	43	356600.00	
3	C991	Usman Shah	40	408700.00	
4	C987	Ali Raza	37	312000.00	
5	C988	Fatima Khan	34	265100.00	

3. Total quantity sold and average price per product

SELECT

p.PRODUCT_ID,

p.PRODUCT_NAME,

p.CATEGORY,

SUM(f.QUANTITY) AS TOTAL_QUANTITY_SOLD,

SUM(f.TOTAL_AMOUNT) AS TOTAL_REVENUE,

ROUND(SUM(f.TOTAL_AMOUNT) / NULLIF(SUM(f.QUANTITY), 0), 2) AS EFFECTIVE_AVG_PRICE,

p.PRICE AS LIST_PRICE,

ROUND((EFFECTIVE_AVG_PRICE - p.PRICE) / p.PRICE * 100, 2) AS PRICE_VARIANCE_PCT

FROM

FACT_ORDERS f

JOIN DIM_PRODUCT p ON f.PRODUCT_KEY = p.PRODUCT_KEY

GROUP BY

p.PRODUCT_ID, p.PRODUCT_NAME, p.CATEGORY, p.PRICE

ORDER BY

TOTAL_QUANTITY_SOLD DESC;

Results		Chart						
	PRODUCT_ID	PRODUCT_NAME	CATEGORY	TOTAL_QUANTITY_SOLD	TOTAL_REVENUE	EFFECTIVE_AVG_PRICE	LIST_PRICE	PRICE_VARIANCE_PCT
1	P126	Laptop Stand	Accessories	135	202500.00	1500.00	1500.00	0.00
2	P123	Wireless Mouse	Accessories	127	317500.00	2500.00	2500.00	0.00
3	P125	USB-C Cable	Accessories	116	92800.00	800.00	800.00	0.00
4	P127	Mechanical Keyboard	Accessories	116	696000.00	6000.00	6000.00	0.00
5	P124	Bluetooth Headphones	Accessories	108	486000.00	4500.00	4500.00	0.00

4. Any customers who placed orders in multiple regions?

WITH CustomerShippingRegions AS (

SELECT

c.CUSTOMER_ID,

c.CUSTOMER_NAME,

f.SHIPPING_REGION,

COUNT(DISTINCT f.ORDER_ID) AS ORDERS_IN_REGION

FROM

FACT_ORDERS f

JOIN DIM_CUSTOMER c ON f.CUSTOMER_KEY = c.CUSTOMER_KEY

GROUP BY

c.CUSTOMER_ID, c.CUSTOMER_NAME, f.SHIPPING_REGION

)

SELECT

CUSTOMER_ID,

CUSTOMER_NAME,

COUNT(DISTINCT SHIPPING_REGION) AS REGION_COUNT,

SUM(ORDERS_IN_REGION) AS TOTAL_ORDERS,

LISTAGG(SHIPPING_REGION, ', ') WITHIN GROUP (ORDER BY SHIPPING_REGION) AS REGIONS

FROM

CustomerShippingRegions

GROUP BY

CUSTOMER_ID, CUSTOMER_NAME

HAVING

COUNT(DISTINCT SHIPPING_REGION) > 1

ORDER BY

REGION_COUNT DESC, TOTAL_ORDERS DESC;

↶ Results

↗ Chart

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	🔗 CUSTOMER_ID	🔗 CUSTOMER_NAME	🔗 REGION_COUNT	🔗 TOTAL_ORDERS	🔗 REGIONS
1	C989	Ahmed Malik	4	46	Balochistan, KPK, Punjab, Sindh
2	C990	Sara Ahmed	4	43	Balochistan, KPK, Punjab, Sindh
3	C991	Usman Shah	4	40	Balochistan, KPK, Punjab, Sindh
4	C987	Ali Raza	4	37	Balochistan, KPK, Punjab, Sindh
5	C988	Fatima Khan	4	34	Balochistan, KPK, Punjab, Sindh