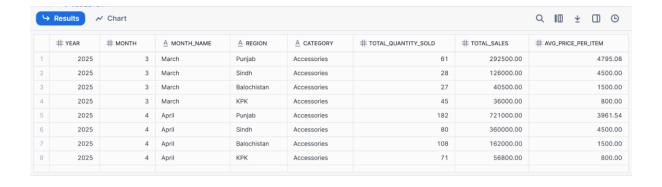
SQL Analytics & Queries

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;
```



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;
```

| C, | ♀ Results ペ 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;

| <i>L</i> , | ♀ Results ✓ Chart | | | | | | | | | |
|------------|---------------------|----------------------|-------------|-----------------------|-----------------|-----------------------|--------------|----------------------|--|--|
| | A PRODUCT_ID | A PRODUCT_NAME | A 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 = | | | | | | | | | | |

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;
```

