

## **OLAP Analysis Report**

This OLAP analysis provides insight into retail performance by examining sales aggregated across countries, time periods, and product categories. The roll-up query revealed variations in quarterly performance across different countries. Countries with higher total sales consistently showed steady behavior across quarters, indicating stable market demand. The roll-up also helped identify seasonal peaks, showing which regions outperform others during specific quarters, which is useful for inventory planning and strategic promotions.

The drill-down analysis focused on Kenya, breaking sales down by month. This finer level of granularity showed short-term demand fluctuations that are otherwise hidden in quarterly summaries. Monthly analysis enables managers to identify promotional effects, supply shortages, or sudden increases in customer activity. It also guides forecasting and budgeting at the country level.

The slice query isolated sales for the Electronics category. This helps management understand how a specific category contributes to total revenue. Electronics often exhibit competitive pricing and high turnover, so isolating them supports decisions around product assortment, marketing efforts, and supplier negotiations.

Overall, the data warehouse supports decision-making by integrating data across multiple dimensions—time, customer, product, and geography. It enables flexible OLAP operations such as roll-up, drill-down, and slicing to reveal trends not visible in raw transactional data. If synthetic data was used, the trends may not fully represent real-world behavior; however, the analytical process remains valid and demonstrates how such insights would drive strategic business decisions.