Analysis of OLAP Queries and Results

The roll-up query provided a summary of total sales grouped by country and quarter. From the visualization, we can identify which countries consistently generate higher sales volumes. For example, in the generated synthetic dataset, countries such as the USA and UK appear to dominate in total quarterly sales, though these figures are artificially constructed and do not represent real market data as seen in the **roll-up.csv.**

The drill-down query focused on monthly sales trends for the UK, revealing seasonal fluctuations. Some months show significant spikes, likely due to random variation in the synthetic data, but in real-world contexts, such peaks might align with holiday seasons or promotional campaigns as Shown in the **drill-down.csv**.

The slice query examined sales exclusively in the Electronics category. Results suggest that this category consistently contributes a substantial portion of total sales across months, indicating its importance for revenue. In an actual business setting, such insights could guide inventory management, marketing campaigns, and investment in high-performing product categories as shown in the **slice.csv.**

Overall, these OLAP queries demonstrate how the data warehouse enables multi-dimensional analysis: summarizing at a high level, drilling into specifics, and isolating particular segments. The synthetic nature of the data means trends may not mirror real-world patterns; however, the methodology mirrors genuine analytical workflows. With real transactional data, the same structure could support strategic decision-making in pricing, stocking, and regional marketing initiatives.