**Tailwind Traders Sales and Profit Insights Project: Step-by-Step Summary**

* **Prepared and Cleaned Sales Data**:
* Used Excel to prepare the initial dataset by calculating key business metrics like gross revenue, total tax, and net revenue per product.
* Ensured data accuracy by cross-checking calculations and setting up formulas to automate data consistency before integrating the data into Power BI.
* **Loaded Data into Power BI**:
* Imported the Tailwind Traders Sales data and optimized data types in Power BI for accurate reporting. Adjusted column types (e.g., Gross Revenue as fixed decimal, Quantity Purchased as whole number) to align with business requirements.
* Loaded additional datasets such as Purchases, Countries, and historical exchange rate data for comprehensive analysis.
* **Established Relationships Between Tables**:
* Created relationships between Sales, Purchases, Countries, and Currency tables using primary keys like **Order ID** and **Country ID**.
* Set relationship properties like cardinality (1:1, 1:\*) and cross-filter direction to ensure smooth data integration across all tables.
* **Developed Advanced DAX Calculations**:
* Created custom measures using DAX to compute critical financial metrics like **Yearly Profit Margin**, **Quarterly Profit**, **Year-to-Date Profit**, and **Median Sales**.
* Applied DAX functions like DATESQTD and TOTALYTD for time-based reporting to provide quarterly and yearly sales insights.
* **Integrated Python Data for Global Currency Conversion**:
* Imported historical currency exchange data using a Python script and integrated it into the Power BI model to convert sales data from multiple currencies to USD.
* Ensured global sales performance could be analyzed uniformly across different regions and currencies.
* **Designed Comprehensive Sales and Profit Reports**:
* Built interactive visualizations, including bar charts (for loyalty points by country and quantity sold by product), pie charts (for sales distribution), and line charts (for sales trends over time).
* Configured Key Performance Indicators (KPIs) to track **Net Revenue**, **Gross Revenue**, and **YTD Profit**.
* **Configured Desktop and Mobile Views**:
* Optimized the reports for mobile and desktop views, ensuring ease of access across devices.
* Tailored the layout to present key metrics on mobile, making the report accessible for decision-makers on the go.
* **Monitored Report Performance**:
* Used the Performance Analyzer tool to assess load times for each visualization and optimized DAX queries to ensure quick report rendering, aiming for load times under 200ms.