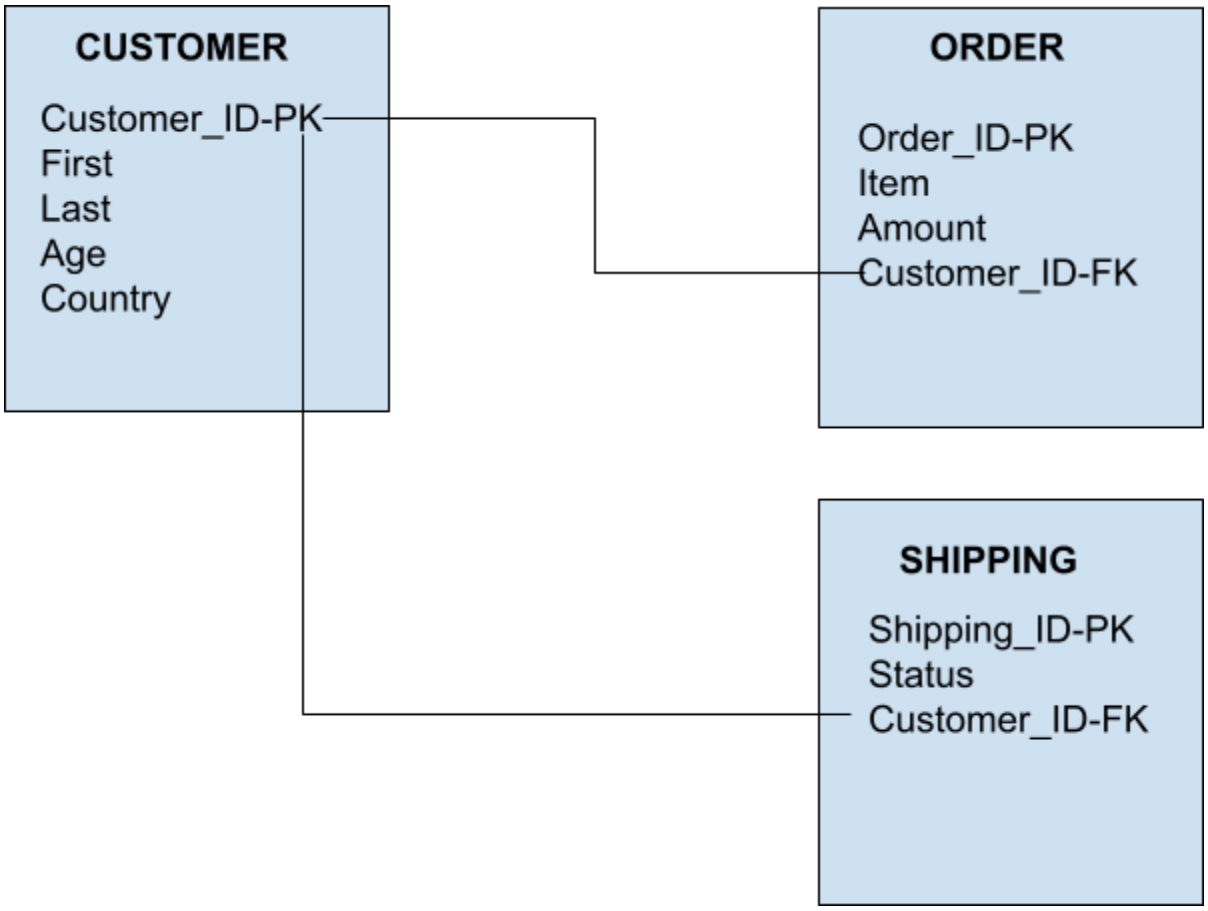
Data Model based on table contents:



Data Consistency:

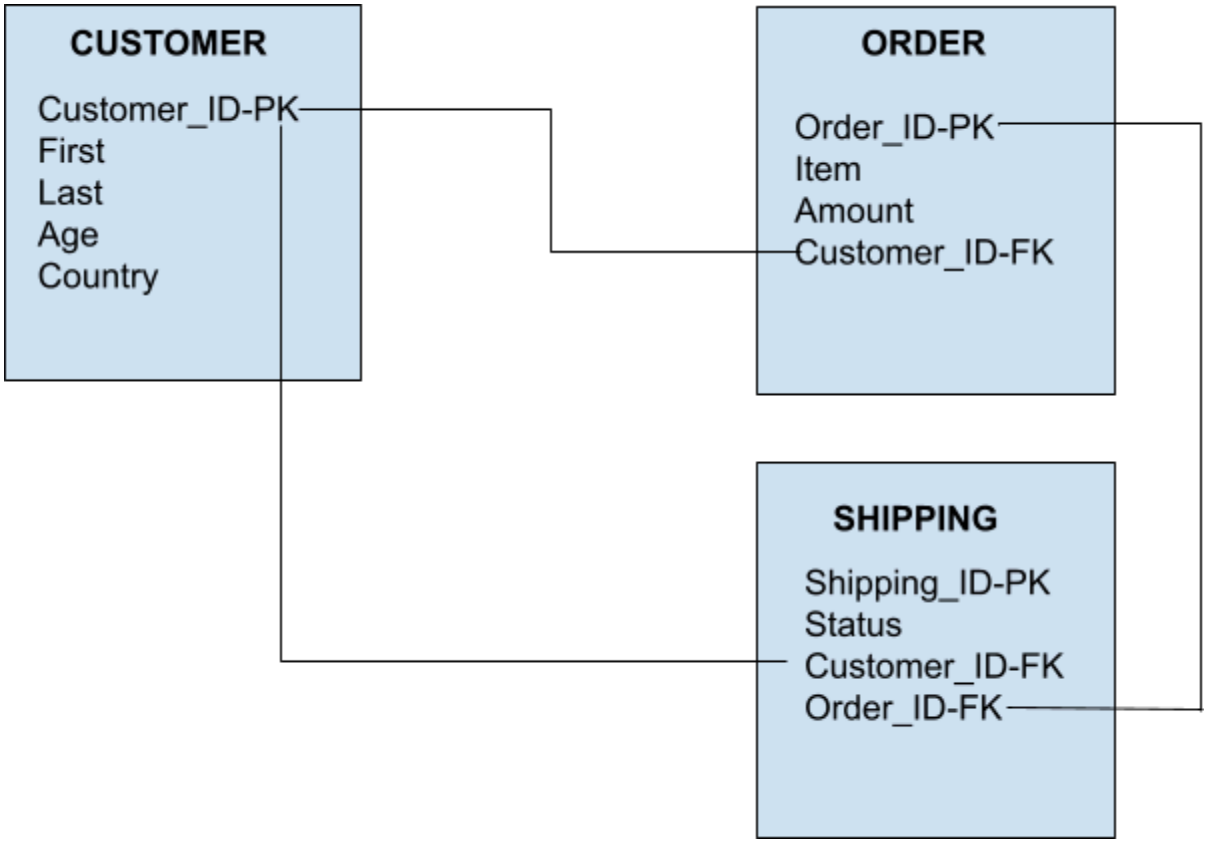
1. The dataset seems to be consistent in terms of the format used for names (First and Last), age, and country. However, there are a few instances where special characters are used in the names, such as "N!cole" and "R0bert". These inconsistencies needs to be addressed for standardization.
2. In the Customer table, there are inconsistencies in the formatting of the "Customer Name" column, where some names are in uppercase and others are in title case or lowercase. This inconsistency could affect data integrity and analysis, especially when trying to group or aggregate data based on customer names.

Data Profiling, Validation and Data Quality:

1. In the Customer table there are multiple customers where the First and Last names has special characters and numbers.
2. The Customer_ID from the Customer table are unique and can be used to uniquely identify any Customer and thus can be used as Primary Key for the Customer table.

3. The Order_ID from the Order table are also unique and can be used to uniquely identify an Order and thus can be used as Primary Key for the Order table.
4. The Customer_ID in the Order table falls within the Customer_ID range of 1-250 thus we can assume that every Order is mapped to the correct Customer_ID.
5. The Customer_ID can act as a Foreign Key for the Order table to find out the orders with respect to a Customer.
6. The Shipping_ID in the Shipping table will help identify the shipping details of a particular order made by a customer but a customer can have multiple orders and if not mapped to a particular Order_ID it is not possible to find out which order's shipping details are mentioned on the table
7. Product Quantity or Individual price of theb product is required for finding the quantity of the products for finding total quantity sold.
8. There are missing values in the "Product ID" and "Quantity" columns, which could impact the accuracy of metrics like total revenue or average order quantity. It's crucial to address these missing values through data cleaning or imputation techniques.
9. For some orders placed by the customers there is no shipping details. For example: Customer with Customer_ID:8 has placed 4 orders but in the Shipping table there are just 2 entries w.r.t. Customer_ID:8
10. If a customer places an order there is entry in order table but no respective entry details in shipping table For E.g.: Customer_ID:4 there is entry in the Order but no respective shipping details
11. For customer who has placed no order there is entry in the shipping table E.g.: Customer_ID: 2

Data Model Recommended:



- **Recommendations and Insights based on analysis:**
- **Age Distribution:**
    - The age of customers ranges from 18 to 80 years old, indicating a diverse age distribution within the customer base. This could be useful for segmentation and targeted marketing strategies.

- **Geographical Distribution:**
    - Customers are from various countries, including the USA, UK, and UAE. The majority of customers seem to be from the USA, followed by the UK and UAE. Understanding the distribution of customers across different countries can help in tailoring marketing campaigns and analyzing regional trends.

- **Purchase Pattern Analysis:**
    - Based on the customer table and order table data purchase pattern of the customer can be analysed and recommendations and suggestions can be given to the customer and targeted promotion can also be done.

- **Replenishment Cycle and Inventory Management:**
    - Based on the frequency of orders and forecasting the demand of a particular product the inventory can be kept in stock. Various metrics such as Economic

Order Quantity and Optimal Inventory Quantity can be tracked. Based on the demand the inventory can be planned.