| **Table/View Name** | **Used For** | **Additional Notes** |
| --- | --- | --- |
| **COUNTRIES** | Stores geographical data (e.g., country names, regions). | A dimension table; used for geographic analysis. |
| **CUSTOMERS** | Contains customer information like name, demographics, and contact details. | Dimension table for customer segmentation or behavior analysis. |
| **CHANNELS** | Describes sales channels (e.g.,direct- indirect sales, others). | Dimension table to analyze performance across sales channels. |
| **TIMES** | Stores time-related data (e.g., day, month, year). | Dimension table for temporal analysis (e.g., seasonal trends). |
| **PRODUCTS** | Holds product-related data such as name, category, and price. | Dimension table for analyzing sales by product or category. |
| **PROMOTIONS** | Stores details about promotions, discounts, and offers. (categories of promotions e.g Tv commercial, loyal customer discount) | Dimension table to assess promotion effectiveness. |
| **COSTS** | Contains cost-related metrics for transactions.(Unit price, unit cost, promo id etc) | Fact table to calculate profitability. Often used with SALES and PROFITS. |
| **SALES** | Stores sales transaction data (e.g., revenue, units sold). | Fact table central to the schema, used for analyzing revenue and performance. |
| **PROFITS** | Contains calculated profits for transactions. | Derived from SALES and COSTS. Represents profitability metrics. |

**Schema Design**

1. **Fact Tables**:
   * **SALES**: Core fact table for analyzing revenue, units sold, and other sales data.
   * **COSTS** and **PROFITS**: Additional fact tables used for financial performance analysis.
2. **Dimension Tables**:
   * **COUNTRIES**, **CUSTOMERS**, **CHANNELS**, **TIMES**, **PRODUCTS**, and **PROMOTIONS** provide contextual data for analyzing the facts.
3. **Relationships**:
   * Fact tables (e.g., SALES) have foreign keys linking them to each dimension table (e.g., CUSTOMERS, PRODUCTS, TIMES).
   * This creates a **star schema** with SALES at the center and dimensions as its spokes.

**Schema Design Considerations**

* **OLAP Optimization**:
  + Fact tables are designed to handle aggregations (e.g., total sales, average costs).
  + Dimension tables allow filtering and grouping by attributes (e.g., sales by region or product).
* **OLTP Optimization (if needed)**:
  + If this schema is used in OLTP systems, dimension tables may be normalized to reduce redundancy, while the fact tables remain optimized for fast inserts and updates.