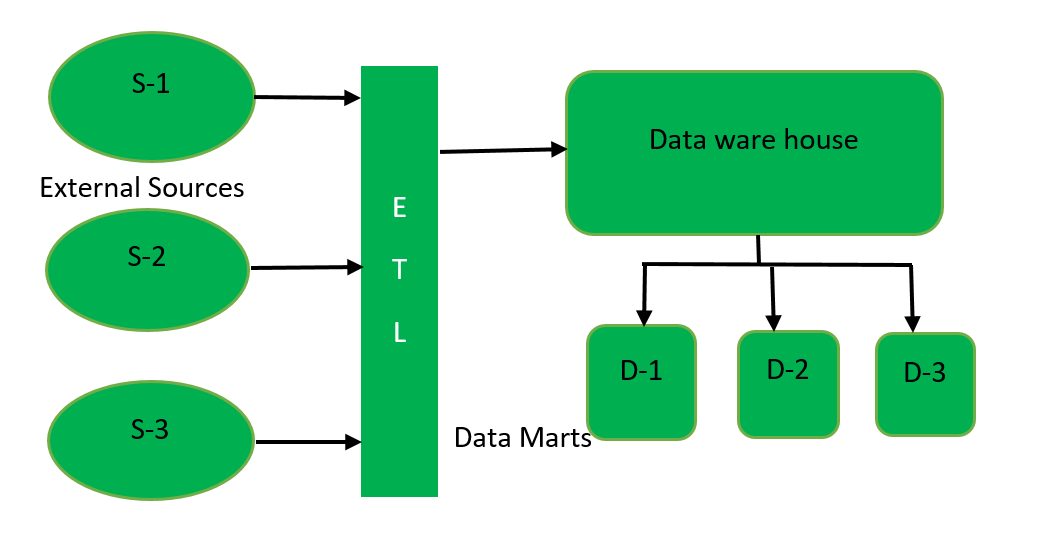
**What is Data Mart?**

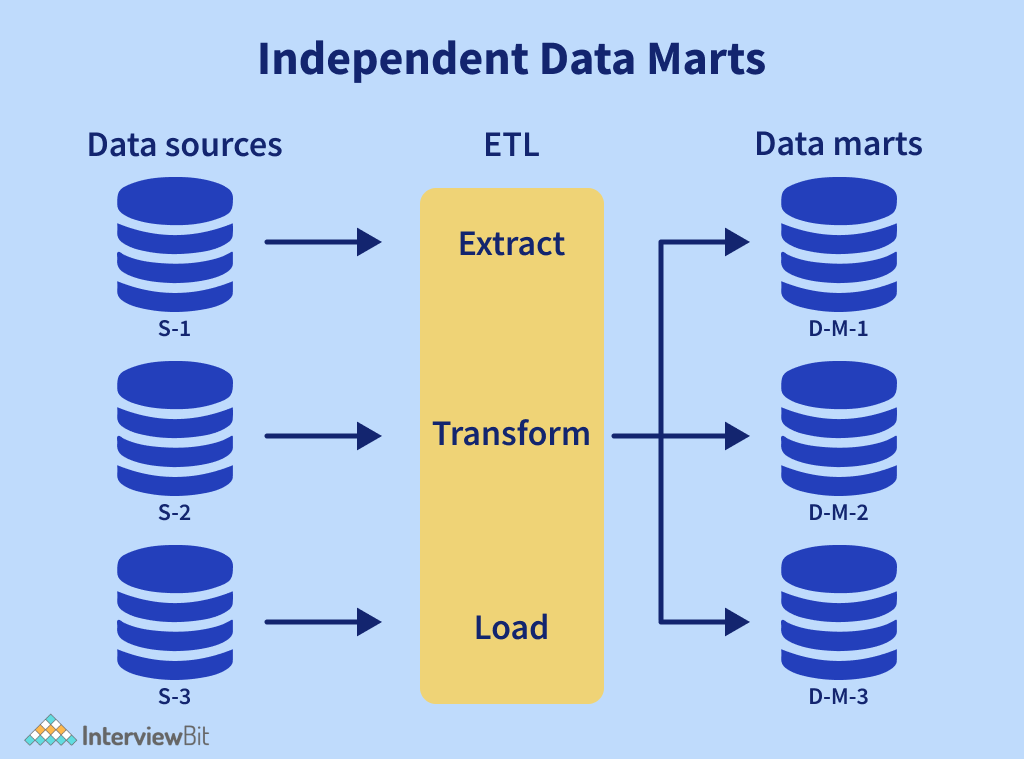
* Targets specific functional areas or departments, providing a simplified, targeted data view.
* Data is structured, transformed, and optimized for efficient querying and analysis.
* Smaller in scale, organized around specific subjects, and tailored for the reporting and analytical needs of specific users.



**Types of Data Mart :**

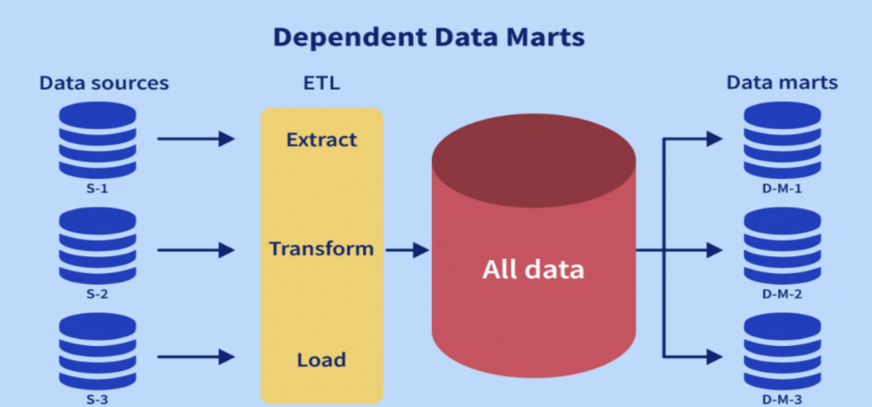
**Independent Data Mart:**

* Independent Data Mart is created directly from external sources instead of data warehouse.
* First data mart is created by extracting data from external sources and then datawarehouse is created from the data present in data mart.
* Independent data mart is designed in bottom-up approach of datawarehouse architecture.
* This model of data mart is used by small organizations and is cost effective comparatively.



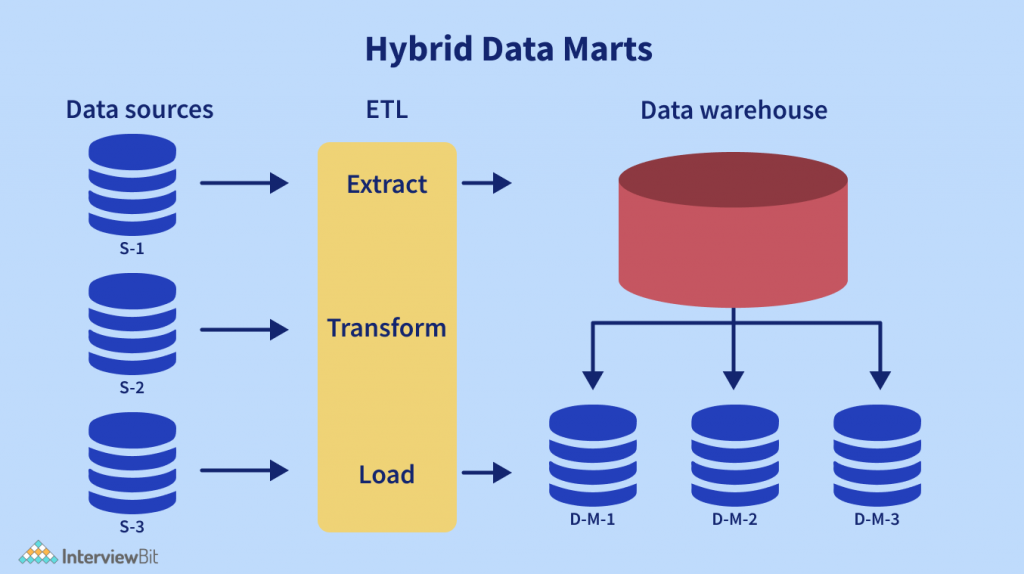
**Dependent Data Mart:**

* Dependent Data Mart is created by extracting the data from central repository, Datawarehouse.
* First data warehouse is created by extracting data (through ETL tool) from external sources and then data mart is created from data warehouse.
* Dependent data mart is created in top-down approach of dataware house architecture. This model of data mart is used by big organizations.



**Hybrid Data Mart:**

* A hybrid data mart combines both independent and dependent data mart components.
* 1Path reflects accessing data directly from external sources and 2Path reflects dependent data model of data mart.



**Structures of Data Mart:**

**Star Architecture in Data Marts:**

* Star architecture is a common data mart structure. It comprises multiple dimension tables surrounding a fact table.
* Primary-key and foreign-key are used to connect the fact table and dimension tables.
* This format supports quick data slice and dice operation for analysis.

**Snowflake Model :**

* A dimensional model extension that offers more normalized data structures is the snowflake model.
* Divides dimension tables into linked tables.  
  Helps decrease data redundancy in complex hierarchies.

#### **Application:**

* **Targeted Reporting and Analytics**
* **Sales and Marketing Analytics**
* **Financial Reporting**
* **Customer Insights**
* **Supply Chain and Inventory Management**

#### **Advantages:**

* **Faster Access to Relevant Data**
* **Improved Performance**
* **Cost-Effective**
* **Flexibility and Agility**

#### **Disadvantages:**

* **Data Redundancy**
* **Data Inconsistency**.
* **Limited Scope.**
* **Maintenance Overhead**