1. Data Marts: Data marts are subsets of a data warehouse that are focused on a specific business function or department. They are designed to provide easy access to relevant data for business users and analysts, who can use the data to gain insights and make informed decisions.
2. Data Lakehouse: A data lakehouse is a hybrid data storage architecture that combines the best aspects of data lakes and data warehouses. It allows organizations to store and manage both structured and unstructured data in a centralized repository, while also providing features such as schema enforcement and query optimization for better performance and ease of use.
3. Data Mesh: Data mesh is a decentralized approach to data architecture that emphasizes the creation of small, autonomous data domains, or "meshes," that are responsible for managing their own data. This approach is designed to enable more agile and scalable data management, as well as greater data democratization and collaboration across an organization.
4. DWH vs Data Lake: A data warehouse is a centralized repository of structured data that is optimized for reporting and analysis, while a data lake is a scalable, centralized repository of both structured and unstructured data that is designed to enable exploratory analysis and data discovery. Data warehouses are typically more rigid and structured, while data lakes are more flexible and adaptable.
5. OLTP vs OLAP: OLTP (Online Transaction Processing) and OLAP (Online Analytical Processing) are two different types of database systems. OLTP is designed for handling high-volume transactional data processing in real-time, while OLAP is designed for handling large volumes of data for querying and analysis purposes. OLTP systems are optimized for high-speed transaction processing, while OLAP systems are optimized for complex, ad-hoc queries and data analysis.

Examples:

* Data Marts: A finance department in a large corporation might create a data mart to store financial data, such as invoices, payments, and expenses, which can then be analyzed and used for reporting and budgeting purposes.
* Data Lakehouse: A healthcare organization might use a data lakehouse to store and manage patient data from various sources, such as electronic health records, medical imaging systems, and wearable devices, which can then be analyzed and used to improve patient care and outcomes.
* Data Mesh: A retail company might adopt a data mesh approach to enable different teams to manage and analyze their own data, such as inventory data, customer data, and sales data, while also providing a shared infrastructure for collaboration and governance.
* DWH vs Data Lake: A manufacturing company might use a data warehouse to store and analyze data on production efficiency, quality control, and supply chain management, while also using a data lake to store and analyze sensor data from its production lines and IoT devices for predictive maintenance and optimization.
* OLTP vs OLAP: An e-commerce website might use an OLTP system to handle transactions, such as orders and payments, while also using an OLAP system to analyze data on customer behavior, sales trends, and website traffic.