Assessment two:

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|  | OLAP | OLTP |
| USEAGE | * APPLICATION   used for business intelligence applications, executive dashboards, and data warehousing.   * QUERY COMPLIXTY | * APPLICATIONS   used in transactional applications like online banking, order processing.   * CONCURRENT USERS |
| PURPOSE | * Analytical Processing * Decision Support | * Transaction Processing * Data Consistency |
| RESOURSE USED | * Database Design   for analytical processing, emphasizing efficient data retrieval and aggregation   * Denormalization * Indices   may have fewer indices compared to OLTP | * Database Design   for transactional processing, focusing on efficient data modification.   * Normalization * Indices   typically have a moderate number of indices to optimize transactional queries |

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| Slicing | Dicing |
| Involves selecting one dimension to view a cross-section of the data. | Involves selecting specific values for two or more dimensions to view a focused subset of the data. |

**What is a data mart?**

A data mart is a subset of a data warehouse focused on a particular line of business, department, or subject area.

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|  | Snowflake | Star Schema | Galaxy Schema |
| Structure | Normalized with multiple related tables. | Centralized fact table connected to denormalized dimension tables. | Combines multiple star schemas through shared dimension tables. |
| Advantages | saves storage.  Reduce redundancy.  easier maintenance. | enhances performance.  user-friendly. | Provides flexibility for complex data relationships and diverse analytical requirements. |
| Use Cases | Suitable for scenarios prioritizing storage efficiency and data integrity. | Well-suited for data warehousing. | Suitable for environments with diverse analytical needs. |