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| **Chapter 1 Key Terms** | |  | | |
| **ad hoc query** | | A of the cuff query without advanced preparation |
| **analytical database** | | A read-only database specifically used with for business analytics, projection and forecasting. It is build to store and manage and consume big data and business intelligence. |
| **business intelligence** | | It’s an umbrella term for a driven process and practices used to collect and analyze data with the purpose of making informed business decisions |
| **centralized database** | | It’s a database that is located and stored at a single site |
| **cloud database** | | A database that runs on a cloud computing platform. Access to it is provided as a service such as IBM Bluemix and Google Cloud . |
| **data** | | Factual information not yet analyzed .. For example an address or phone numbers |
| **data anomaly** | | Problems that occur when data is redundant and not in normal form |
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| **data dependence** | | A condition where a program statement or instruction refers to the data of a preceding statement |

**data dictionary** A DBMS component that stores metadata. is a collection of descriptions of the *data* objects or items in a *data* model for the benefit of programmers and others who need to refer to them

**data inconsistency** occur between files when similar data is kept in different formats in two different files

data A condition in which data access is unaffected by changes in the physical data storage

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| **data management data processing manager data quality data redundancy data warehouse database**  **database design database management** |

A process that focuses on data collection, storage, and retrieval. Common data management functions include addition, deletion, modification, and listing.

A DP specialist who evolved into a department supervisor. Roles include managing technical and human resources, supervising senior programmers, and troubleshooting the program.

A comprehensive approach to ensuring the accuracy, validity, and timeliness of data.

A condition in which a data environment contains redundant data.

An integrated, subject-oriented, time-variant, nonvolatile collection of data that provides support for decision making, according to Bill Inmon, the acknowledged ?father of the data warehouse.?

A shared, integrated computer structure that houses a collection of related data. A database contains two types of data: end-user data and metadata. The metadata consist of data about data?that is, the data characteristics and relationships.

The process that yields the description of the database structure and determines the database components. Database design is the second phase of the Database Life Cycle.

The collection of programs that manages the database structure and controls access to the data stored in the database.

# system (DBMS)

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| **database system** | An organization of components that defines and regulates the collection, storage, management, and use of data in a database environment. |
| **desktop database discipline-** | A single-user database that runs on a personal computer. |
| **specific database** | A database that contains data focused on specific subject areas. |
| **distributed database** | A logically related database that is stored in two or more physically independent sites. |
| **enterprise database** | The overall company data representation, which provides support for present and expected future needs. |
| **Extensible**  **Markup**  **Language**  **(XML)** | A metalanguage used to represent and manipulate data elements. Unlike other markup languages, XML permits the manipulation of a document's data elements. XML facilitates the exchange of structured documents such as orders and invoices over the Internet. |
| **field** | An alphabetic or numeric character or group of characters that defines a characteristic of a person, place, or thing. For example, a person's Social Security number, address, phone number, and bank balance all constitute fields. |
| **file** | A named collection of related records. |
| **generalpurpose database** | A database that contains a wide variety of data used in multiple disciplines?for example, a census database that contains general demographic data, or the LexisNexis and ProQuest databases that contain newspaper, magazine, and journal articles for a variety of topics. |
| **information** | The result of processing raw data to reveal its meaning. Information consists of transformed data and facilitates decision making. |
| **islands of information** | In the old file system environment, pools of independent, often duplicated, and inconsistent data created and managed by different departments. |
| **knowledge** | The body of information and facts about a specific subject. Knowledge implies familiarity, awareness, and understanding of information as it applies to an environment. A key characteristic is that new knowledge can be derived from old knowledge. |
| **logical data format** | The way a person views data. |
| **metadata** | Data about data; that is, data about data characteristics and relationships. |
| **multiuser database** | A database that supports multiple concurrent users. |
| **NoSQL** | A new generation of database management systems that is not based on the traditional relational database model. |
| **online analytical processing (OLAP) online** | Decision support system tools that use multidimensional data analysis techniques. OLAP creates an advanced data analysis environment that supports decision making, business modeling, and operations research. |
| **transaction processing (OLTP)** | The systems that support a company's day-to-day operations. Databases that support OLTP are known as OLTP databases, transactional databases, or operational databases. |
| **operational database** | A database designed primarily to support a company's day-to-day operations. |
| **performance tuning** | Activities that make a database perform more efficiently in terms of storage and access speed. |

**physical data format** The way a computer sees data.

**query** A question or task asked by an end user of a database in the form of SQL code. A specific request for data manipulation issued by the end user or the application to the DBMS.

**query** A nonprocedural language that is used by a DBMS to manipulate its data. An example of a **language** query language is SQL. **query result set** The collection of data rows returned by a query.

**record** A collection of related fields. **semistructured data** Data that have already been processed to some extent. **single-user database** A database that supports only one user at a time.

**social media** Web and mobile technologies that enable ?anywhere, anytime, always on? human interactions.

**structural** A data characteristic in which a change in the database schema affects data access, thus **dependence** requiring changes in all access programs. **structural independence** A data characteristic in which changes in the database schema do not affect data access.

**structured** Unstructured data that have been formatted to facilitate storage, use, and information **data** generation.

# Structured

**Query** A powerful and flexible relational database language composed of commands that enable users to create database and table structures, perform various types of data manipulation

# Language

**(SQL)** and data administration, and query the database to extract useful information. **transactional database** A database designed to keep track of the day-to-day transactions of an organization. **unstructured data** Data that exist in their original, raw state; that is, in the format in which they were collected.

**workgroup** A multiuser database that usually supports fewer than 50 users or is used for a specific **database** department in an organization.

**XML database** A database system that stores and manages semistructured XML data.