# What is stored in a database?

Various types of information are stored in a database. For example, a college maintains data about students, courses, grades, and instructors. Initially, much of this data is in an unorganized, raw, and unreadable format. However, it can be processed and stored in a readable format, organized into rows and columns, much like a spreadsheet with in the database system.

# 2.What are data?

Data is raw, unorganized information that may not be easily readable for non-technical individuals. It must be processed into a meaningful format to obtain information.

# 3. What is information?

Information is the transformation of raw data through processing, organization, or interpretation, resulting in meaningful outcomes that serve a purpose for users.

# 4. What does DBMS stand for and what is it?

A "DBMS" stands for a "Database Management System." It is software designed to manage and control access to databases while ensuring data integrity. DBMS provides tools for data manipulation and retrieval, simplifying database interaction for users and applications.

# 5.What is a rational database?

A "relational database" is a structured system for organizing data into tables with rows and columns. It's widely used for efficient data management and is based on principles established by Edgar F. Codd in the 1970s.

# 6.What does DDLC stand for?

DDLC is an refers for "Database Development Life Cycle".

# 7. What are the phases of DDLC?

In the Database Development Life Cycle (DDLC), there are a total of five phases: planning, designing, developing, implementing, and maintaining a database system. This comprehensive approach covers the entire lifecycle of a database, from its initial concept to ongoing management and improvements.

# 8. What is the purpose of requirements analysis?

Requirements analysis aims to gather and document the specific needs and objectives of a project or system, providing a clear foundation for effective planning and development.

# 9. What is an entity relationship diagram?

An entity-relationship diagram (ERD) is a visual tool used in database design to depict how different entities, along with their attributes, are related to each other within a database system. Attributes represent the properties or characteristics of entities’ like (names or IDs) and indicates primary keys (unique identifiers) and foreign keys (references to other entities) etc.

# 10. What are two nations used to create entity relationship diagram?

Two common notations for creating entity-relationship diagrams (ERDs) are Crow's Foot Notation, known for its cardinality symbols, and Chen Notation, recognized for its simplicity and clarity in representing database structures.

# 11. What is normalization?

Normalization is the process of structuring a relational database to reduce redundancy and improve data integrity. It involves breaking down large tables into smaller ones and establishing relationships between them to prevent data anomalies and ensure efficient data storage and retrieval.

# 12. How many normal forms are usually required be industry?

In the industry, the most commonly used and essential normal forms are the first three: 1NF, 2NF, and 3NF. These address common data organization needs in most database design scenarios.

# 13. What is relational data model?

The relational data model organizes data into tables with rows and columns. Tables represent specific entities, rows are individual records, and columns define attributes. Keys establish relationships between tables, making data management and querying efficient.

# 14. What are the four categories of SQL commands?

Here are the four SQL commands categories:

1: **Data Query Language (DQL):** Involves commands like SELECT to retrieve data.

2: **Data Definition Language (DDL**): Includes commands like CREATE, ALTER, and DROP for defining and modifying database structure.

3: **Data Manipulation Language (DML):** Comprises commands like INSERT, UPDATE, and DELETE to manipulate data.

4: **Data Control Language (DCL):** Covers commands like GRANT and REVOKE for managing data access and privileges.

# 15. Which SQL category is used to create and modify the structure of database?

The SQL category used to create and modify the structure of a database is Data Definition Language (DDL).

# 16. Which SQL category is used to access and modify the data in a database?

The SQL category used to access and modify data in a database is Data Manipulation Language (DML).