* **What do you understand? By Database**

A database is a structured collection of information, or data, that is typically saved electronically in a computer system.

* **What is normalization?**

The process of structuring data in a database is called normalization. It involves building tables and figuring out how to relate them to each other.

Normalization is the act of designing a database so as to eliminate

redundancies, and improves how clearly data is arranged in databases.

The distribution of the data collected in a single table will be achieved by normalization.

over several tables that have distinct connections to one another.

* **What is the difference between DBMS and RDBMS?**

**->** DBMS: Satnd for Data Base Management System

DBMS stores data as a file.

There is no relationship between the data.

Normalization is not present.

**RDBMS** stands for Relational Database Management System.

RDBMS stores data in tabular form.

Data is stored in the form of tables that are related to each other.

Normalization is present.

* **What is the MF Cod Rule for RDBMS Systems?**

Dr. Edgar F. Codd, a computer scientist, developed the relational model for database administration in addition to proposing Codd's rules. The purpose of these guidelines is to guarantee data usability, consistency, and integrity.

**The Information Rule:** All information, whether it is user information or metadata, that is stored in a database must be entered as a value in a cell of a table. It is said that everything within the database is organized in a table layout.

**The Guaranteed Access Rule:** Each data element is guaranteed to be accessible logically with a combination of the table name, primary key (row value), and attribute name (column value).

**Systematic Treatment of Null Values**: Every null value in a database must be given a systematic and uniform treatment.

**Active Online Catalog Rule**: The database catalog, which contains metadata about the database, must be stored and accessed using the same relational database management system.

**The Comprehensive Data Sublanguage** Rule: A crucial component of any efficient database system is its ability to offer an easily understandable data manipulation language (DML) that facilitates defining, querying, and modifying information within the database.

**The View Updating Rule**: All views that are theoretically updatable must also be updatable by the system.

**High-level Insert, Update, and Delete**: A successful database system must possess the feature of facilitating high-level insertions, updates, and deletions that can grant users the ability to conduct these operations with ease through a single query.

**Physical Data Independence**: Application programs and activities should remain unaffected when changes are made to the physical storage structures or methods.

**Logical Data Independence** : Application programs and activities should remain unaffected when changes are made to the logical structure of the data, such as adding or modifying tables.

**Integrity Independence**: Integrity constraints should be specified separately from application programs and stored in the catalog. They should be automatically enforced by the database system.

**Distribution Independence**: The distribution of data across multiple locations should be invisible to users, and the database system should handle the distribution transparently.

**Non-Subversion Rule**: If the interface of the system is providing access to low-level records, then the interface must not be able to damage the system and bypass security and integrity constraints.

* **What do you understand by data redundancy?**

Data redundancy occurs when the same piece of data exists in multiple places.

* **What is a DDL interpreter?**

**DDL** stands for data definition language.

DDL commands include CREATE, ALTER, DROP, and TRUNCATE.

It is used to define the structure of databases and tables.

The interpreter performs line-by-line code.

* **What is the DML compiler in SQL?**

DML stands for data management language.

DML commands include SELECT, INSERT, UPDATE, and DELETE.

DML is used to manipulate the data itself within the database.

compiler compiles hole code.

* **What are SQL key constraints? Writing an Example of SQL Key Constraints**

The primary key constraint uniquely identifies each record in a table . Primary keys must contain unique values and cannot contain null values.

* **What is a save point? How do I create a save point and write a query?**

Savepoint is a command in SQL that is used with the rollback command.

It is a command in Transaction Control Language that is used to mark the transaction in a table.

-> Syntax: SAVEPOINT savepoint\_name;

* **What is a trigger, and how do you create a trigger in SQL?**

A trigger is a statement that a system executes automatically when there is any modification to the database.

A trigger is a SQL store procedure that automatically executes in response to a specific event, such as an insert, update, delete, or truncate statement on a specific table or view.

-> Syntax: CREATE TRIGGER [schema\_name.] trigger\_name

ON table\_name

AFTER {[INSERT], [UPDATE], [DELETE]}

[NOT FOR REPLICATION]

AS {sql\_statements} ;