

DATABASE





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Data: Data is any sort of information which is stored in computer memory.

Database: A database is a systematic collection of data in an electronic system that allows data to be stored, easily accessed, manipulated and updated

Different Types of Database:

- Relational database
- Hierarchical databases
- Network database
- Object-oriented database
- NoSQL database



SQL

- SQL stands for Structured Query Language.
- It is a kind of programming language and it is the standard language for interacting with Relational Databases.
- Using SQL we can manage data in a RDBMS
 1. Create new database and tables
 2. Insert records
 3. Update records
 4. Delete records
 5. Retrieve/Read records
- SQL is pronounced as “S-Q-L” or as “Sequel”.



Subset Of SQL

- **DQL (Data Query Language):** It allows to get information in database.
- **DDL (Data Definition Language):** It is responsible for defining the data structure, which includes commands such as CREATE, ALTER and DROP.
- **DML (Data Manipulation Language):** This command is used to modify existing data in a database. These commands include SELECT, UPDATE and INSERT.
- **DCL (Data Control Language):** his command controls access to data in the database. GRANT and REVOKE are two commands that fall under this category.



Datatypes

➤ Character Datatype

- CHAR(size)
- VARCHAR(size)
- BINARY(size)
- VARBINARY(size)

➤ Numeric Datatype

- INT
- FLOAT
- DOUBLE

➤ DateTime Datatype

- DATE
- DATETIME
- TIME



SQL COMMANDS

- `SELECT` - extracts data from a database
- `UPDATE` - updates data in a database
- `DELETE` - deletes data from a database
- `INSERT INTO` - inserts new data into a database
- `CREATE DATABASE` - creates a new database
- `ALTER DATABASE` - modifies a database
- `CREATE TABLE` - creates a new table
- `ALTER TABLE` - modifies a table
- `DROP TABLE` - deletes a table
- `CREATE INDEX` - creates an index (search key)
- `DROP INDEX` - deletes an index