

Data Analytics Project

16. Introduction to Databases



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WHAT is a Database?

1. A database is an organized collection of structured information stored electronically.
2. It enables efficient storage, retrieval, and manipulation of data.

Example: A **company's customer database** stores information such as names, addresses, and purchase history.



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TABLES in a Database?

1. Tables organize data into rows and columns format.
2. Each table represents a specific entity or concept.

Example: In a **school database**, there may be tables for students, courses, and grades.



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SCHEMA in a Database?

1. Schema defines the **structure** of the database.
2. It includes **tables**, **fields**, **relationships**, and **constraints**.

Example: A **database schema** for a library includes **tables** for books, authors, and **borrowers**, along with their respective fields.



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METADATA in a Database?

1. Metadata provides **information** about the data stored in the database.
2. It helps in **understanding** the structure and **properties** of the data.

Example: Metadata in a **music database** includes details about **song titles**, **artists**, and **album release dates**.

Database Management System (DBMS)

1. DBMS is software for creating, managing, and utilizing databases.
2. It provides tools for defining, querying, updating, and administering databases.

Example: MySQL, PostgreSQL, and Oracle are popular DBMSs used in various applications.

TYPES of Databases

1. Databases can be flat, relational, or NoSQL.
2. Each type caters to diverse data storage and management needs.

Example: **Relational databases** use tables to establish relationships between data, while **NoSQL databases** offer flexibility in handling unstructured data.

THANK YOU!!! FOR YOUR SUPPORT! For Now...

Keep Learning, Keep Sharing & Keep Following
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