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Answer 1:

A database is a structured collection of data organized for efficient retrieval, storage, and manipulation. It's like a digital filing cabinet where information is stored in a structured manner.

For example, imagine you're running an online store. You'd use a database to store information about products (like name, price, and description), customer details (like name, address, and purchase history), and order information (like items ordered, quantities, and payment details).

Why we need a database:

Without a database, managing this data would be chaotic and inefficient. With a database:

1. Data Redundancy: Databases ensure data consistency and accuracy, reduce Redundancy.
2. Data security: Databases provide mechanisms for controlling access to sensitive information

Answer 2:

File-based storage systems, though widely used, face a significant challenge: the absence of centralized control. Unlike databases, they lack enforced data consistency and security measures, leading to redundancy and vulnerability. Scalability is also an issue, as they struggle to manage growing data volumes efficiently. In essence, while simple, file-based systems falter in meeting the demands of modern data management.

Answer 3:

DBMS stands for Database Management System. It's software designed to manage databases, providing an interface for users and applications to interact with the data.

The need for DBMS arises from several factors:

1. Data Organization: DBMS organizes data in a structured manner, making it easier to store, retrieve, and manage.
 2. Data Integrity: It ensures data integrity by enforcing constraints and rules, reducing the risk of errors and inconsistencies.
 3. Data Security: DBMS offers mechanisms for controlling access to data, protecting sensitive information from unauthorized access.
 4. Concurrency Control: It manages concurrent access to data by multiple users or applications, preventing conflicts and ensuring data consistency.
- DBMS streamlines data management processes, improves data quality and security, and enhances the efficiency of accessing and manipulating data.