Limitations of file system

File systems, which manage how data is stored and retrieved on storage devices, have several limitations compared to more advanced data management systems like database management systems (DBMS).

1. **Limited Organization:** File systems can't organize data in very complex ways, mainly using folders and files.
2. **Concurrency Challenges:** It's hard for file systems to handle multiple users changing the same file at the same time without causing problems.
3. **Scaling Difficulties:** As the number of files and folders grows, file systems can slow down and struggle to manage data effectively.
4. **Basic Search and Retrieval:** While file systems can find and fetch files, they're not great at more complex searches or combining data from different files.
5. **Limited Security Features:** File systems offer basic security like permissions, but they lack advanced security measures like encryption and detailed auditing.

Applications of database system

Database systems are widely used in various applications across industries due to their ability to efficiently store, manage, and retrieve data. Some common applications include:

1. **Customer Relationship Management (CRM) Systems:** CRM systems use databases to store and manage customer data, including contact information, interactions, purchases, and preferences, to improve customer service and sales processes.
2. **E-commerce Platforms:** E-commerce platforms use databases to manage product catalogs, customer orders, payments, and inventory, enabling online transactions and personalized shopping experiences.
3. **Healthcare Information Systems:** Healthcare systems use databases to store and manage patient records, medical histories, treatment plans, and billing

information, ensuring accurate and secure data management for healthcare providers.

4. **Banking and Financial Systems:** Banking and financial systems use databases to manage customer accounts, transactions, loans, and investments, ensuring data integrity and security for financial institutions.
5. **Telecommunications Systems:** Telecommunications systems use databases to manage customer accounts, call records, network configurations, and service provisioning, ensuring efficient communication services.
6. **Manufacturing and Supply Chain Management:** Manufacturing and supply chain systems use databases to manage inventory, production schedules, suppliers, and distribution networks, optimizing production and logistics processes.
7. **Education Management Systems:** Educational institutions use databases to manage student records, course schedules, grades, and administrative processes, improving academic and administrative efficiency.
8. **Government Systems:** Government agencies use databases for various purposes, including managing citizen records, tax information, land records, public safety, and regulatory compliance.
9. **Data Warehousing and Business Intelligence:** Organizations use databases for data warehousing and business intelligence purposes, storing and analyzing large volumes of data to gain insights for decision-making and strategic planning.