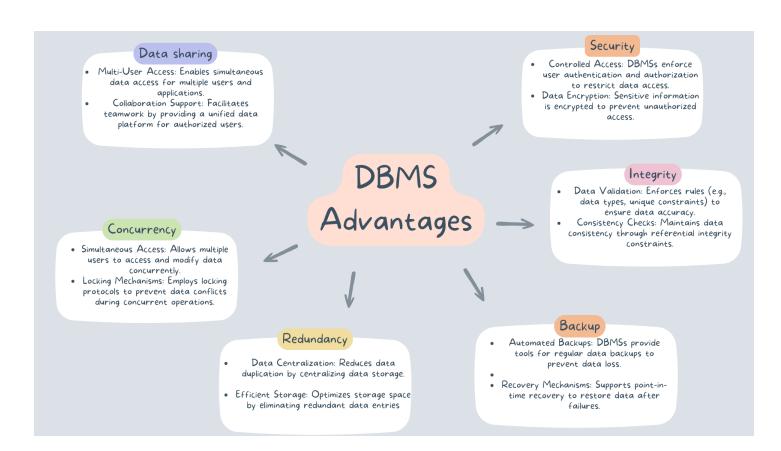
## Task 1 (Report) Database Search and Reporting Task

## 1. Comparison Assignment

	Flat File Systems	Relational Databases
Structure	stored in a single table or file	Multiple related tables
Data	often repeated across	designed to minimize data
Redundancy	multiple records	redundancy
Relationships	unstructured file without	organize data into multiple related
	inherent relationships	tables using keys
Example	Suitable for small scale	Ideal for applications requiring
usage	applications.	complex data relationships.
	Ex. storing configuration	Ex. An online store uses a
	settings and simple logs.	relational database.
Drawbacks	Limited scalability, Lack	Higher complexity, Requires more
	of support for advanced	resource, Cost and Maintenance
	querying,	

#### 2. DBMS Advantages Mind Map



#### 3. Roles in a Database System

### BI Developer

- Role: Analyzes data to provide actionable insights for decision-making.
- Responsibilities: Data modeling, report generation, and dashboard creation.

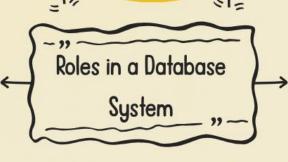
## Application Developer

- Role: Develops applications that interact with the database.
- Responsibilities: Application logic development, UI/UX design, and ensuring data integrity between application and database.

#### Database Administrator DBA

- Role: Manages and maintains the database system.
- Responsibilities: Performance tuning, backup and recovery, security management, and user access control.

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System Analyst

- Role: Analyzes business requirements and translates them into technical specifications.
- Responsibilities: Identifies system needs, designs workflows.

#### Database Designer

- Role: Designs the database structure to meet business needs.
- Responsibilities: Entityrelationship modeling, schema design, and normalization.

### Database Developer

- Role: Develops and implements database applications.
- Responsibilities: Writing SQL queries, stored procedures, and integrating databases with applications.