1. In relational databases relationships define how tables are connected to each other. The two common types of relationships are One-to-Many (1: N) and the Many-to-Many (N: N).

**Example of 1: N:** a database with customers and orders tables. Each customer can place multiple orders, but each order is lined to one customer. The customer ID in the orders table acts as a foreign key referencing the customer ID in customer Table.

**Example of N: N:** In a school database students and courses tables can have a many-to-many relationship. A student can enroll in many courses and each course can have multiple students. The relationship is normally managed with a junction table such as ENROLLMENTS which would have student ID and course ID as foreign keys.

1. **Advantages of Relational Databases**

* Data integrity
* Flexibility
* Security
* Data Consistency

Advantages of NoSQL databases

* Scalability
* Flexibility
* Performance
* Developer-friendly

1. **Disadvantages of Relational Databases**

* Complexity
* Scalability issues
* Performance
* Rigid Schema

Disadvantages of NoSQL databases

* Lack of Standardization
* Limited ACID support
* Maturity

1. **Two features of MySQL**

* ACID Compliance- ensures reliable transactions and data integrity.
* Replication- supports a master-slave replication allowing data from one MySQL server (master) to be replicated by slaves.

Features of MongoDB

* Document Oriented Storage- MongoDB stores data in flexible JSON documents.
* Sharding- Distributes data across multiple servers to handle large datasets and higher throughput.