Database

# SQL

## Relational Explain the concept of normalization in relational databases.

## What is ACID transactions?

## What is the difference between a join and a subquery in SQL?

## What are stored procedures and triggers

## Explain the differences between clustered and non-clustered indexes

## What are some common optimization techniques for improving the performance

## What is database replication

## What is database sharding

## Explain the difference between LEFT OUTER JOIN and RIGHT OUTER JOIN.

## When would you use UNION instead of a join?

## What is a composite index

## How does an index improve query performance

## What is the difference between a unique index and a primary key constraint

## What is connection pooling

## What is table locking, give me some types of locking

## What is query optimization, and why is it important in database systems

## What are query hints

## What is view and when to use it

## Explain the differences between data-at-rest encryption and data-in-transit encryption.

## Explain the concept of database auditing.

## What is SQL injection, and how can you prevent

## Explain the concept of database anomaly detection

# No SQL

## What is denormalization, and why is it commonly used in NoSQL databases?

## What are secondary indexes in NoSQL databases, and how are they used for query optimization?

## What are some common security considerations in NoSQL databases?

## What is horizontal partitioning, and how does it help improve scalability in NoSQL databases?

## Explain how indexing works in MongoDB to optimize query performance.

## Describe best practices for securing and managing data in MongoDB.