

Task 1 & Task 2 – Database Indexing and Communication Concepts

Task 1: Explain Database Indexing

a) As an Engineer

Database indexing is a data structure optimization technique used to improve the performance of read queries. An index works like a lookup table, allowing the database to quickly locate records without scanning the entire table. Indexes are commonly implemented using B-trees, hash tables, or similar structures. While indexes speed up reads, they increase storage usage and add overhead to write operations, so they must be designed carefully.

b) As a Product Manager

Database indexing helps the system retrieve data faster as the product scales. It directly impacts user experience by improving page load times and system responsiveness. Indexing requires planning since it can increase costs and slightly slow down data updates. From a product perspective, indexing is prioritized for high-value and performance-critical features.

c) As a Product Sales Person

Database indexing ensures the software remains fast and responsive, even with large volumes of data. It enables quicker searches, faster reports, and smoother overall performance. For customers, this means the product scales reliably as their data grows, supporting long-term productivity.

d) CEO's Perspective

Database indexing is a strategic tool that helps the platform stay fast, scalable, and cost-efficient. It supports consistent performance while controlling infrastructure costs, improving customer satisfaction, and enabling long-term, sustainable growth.

Task 2: Video Key Learnings

Video 1: Business Communication

1. Business communication is the exchange of information to achieve goals, share ideas, and build professional relationships.
2. Strong communication skills improve clarity, effectiveness, and reduce misunderstandings in the

workplace.

3. Communication occurs through multiple modes such as written, verbal, non-verbal, and presentations.

Video 2: Technical Communication

1. Technical communication focuses on explaining technical information clearly to a specific audience.
2. Its goal is to help users understand complex topics and use products or services effectively.
3. It is audience-centered, meaning content must be tailored to the knowledge level and needs of the audience.

Video 3: TED-style Talk (Sounding Smart)

1. The talk humorously shows how speakers can appear intelligent without meaningful content.
2. It highlights how presentation style can overshadow actual substance.
3. The talk satirically critiques TED-style presentations that look impressive but lack depth.