

# 23 Lecture - CS403

## Important Subjective

### 1. What is physical record in database design?

Ans: Physical record refers to the way the data is stored on the storage devices like hard disks, CDs, or tapes. It specifies the number of bytes allocated to store each field or attribute of a table, the order in which the fields are stored, and the format of each field.

### What is denormalization in database design?

Ans: Denormalization is a technique used in database design to improve query performance by adding redundant data to one or more tables. It is used in situations where there is a need for faster read performance than write performance.

### What are the advantages of denormalization?

Ans: The advantages of denormalization include faster read performance, reduced complexity of queries, and improved query response time. It also eliminates the need for expensive joins and can improve the efficiency of data retrieval operations.

### What are the disadvantages of denormalization?

Ans: The disadvantages of denormalization include increased storage space, increased complexity of data maintenance, and increased risk of data inconsistencies due to redundant data.

### What is a materialized view?

Ans: A materialized view is a database object that contains the results of a query. It is a precomputed table that stores the results of a query so that the data can be retrieved more quickly.

### What is indexing in database design?

Ans: Indexing is a technique used in database design to improve query performance. It involves creating a separate data structure that allows faster access to data based on certain criteria.

### What is clustering in database design?

Ans: Clustering is a technique used in database design to improve query performance by physically grouping related data together on disk.

### What is partitioning in database design?

Ans: Partitioning is a technique used in database design to improve query performance by dividing a large table into smaller, more manageable pieces called partitions.

### What is compression in database design?

Ans: Compression is a technique used in database design to reduce the size of data stored on disk. It involves encoding data in a more compact format so that it takes up less space.

### What is backup and recovery in database design?

Ans: Backup and recovery is a technique used in database design to protect data from loss or

corruption. It involves making copies of the data and storing them in a secure location so that they can be restored in case of data loss or corruption.