Database

ER diagram

Conversion of ER diagram into relational model

Basics of relational model and functional dependency

Idea about key/types

Normalization

Lossless decomposition and dependency preserving

Indexing and physical structure

SQL, RA, RC

Transaction

Concurrency control

**Data**

Data refers to Raw and isolated facts, figures, symbols, value could be recordable. Data can be various forms such as numbers, text, images, audio, and video.

Data is a collection of a distinct small unit of information.

**Information** processed, meaningful, usable data

Database

Database is a organized collection of data, so that it can be easily accessed and managed. We can organized data into tables, rows, columns and index it to make it easier to find relevant information.

The main purpose of the database is to operate a large amount of information by storing, retrieving and managing data.

File based

Hierarchical data model

Network data model

Relational database

Cloud database

NoSQL database

Object oriented database

Graph database

DBMS

RDBMS

The RDBMS is stands for Relational database management system. It is a type of dbms.it stores data in tables, which consist of rows and columns. Each table represents a entity and each row in the table represents a record/tuple/instance of entity.

Tables

RDMS, data is organized into tables, where each table has unique name and consist of rows and columns.

Entity

Row and columns

Row also known as records/tuples, represents individual instance of data stored in table.

Columns also known as attributes or fields, represent the different properties or characteristics of the data.

Tuple

Attribute