DBMS Database Management System

Data: are raw facts and concepts given to computer.

Information: is processed form of data

It is of two types

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1. Database: It is an arrangement of data in meaningful form

2. Result: It is due to processing/calculation of data

Database: is huge amount of data about an organisation, collected at one place in an organised manner. It is a miniworld of discourse for that organisation to perform its day to day operations.

DBMS is Database Management System

It is an application software that help us to perform all database operation to create, alter, delete databases and its objects. It also provide us with features to manipulate records in database such as insert, update, delete and select records .

Famous DBMS

1. Oracle

2. MS SQL Server <------->

3. My SQL

4. Sequel

5. MS Access

6. Mongo DB

Tables -->> Rows and Columns

Features of good DB

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1. Min Duplicacy

2. Consistency

3. Data Independence

4. CPU and Memory efficient

5. Support Relationships

6. Data Security

7. Data maintenance

8. User Independence

Parts of DB

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Tables ----> Entities---> Strong Entity (All records are unique) /// Weak Entity (It has dependency on other enities)

Rows > Records/Tuples

Coulmns > Attributes/Fields

Relationships

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. One to One Relationship

. One to Many Relationship

. Many to Many Relationship

Entity Relationship Diagram --

Keys

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Primary Key is an attribute in the table of a db that uniquely identifies one record. (Not null and Unique)

Foreign Key is an attribute that refers to primary key of other Table.

Super key - is a combination of two or more columns of a table that uniquely identifies one record.

Unique Key - Not duplicate

Candidate Key - These attributes help to identify unique records in absence of primary key

Normalisation: It is breaking of large database bodies into smaller units such that no insertion, deletetion and updation anomalies(problems) exists.

1st Normal Form No Duplicacy /Primary keys are defined

2nd Normal Form No functional dependency/ Foreign key defined

3rd Normal Form Boyce Codd Normal Form(BCNF) Candidates key defined

4th Normal Form No Multivalued dependency

5th Normal Form Project Join Normal Form (PJNF)