**MODULE: 5 (Database)**

1. What do you understand By Database?

* A database is like a digital storage room where we keep information organized. It helps us store and manage data so we can easily find what we need when we need it. Think of it as a big virtual filing system for storing all sorts of information.

1. What is Normalization?

* Normalization is a process in database design where we organize the data to minimize redundancy and dependency. It involves breaking down tables into smaller ones and establishing relationships between them to reduce data duplication and inconsistencies. This ensures data integrity and makes the database more efficient and easier to maintain.

1. What is Difference between DBMS and RDBMS?

* DBMS manages databases but does not organize data relationally. It stores data in flat files without maintaining relationships between them.
* RDBMS, on the other hand, organizes data relationally by establishing relationships between tables. It stores data in tabular form, reducing redundancy and making it easier to access and manage.

1. What is MF Cod Rule of RDBMS Systems?

The MF Cod Rule is a mnemonic used in the context of Relational Database Management Systems (RDBMS) to remember the key normalization rules. Each letter represents a specific normalization rule:

- M: Multivalued Dependency Rule

- F: Functional Dependency Rule

- Cod: Conjunctive, Orthogonal, and Disjunctive Dependency Rules

5. What do you understand By Data Redundancy?

Data redundancy refers to the repetition of data in a database system. This occurs when the same piece of data is stored multiple times in different places within the database. It can lead to inconsistencies, inefficiencies, and an increased risk of data anomalies.

1. What is DDL Interpreter?

The DDL Interpreter is a part of a database system that handles DDL commands. These commands are used to define, modify, and delete the structure of the database. Its job is to translate these commands into instructions that the database system can understand.

1. What is DML Compiler in SQL?

The DML Compiler in SQL handles commands for manipulating data stored in the database, like inserting, updating, and deleting data. It translates these commands into instructions that the database system can understand and execute. Essentially, it interacts with the data in the database.

1. What is SQL Key Constraints writing an Example of SQL Key Constraints.

**Primary Key Constraint**: Ensures that each record in a table is uniquely identified by a column or a set of columns. It enforces the uniqueness and not null property.

Example:-

CREATE TABLE Students (

StudentID INT PRIMARY KEY,

Name VARCHAR(50),

Age INT

);

**Unique Constraint**: Ensures that the values in a column or a set of columns are unique, but unlike a primary key, it allows null values.

Example:-

CREATE TABLE Employees (

EmployeeID INT UNIQUE,

Name VARCHAR(50),

Email VARCHAR(100) UNIQUE

);

**Foreign Key Constraint**: Establishes a relationship between two tables, ensuring the referential integrity of the data. It enforces that the values in a column (or columns) of one table match the values in another table's primary key or unique key column(s).

CREATE TABLE Orders (

OrderID INT PRIMARY KEY,

CustomerID INT,

OrderDate DATE,

FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

1. What is save Point? How to create a save Point write a Query?

10.What is trigger and how to create a Trigger in SQL?

1. Create Table Name : Student and Exam

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