

- **What do you understand By Database.**

- DBMS stands for Data Base Management System.

DBMS = Database + Management System.

Database is a collection of inter-related data and Management System is a set of programs to store and retrieve those data.

DBMS is a collection of inter-related data and set of programs to store & access those data in an easy and effective manner.

- **What is Normalization?**

- Normalization is a database design technique data redundancy and eliminates undesirable characteristics like insertion, Update and Deletion Anomalies. Normalization rules divides larger tables into smaller table and links them using relationship. The purpose of Normalization in SQL is to eliminate redundant (repetitive) data and ensure data is stored logically.

- **What is Difference between DBMS and RDBMS?**

<b>DBMS</b>	<b>RDBMS</b>
DBMS stores data as file.	RDBMS stores data in tabular form.
Data elements need to access individually.	Multiple data elements can be accessed at the same time.
No relationship between data.	Data is stored in the form of tables which are related to each other.
Normalization is not present.	Normalization is present.
It stores data in either a navigational or hierarchical form.	It uses a tabular structure where the headers are the column names, and the rows contain corresponding values.
It deals with small quantity of data.	It deals with large amount of data.
Data redundancy is common in this model.	Keys and indexes do not allow Data redundancy.
It is used for small organization and deal with small data.	It is used to handle large amount of data.
It supports single user.	It supports multiple users.
Data fetching is slower for the large amount of data.	Data fetching is fast because of relational approach.
The data in a DBMS is subject to low security levels with regards to data manipulation.	There exists multiple levels of data security in a RDBMS.
Low software and hardware necessities.	Higher software and hardware necessities.
Examples: XML, Window Registry, etc.	Examples: MySQL, PostgreSQL, SQL Server, Oracle, Microsoft Access etc.

- **What is MF Cod Rule of RDBMS Systems?**

- Codd's twelve rules are a set of thirteen rules (numbered zero to twelve) proposed by Edgar F. Codd, a pioneer of the relational model for databases, designed to define what is required from a database management system in order for it to be considered relational, i.e., a relational database management system (RDBMS).

- **What do you understand By Data Redundancy?**

- Data redundancy occurs when the same piece of data exists in multiple places, whereas data inconsistency is when the same data exists in different formats in multiple tables. Unfortunately, data redundancy can cause data inconsistency, which can provide a company with unreliable and/or meaningless information

- **What is DDL Interpreter?**

- It processes the DDL statements into a set of table containing meta data (data about data).

- **What is DML Compiler in SQL?**

- It processes the DML statements into low level instruction (machine language), so that they can be executed.

- **What is SQL Key Constraints writing an Example of SQL Key Constraints?**

- SQL constraints are used to specify rules for the data in a table. Constraints are used to limit the type of data that can go into a table. This ensures the accuracy and reliability of the data in the table. If there is any violation between the constraint and the data action, the action is aborted.

- ❖ **The following constraints are commonly used in SQL :**

- NOT NULL - Ensures that a column cannot have a NULL value
- UNIQUE - Ensures that all values in a column are different
- PRIMARY KEY - A combination of a NOT NULL and UNIQUE. Uniquely identifies each row in a table
- FOREIGN KEY - Prevents actions that would destroy links between tables
- CHECK - Ensures that the values in a column satisfies a specific condition
- DEFAULT - Sets a default value for a column if no value is specified
- CREATE INDEX - Used to create and retrieve data from the database very quickly.

- **What is save Point? How to create a save Point writes a Query?**

- A SAVEPOINT is a point in a transaction in which you can roll the transaction back to a certain point without rolling back the entire transaction.

Syntax for SAVEPOINT command: SAVEPOINT SAVEPOINT\_NAME;

This command is used only in the creation of SAVEPOINT among all the transactions.

- ❖ **To create a table in the database :**

- mysql> USE dbs;
- mysql> CREATE TABLE student(ID INT, Name VARCHAR(20), Percentage INT, Location VARCHAR(20), DateOfBirth DATE);

- **What is Trigger and how to create a Trigger in SQL?**

- A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs.  
Data Manipulation Language (DML) triggers run when a user tries to modify data through a (DML) event. DML events are INSERT, UPDATE, or DELETE statements on a table or view.

- ❖ **How to create a Trigger in SQL :**

- Trigger on an INSERT, UPDATE, or DELETE statement to a table or view (DML Trigger).
- `CREATE [ OR ALTER ] TRIGGER [ schema_name . ]trigger_name  
ON { table | view }  
[ WITH <dml_trigger_option> [ ,...n ] ]  
{ FOR | AFTER | INSTEAD OF }  
{ [ INSERT ] [ , ] [ UPDATE ] [ , ] [ DELETE ] }  
[ WITH APPEND ]  
[ NOT FOR REPLICATION ]  
AS { sql_statement [ ; ] [ ,...n ] | EXTERNAL NAME <method  
specifier [ ; ] > }`
- `<dml_trigger_option> ::=`  
    `[ ENCRYPTION ]`  
    `[ EXECUTE AS Clause ]`
- `<method_specifier> ::=`  
    `assembly_name.class_name.method_name`