1.What do you understand By Database?

Ans- DBMS stands for Data Base Management System.

• Data and 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.

• For Example, university database organizes the data about students,faculty, and admin staff etc. which helps in efficient retrieval, insertion and deletion of data from it.

2.what is Normalization?

Ans- Normalization is the process of minimizing redundancy (duplicity) from a relation or set of relations.

• Redundancy in relation may cause insertion, deletion and updation anomalies. So, it helps to minimize the redundancy in relations.

• Most Commonly used normal forms:

* First normal form(1NF)

• If a relation contain composite or multi-valued attribute, it violates first normal form or a relation is in first normal form if it does not contain any composite or multi-valued attribute.

• A relation is in first normal form if every attribute in that relation is singled valued attribute.

* Second normal form(2NF)

• To be in second normal form, a relation must be in first normal form and relation must not contain any partial dependency.

• relation is in 2NF if it has No Partial Dependency, i.e., no non-prime attribute (attributes which are not part of any candidate key) is dependent on any proper subset of any candidate key of the table.

• Partial Dependency – If the proper subset of candidate key determines non-prime attribute, it is called partial dependency.

* Third normal form(3NF) Boyce

• A relation is in third normal form, if there is no transitive dependency for non-prime attributes as well as it is in second normal form.

3. What is Difference between DBMS and RDBMS?

Ans- Database management system, as the name suggests, is a management system that is used to manage the entire flow of data, i.e, the insertion of data or the retrieval of data, how the data is inserted into the database, or how fast the data should be retrieved, so DBMS takes care of all these features, as it maintains the uniformity of the database as well does the faster insertions as well as retrievals.

RDBMS

RDBMS on the other hand is a type of DBMS, as the name suggests it deals with relations as well as various key constraints. So here we have tables which are called schema and we have rows which are called tuples. It also aids in the reduction of data redundancy and the preservation of database integrity.

relational Database Management System is an advanced version of a DBMS.

4. What is MF Cod Rule of RDBMS Systems?

Ans-

5. What do you understand By Data Redundancy?

Ans-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.

6. What is DDL Interpreter?

Ans- CREATE - Creates a new table, a view of a table, or other -object in database.

ALTER - Modifies an existing database object, such as a table.

DROP - Deletes an entire table, a view of a table or other object in the database.

7. What is DML Compiler in SQL?

Ans- INSERT - Creates a record.

UPDATE - Modifies records.

DELETE - Deletes records.

DML Compiler DML expands to  Data manipulation language , DML Compiler again as the name suggests compiles(or translates) the DML statements such as select, update and delete statements into low-level instructions which is nothing but the machine-readable object code to make it executable.

8. What is SQL Key Constraints writing an Example of SQL Key Constraints?

Ans- 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.

Constraints can be column level or table level. Column level constraints apply to a column, and table level constraints apply to the whole table.

The following constraints are commonly used in SQL:-

[NOT NULL](https://www.w3schools.com/sql/sql_notnull.asp) - Ensures that a column cannot have a NULL value.

[UNIQUE](https://www.w3schools.com/sql/sql_unique.asp) - Ensures that all values in a column are different.

[PRIMARY KEY](https://www.w3schools.com/sql/sql_primarykey.asp) - A combination of a  NOT NULL  and  UNIQUE . Uniquely identifies each row in a table.

[FOREIGN KEY](https://www.w3schools.com/sql/sql_foreignkey.asp) - Prevents actions that would destroy links between tables.

[CHECK](https://www.w3schools.com/sql/sql_check.asp) - Ensures that the values in a column satisfies a specific condition.

[DEFAULT](https://www.w3schools.com/sql/sql_default.asp) - Sets a default value for a column if no value is specified.

[CREATE INDEX](https://www.w3schools.com/sql/sql_create_index.asp) - Used to create and retrieve data from the database very quickly.

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

Ans-Save point Command is used to temporarily save a transaction so that you can rollback to that point whenever required.

Following is save point command's syntax:

SAVEPOINT savepoint\_name;

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

Ans- A trigger is a stored procedure in database which automatically invokes whenever a

special event in the database occurs.

* For example, a trigger can be invoked when a row is inserted into a specified table.

CREATE TRIGGER: This is the SQL command used to create a trigger.

* trigger\_name: This is the name of the trigger. You can choose any name you like, as long as it follows the naming conventions of your DBMS.
* [BEFORE|AFTER]: This specifies whether the trigger should be activated before or after the triggering event.
* [INSERT|UPDATE|DELETE]: This specifies the event that will trigger the execution of the trigger. You can choose one or more of these options depending on the specific trigger you want to create.
* ON table\_name: This specifies the table that the trigger will be associated with.
* [FOR EACH ROW]: This specifies that the trigger will be executed once for each row that is affected by the triggering event.
* BEGIN and END: This is where you will put the code that should be executed when the trigger is activated. The code inside the BEGIN and END blocks can be any SQL statements that you want to execute when the trigger is activated. The exact syntax and functionality of triggers can vary depending on the specific DBMS you are using.