1. What are the different subsets of SQL?

DDL (Data Definition Language) – It allows you to perform various operations on the database such as CREATE, ALTER and DELETE objects.

DML ( Data Manipulation Language) – It allows you to access and manipulate data. It helps you to insert, update, delete and retrieve data from the database.

DCL ( Data Control Language) – It allows you to control access to the database. Example – Grant, Revoke access permissions.

1. What is the database normalization?

First normal form: non duplicated rows. Each row should be atomic.

Second normal form: In first form and are not part of a compound primary key must be dependent on the whole of the compound primary key and not just part of it.

Third normal form: in second normal form. All non-key columns are not dependent on other non-key columns.

1. What is index?
2. What is cluster index? Non-cluster index?
3. Limit

Select \* from table limit 10,1(取1个数，从第十个开始)

Select \* from table limit 1 offset 10(取1个数，从第十个开始)

1. Q38. What is the need of MERGE statement?

This statement allows conditional update or insertion of data into a table. It performs an UPDATE if a row exists, or an INSERT if the row does not exist.

1. Q45. List some case manipulation functions in SQL?

There are three case manipulation functions in SQL, namely:

LOWER: This function returns the string in lowercase. It takes a string as an argument and returns it by converting it into lower case. Syntax:

LOWER(‘string’)

UPPER: This function returns the string in uppercase. It takes a string as an argument and returns it by converting it into uppercase. Syntax:

UPPER(‘string’)

INITCAP: This function returns the string with the first letter in uppercase and rest of the letters in lowercase. Syntax:

INITCAP(‘string’)

1. Q46. What are the different set operators available in SQL?

Some of the available set operators are – Union, Intersect or Minus operators.

1. What are Constraints?

Constraints are used to specify the limit on the data type of the table. It can be specified while creating or altering the table statement. The sample of constraints are:

NOT NULL

CHECK

DEFAULT

UNIQUE

PRIMARY KEY

FOREIGN KEY

1. What is the difference between clustered and non clustered index in SQL?

The differences between the clustered and non clustered index in SQL are :

Clustered index is used for easy retrieval of data from the database and its faster whereas reading from non clustered index is relatively slower.

Clustered index alters the way records are stored in a database as it sorts out rows by the column which is set to be clustered index whereas in a non clustered index, it does not alter the way it was stored but it creates a separate object within a table which points back to the original table rows after searching.

One table can only have one clustered index whereas it can have many non clustered index.

1. What do you mean by Denormalization?

Denormalization refers to a technique which is used to access data from higher to lower forms of a database. It helps the database managers to increase the performance of the entire infrastructure as it introduces redundancy into a table. It adds the redundant data into a table by incorporating database queries that combine data from various tables into a single table.

1. What are the different types of a subquery?

There are two types of subquery namely, Correlated and Non-Correlated.

Correlated subquery: These are queries which select the data from a table referenced in the outer query. It is not considered as an independent query as it refers to another table and refers the column in a table.

Non-Correlated subquery: This query is an independent query where the output of subquery is substituted in the main query.

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