Daily SQL Interview Questions

11. What is join? Explain the different types.

This is a keyword used to query data from more tables based on the relationship between the fields of the tables. Keys play a major role when JOINs are used.

- LEFT JOIN
- RIGHT JOIN
- INNER JOIN
- FULL OUTER JOIN

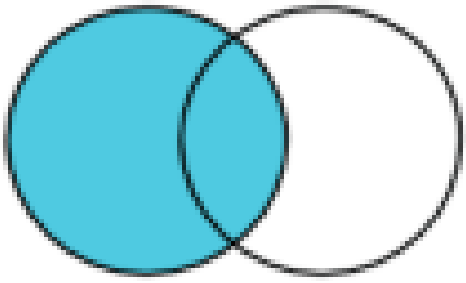
There are various types of joins which can be used to retrieve data and it depends on the relationship between tables.

- Left Outer Join: If we want all the records from left table and only matching records from right table then will use left outer join/left join.

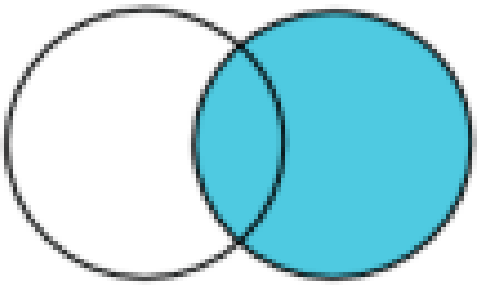
- Right Outer Join: If we want to display all the records from right table and only matching records from left table then will right outer join/right join.

Full Outer Join: If we want to display all the records from both the tables then will use full outer join.

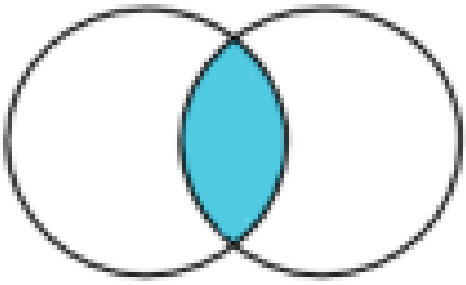
Inner Join: If we want only the matching records from both the tables then will use Inner join/Simple join.



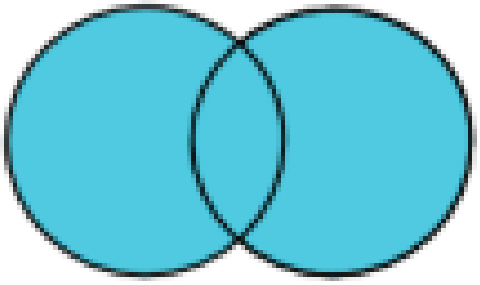
Left Join



Right Join



Inner Join



Full Outer Join

12. Explain the different types of normalization.

First Normal Form (1NF): This should remove all the duplicate columns from the table. Creation of tables for the related data and identification of unique columns.

Second Normal Form (2NF): Meeting all requirements of the first normal form. Placing the subsets of data in separate tables and Creation of relationships between the tables using primary keys.

Third Normal Form (3NF): This should meet all requirements of 2NF. Removing the columns which are not dependent on primary key constraints.

Fourth Normal Form (4NF): Meeting all the requirements of third normal form and it should not have multi-valued dependencies.

13. What are the different types of indexes?

An index is a performance tuning method of allowing faster retrieval of records from the table. An index creates an entry for each value and makes it faster to retrieve data.

There are three types of indexes:

Unique Index:

- This indexing does not allow the field to have duplicate values if the column is unique indexed. Unique index can be applied automatically when primary key is defined.

Clustered Index:

This type of index reorders the physical order of the table and search based on the key values. Each table can have only one clustered index.

Non-Clustered Index:

Non-Clustered Index does not alter the physical order of the table and maintains logical order of data. Each table can have 999 non clustered indexes

14. What is query?

- A DB query is a code written in order to get the information back from the database.

- Queries can be designed in such a way that it matches with our expectation of the result set

15. What is a trigger?

A DB trigger is a code or programs that automatically execute with response to some event on a table or view in a database. Mainly, trigger helps to maintain the integrity of the database.

Example: When a new student is added to the student database, new records should be created in the related tables such as the Exam, Score and Attendance tables.

Thank You