

Answer following questions

1. What is a result set?

My understanding is that a result set is a table which contains data typically from a query.

2. What is the difference between Union and Union All?

Firstly, the similarities of Union and Union All are that both statements combine results vertically and are grouped by multiple results. Therefore, the number of columns for both tables must be the same for Union and Union All. Likewise the column types must be identical such as uniting an integer column with another integer column; uniting an integer column with a varchar is not allowed. Also, Union and Union all share the feature where the alias must be in the first select statement. Secondly, the differences are that Union will remove duplicates, sort the values for the first column, and can't be used for recursive cte; While Union All keeps duplicates, doesn't sort the values of the first column, and can be used for recursive cte.

3. What are the other Set Operators SQL Server has?

SQL Server has two other Set Operators which are Intersect and Except. They also have the same similarities as Union and Union all.

4. What is the difference between Union and Join?

Join is used to combine rows from two tables. Join uses the keys of one table to match to another table with the same key using the join condition. Also the result set will have columns from both tables. While Union will use the columns that meet the aforementioned criteria to combine two tables. Also, Union stacks results vertically as mentioned earlier.

5. What is the difference between INNER JOIN and FULL JOIN?

Inner join returns the matching rows in the two table, while Full Join returns all of the rows in the two tables.

6. What is difference between left join and outer join

If you mean Left Outer Join, I believe Left Outer Join is the same as Left Outer Join. My understanding is that Outer keyword is optional. If you mean Right Join, Left join returns all the rows from the left table and all the matching rows in the right table and null for non matching values, while Right Outer Join returns everything on the right, matching values on the left and non matching rows are null. If you mean Full Outer Join, Left join returns all the rows from the left table and all the matching rows in the right table and null for non matching values, while Full Outer Join returns all the rows in each table and non matching values are null.

7. What is cross join?

Cross join is used to create the cartesian product of two tables.

8. What is the difference between WHERE clause and HAVING clause?

From my understanding the Where clause is used to filter through non aggregate fields, while the Having clause is used to filter through aggregate fields. Where clause is executed before aggregations, while the Having clause is executed after aggregation. Where can be used with the Select and Update clause, but the Having clause can only be used with the Select clause. Also, the Having clause is used with along with the Group By clause. Both Where and Having Clause are optional.

9. Can there be multiple group by columns?

Yes, I believe it is mandatory to have to same non aggregate columns in the group by clause as in the select clause. There should be a group by clause if there are non aggregate and aggregate columns in the select clause.