1. In SQL Server, assuming you can find the result by using both joins and subqueries, which one would you prefer to use and why?

Ans:

I prefer to use JOIN because JOIN usually has better performance than subquery.

1. What is CTE and when to use it?

Ans:

CTE stands for Common Table Expression.

It can be used to:

1. Create a recursive query.
2. Substitute for a view when the general use of a view is not required.
3. Enable grouping by a column that is derived from a scalar subselect, or a function that is either not deterministic or has external access.
4. Reference the resulting table multiple times in the same statement.
5. What are Table Variables? What is their scope and where are they created in SQL Server?

Ans:

1. Table Variables are local variables that has some similarities to temp tables. Table variables are created via a declaration statement like other local variables. Like other local variables, a table variable name begins with an @ sign. However, its declaration statement has a type of table.
2. The scope of a variable lasts from the point it is declared until the end of the batch or stored procedure in which it is declared.
3. It is stored in the tempdb system database.
4. What is the difference between DELETE and TRUNCATE? Which one will have better performance and why?

Ans:

1. We can use WHERE clause to select to record we want for DELETE but cannot use WHERE for TRUNCATE.
2. DELETE is DML command while TRUNCATE is DDL command.
3. Trigger is fired if DELETE and Trigger is not fired while TRUNCATE.
4. TRUNCATE removes all the rows form a table while DELETE can use WHERE clause to specify the row we want to delete. If there is no condition provided, all the rows will be removed.
5. TRUNCATE locks the whole table while DELETE locks the table row.
6. TRUNCATE resets identity of table while DELETE does not.

TRUNCATE has better performance because it makes less use of the transaction log. DELETE must read the records, check constraints, update the block, update indexes, and generate redo/undo.

1. What is Identity column? How does DELETE and TRUNCATE affect it?

Ans:

IDENTITY column is a special type of column that is used to automatically generate key values based on a provided seed (starting point) and increment. SQL Server provides us with a number of functions that work with the IDENTITY column.

For DELETE, it retains the identity and does not reset it to the seed value.

For TRUNCATE, it resets the identity to its seed value.

1. What is difference between “delete from table\_name” and “truncate table table\_name”?

Ans:

These two queries both delete all the rows from the table. However, “delete from table\_name” delete records row by row while “truncate table table\_name” delete all the records as a whole. Thus, the second query has better performance than the first querys