SQL

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# Query to delete duplicate records

DELETE FROM [SampleDB].[dbo].[Employee]

    WHERE ID NOT IN

    (

        SELECT MAX(ID) AS MaxRecordID

        FROM [SampleDB].[dbo].[Employee]

        GROUP BY [FirstName],

                 [LastName],

                 [Country]

    );

# Magic Tables

There are Magic Tables (virtual tables) in SQL Server that hold the temporal information of recently inserted and recently deleted data in the virtual table. INSERTED and DELETED are two types of magic tables in SQL Server. An INSERTED magic table is populated with INSERT and UPDATE operations and DELETED magic table is populated with UPDATE and DELETE operations.

The INSERTED magic table stores the before version of the row, and the DELETED table stores the after version of the row for any INSERT, UPDATE, or DELETE operations.

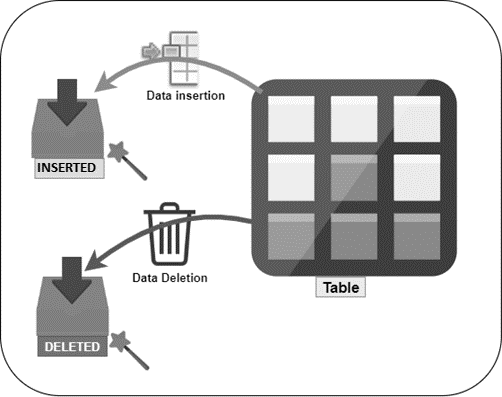
A magic table can be utilized in INSERT, UPDATE, and DELETE activity with the table in a trigger, which is the common understanding of people. SQL Server uses magic tables outside the TRIGGER also for a lot of other purposes too. Use of Magic tables in SQL Server with the usual update statement lessens the information dependency and makes your information consistent with your transaction.

A magic table is stored in the temp DB.

**INSERT**: The INSERTED magic table will have the newly inserted rows on the top in the table with an insert operation. It can be used to manage an audit of the table to another history table.

**DELETE**: The DELETED magic table will have the recently deleted rows on the top in the table with a delete operation. It can be used to manage a previous version of the row for the audit purpose in the history table.

**UPDATE**: Both INSERTED and DELETED virtual tables will be part of an update statement. Update statement returns deleted magic table with the previous version of the row and the inserted magic table with the new version of a row, which is going to be replaced or updated with the earlier values in the table. The important thing is that whenever users perform the update statement inside the trigger or outside the trigger, INSERTED and DELETED magic tables are being used.



A common use of Magic tables in SQL Server is the DML (Data Manipulation Language) trigger. SQL Server DML trigger allows using these two virtual tables INSERTED and DELETED. The ideal use of the trigger is auditing and managing a before and after version of the table row on INSERT, UPDATE, or DELETE operation within the transaction statement. Even users can write data manipulation logic as well with these magic tables inside the trigger.