**Common Table Expression**

A common table expression (CTE) can be thought of as a temporary result set that is defined within the execution scope of a single SELECT, INSERT, UPDATE, DELETE, or CREATE VIEW statement.

A CTE is similar to a derived table in that it is not stored as an object and lasts only for the duration of the query

**Unlike** a derived table, a CTE **can be self-referencing and can be referenced multiple times** in the same query.

**Structure Of CTE**

WITH expression\_name [ ( column\_name [,...n] ) ]

AS

( CTE\_query\_definition )

USE AdventureWorks2008R2;

GO

-- Define the CTE expression name and column list.

WITH Sales\_CTE (SalesPersonID, SalesOrderID, SalesYear)

AS

-- Define the CTE query.

(

SELECT SalesPersonID, SalesOrderID, YEAR(OrderDate) AS SalesYear

FROM Sales.SalesOrderHeader

WHERE SalesPersonID IS NOT NULL

)

-- Define the outer query referencing the CTE name.

SELECT SalesPersonID, COUNT(SalesOrderID) AS TotalSales, SalesYear

FROM Sales\_CTE

GROUP BY SalesYear, SalesPersonID

ORDER BY SalesPersonID, SalesYear;

GO