MS SQL 2008

Views
Chapter 11 | Hotek, 2008

Views

- A view is a virtual table whose contents are defined by a query – created by a SELECT statement and stored in the DB

- Works exactly like a table does and unless indexed, is not permanently stored in DB

- 3 types of views
  - Standard views: simple SELECT statement
  - Indexed views: one that is indexed
  - Partitioned views: joins horizontally partitioned data from a set of member tables across one or more servers

Benefits of Views

- Security and data customisation
  - They are helpful especially to create security areas where users only work on a view and not the tables themselves
- Data manipulation (even across servers)
  - Unnecessary data can be skipped, frequently accessed data
- Backward compatibility
  - For example non-normalised data
- Data Import and Export

CREATE VIEW [*schema_name* **.**] *view_name* [**(***column* [
,...*n*] **)**] [WITH <view_attribute> [**,**...n]]
AS *select_statement* [WITH CHECK OPTION] [;]

Some Limitations

- The SELECT clauses in a view definition cannot include the following:
  - COMPUTE or COMPUTE BY clauses
  - An ORDER BY clause, unless there is also a TOP clause in the select list of the SELECT statement
  - The INTO keyword
  - The OPTION clause
  - A reference to a temporary table or a table variable.

Example

USE AdventureWorks ;
GO

CREATE VIEW hiredate_view AS
SELECT c.FirstName, c.LastName, e.EmployeeID, e.HireDate
FROM HumanResources.Employee e JOIN Person.Contact c on e.ContactID = c.ContactID ;
GO

SELECT *
FROM hiredate_view
GO

- Data can only be modified through a view in same way by using UPDATE, INSERT and DELETE statements if and only if:
  - Any modifications must reference only one base table
  - Must reference the underlying data in the table columns directly, they cannot be derived in any other way
  - The columns that are being modified cannot be affected by GROUP BY, HAVING, or DISTINCT clauses.
  - TOP cannot be used anywhere in the select statement of the view when WITH CHECK OPTION is also specified