



SQL View

.NET

A View is a way to create a SQL table virtually for a specific purpose, such as to present data to a user in a way that safeguards the data from malicious intent.

[HTTPS://DOCS.MICROSOFT.COM/EN-US/SQL/T-SQL/STATEMENTS/CREATE-VIEW-TRANSACT-SQL?](https://docs.microsoft.com/en-us/sql/t-sql/statements/create-view-transact-sql?)

SQL – Computed Columns

<https://docs.microsoft.com/en-us/sql/relational-databases/tables/specify-computed-columns-in-a-table?view=sql-server-ver15>

A *Computed Column* is a virtual column whose value is based on some computation done on other columns within the table. It is not physically stored in the table unless the column is marked **PERSISTED**.

A *Computed Column* expression can use data from other columns to calculate a value for the column to which it belongs.

When creating a table, use the keyword **AS** to designate a column as a Computed Column.

```
CREATE TABLE dbo.Products
(ProductID int IDENTITY(1,1) NOT NULL,
QtyAvailable smallint,
UnitPrice money,
InventoryValue
AS
(QtyAvailable * UnitPrice) );
```

SQL – Computed Tables (Views)

<https://docs.microsoft.com/en-us/sql/t-sql/statements/create-view-transact-sql?view=sql-server-ver15>

A **Computed Table** is a virtual table whose contents are defined by a query. A **View** can be used:

- To focus, simplify, and customize the perception each user has of the database.
- As a security mechanism by allowing users to access data through the **View** without granting the users permissions to directly access the underlying base tables.
- To provide a backward compatible interface to emulate a table whose schema has changed.

```
ALTER TABLE Poke.Pokemon ADD
    Active BIT NOT NULL DEFAULT 1;

GO

CREATE VIEW Poke.ActivePokemon AS
    SELECT * FROM Poke.Pokemon WHERE Active = 1;

GO
```

View – WITH SCHEMABINDING

<https://docs.microsoft.com/en-us/sql/t-sql/statements/create-view-transact-sql?view=sql-server-ver15#arguments>
<https://www.tutorialspoint.com/sql/sql-using-views.htm>

When **WITH SCHEMABINDING** is specified:

- the base table(s) cannot be modified in a way that would affect the **View** definition.
- The **View** definition itself must first be modified or dropped to remove dependencies on the table that is to be modified.
- The **SELECT** statement must include the two-part names (schema.object) of tables, **Views**, or user-defined **Functions** that are referenced.
- All referenced objects must be in the same database.

```
CREATE VIEW view_name  
WITH SCHEMABINDING  
AS  
SELECT column1, column2...  
FROM table_name  
WHERE [condition];
```


View – WITH SCHEMABINDING

WITH SCHEMABINDING sets up a "hard" reference from the **View** to the table. The **View** prevents any changes to that table that would “break” the **View**'s query

```
GO
CREATE VIEW Poke.WeirdView WITH SCHEMABINDING AS
    SELECT PokemonId * 2 AS PokemonId, Name + '!' AS Name
    FROM Poke.Pokemon;
GO
DROP VIEW Poke.WeirdView;
DROP TABLE Poke.Pokemon;
```

```
SELECT * FROM Poke.WeirdView;
DELETE FROM Poke.WeirdView WHERE PokemonId = 2000;
UPDATE Poke.WeirdView SET Name = 'Charmander';
```