Part 41 – Indexed Views

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In this session we will learn

- Indexed views

Prerequisite:
Part 39 - View Basics
Part 40 - Updateable Views

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Indexed Views

What is an Indexed View?
                or
What happens when you create an Index on a view?

A standard or Non-indexed view, is just a stored SQL query. When, we try to retrieve data from the view, the data is actually retrieved from the underlying base tables.

So, a view is just a virtual table it does not store any data, by default.

However, when you create an index, on a view, the view gets materialized. This means, the view is now, capable of storing data.

In SQL server, we call them Indexed views and in Oracle, Materialized views.

Indexed Views - Example

ProductId	Name	UnitPrice
1	Books	20
2	Pens	14
3	Pencils	11
4	Clips	10

ProductId	QuantitySold
1	10
3	23
4	21
2	12
1	13
3	12
4	13
1	11
2	12
1	14

Name	TotalSales	TotalTransactions
Books	960	4
Clips	340	2
Pencils	385	2
Pens	336	2

```
Create view vWTotalSalesByProduct
With SchemaBinding
as
Select Name,
SUM(ISNULL((QuantitySold * UnitPrice), 0)) as TotalSales,
COUNT_BIG(*) as TotalTransactions
from dbo.tblProductSales
join dbo.tblProduct
on dbo.tblProduct.ProductId = dbo.tblProductSales.ProductId
group by Name
```

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Guidelines for creating Indexed Views

```
Create view vWTotalSalesByProduct
With SchemaBinding
as
Select Name,
SUM(ISNULL((QuantitySold * UnitPrice), 0)) as TotalSales,
COUNT_BIG(*) as TotalTransactions
from dbo.tblProductSales
join dbo.tblProduct
on dbo.tblProduct.ProductId = dbo.tblProductSales.ProductId
group by Name
```

Name	TotalSales	TotalTransactions
Books	960	4
Clips	340	2
Pencils	385	2
Pens	336	2

1. The view should be created with SchemaBinding option
2. If an Aggregate function in the SELECT LIST, references an expression, and if there is a possibility for that expression to become NULL, then, a replacement value should be specified.
3. If GROUP BY is specified, the view select list must contain a COUNT_BIG(*) expression
4. The base tables in the view, should be referenced with 2 part name.

```
Create Unique Clustered Index UIX_vWTotalSalesByProduct_Name
on vWTotalSalesByProduct(Name)
```

For the complete list , please visit MSDN
http://msdn.microsoft.com/en-us/library/ms191432(v=sql.105).aspx

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Additional Resources

- ## PRAGIM Home Page:

  - www.PragimTech.com

- ## Resources:

  - ASP.NET Interview Questions
  - www.VenkatASPInterview.Blogspot.com
  - C# Interview Questions
  - www.VenkatCSharpInterview.Blogspot.com
  - SQL Server Interview Questions
  - www.venkatsqlinterview.Blogspot.com

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