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Part 54 – Pivot in SQL Server 2008

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In this session we will learn

- Pivot operator

Prerequisite:

Part 11 - Group By
Part 48 - Derived table and CTE in sql server

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PIVOT Operator

Pivot is a sql server operator that can be used to turn **unique values from one column**, into **multiple columns in the output**, there by effectively rotating a table.

SalesAgent	SalesCountry	SalesAmount
Tom	UK	200
John	US	180
John	UK	260
David	India	450
Tom	India	350
David	US	200
Tom	US	130
John	India	540
John	UK	120
David	UK	220
John	UK	420
David	US	320
Tom	US	340
Tom	UK	660
John	India	430
David	India	230
David	India	280
Tom	UK	480
John	US	360
David	UK	140

SalesCountry	SalesAgent	Total
India	David	960
India	John	970
India	Tom	350
UK	David	360
UK	John	800
UK	Tom	1340
US	David	520
US	John	540
US	Tom	470


```
--Group By Query
SELECT SalesCountry, SalesAgent,
SUM(SalesAmount) AS Total
FROM tblProductSales
GROUP BY SalesCountry, SalesAgent
ORDER BY SalesCountry, SalesAgent
```

PIVOT Operator

SalesAgent	SalesCountry	SalesAmount
Tom	UK	200
John	US	180
John	UK	260
David	India	450
Tom	India	350
David	US	200
Tom	US	130
John	India	540
John	UK	120
David	UK	220
John	UK	420
David	US	320
Tom	US	340
Tom	UK	660
John	India	430
David	India	230
David	India	280
Tom	UK	480
John	US	360
David	UK	140

SalesCountry	SalesAgent	Total
India	David	960
India	John	970
India	Tom	350
UK	David	360
UK	John	800
UK	Tom	1340
US	David	520
US	John	540
US	Tom	470

```
--Group By Query
SELECT SalesCountry, SalesAgent,
SUM(SalesAmount) AS Total
FROM tblProductSales
GROUP BY SalesCountry, SalesAgent
ORDER BY SalesCountry, SalesAgent
```

SalesAgent	India	US	UK
David	960	520	360
John	970	540	800
Tom	350	470	1340

```
--Query using Pivot operator
SELECT SalesAgent, India, US, UK
FROM tblProductSales
PIVOT
(
        SUM(SalesAmount)
        FOR SalesCountry
        IN ([India],[US],[UK])
)
AS PivotTable
```

PIVOT Operator

Id	SalesAgent	SalesCountry	SalesAmount
1	Tom	UK	200
2	John	US	180
3	John	UK	260
4	David	India	450
5	Tom	India	350
6	David	US	200
7	Tom	US	130
8	John	India	540
9	John	UK	120
10	David	UK	220
11	John	UK	420
12	David	US	320
13	Tom	US	340
14	Tom	UK	660
15	John	India	430
16	David	India	230
17	David	India	280
18	Tom	UK	480
19	John	US	360
20	David	UK	140

```
--Query using Pivot operator
SELECT SalesAgent, India, US, UK
FROM tblProductSales
PIVOT
(
        SUM(SalesAmount)
        FOR SalesCountry
        IN ([India],[US],[UK])
)
AS PivotTable
```

```
Select SalesAgent,India,US,UK
from
(
        Select SalesAgent,
        SalesCountry,SalesAmount
        from tblProductsSale
) as SourceTable
Pivot
(
        Sum(SalesAmount)
        for SalesCountry in
        (India, US, UK)
) as PivotTable
```

SalesAgent	India	US	UK
Tom	NULL	NULL	200
John	NULL	180	NULL
John	NULL	NULL	260
David	450	NULL	NULL
Tom	350	NULL	NULL
David	NULL	200	NULL
Tom	NULL	130	NULL
John	540	NULL	NULL
John	NULL	NULL	120
David	NULL	NULL	220
John	NULL	NULL	420
David	NULL	320	NULL
Tom	NULL	340	NULL
Tom	NULL	NULL	660
John	430	NULL	NULL
David	230	NULL	NULL
David	280	NULL	NULL
Tom	NULL	NULL	480
John	NULL	360	NULL
David	NULL	NULL	140

PIVOT Operator

```
--Syntax from MSDN
SELECT <non-pivoted column>,
    [first pivoted column] AS <column name>,
    [second pivoted column] AS <column name>,

    ...

    [last pivoted column] AS <column name>
FROM
    (<SELECT query that produces the data>)
    AS <alias for the source query>
PIVOT
(
    <aggregation function>(<column being aggregated>)
FOR
    [<column that contains the values that will become column headers>]
    IN ( [first pivoted column], [second pivoted column], ... [last pivoted
column])
)
AS <alias for the pivot table>
<optional ORDER BY clause>
```

```
Select SalesAgent,India,US,UK
from
(
       Select SalesAgent,
       SalesCountry,SalesAmount
       from tblProductsSale
) as SourceTable
Pivot
(
       Sum(SalesAmount)
       for SalesCountry in
       (India, US, UK)
) as PivotTable
```

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