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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 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 retained a table

nto multiple columns in 1	he output, there by	y effectively rotating a table.
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into muit	<u>ple column</u>	s in the out
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					
Ų	UK	David	360					
1	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

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SalesAgent	SalesCountry	SalesAmount	SalesCountry	Sales	Agent	Total	
Tom	UK	200	India	David		960	
John	US	180	India	John		970	Group By Query
John	UK	260	India	Tom		350	SELECT SalesCountry, SalesAgent, SUM(SalesAmount) AS Total
David	India	450	UK	David	l	360	FROM tblProductSales
Tom	India	350	UK	John		800	GROUP BY SalesCountry, SalesAgent
David	US	200	UK	Tom		1340	
Tom	US	130	US	David		520	
John	India	540	US	John		540	
John	UK	120	US	Tom		470	
David	UK	220					
John	UK	420					
David	US	320					Query using Pivot operator
Tom	US	340					SELECT SalesAgent, India, US, UK
Tom	UK	660	SalesAgent	India	us l	JK	FROM tblProductSales
John	India	430	David	960	520 3	360	(
David	India	230	John	970	540 8	300	SUM(SalesAmount)
David	India	280	Tom	350	470 1	1340	FOR SalesCountry
Tom	UK	480					IN ([India],[US],[UK])
John	US	360) AS PivotTable
David	UK	140					an IIvolunio

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ld	SalesAgent	SalesCountry	SalesAmount	Query using Pivot operator	SalesAgent	India	US	UK
1	Tom	UK	200	SELECT SalesAgent, India, US, UK FROM tblProductSales	Tom	NULL	NULL	200
2	John	US	180	PIVOT	John	NULL	180	NULL
3	John	UK	260	(John	NULL	NULL	260
4	David	India	450	<pre>SUM(SalesAmount)</pre>	David	450	NULL	NULL
5	Tom	India	350	FOR SalesCountry	Tom	350	NULL	NULL
6	David	US	200	IN ([India],[US],[UK])	David	NULL	200	NULL
7	Tom	US	130	AS PivotTable	Tom	NULL	130	NULL
8	John	India	540		John	540	NULL	NULL
9	John	UK	120	Select SalesAgent, India, US, UK	John	NULL	NULL	120
10	David	UK	1220	from	David	NULL	NULL	220
11	John	UK	420	(John	NULL	NULL	420
12	David	US	320	Select SalesAgent,	David	NULL	320	NULL
13	Tom	US	340	SalesCountry, SalesAmount	Tom	NULL	340	NULL
14	Tom	UK	660	<pre>from tblProductsSale</pre>	Tom	NULL	NULL	660
1 5	John	India	430) as SourceTable	John	430	NULL	NULL
16	David	India	230	Pivot	David	230	NULL	NULL
17	David	India	280	Sum(SalesAmount)	David	280	NULL	NULL
18	Tom	UK	480	for SalesCountry in	Tom	NULL	NULL	480
19	John	US	360	(India, US, UK)	John	NULL	360	NULL
20	David	UK	140) as PivotTable	David	NULL	NULL	140

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```
from
                                                        Select SalesAgent,
                                                        SalesCountry, SalesAmount
                                                        from tblProductsSale
--Syntax from MSDN
                                                 ) as SourceTable
SELECT <non-pivoted column>,
                                                 Pivot
    [first pivoted column] AS <column name>,
    [second pivoted column] AS <column name>,
                                                        Sum(SalesAmount)
                                                        for SalesCountry in
                                                        (India, US, UK)
                                                 ) as PivotTable
    [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

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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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