

SQL Server Tutorial

Part 103 - Cube in SQL Server

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In this session we will learn

- Cube in SQL Server

Link to Dot Net Basics, ASP.NET, C#, ADO.NET and SQL Server video series

<http://www.youtube.com/user/kudvenkat/playlists>

Suggested Videos

Part 100 - Send datatable as parameter to stored procedure

Part 101 - Grouping sets in SQL Server

Part 102 - Rollup in SQL Server

Cube in SQL Server

If you are in need of the DVD with all the videos and PPT's, please visit

<http://pragimtech.com/order.aspx>

Cube() in SQL Server produces the result set by generating all combinations of columns specified in GROUP BY CUBE()

Write a query to retrieve Sum of Salary grouped by all combinations of the 2 columns (Country & Gender) as well as Grand Total.

Employees Table				
Id	Name	Gender	Salary	Country
1	Mark	Male	5000	USA
2	John	Male	4500	India
3	Pam	Female	5500	USA
4	Sara	Female	4000	India
5	Todd	Male	3500	India
6	Mary	Female	5000	UK
7	Ben	Male	6500	UK
8	Elizabeth	Female	7000	USA
9	Tom	Male	5500	UK
10	Ron	Male	5000	USA

Country	Gender	TotalSalary
India	Female	4000
UK	Female	5000
USA	Female	12500
NULL	Female	21500
India	Male	8000
UK	Male	12000
USA	Male	10000
NULL	Male	30000
NULL	NULL	51500
India	NULL	12000
UK	NULL	17000
USA	NULL	22500

Rollup in SQL Server

```
-- Using Cube with Group By
SELECT Country, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Cube(Country, Gender)
```

```
-- OR
```

```
SELECT Country, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country, Gender with Cube
```

```
-- The above query is equivalent to
-- the following Grouping Sets query
```

```
SELECT Country, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY GROUPING SETS
(
    (Country, Gender),
    (Country),
    (Gender),
    ()
)
```

Rollup in SQL Server

The queries on the previous are equivalent to the following **UNION ALL** query. While the data in the result set is the same, the ordering is not. Use **ORDER BY** to control the ordering of rows in the result set

```
SELECT Country, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country, Gender

UNION ALL

SELECT Country, NULL, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country

UNION ALL

SELECT NULL, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Gender

UNION ALL

SELECT NULL, NULL, SUM(Salary) AS TotalSalary
FROM Employees
```

Additional Resources

PRAGIM Home Page:

www.PragimTech.com

Resources:

C#, ADO.NET, ASP.NET, SQL Server & MVC youtube Playlists

<http://www.youtube.com/user/kudvenkat/playlists>

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