In this session we will learn

- Rollup in SQL Server

2

Rollup in SQL Server

ROLLUP is used to do aggregate operation on multiple levels in a hierarchy

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

Retrieve Salary by country along with grand total

Country	TotalSalary
India	12000
UK	17000
USA	22500
NULL	51500

Retrieve Salary by country along with grand total

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

3

Rollup in SQL Server

Other ways to retrieve Salary by Country along with Grand Total

```sql
-- Using ROLLUP clause with GROUP BY
SELECT Country, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country WITH ROLLUP
```

```sql
-- Using UNION ALL operator along with GROUP BY
SELECT Country, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country

UNION ALL

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

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

Rollup in SQL Server

Grouping sets is a new feature introduced in SQL Server 2008

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

Group Salary by Country and Gender. Also compute the Subtotal at Country level and Grand Total.

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

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

5

Rollup in SQL Server

Other ways to group Salary by Country and Gender and also to compute the Subtotal at Country level and Grand Total

```sql
-- Using ROLLUP clause with GROUP BY
SELECT Country, Gender, SUM(Salary) AS TotalSalary
FROM Employees
GROUP BY Country, Gender WITH ROLLUP
```

```sql
--Using UNION ALL with GROUP BY
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, NULL, SUM(Salary) AS TotalSalary
FROM Employees
```

6

Rollup in SQL Server

Other ways to group Salary by Country and Gender and also to compute the Subtotal at Country level and Grand Total

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

http://csharp-video-tutorials.blogspot.com

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

Code samples and text version of all the videos on my blog
http://www.csharp-video-tutorials.blogspot.com

To receive email alerts when new videos are uploaded, please subscribe to my YOUTUBE channel
www.YouTube.com/kudvenkat

https://twitter.com/kudvenkat