**Section : 03**

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**Challenge 1: Retrieve Regional Sales Totals**

**Que 1:**

-- Retrieve totals for country/region and state/province

SELECT a.CountryRegion, a.StateProvince, SUM(soh.TotalDue) AS Revenue

FROM SalesLT.Address AS a

JOIN SalesLT.CustomerAddress AS ca ON a.AddressID = ca.AddressID

JOIN SalesLT.Customer AS c ON ca.CustomerID = c.CustomerID

JOIN SalesLT.SalesOrderHeader as soh ON c.CustomerID = soh.CustomerID

GROUP BY ROLLUP( a.CountryRegion, a.StateProvince)

ORDER BY a.CountryRegion, a.StateProvince;

**Que 2:**

-- Indicate the grouping level in the results

SELECT(CASE CONCAT(GROUPING\_ID(a.CountryRegion), GROUPING\_ID(a.StateProvince))

WHEN '11'

THEN 'Grand Total'

WHEN '01'

THEN CONCAT(a.CountryRegion, ' ', 'Subtotal')

WHEN '00'

THEN CONCAT(a.StateProvince, ' ', 'Subtotal')

END) AS Level,

a.CountryRegion,

a.StateProvince,

SUM(soh.TotalDue) AS Revenue

FROM SalesLT.Address AS a

JOIN SalesLT.CustomerAddress AS ca ON a.AddressID = ca.AddressID

JOIN SalesLT.Customer AS c ON ca.CustomerID = c.CustomerID

JOIN SalesLT.SalesOrderHeader AS soh ON c.CustomerID = soh.CustomerID

GROUP BY ROLLUP(a.CountryRegion, a.StateProvince)

ORDER BY a.CountryRegion,

a.StateProvince;

**Que 3:**

--Add a grouping level for cities

SELECT(CASE CONCAT(GROUPING\_ID(a.CountryRegion), GROUPING\_ID(a.StateProvince))

WHEN '11'

THEN 'Grand Total'

WHEN '10'

THEN 'City Level Subtotal'

WHEN '01'

THEN 'Country Level Subtotal'

WHEN '00'

THEN 'Group Level Subtotal'

END) AS Level,

a.CountryRegion,

a.StateProvince,

SUM(soh.TotalDue) AS Revenue

FROM SalesLT.Address AS a

JOIN SalesLT.CustomerAddress AS ca ON a.AddressID = ca.AddressID

JOIN SalesLT.Customer AS c ON ca.CustomerID = c.CustomerID

JOIN SalesLT.SalesOrderHeader AS soh ON c.CustomerID = soh.CustomerID

GROUP BY CUBE(a.CountryRegion, a.StateProvince)

ORDER BY a.CountryRegion,

a.StateProvince;

**Challenge 2: Retrieve Customer Sales Revenue by Category**

**Que 1:**

--Retrieve customer sales revenue for each parent category

select CompanyName,Accessories,Bikes,Clothing,Components from

(

select A.CompanyName,E.ParentProductCategoryName,Sum(C.LineTotal) AS "Total Revenue"

from AdventureWorksLT2012.SalesLT.Customer AS A

JOIN AdventureWorksLT2012.SalesLT.SalesOrderHeader AS B

On A.CustomerID = B.CustomerID

JOIN AdventureWorksLT2012.SalesLT.SalesOrderDetail AS C

On B.SalesOrderID = C.SalesOrderID

JOIN AdventureWorksLT2012.SalesLT.Product AS D

On C.ProductID = D.ProductID

JOIN AdventureWorksLT2012.SalesLT.vGetAllCategories AS E

ON D.ProductCategoryID =E.ProductCategoryID

GROUP BY CompanyName,ParentProductCategoryName) AS Sales

PIVOT (SUM([Total Revenue]) FOR ParentProductCategoryName IN (Accessories,Bikes,Clothing,Components)) As PvtTable