SQL Server Reporting Services 2012
Lab Book

Document Revision History

Date	Revision No.	Author	Summary of Changes
25-Jan-2013	1	Ajit Jog	Content Creation
23-Jul-2015	2	Vandana Mistry	Content Creation

Table of Contents

Lab 1	Creating a Tabular Product Listing Report
Description	We will create a report which will show product details grouped according product category and add category wise subtotals/
Objective	To learn 1. How to create Shared Data Source and Local Data Source 2. Define Report DataSet 3. Use Data Set and Table report item to create tabular report 4. Define a row group 5. Add Sub totals to group

1. Open SQL Server Data Tools IDE, Start New SSRS Project
   a. File -> New Project , select Business Intelligence Project, Select Report Server Project template, Give Project Name Sales_xxxxx(where xxxx is your employee code). click ok

2. Right click Reports folder in Solution Explorer, click Add -> New Item.
   a. Select report item template
   b. Give   report name as ResellerSalesSummary_xxxx.rdl

3. Create Shared Data Source
   a. In Solution Explorer , right click Shared Data Sources, click Add New Data Source
      i. Give the DataSource Name as AdventureWorksDW2012
      ii. Type: Microsoft SQL Server
      iii. For Connection String, click edit.. Specify the credentials and other details.
      iv. Select the Database AdventureWorksDW2012
4. In Report Data Window,
   a. Click New Data Source and create a local report level data source based on Shared Data Source of step 2
   b. Click New Data Set
      i. Create a dataset named ResellerSale on local data source created in step 4.a
      ii. The Select Query for DataSet is:-
      SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType, d.CalendarYear, SUM(s.SalesAmount) AS SalesAmount
      FROM   FactResellerSales AS s
      INNER JOIN DimReseller AS r ON r.ResellerKey = s.ResellerKey
      INNER JOIN DimDate AS d ON d.DateKey = s.OrderDateKey
       INNER JOIN DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
      WHERE   (d.CalendarYear = '2008')

```
GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry,
r.BusinessType, d.CalendarYear
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry,
r.BusinessType
```

      iii. Click ok.

5. From toolbox, drag a Table report item onto report designer surface.
6. Create a Report as shown below. Create necessary groups and totals.

Group	Country	Business Type	Sales Amount
Europe	France	Specialty Bike Shop	120181.3778
		Value Added Reseller	399158.5287
		Warehouse	857270.8147
		Country Total	1376610.7212
	Germany	Specialty Bike Shop	77158.4760
		Value Added Reseller	299826.7380
		Warehouse	508136.1384
		Country Total	885121.3524
	United Kingdom	Specialty Bike Shop	92952.0660
		Value Added Reseller	538182.9649
		Warehouse	645970.2022
		Country Total	1277105.2331
	Group Total		3538837.3067

Matrix Report

7. Create a new Dataset with the Name ResellerSalesByTerritoryByYear with the following Query:

```
SELECT      st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear,
SUM(s.SalesAmount) AS SalesAmount
FROM        FactResellerSales AS s INNER JOIN
              DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
              DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry
```

8. Drag the Matrix control and create a report as shown below.

| Design | Preview |

Group	Country	Business Type	Sales Amount
[SalesTerritoryG	[SalesTerritoryC	[BusinessType]	[SalesAmount]
		Country Total	[Sum(SalesAm(
	Group Total		[Sum(SalesAm(

Sales Territory	[CalendarYear]
[SalesTerritoryC	[Sum(SalesAm(

9. Preview the report.

| Design | Preview |

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Group	Country	Business Type	Sales Amount
Europe	France	Specialty Bike Shop	120181.3778
		Value Added Reseller	399158.5287
		Warehouse	857270.8147
		Country Total	1376610.7212
	Germany	Specialty Bike Shop	77158.4760
		Value Added Reseller	299826.7380
		Warehouse	508136.1384
		Country Total	885121.3524
	United Kingdom	Specialty Bike Shop	92952.0660
		Value Added Reseller	538182.9649
		Warehouse	645970.2022
		Country Total	1277105.2331
	Group Total		3538837.3067

Sales Territory Country	2005	2006	2007	2008
Australia			847430.9640	746904.4127
Canada	1513359.4563	4822999.2021	5651305.4254	2390261.5127
France		857123.1784	2373804.0354	1376610.7212
Germany			1098866.6849	885121.3524
United Kingdom		841757.7607	2160145.8328	1277105.2331
United States	6552075.8490	17622549.5128	20071116.4827	9362059.3657

10. In the solutions Explorer, create a copy ResellerSalesSummary_xxx.rdl and name it as ResellerSalesSummary_list_xxxx .rdl
11. Drag a list below the Matrix and Drag the Matrix in the list.

| ResellerSalesSumma...12704.rdl [Design]* × | ResellerSalesSumma...12704.rdl [Design] |

| Design | Preview |

Group	Country	Business Type	Sales Amount
[SalesTerritoryG	[SalesTerritoryC	[BusinessType]	[SalesAmount]
		Country Total	[Sum(SalesAm(
	Group Total		[Sum(SalesAm(

Sales Territory	[CalendarYear]
[SalesTerritoryCou	[Sum(SalesAmour

12. Set the DataSetName property of list to ResellerSalesByTerritoryByYear.
13. In the Grouping pane, right-click the Details1 group, and click Group Properties.
14. In the Group Properties dialog box, click Add.
15. In the Group On drop-down list, select [SalesTerritoryGroup], and click OK.

16. From the Toolbox window, drag a text box control into the list above the matrix, and position the text box at the left edge of the list just above the matrix Point to the new text box, click the Field List icon, and click SalesTerritoryGroup.

ResellerSalesSumma...12704.rdl [Design]* ✕ ResellerSalesSumma...12704.rdl [Design]

Design   Preview

Group	Country	Business Type	Sales Amount
[SalesTerritoryG	[SalesTerritoryC	[BusinessType]	[SalesAmount]
		Country Total	[Sum(SalesAm(
	Group Total		[Sum(SalesAm(

[First(SalesTerritoryGroup)]

Sales Territory	[CalendarYear]
[SalesTerritoryCou	[Sum(SalesAmour
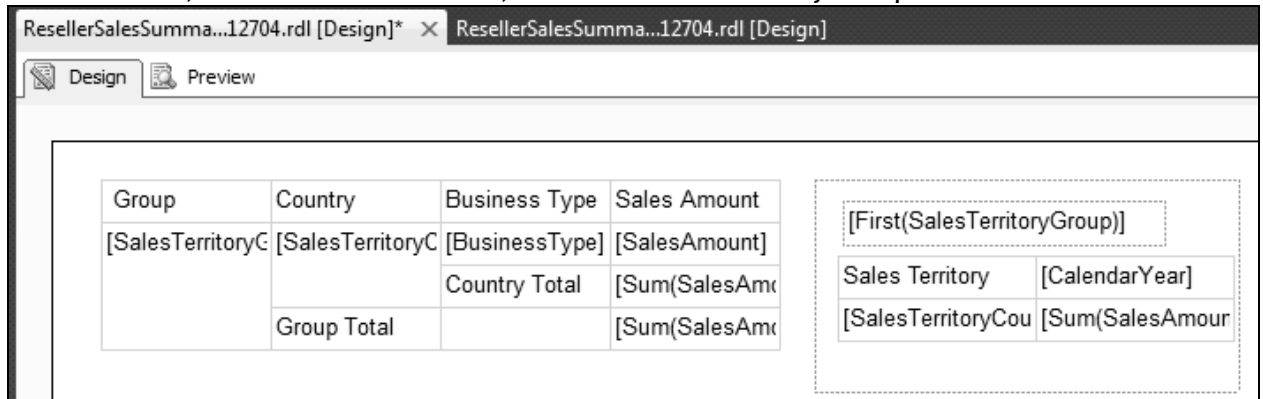
17. Preview the Report.

Group	Country	Business Type	Sales Amount
Europe	France	Specialty Bike Shop	120181.3778
		Value Added Reseller	399158.5287
		Warehouse	857270.8147
		Country Total	1376610.7212
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		Value Added Reseller	299826.7380
		Warehouse	508136.1384
		Country Total	885121.3524
	United Kingdom	Specialty Bike Shop	92952.0660
		Value Added Reseller	538182.9649
		Warehouse	645970.2022
		Country Total	1277105.2331
	Group Total		3538837.3067
North America	Canada	Specialty Bike Shop	171182.2357

Europe

Sales Territory Country	2006	2007	2008
France	857123.1784	2373804.0354	1376610.7212
Germany		1098866.6849	885121.3524
United Kingdom	841757.7607	2160145.8328	1277105.2331

North America

Sales Territory Country	2005	2006	2007	2008
Canada	1513359.4563	4822999.2021	5651305.4254	2390261.5127
United States	6552075.8490	17622549.5128	20071116.4827	9362059.3657

Pacific

Sales Territory Country	2007	2008
Australia	847430.9640	746904.4127

Create Adjacent Groups

1. In Solution Explorer, right-click the Reports folder, point to Add, and click New Item.
   Name the report as ResellerSalesByYearByProduct_xxxxxx.rdl
2. Create a new Dataset with the following Query
   SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear, pc.EnglishProductCategoryName AS Category, SUM(s.SalesAmount) AS SalesAmount FROM   FactResellerSales AS s
   INNER JOIN DimTime AS d ON d.TimeKey = s.OrderDateKey
   INNER JOIN DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
   INNER JOIN DimProduct AS p ON p.ProductKey = s.ProductKey
   INNER JOIN DimProductSubcategory AS ps ON ps.ProductCategoryKey = p.ProductSubcategoryKey
   INNER JOIN   DimProductCategory AS pc ON pc.ProductCategoryKey = ps.ProductCategoryKey

GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear, pc.EnglishProductCategoryName
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, Category

3. Create a report as shown below:

Sales Territory Group	[CalendarYear]
[SalesTerritoryGroup]	[Sum(SalesAmount]

4. Right-click the text box containing [CalendarYear], point to Add Group, and select Adjacent Right
5. In the Tablix Group dialog box, in the Group By drop-down list, select Category, and click OK
6. Point to the text box below [Category], click the Field List icon, and click SalesAmount Save and then preview the report.

| Design | Preview |

Sales Territory	[CalendarYear]	[Category]
[SalesTerritoryG	[Sum(SalesAmount]	[Sum(SalesAmo

ResellerSalesByYear...612704.rdl [Design]

Design | Preview

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Sales Territory Group	2005	2006	2007	2008	Accessories	Bikes	Clothing	Components
Europe		12012879.2292	36615372.2568	24690862.0667	308405.6472	7321530.0915	25700907.6880	39988270.1260
North America	53536179.1767	166915819.5194	187315606.3041	85018037.8464	1704958.6356	71799716.3784	48295388.7888	370985579.0438
Pacific			5042726.9736	5004484.8156	33731.5680	356806.6596	9615625.2816	41048.2800

7. Insert a text Box for the title and a line below it.
Insert an Image. Give the Image Name as logo, type as Embedded and select logo.bmp from the appropriate path.
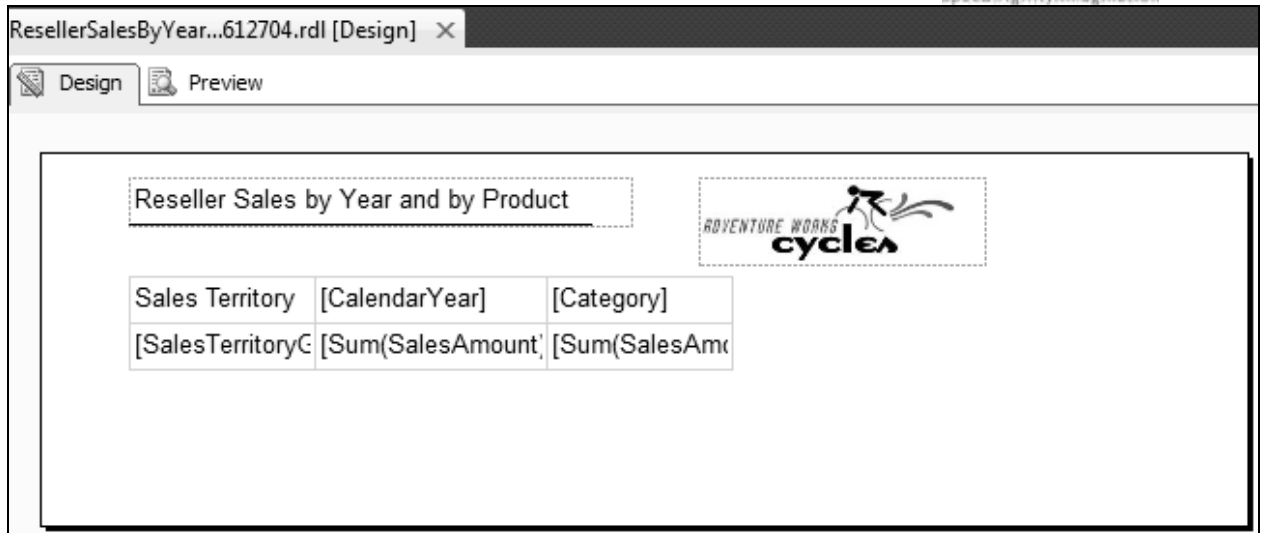
8. Preview the report.

Sales Territory Group	2005	2006	2007	2008	Accessories	Bikes	Clothing	Components
Europe		12012879.2292	36615372.2568	24690862.0667	308405.6472	7321530.0915	25700907.6880	39988270.1260
North America	53536179.1767	166915819.5194	187315606.3041	85018037.8464	1704958.6356	71799716.3784	48295388.7888	370985579.0438
Pacific			5042726.9736	5004484.8156	33731.5680	356806.6596	9615625.2816	41048.2800

Create SubReport

1. In Solution Explorer, right-click the Reports folder, point to Add, and click Existing Item In the Add New Item. Name it as ResellerSalesByBusinessType.rdl.
2. Create a DataSource based on the Shared Data Source and two Datasets as shown below:

ResellerSales

SELECT st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType, d.CalendarYear, SUM(s.SalesAmount) AS SalesAmount
FROM   FactResellerSales AS s
             INNER JOIN   DimReseller AS r ON r.ResellerKey = s.ResellerKey
             INNER JOIN   DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
             DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
WHERE   (d.CalendarYear = '2008')
GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType, d.CalendarYear
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType

ResellerSalesByTerritoryByYear
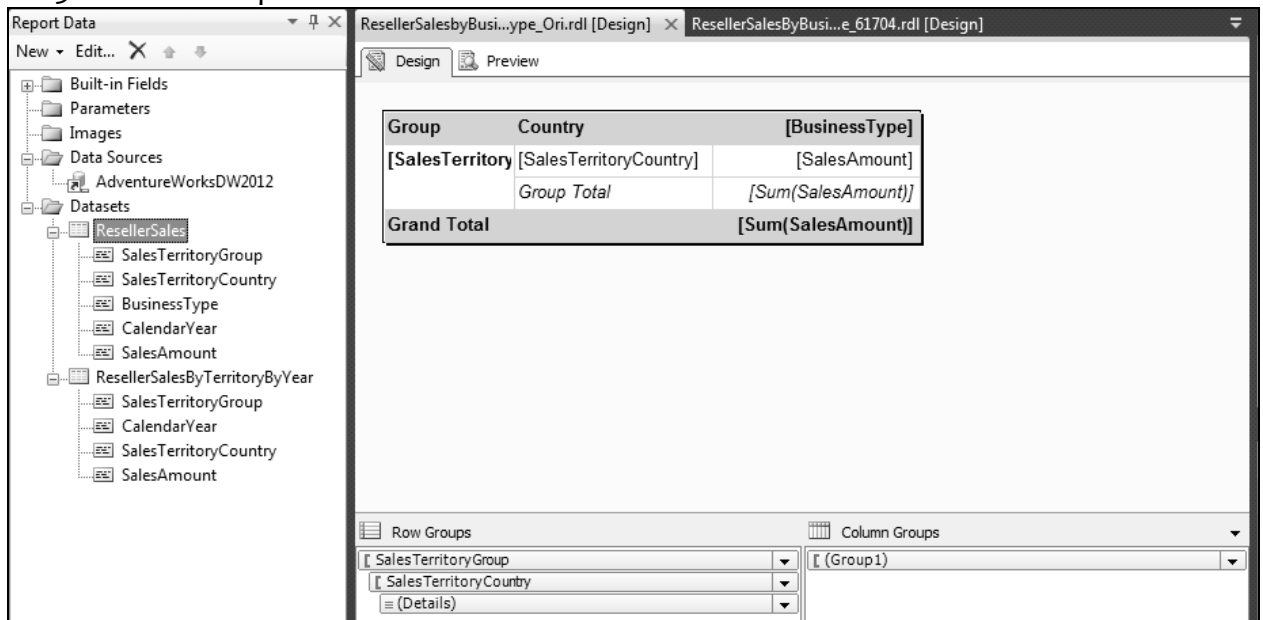
SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear, SUM(s.SalesAmount) AS SalesAmount

```
FROM        FactResellerSales AS s INNER JOIN
            DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
            DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry
```

3. Create a Report as shown below

4. Preview the report.

Design | Preview

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Group	Country	Specialty Bike Shop	Value Added Reseller	Warehouse
Europe	France	$120,181		
			$399,159	
				$857,271
	Germany	$77,158		
			$299,827	
				$508,136
	United Kingdom	$92,952		
			$538,183	
				$645,970
	Group Total	$290,292	$1,237,168	$2,011,377
North America	Canada	$171,182		
			$884,996	
				$1,334,083
	United States	$712,180		
			$4,847,762	
				$3,802,117
	Group Total	$883,362	$5,732,759	$5,136,200
Pacific	Australia	$165,542		
			$400,571	
				$180,791
	Group Total	$165,542	$400,571	$180,791
Grand Total		$1,339,196	$7,370,498	$7,328,368

5. In the Reseller SalesByYearByProduct_xxxxxx report, from the Toolbox window, drag Subreport to the design surface below the matrix.
6. Right-click the subreport, and select Subreport Properties
7. In the Subreport Properties dialog box, in the Use This Report As A Subreport dropdown list, select ResellerSalesByBusinessType, and click OK.

Design | Preview

Reseller Sales by Year and by Product

Sales Territory	[CalendarYear]	[Category]
[SalesTerritoryG	[Sum(SalesAmount'	[Sum(SalesAmo

ResellerSalesbyBusinessType

Row Groups

[SalesTerritoryGroup

Column Groups

[CalendarYear
[Category

8. Preview the report.

Design | Preview

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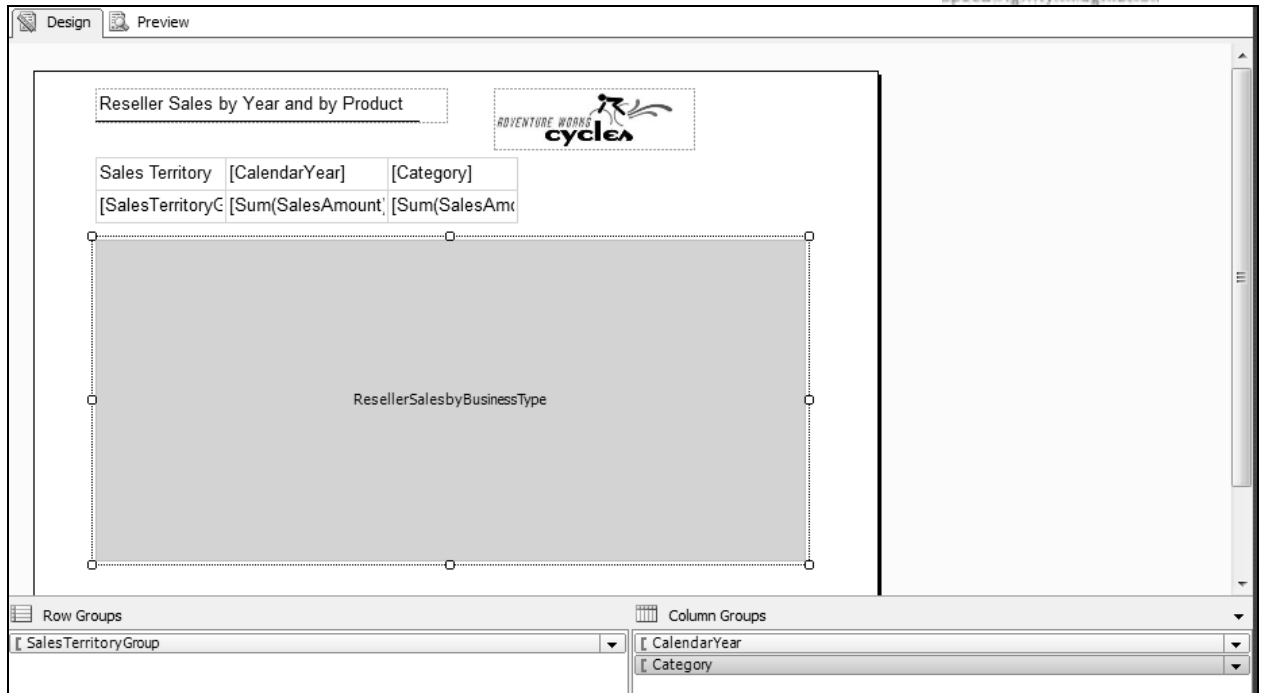
Sales Territory Group	2001	2002	2003	2004	Accessories	Bikes	Clothing	Components
Europe		12012879.2292	36615372.2568	24690862.0667	308405.6472	7321530.0915	25700907.6880	39988270.1260
North America	53536179.1767	166915819.5194	187315606.3041	85018037.8464	1704958.6356	71799716.3784	48296388.7888	370985579.0438
Pacific			5042726.9736	5004484.8156	33731.5680	356806.6596	9615625.2816	41048.2800

Group	Country	Specialty Bike Shop	Value Added Reseller	Warehouse
Europe	France	$120,181		
			$399,159	
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	Germany	$77,158		
			$299,827	
				$508,136
	United Kingdom	$92,952		
			$538,183	
				$645,970
	Group Total	$290,292	$1,237,168	$2,011,377
North America	Canada	$171,182		
			$884,996	
				$1,334,083
	United States	$712,180		
			$4,847,762	

Lab 2	**Add calculations to a report** **Use Built-in fields** **Add Header and Footer** **Use Conditional Formatting**
Description	We will create a reports which will show how to create
Objective	To learn 1. How to add calculations to a report 2. How to use Built-in fields 3. How to add Header and Footer 4. Apply conditional Formatting

1. Create a Report Named   ResellerSalesMarginAnalysis.rdl
2. Create a DataSource Pointing to AdventureWorksDW20012.
3. Create a DataSet named ResellerSales with the following Query
   SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType,
   d.CalendarYear, p.EnglishProductName, SUM(s.SalesAmount) AS SalesAmount,
                 SUM(s.TotalProductCost) AS TotalProductCost
   FROM   FactResellerSales AS s INNER JOIN
                    DimReseller AS r ON r.ResellerKey = s.ResellerKey INNER JOIN
                    DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
                    DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
   INNER JOIN
                    DimProduct AS p ON p.ProductKey = s.ProductKey
   WHERE   (d.CalendarYear = '2008')
   GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType,
   d.CalendarYear, p.EnglishProductName
   ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType
4. Create a report as shown below:

5. Preview the report.

Reseller Sales Margin Analysis

Group	Country	Busines Type	Product	Sales Amount
Europe	France	Specialty Bike Shop	AWC Logo Cap	$5
			Bike Wash - Dissolver	$5
			Chain	$12
			Classic Vest, S	$686
			Front Brakes	$64
			Front Derailleur	$110
			Hitch Rack - 4-Bike	$1,368
			LL Road Pedal	$219
			Long-Sleeve Logo Jersey, L	$90
			ML Road Pedal	$37
			Mountain-200 Black, 38	$17,901
			Mountain-200 Black, 42	$1,377
			Racing Socks, L	$38
			Racing Socks, M	$16
			Road-350-W Yellow, 40	$15,309
			Road-350-W Yellow, 42	$1,021

6. Create a calculated field in the Dataset. Name it as ProfitMargin and give the following formula for it:
SalesAmount-TotalProductCost

7. Drag the ProfitMargin column after the Sales Amount column. Save the report.

	Design	Preview				

Reseller Sales Margin Analysis

	Group	Country	Busines Type	Product	Sales Amount	Profit Margin
	[SalesTerritoryG	[SalesTerritoryCou	[BusinessType]	[EnglishProductName]	[SalesAmount]	[ProfitMargin]
				Business Type Total	*[Sum(SalesAmou*	*[Sum(ProfitMarg*
			Country Total		*[Sum(SalesAmou*	
		Group Total			*[Sum(SalesAmoi*	

8. Change the format of ProfitMargin column to **C2.** Preview the report.

Reseller Sales Margin Analysis

Group	Country	Busines Type	Product	Sales Amount	Profit Margin
Europe	France	Specialty Bike Shop	AWC Logo Cap	$5	($1.53)
			Bike Wash - Dissolver	$5	$1.80
			Chain	$12	$3.16
			Classic Vest, S	$686	$258.32
			Front Brakes	$64	$16.61
			Front Derailleur	$110	$28.54
			Hitch Rack - 4-Bike	$1,368	$515.28
			LL Road Pedal	$219	$56.85
			Long-Sleeve Logo Jersey, L	$90	($25.49)
			ML Road Pedal	$37	$9.69
			Mountain-200 Black, 38	$17,901	$1,625.17
			Mountain-200 Black, 42	$1,377	$125.01
			Racing Socks, L	$38	$14.22
			Racing Socks, M	$16	$6.10
			Road-350-W Yellow, 40	$15,309	($928.74)
			Road-350-W Yellow, 42	$1,021	($61.92)

9. Click the Design tab.
10. Insert a column to the right of ProfitMargin column, right-click the text box, and click Expression. In the Expression dialog box, type the following :
=Fields!ProfitMargin.Value/Fields!SalesAmount.Value
Close the Expression dialog box.
11. Name the new column as Profit Margin Pct . Change its format to P2.

	Design	Preview					

Reseller Sales Margin Analysis

	Group	Country	Busines Type	Product	Sales Amount	Profit Margin	Profit Margin Pct
	[SalesTerritoryGi	[SalesTerritoryCour	[BusinessType]	[EnglishProductName]	[SalesAmount]	[ProfitMargin]	«Expr»
				Business Type Total	*[Sum(SalesAmou*	*[Sum(ProfitMarg*	
			Country Total		*[Sum(SalesAmou*		
		Group Total			*[Sum(SalesAmoi*		

12. Preview the report.

Reseller Sales Margin Analysis

Group	Country	Busines Type	Product	Sales Amount	Profit Margin	Profit Margin Pct
Europe	France	Specialty Bike Shop	AWC Logo Cap	$5	($1.53)	-28.33 %
			Bike Wash - Dissolver	$5	$1.80	37.67 %
			Chain	$12	$3.16	26.00 %
			Classic Vest, S	$686	$258.32	37.67 %
			Front Brakes	$64	$16.61	26.00 %
			Front Derailleur	$110	$28.54	26.00 %
			Hitch Rack - 4-Bike	$1,368	$515.28	37.67 %
			LL Road Pedal	$219	$56.85	26.00 %
			Long-Sleeve Logo Jersey, L	$90	($25.49)	-28.33 %
			ML Road Pedal	$37	$9.69	26.00 %
			Mountain-200 Black, 38	$17,901	$1,625.17	9.08 %
			Mountain-200 Black, 42	$1,377	$125.01	9.08 %
			Racing Socks, L	$38	$14.22	37.67 %
			Racing Socks, M	$16	$6.10	37.67 %
			Road-350-W Yellow, 40	$15,309	($928.74)	-6.07 %
			Road-350-W Yellow, 42	$1,021	($61.92)	-6.07 %

13. Click on the Design Tab. Delete the existing title and drag the Built-in field ReportName to the textbox.
14. Add page footer and drag a textbox in it. Drag the Built-in field Page Number to it. In the same textbox add the Built-in field TotalPages.

Design   Preview

[&ReportName]

Group	Country	Busines Type	Product	Sales Amount	Profit Margin	Profit Margin Pct
[SalesTerritoryGr	[SalesTerritoryCour	[BusinessType]	[EnglishProductName]	[SalesAmount]	[ProfitMargin]	«Expr»
			Business Type Total	[Sum(SalesAmou	[Sum(ProfitMarg	
		Country Total		[Sum(SalesAmou		
	Group Total			[Sum(SalesAmou		

[&PageNumber] of [&TotalPages]

15. Preview the report.
16. Click Design tab.
17. Select Profit Margin column, select text box. Click Properties. Select Color property.
18. Select Expression. Type "=IIf(reportitems!ProfitMargin.Value > 200, "DarkViolet", "Tomato")".
19. Click OK. Preview the report.

ResellerSalesMarginAnalysis

Group	Country	Busines Type	Product	Sales Amount	Profit Margin	Profit Margin Pct
Europe	France	Specialty Bike Shop	AWC Logo Cap	$5	($1.53)	-28.33 %
			Bike Wash - Dissolver	$5	$1.80	37.67 %
			Chain	$12	$3.16	26.00 %
			Classic Vest, S	$686	$258.32	37.67 %
			Front Brakes	$64	$16.61	26.00 %
			Front Derailleur	$110	$28.54	26.00 %
			Hitch Rack - 4-Bike	$1,368	$515.28	37.67 %
			LL Road Pedal	$219	$56.85	26.00 %
			Long-Sleeve Logo Jersey, L	$90	($25.49)	-28.33 %
			ML Road Pedal	$37	$9.69	26.00 %
			Mountain-200 Black, 38	$17,901	$1,625.17	9.08 %
			Mountain-200 Black, 42	$1,377	$125.01	9.08 %
			Racing Socks, L	$38	$14.22	37.67 %
			Racing Socks, M	$16	$6.10	37.67 %
			Road-350-W Yellow, 40	$15,309	($928.74)	-6.07 %
			Road-350-W Yellow, 42	$1,021	($61.92)	-6.07 %

Lab 3	**Creating Parameters**
Description	We will create a report which will accept Parameters and display result as per the parameters
Objective	To learn 1. How to create parameters 2. Use a Report Parameter as a filter 3. Add a Query Parameter to a Dataset 4. Create and use Cascading parameters 5. Create SubReport with Parameters

1. Refer to the report created in the previous Lab.
2. In Report Data window right click Parameters folder and select Add parameter Type SalesTerritoryGroup in Name .
3. In the Prompt box Select Allow Multiple values check box.
4. In the left pane click Available values and select specify values click Add.
5. In the label text box type Europe and then in value type Europe
6. Repeat the above steps for North America and Pacific
7. Preview the report
8. Notice that report data has not changed .You must alter the dataset to use the new parameter
9. In the Report Data window, right click ResellerSales and Select Dataset properties.
10. In the Dataset properties dialog box, in the left pane, Click Filters
11. Click Add and in the Expression drop down list, select [SalesTerritoryGroup]
12. In the operator drop down list, select In
13. In the Value textbox, type [@SalesTerritoryGroup]
14. Preview the report.

15. Click on the Design tab.
16. Create a new dataset named YearlookUp
17. Write the following query
    Select distinct CalendarYear from Dimdate order by CalendarYear
18. Add a Parameter with the name and Prompt as Year
19. In the Available values, select get values from query
20. In dataset select Yearlookup and in value select calendaryear
21. Click Default values, select Get values from query.
22. In dataset select Yearlookup and in value select CalendarYear
23. In report data window select Resellersales dataset.
24. In query designer modify the query to the following:-
    Where (d.calendaryear in (@Year)
25. Click ok.
26. In the Dataset properties dialog box click parameters.
27. In the parameter value drop down list, select [@Year].
28. Click Ok. Save and preview the report.

29. Click on the Design tab.
30. Create a new dataset named QuarterlookUp
31. Write the following query
    SELECT DISTINCT d.CalendarQuarter AS CalendarQuarterValue, 'Q' +
    CONVERT(CHAR(1), d.CalendarQuarter) AS CalendarQuarterLabel
    FROM DimDate AS d
    INNER JOIN FactResellerSales AS f ON d.Date = f.OrderDateKey
    WHERE   (d.CalendarYear IN (@Year))
32. Add a Parameter with the name and Prompt as Quarter
33. Click Available values, select get values from query
34. In dataset select Quarterlookup and in value field drop down list, select
    CalendarQuarterValue and in Label field drop down list, select
    CalendarQuarterLabel
35. Click Default values, select Get values from query.
36. In dataset select Quarterlookup and in value field drop down list, select
    CalendarQuarterValue and in Label field drop down list, select
    CalendarQuarterLabel
37. In report data window select Resellersales dataset. Change the Query as below
   SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType,
    d.CalendarYear, p.EnglishProductName, SUM(s.SalesAmount) AS SalesAmount,
            SUM(s.TotalProductCost) AS TotalProductCost
    FROM   FactResellerSales AS s INNER JOIN
             DimReseller AS r ON r.ResellerKey = s.ResellerKey INNER JOIN
             DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
             DimSalesTerritory AS st ON st.SalesTerritoryKey =
    s.SalesTerritoryKey INNER JOIN
             DimProduct AS p ON p.ProductKey = s.ProductKey
    **WHERE   (d.CalendarYear IN (@Year)) AND (d.CalendarQuarter IN
    (@Quarter))**
    GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType,
    d.CalendarYear, p.EnglishProductName
    ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, r.BusinessType

38. Save the report. Preview the report.
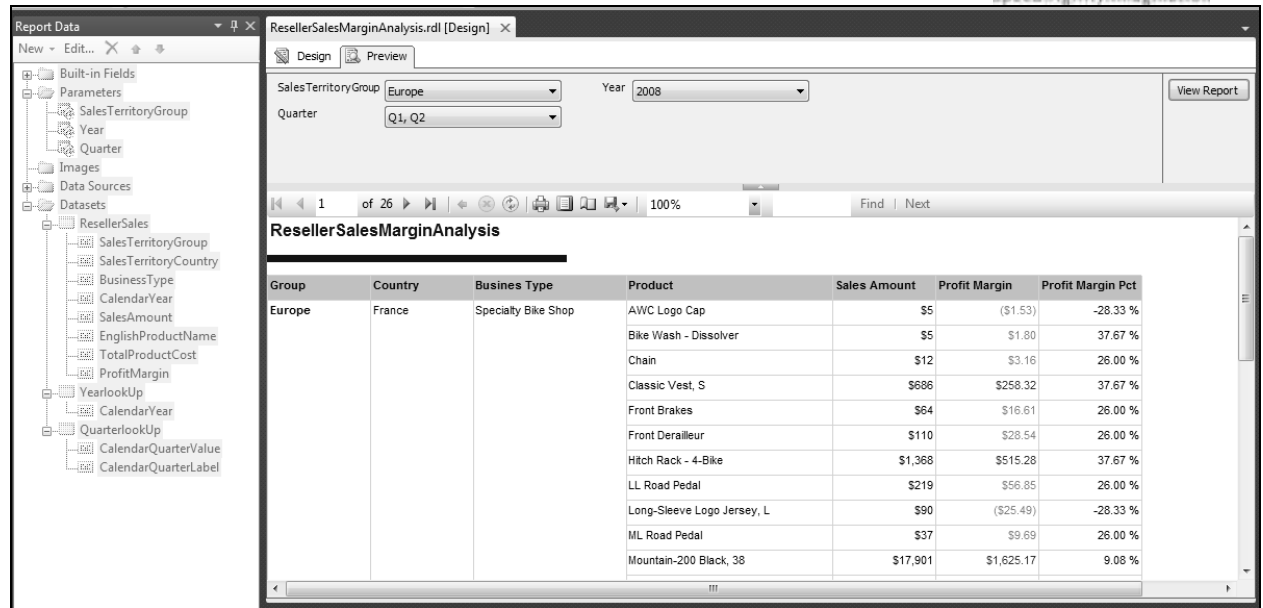
Create SubReport with Parameters

1. Create a report named ProductCategoriesListing
2. Create a DataSource Based on NorthWind Database
3. Create a DataSet with the following Query:
   SELECT   CategoryID, CategoryName, Description
   FROM   Categories
   ORDER BY   CategoryName
4. Create a Report as shown below and preview it.
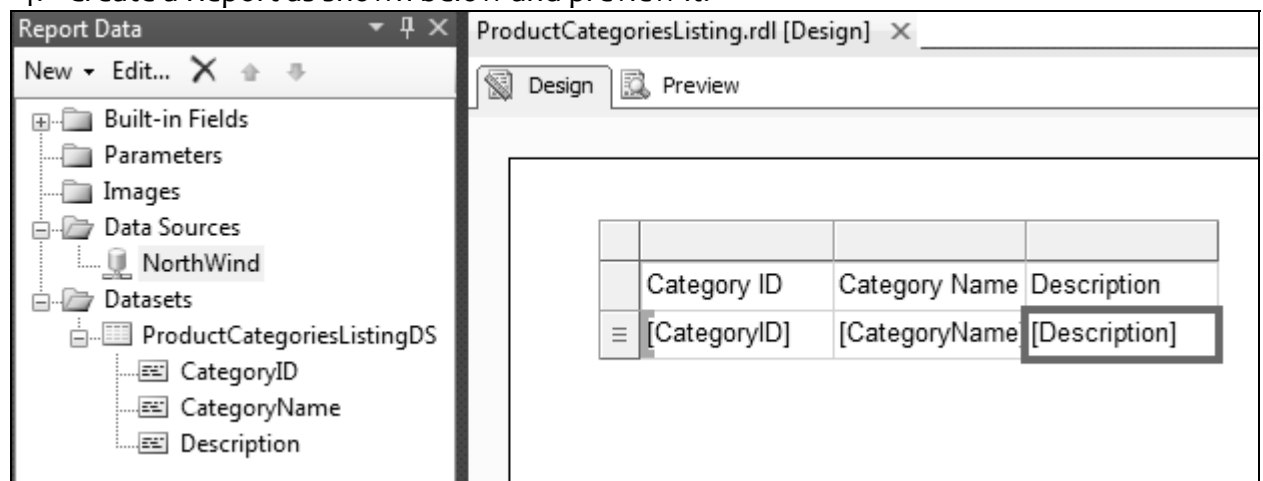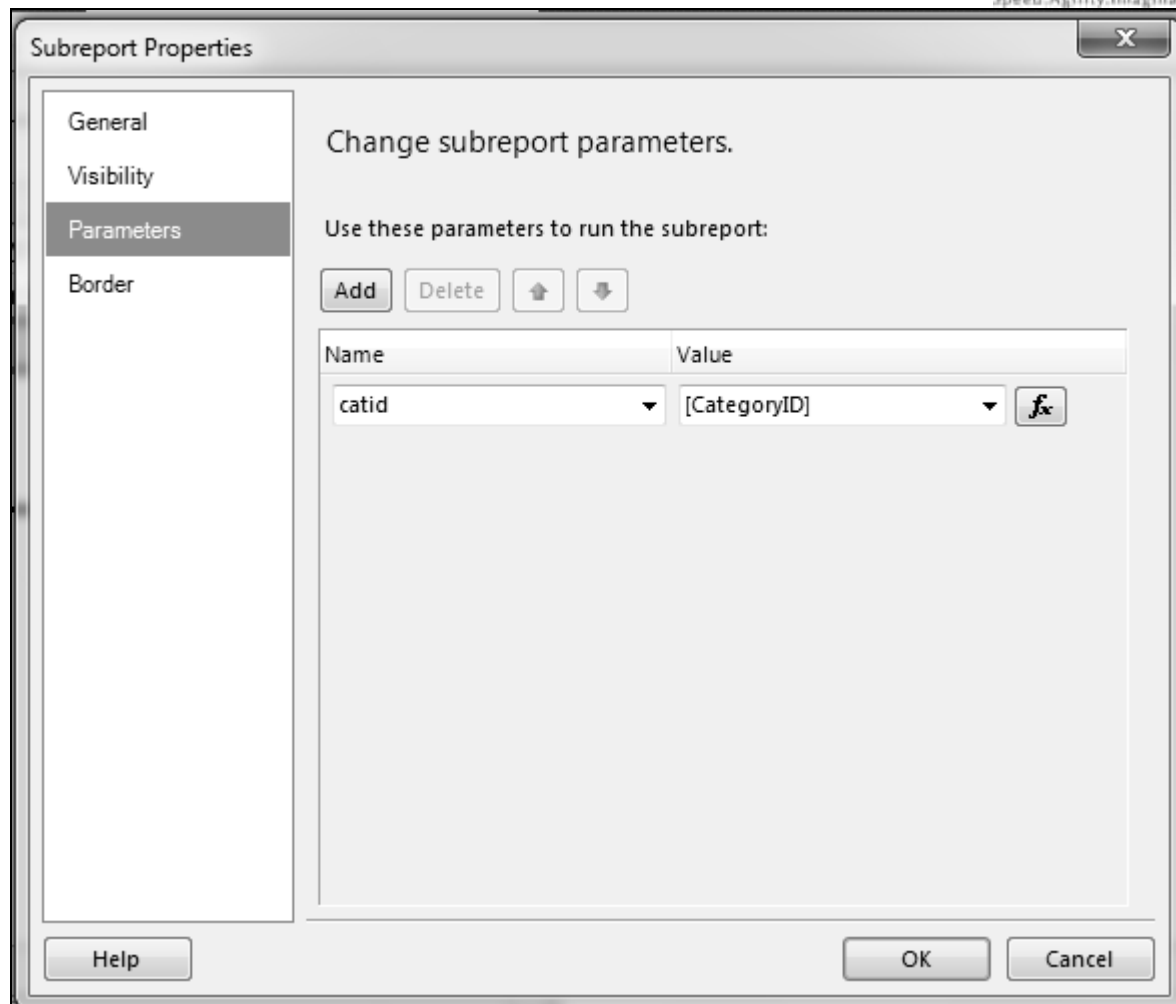

5. Create another report named ProductsListing.
6. Create a DataSource Based on NorthWind Database
7. Create a DataSet with the following Query:
   SELECT   ProductID, ProductName, UnitPrice,
             UnitsInStock, CategoryID
   FROM   Products
   WHERE   (CategoryID = @catid)
   ORDER BY ProductName
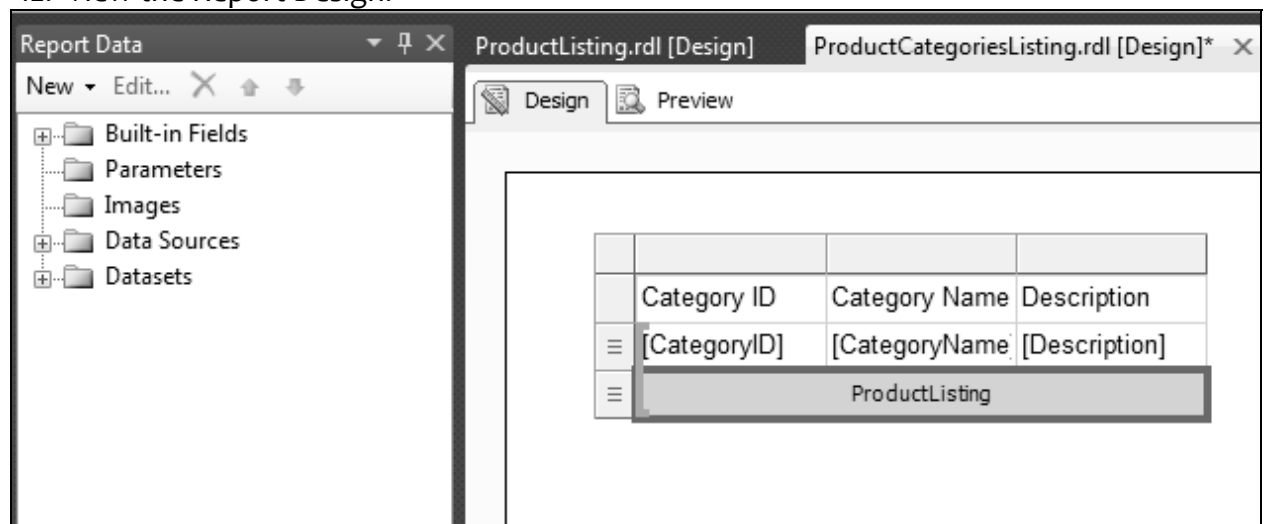
8. In the report data window goto @catid parameter properties
   a. Set data type: integer
   b. Select parameter visibilty to hidden
   c. Goto Default Values tab, and specify default value as 1
9. Create a Report as shown below.
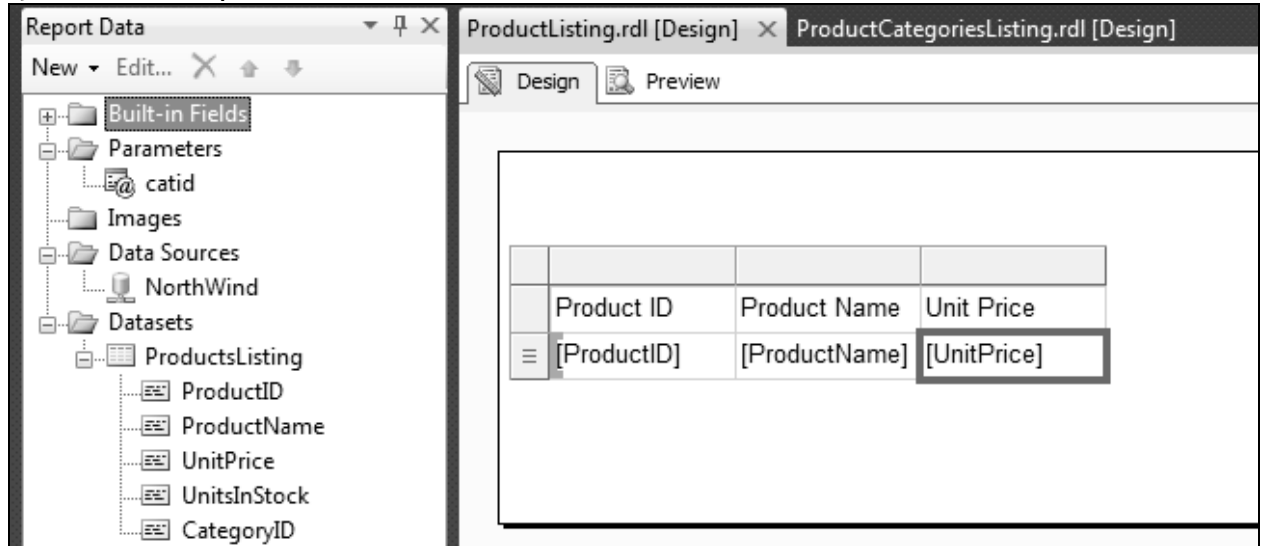
10. Preview the report to ensure that it always displays category id 1 products.
11. Open ProductCategoriesListing report.
    a. Right click the field row in left grey area, and Select Inset Row->Inside Group Below.
    b. Select the cells merge the cells.
    c. In the row drag Subreport report item from toolbox.
    d. Right Click the subreport and in the subreport properties
    e. Select ProductsList as subreport.
    f. Goto parameters tab, click add and set as shown below:

Subreport Properties

General

Visibility

Parameters

Border

Change subreport parameters.

Use these parameters to run the subreport:

Add | Delete | ⬆ | ⬇

Name	Value
catid ▼	[CategoryID] ▼ *fx*

Help | OK | Cancel

12. View the Report Design.

Report Data ▼ 📌 ✕

New ▼ Edit... ✕ ⬆ ⬇

⊞ 📁 Built-in Fields
   📁 Parameters
   📁 Images
⊞ 📁 Data Sources
⊞ 📁 Datasets

ProductListing.rdl [Design] | ProductCategoriesListing.rdl [Design]* ✕

🖺 Design | 🔍 Preview

	Category ID	Category Name	Description
≡	[CategoryID]	[CategoryName]	[Description]
≡		ProductListing	

13. Preview the Report.

Create Drillthrough Report

1. Create a report named Sales Orders.
2. Create a DataSource based on AdventureWorks2012 Database.
3. Create a Dataset named SalesOrders with the following Query:

SELECT   soh.OrderDate AS Date, soh.SalesOrderNumber AS [Order], pps.Name AS
Subcat, pp.Name AS Product, SUM(sd.OrderQty) AS Qty, SUM(sd.LineTotal) AS
LineTotal
FROM Sales.SalesPerson AS sp
INNER JOIN Sales.SalesOrderHeader AS soh ON sp.BusinessEntityID = soh.SalesPersonID
INNER JOIN Sales.SalesOrderDetail AS sd ON sd.SalesOrderID = soh.SalesOrderID
INNER JOIN Production.Product AS pp ON sd.ProductID = pp.ProductID
INNER JOIN Production.ProductSubcategory AS pps ON pp.ProductSubcategoryID =
pps.ProductSubcategoryID
INNER JOIN   Production.ProductCategory AS ppc ON ppc.ProductCategoryID =
pps.ProductCategoryID
GROUP BY ppc.Name, soh.OrderDate, soh.SalesOrderNumber, pps.Name, pp.Name,
soh.SalesPersonID
HAVING   (ppc.Name = 'Clothing')

4. Preview the Report.

5. Create a report named Sales Orders Detail.
6. Create a DataSource based on AdventureWorks2012 Database.
7. Create a Dataset named SalesOrdersDetails with the following Query:
   SELECT   P.Name AS Product, SD.OrderQty AS Quantity, SD.LineTotal
   FROM   Sales.SalesOrderDetail AS SD
   INNER JOIN   Production.Product AS P ON SD.ProductID = P.ProductID
   INNER JOIN   Sales.SalesOrderHeader AS SOH ON SD.SalesOrderID =
   SOH.SalesOrderID
   WHERE   (SOH.SalesOrderNumber = @SalesOrder)
   ORDER BY SD.SalesOrderDetailID
8. From the Toolbox, drag a Table to the design surface.
9. From the Report Data pane, drag the following fields to table cells in the Data row:
    Product, Quantity, LineTotal.
10. Preview the report.
11. On the report viewer toolbar, in Sales Order, type SO43659.
12. The report displays line totals for the specified sales order.
13. In Solution Explorer, double-click Sales Orders.rdl. The report opens in Design view.
14. In the Order column, right-click in the text box that contains [Order], and then click
Text Box Properties.
15. Click Action.
16. In Enable as a hyperlink, select Go to report.
17. In Select a report from the list, from the drop-down list, select Sales Order Detail.
18. In Use these parameters to run the report, click Add.
19. A new row is added to the grid.
20. In Name, from the drop-down list that shows the list of parameters defined for the
    report, select SalesOrder.
21. In Value, from the drop-down list, select [Order].

22. Click Font.
23. In Effects, from the drop-down list, select Underline.
24. Next to Color, click (fx) to open the Expression dialog box.
25. Replace the default text Black with a different color, for example, Blue.
26. Click OK twice.
27. Preview the Report.

Click on Order SO43659 and view the Sales Order Details Report.

Lab 4	Adding Interactivity to reports
Description	We will create a report and add interactivity to it
Objective	To learn 1. How to control visibility in Reports 2. How to create Recusive Hierarchy

Control Visibility in Reports

1. Refer to the report created in the previous Lab.(ResellerSalesMarginAnalysis.rdl)
2. In the Row Groups double click on Business Type. In the Group Properties select *Visiblity.* Select the Radio Button *Hide.* Select the check box *Display can be toggled by this Report Item.* From the drop down list, select Sales Territory Country.
3. Click on Sales Territory Country. In the Group Properties select *Visiblity.* Select the Radio Button *Hide.* Select the check box *Display can be toggled by this Report Item.* From the drop down list, select Sales Territory Group.
4. Preview the report.
5. Select all Sales Territory Group, Year and Quarter. View the Report.

Click on + symbol to see details.

6. Click on Design tab. Show all the groups.
7. In the Rows Groups pane, right-click SalesTerritoryGroup, and select Group Properties.
8. In the Document Map drop-down list, select [SalesTerritoryGroup]. Click OK.
9. Similarly select the Document Map for SalesTerritoryCountry and BusinessType.
10. Preview the report. Select all Sales Territory Group, Year and Quarter. View the Report.

Create Recursive Hierarchy

1. Create a new Report named EmployeeOrganization_xxxxxx.rdl
2. Create a DataSource pointing to AdventureWorksDW2012
3. Create a Dataset named Employee with the following Query
   SELECT EmployeeKey, ParentEmployeeKey, LastName + ', ' + FirstName AS
   EmployeeName, Title FROM DimEmployee
4. Create Report as Shown below.
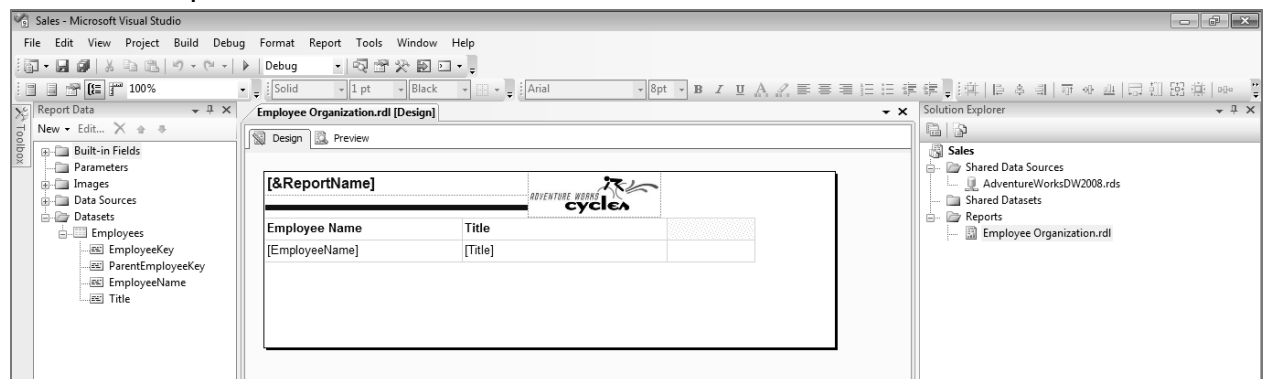
5. Preview the report.

Employee Organization

Employee Name	Title	
Gilbert, Guy	Production Technician - WC60	
Brown, Kevin	Marketing Assistant	
Tamburello, Roberto	Engineering Manager	
Walters, Rob	Senior Tool Designer	
Walters, Rob	Senior Tool Designer	
D'Hers, Thierry	Tool Designer	
Bradley, David	Marketing Manager	
Bradley, David	Marketing Manager	
Dobney, JoLynn	Production Supervisor - WC60	
Ellerbrock, Ruth	Production Technician - WC10	
Erickson, Gail	Design Engineer	
Johnson, Barry	Production Technician - WC10	
Goldberg, Jossef	Design Engineer	
Duffy, Terri	Vice President of Engineering	
Higa, Sidney	Production Technician - WC10	
Maxwell, Taylor	Production Supervisor - WC50	
Ford, Jeffrey	Production Technician - WC10	

6. Click the tablix to select it, and then, in the Rows Groups pane, right-click Details and click Group Properties.
7. In the Group Properties dialog box, click Add.
8. In the Group On Drop down list, select [EmployeeKey].
9. Click Advanced, and then in Recursive parentdrop-down list, select [ParentEmployeeKey].
10. In the Group Properties dialog box, click OK.
11. Preview the report.

Employee Name	Title	
Sánchez, Ken	Chief Executive Officer	
Bradley, David	Marketing Manager	
Brown, Kevin	Marketing Assistant	
Harnpadoungsataya, Sariya	Marketing Specialist	
Gibson, Mary	Marketing Specialist	
Williams, Jill	Marketing Specialist	
Eminhizer, Terry	Marketing Specialist	
Benshoof, Wanida	Marketing Assistant	
Wood, John	Marketing Specialist	
Dempsey, Mary	Marketing Assistant	
Bradley, David	Marketing Manager	
Duffy, Terri	Vice President of Engineering	
Tamburello, Roberto	Engineering Manager	
Walters, Rob	Senior Tool Designer	
Walters, Rob	Senior Tool Designer	
Erickson, Gail	Design Engineer	
Goldberg, Jossef	Design Engineer	
Miller, Dylan	Research and Development	

12. Click the Design tab, and then, in the tablix, click the textbox containing [EmployeeName]. In the properties window, expand the *Padding* property, and in the Left drop-down list, select <Expression...> and type the following
=CStr(2+ Level()*10) + "pt"
13. Preview the Report.
14. In the properties window, expand the font property , and in the Font-Weight drop-down list, select <Expression...>
15. In the Expression Dialog box, construct the following Expression
=IIF(Level()<2, "Bold", "Normal")
16. Preview the Report.

Lab 5	Create Charts
Description	Create a Chart

Objective	To learn
	   1. How to create Charts
	   2. How to Format Charts

Create a column Chart

1. Create a new Report with the Name SalesSummaryChart_xxxxxx
2. Create a DataSource pointing to AdventureWorksDW2012
3. Create DataSet ResellerSales with the following Query

SELECT   st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear, SUM(s.SalesAmount)
                AS SalesAmount
FROM   FactResellerSales AS s INNER JOIN
                DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
                DimSalesTerritory AS st ON st.SalesTerritoryKey = s.SalesTerritoryKey
GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear
ORDER BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, d.CalendarYear

4. Create DataSet EmployeeSales with the following Query

select * from (SELECT   top 5 e.LastName + ', ' + e.FirstName AS Employee,
d.CalendarYear, SUM(s.SalesAmount)
                AS SalesAmount
FROM   FactResellerSales AS s INNER JOIN
                DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
                DimEmployee AS e on e.EmployeeKey = s.EmployeeKey
WHERE d.CalendarYear = 2007
GROUP BY e.LastName + ', ' + e.FirstName, d.CalendarYear
ORDER BY SUM(s.SalesAmount), e.LastName + ', ' + e.FirstName, d.CalendarYear) t1
union all
select * from (SELECT   top 1 e.LastName + ', ' + e.FirstName AS Employee,
d.CalendarYear, SUM(s.SalesAmount) AS SalesAmount
FROM   FactResellerSales AS s INNER JOIN
                DimDate AS d ON d.DateKey = s.OrderDateKey INNER JOIN
                DimEmployee AS e on e.EmployeeKey = s.EmployeeKey
WHERE d.CalendarYear = 2003
GROUP BY e.LastName + ', ' + e.FirstName, d.CalendarYear
ORDER BY SUM(s.SalesAmount) DESC, e.LastName + ', ' + e.FirstName,
d.CalendarYear) t2
ORDER BY Employee

5. Design the Chart as shown below.
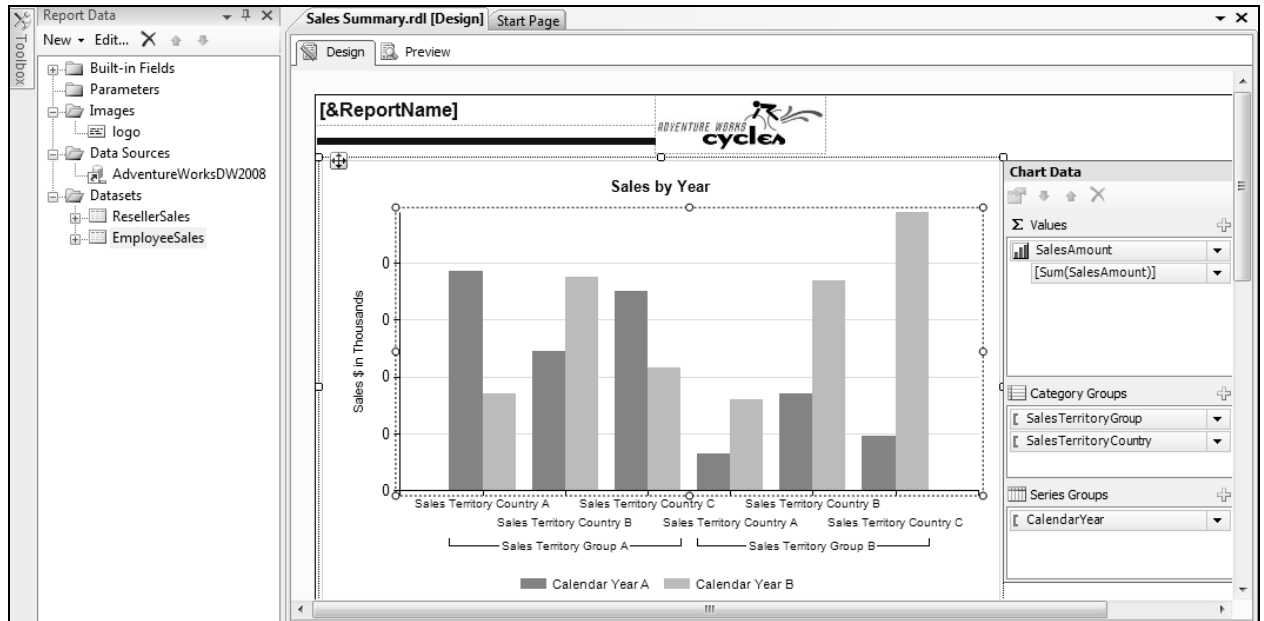
6. Click the chart, and then, in the Properties window, expand the Size category
7. In the Width text box, type 6in, and then, in the Height text box, type 4in
8. Right-click the legend and select Legend Properties
9. In the Legend Properties dialog box, in the Legend Position diagram, click the bottom center option button, and then, in the Layout drop-down list, select Row
10. On the vertical axis, right-click Axis Title and select Axis Title properties
11. In the Axis Title properties box, type **Sales $ in Thousands** and Click OK.
12. Right-click any of the numeric labels and on the vertical axis, select Axis properties.
13. In the Category list, select Number, and then, in the Decimal Places text box, type **0.**
14. Select the use 1000 separator(,) check box.
15. Select Show values check box and from the drop-down list select **Thousands**.
16. On the horizontal axis, right-click Axis Title and select Axis Title Properties.
17. In the Title Text box, clear the text and click OK.
18. Double-click the Chart Title, select the text Chart Title, and then type **Sales by Year.**
19. In the series drop zone, right-click CalendarYear and select Series Group Properties.
20. In the Series Group Properties dialog box, in the left pane, click Sorting.
21. Click Add.
22. In the Sort By drop-down list, select Calendar Year and click OK.
23. Save and then preview the report.
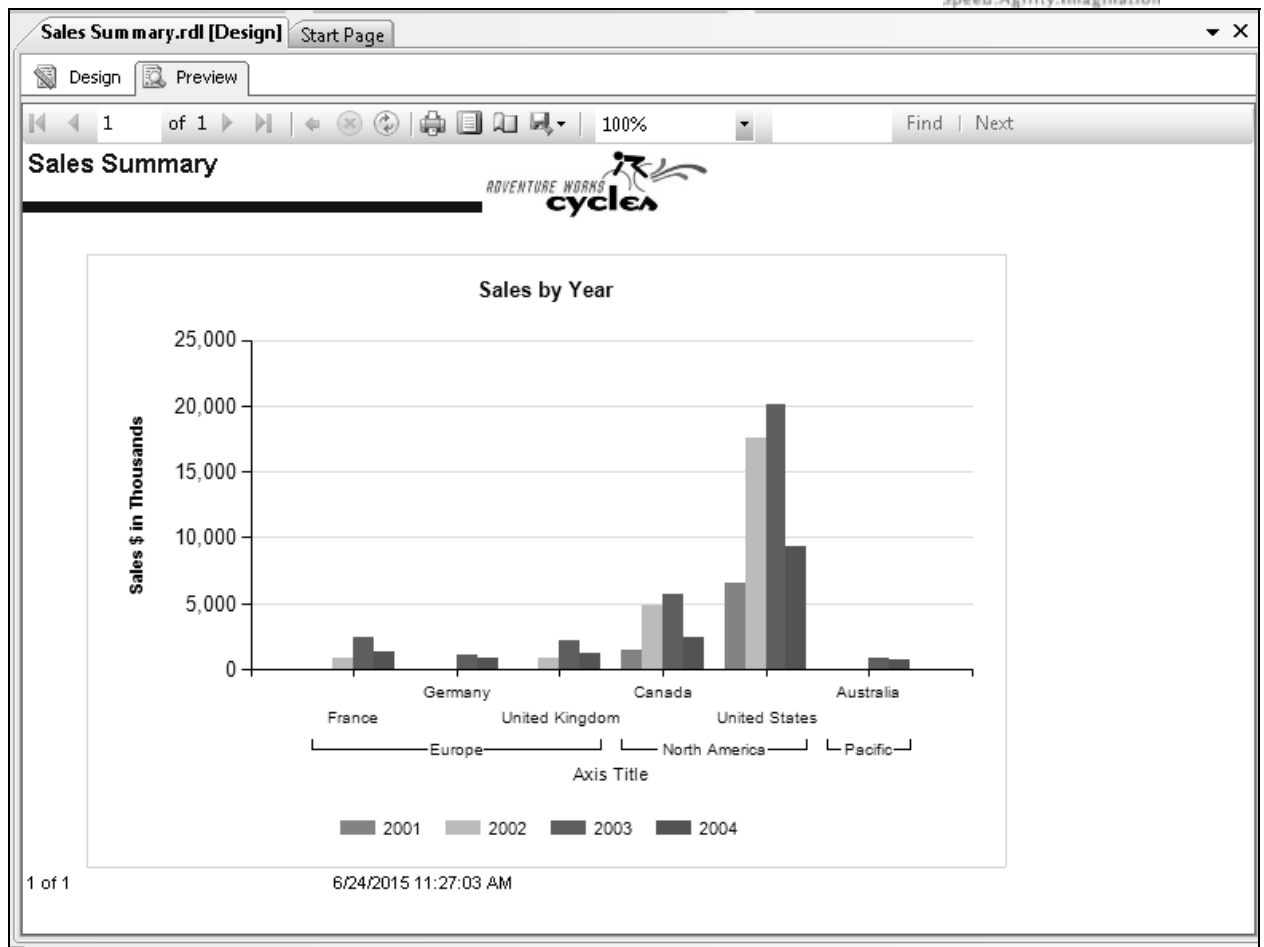
Lab 6	Report Builder
Description	Work with ReportBuilder
Objective	To learn 1. How to work with ReportBuilder

1. Start Report Builder. Create a Blank Report.
2. Create a DataSource pointing to AdventureWorks2DW012.
3. Create a DataSet with the following Query
   ```
   SELECT
           t.CalendarYear,
           pc.EnglishProductCategoryName ProductCategoryName,
           ps.EnglishProductSubcategoryName ProductSubcategoryName,
           p.EnglishProductName ProductName,
           SUM(s.SalesAmount) SalesAmount
   FROM
           dbo.FactInternetSales s
           JOIN dbo.DimDate t ON t.DateKey = s.OrderDateKey
           JOIN dbo.DimProduct p ON p.ProductKey = s.ProductKey
           JOIN dbo.DimProductSubCategory ps ON ps.ProductSubcategoryKey =
   p.ProductSubcategoryKey
           JOIN dbo.DimProductCategory pc ON pc.ProductCategoryKey =
   ps.ProductCategoryKey
   WHERE
           t.CalendarYear = '2008'
   GROUP BY
           t.CalendarYear,
           pc.EnglishProductCategoryName,
           ps.EnglishProductSubcategoryName,
           p.EnglishProductName
   ORDER BY
           pc.EnglishProductCategoryName,
           ps.EnglishProductSubcategoryName,
           p.EnglishProductName
   ```

4. Create a Report as shown below.

Internet Sales 2008		
Product Name	Sales Amount	
[ProductName]	[SalesAmount]	
Total Sales	[Sum(SalesAm⟨	

5. Run the report.
6. In the table, right-click [ProductName], select Add Group, and select Parent Group in the Row Group section
7. From the Group By drop-down list, select [ProductSubcategoryName]
8. Select the Add Group Header and Add Group Footer check boxes
9. Right-click the column handle of the first column (containing the column title Group1), and select Delete Columns.
10. In the group header row above [ProductName], click the Field List icon and select ProductSubcategoryName.
11. Click the Field List icon in the group footer row between [SalesAmount] and [Sum(SalesAmount)], and click SalesAmount to update the table.

Internet Sales 2008

Product Name	Sales Amount	
[ProductSubcat		
[ProductName]	[SalesAmount]	
	[Sum(SalesAmo	
Total Sales	[Sum(SalesAmo	

[&ExecutionTime]

12. Right-click the first text box of the group footer below [ProductName], and then select Expression.
13. In the Expression dialog box, in the Category list, click Fields (Internet Sales2004), and then, in the Values list, double-click ProductSubcategoryName.
14. In the Set Expression For: Value text box, at the end of the expression, type & " total" to construct the following expression:
    =Fields!ProductSubcategoryName.Value & " total"
15. In the Row Group section of the Grouping pane, right-click Group1, select Add Group, and select Parent Group.
16. In the Group By drop-down list, select [ProductCategoryName].
17. Select the Add Group Header and Add Group Footer check boxes, and click OK.
18. Right-click the column handle of the first column (containing the column title Group2), and select Delete Columns.
19. In the group header row above [ProductSubcategoryName], click the Field List icon, and select ProductCategoryName.
20. In the group footer row between [Sum(SalesAmount)] and [Sum(SalesAmount)], click the Field List icon, and click SalesAmount.
21. Right-click the first text box of the new group footer, then select Expression.
22. In the Expression dialog box, construct the following expression:
    =Fields!ProductCategoryName.Value & " total"

23. View the Report Design.

	Product Name	Sales Amount	
	[ProductCatego		
	[ProductSubcat		
≡	[ProductName]	[SalesAmount]	
	«Expr»	[Sum(SalesAm(	
	«Expr»	[Sum(SalesAm(	
	Total Sales	[Sum(SalesAm(	

Internet Sales 2008

[&ExecutionTime]

24. In the Row Groups section of the Grouping pane, right-click Group2, and select Group Properties.
25. In the left pane, click Page Breaks.
26. Select the Between Each Instance Of A Group check box.
27. Select Tablix Properties.
28. Select the Repeat Header Rows On Each Page check box.
29. Run the Report.

Internet Sales 2008

Product Name	Sales Amount	
Accessories		
Bike Racks		
Hitch Rack - 4-Bike	22920.0000	
Bike Racks total	22920.0000	
Bike Stands		
All-Purpose Bike Stand	20670.0000	
Bike Stands total	20670.0000	
Bottles and Cages		
Mountain Bottle Cage	11997.9900	
Road Bottle Cage	9034.9500	
Water Bottle - 30 oz.	12484.9800	
Bottles and Cages total	33517.9200	
Cleaners		
Bike Wash - Dissolver	4173.7500	