SAP BusinessObjects Business Intelligence Workbook 1 Solution Guide

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3/8/2012

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Introduction

This solution guide is a companion to the "SAP BusinessObjects Business Intelligence Workbook 1: The Sports Warehouse". For more information about the activities refer to Workbook 1.

To get the most out of this Solution Guide, it is strongly recommended that you do your best to complete the activities in the workbook without referring to this Solution Guide whenever possible. The prerequisites and recommended tutorials referred to in the Workbook activities should provide you with the knowledge required to successfully complete the activities.

If you get stuck completing any of the activities, follow the step by step solutions in this guide. However, simply clicking through the step by step solutions found here will generally be inadequate to learn how to build effective business intelligence solutions. If you need the step by step solutions to complete any activity, try to complete the activity in the workbook again without referring to the detailed solution steps.

Instructions to install the required software are provided in the "SAP BusinessObjects B1 4.x Installation Job Aid".

Solution 1: Create the Sports_Warehouse Database

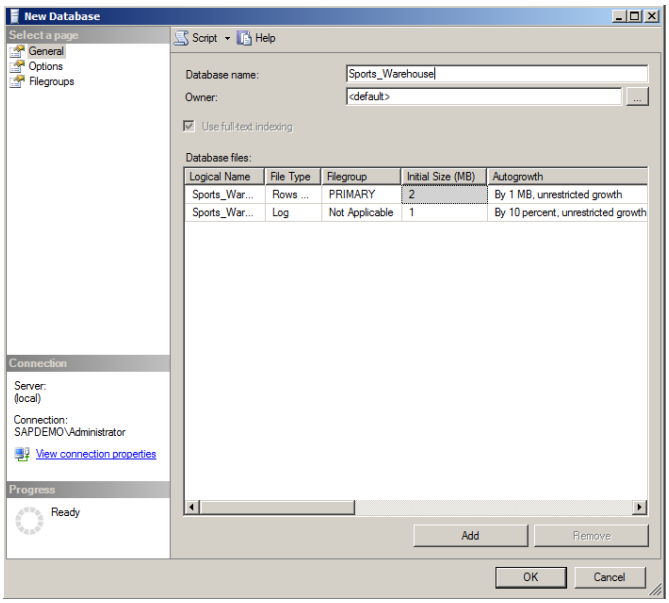
1. Download and extract the following workbook resources.
   a. Sports: http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/4026d3cc-ca4a-2f10-fa85-ecc740f6a085
   b. Spreadsheets: http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/00f8b958-cb4a-2f10-a2b3-e18c0ef13574

2. Open SQL Server Management Studio (Start > All Programs > Microsoft SQL Server 2008 > SQL Server Management Studio.
3. Login as shown in the dialog below.

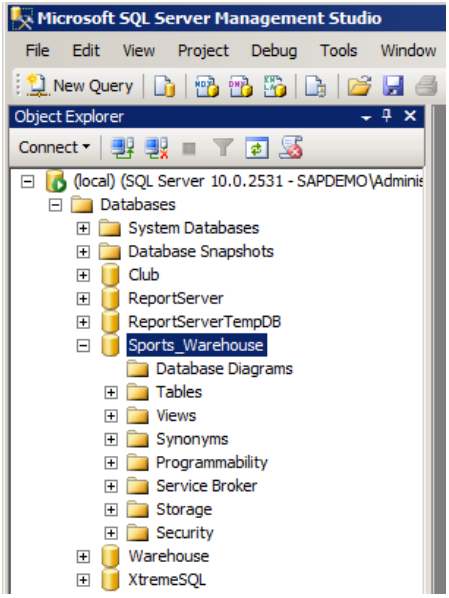
Note: You may need to switch server types to view the (local) server name.

4. Right click Databases in the Object Explorer and choose New Database…

5. Type Sports_Warehouse in the Database Name field.

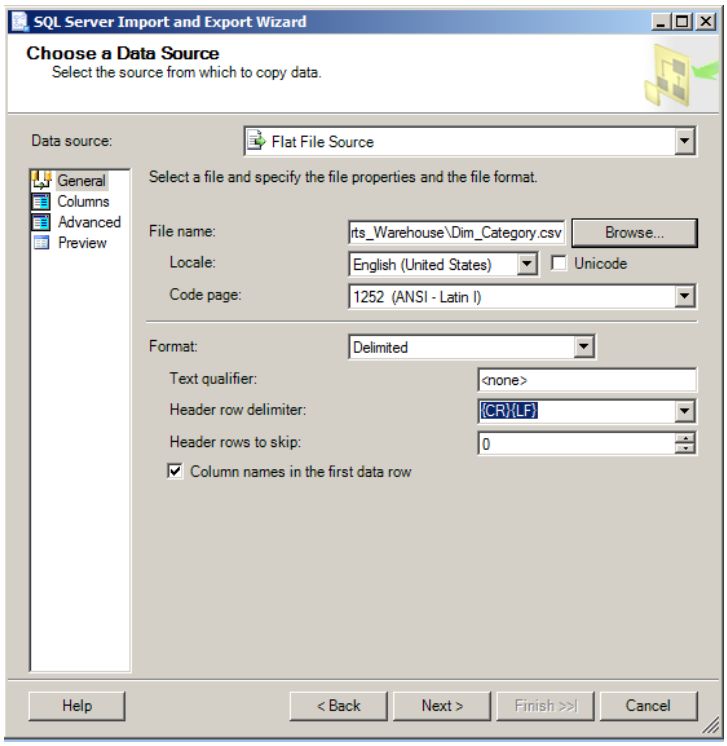


6. Change the Initial Size to 10 MB.
7. Click OK.
8. Navigate to the Sports_Warehouse Database.

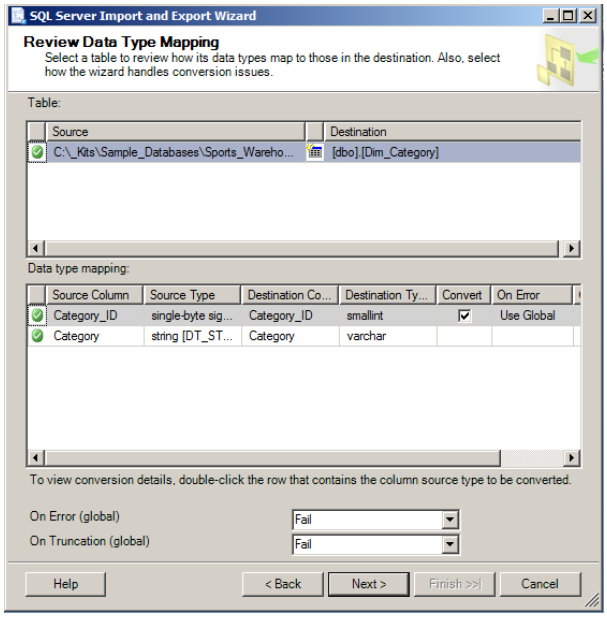


9. Right click Sports_Warehouse and choose Tasks > Import Data…
10. Click Next.
11. Choose Flat File Source as the data source.
12. Click Browse…
13. Navigate to Sample_Databases\Sports_Warehouse\.
14. Choose CSV Files (*.csv).
15. Select the Dim_Category.

16. Check the Column names in the first data row checkbox.

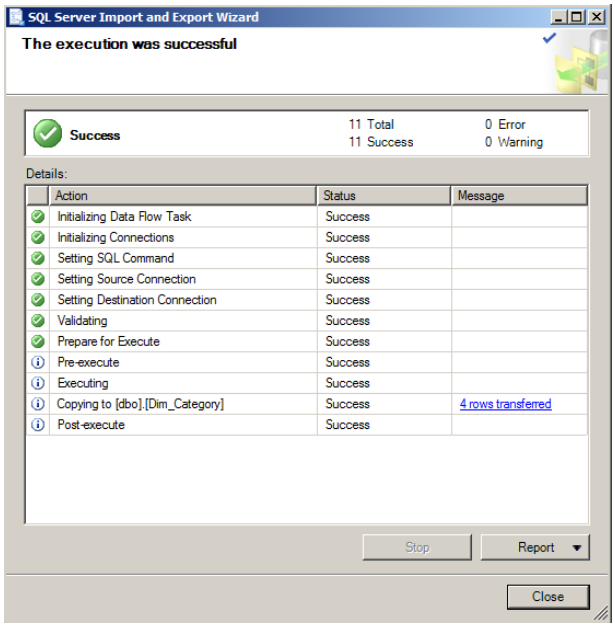


17. Click Advanced on the left.
18. Change the Category_ID data type to single-byte signed integer.
19. Click Next.
20. Click Next.



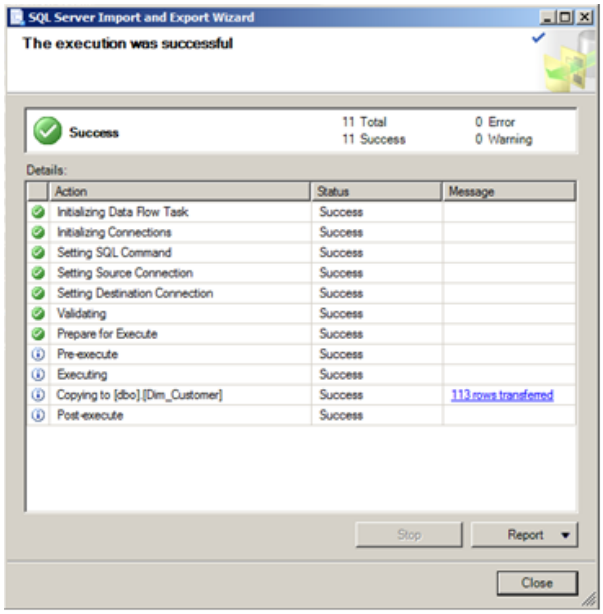
21. Click Next.
22. Click Next.

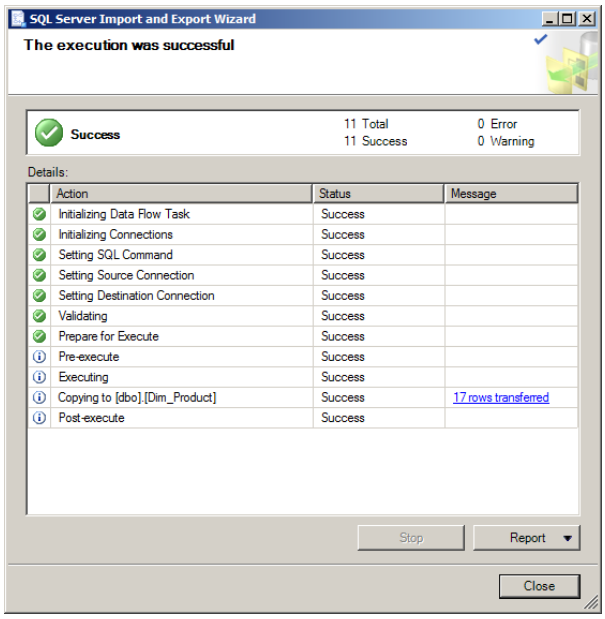
23. Click Finish.
24. Click Close.



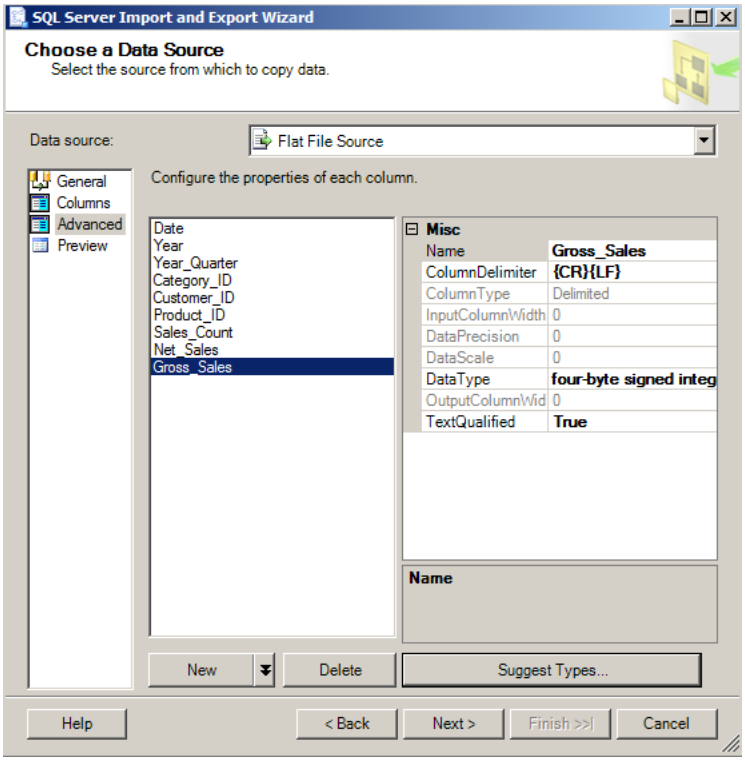
25. Repeat these steps to import the Dim_Customer and Dim_Product.

    Don't forget to check the *Column names in the first data row* option and to change the Customer_ID, Product_ID data type.





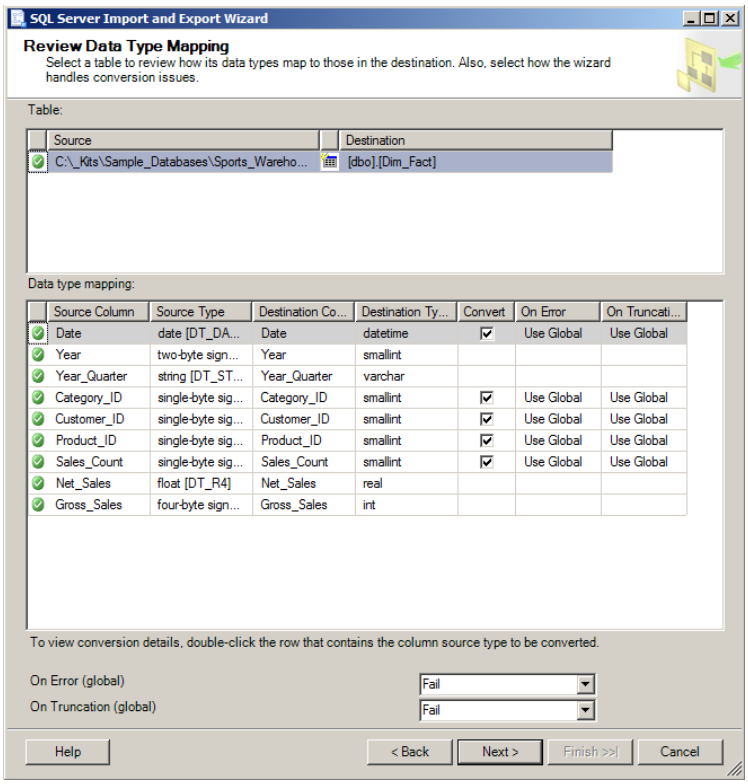
26. Repeat these steps to import the Dim_Fact table.
    a. To modify the data types in the fact table:
        i. Click Advanced on the left of the dialog.
        ii. Click each column name (Date, Year, Year_Quarter, etc) and click the Suggest Types… button.



iii. Click Next .

iv. Click Next.

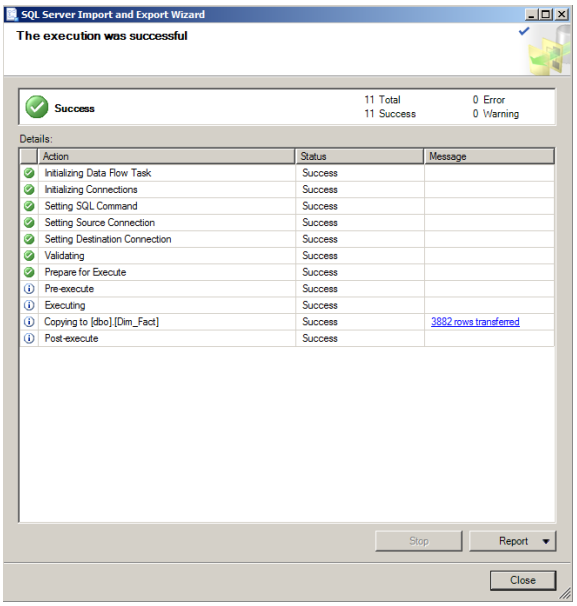
v. Review the Data Mappings.



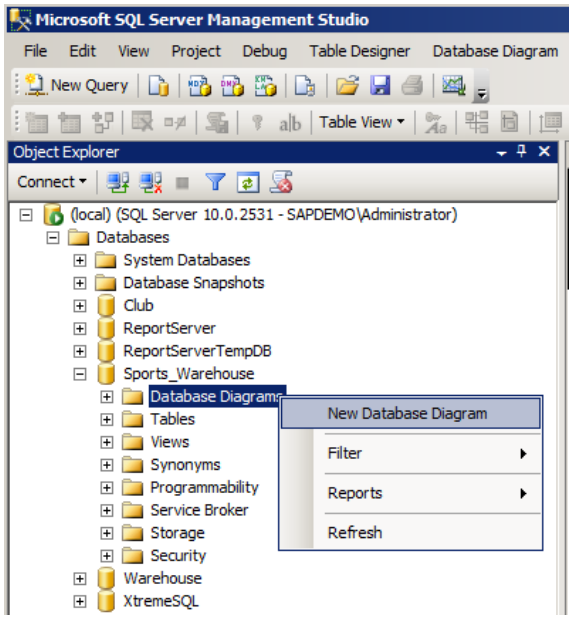
vi. Click Next.

vii. Click Next.

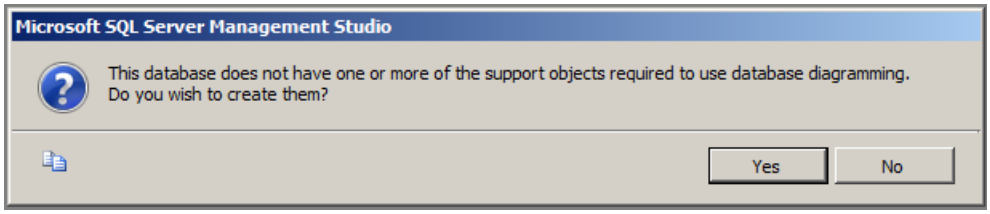
viii. Click Finish.



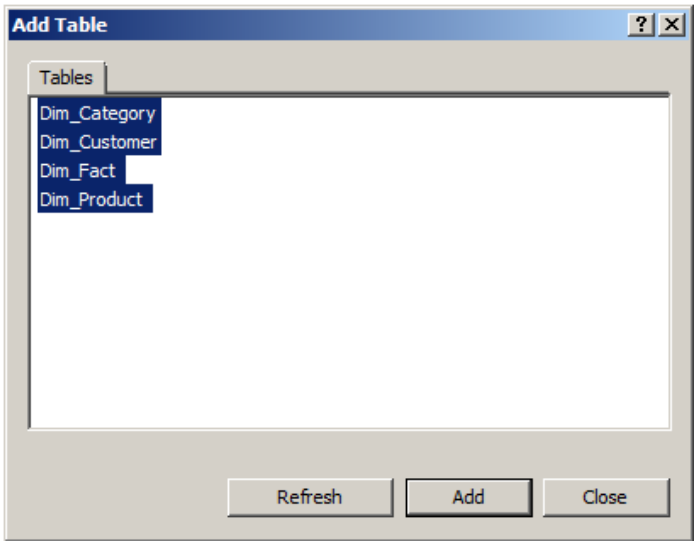
27. Right click the Sports_Warehouse Database Diagrams folder and choose New Database Diagram.



28. Click Yes.



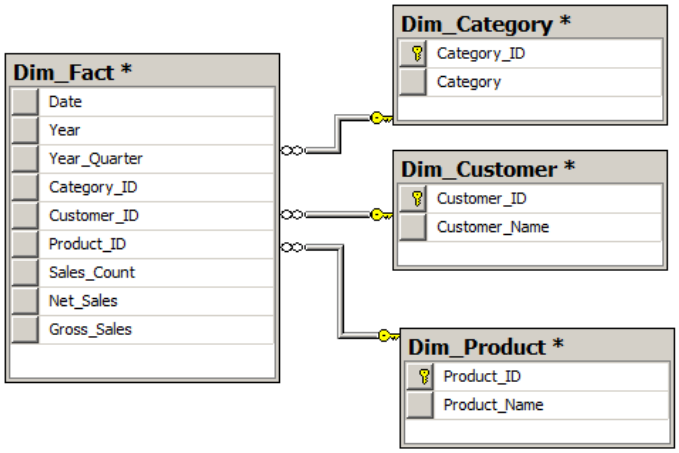
29. Select all four tables and click Add.



30. Click Close.
31. Set the primary keys for Dim_Category, Dim_Customer, and Dim_Product tables.
    a. In the Dim_Category table, right-click Category_ID and set it to primary key.
    b. Do the same for Customer_ID and Product_ID.

32. Create relationships between each of the dimension tables and the fact tables.
    a. Click and drag the table title bars to rearrange the tables.
    b. Click and drag the primary keys to the fact tables.

    Your completed diagram should look like the image below.



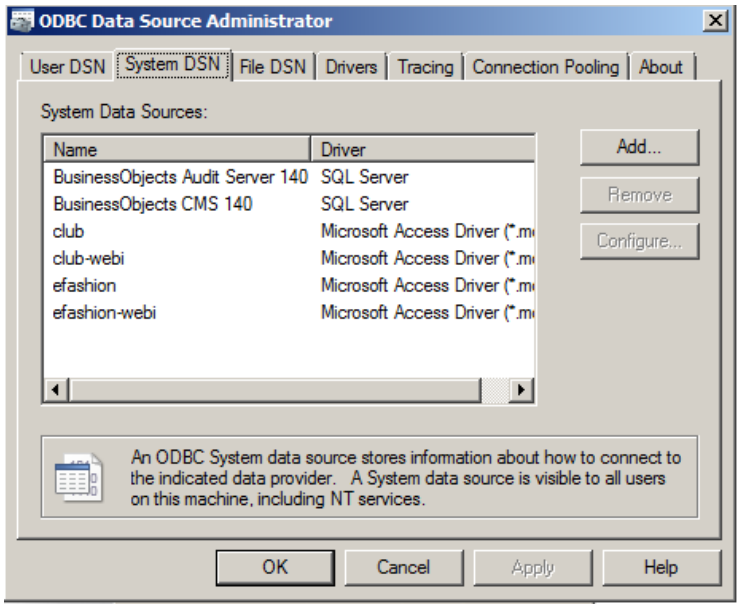
33. Save your relationship diagram.

    Note if you get an error message saving the table: Click Tools > Options, select Designers and uncheck the Prevent saving changes that require table re-creation option. Then try to save your diagram again.

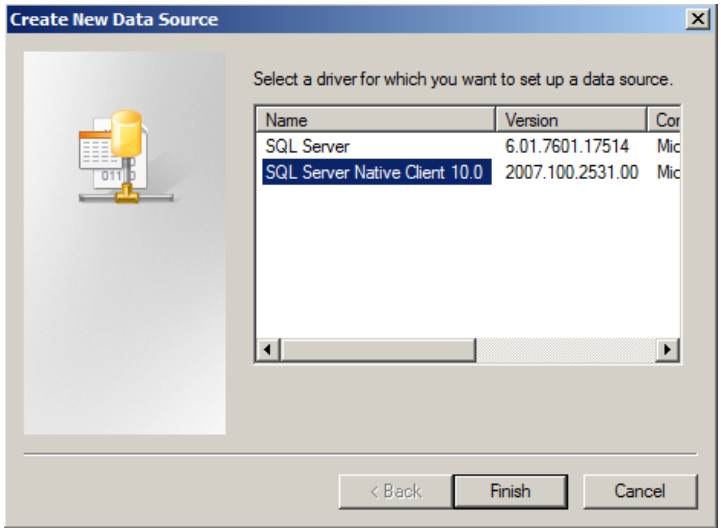
Solution 2: Create a Sports Data Source Name

1. Open Windows Explorer and navigate to C:\Windows\SysWOW64\.
2. Double-click odbcad32.
3. Click the System DSN tab.

4. Click Add…

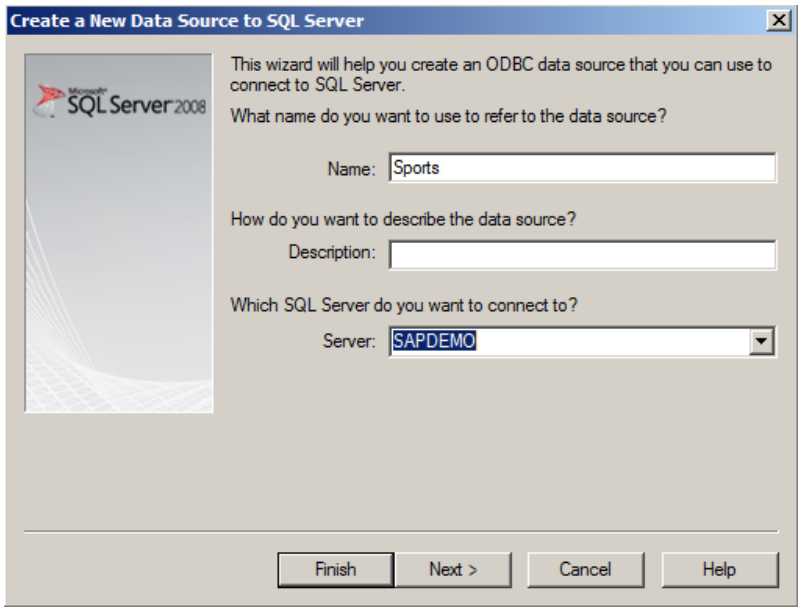


5. Select SQL Server Native Client 10.0.

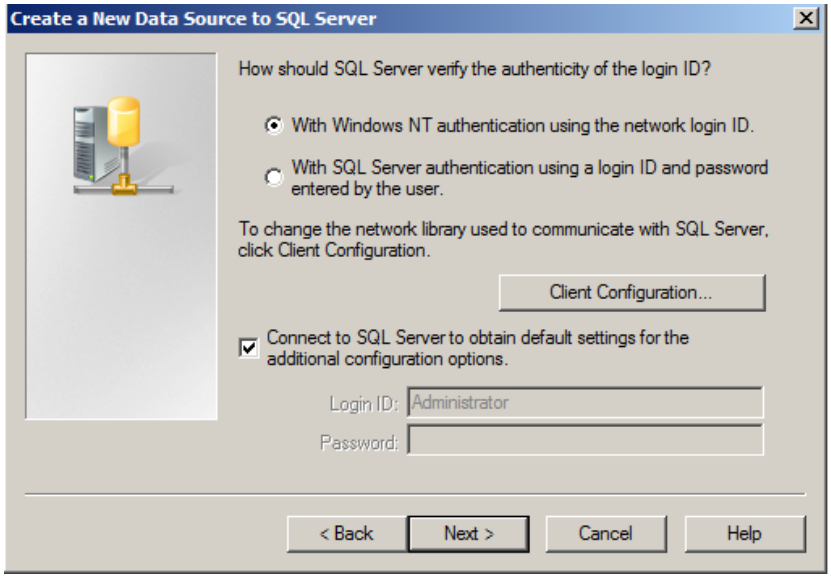


6. Click Finish.

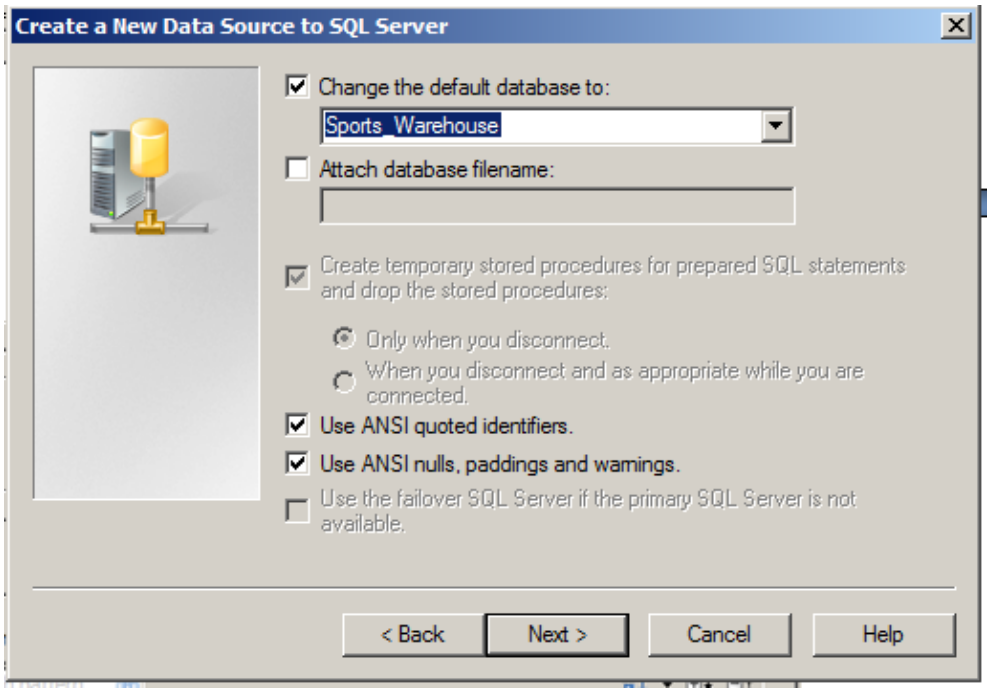
7. Type the name **Sports** and select the SAPDEMO server and click Next>.



8. Click Next.



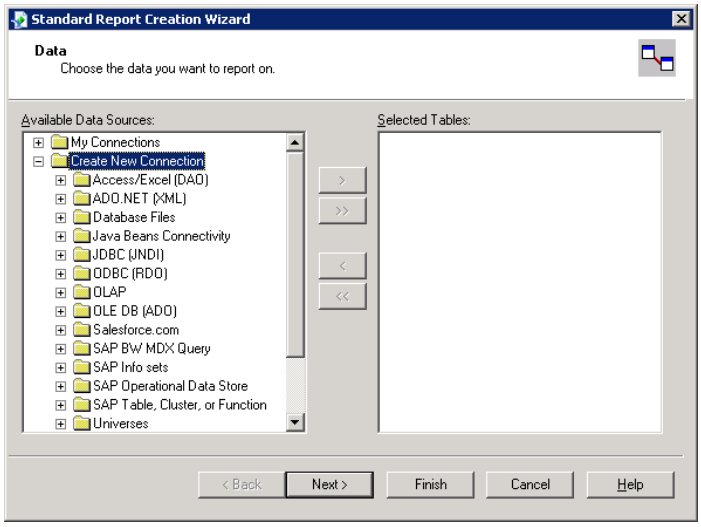
9. Check Change the default database to option and select Sports_Warehouse.



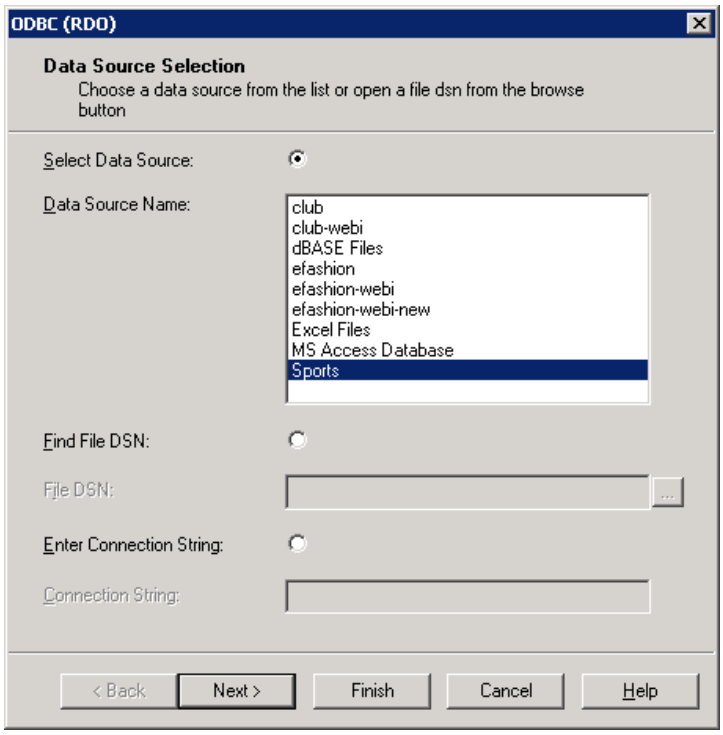
10. Click Next.
11. Click Finish.
12. Click Test Data Source.
13. Click OK, OK, OK.
14. Click Start > Control Panel.
15. Click Administrative Tools.
16. Double-click Data Sources (ODBC) and repeat steps 3 – 13 to create another DNS named **Sports.**

Solution 3 – Create a Crystal Report using the Standard Report Creation Wizard

1. Open Crystal Reports 2011 (Start > All Programs > Crystal Reports 2011 > Crystal Reports 2011)
2. Click File > New > Standard Report…
3. Expand Create New Connection.

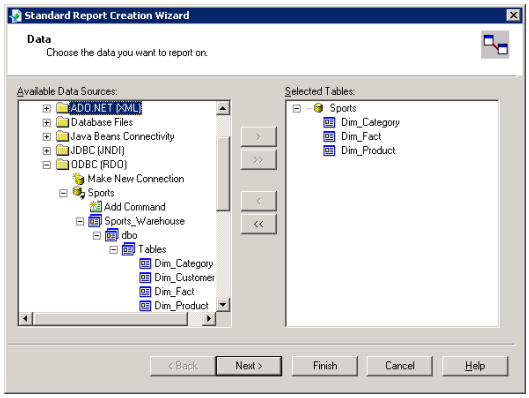


4. Expand ODBC (RDO).
5. If you do not see the ODBC (RDO) dialog, double-click Make New Connection.
6. Click Sports.

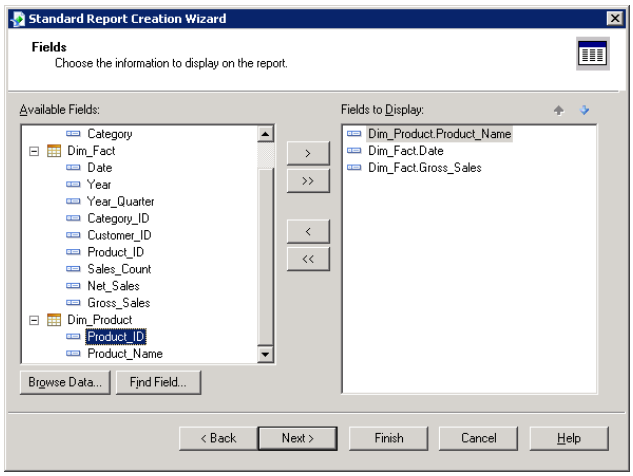


7. Click Next.
8. Type the password Welcome1.
9. Click Finish.
10. Expand Sports > Sports_Warehouse > dbo > Tables.

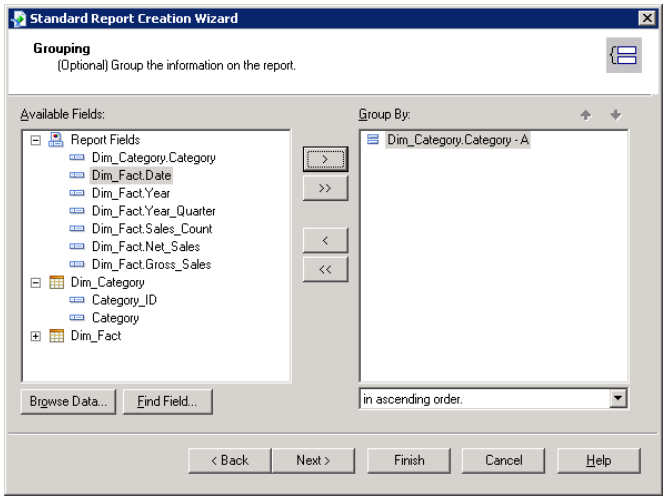
11. Double-click Dim_Category, Dim_Fact, Dim_Product.



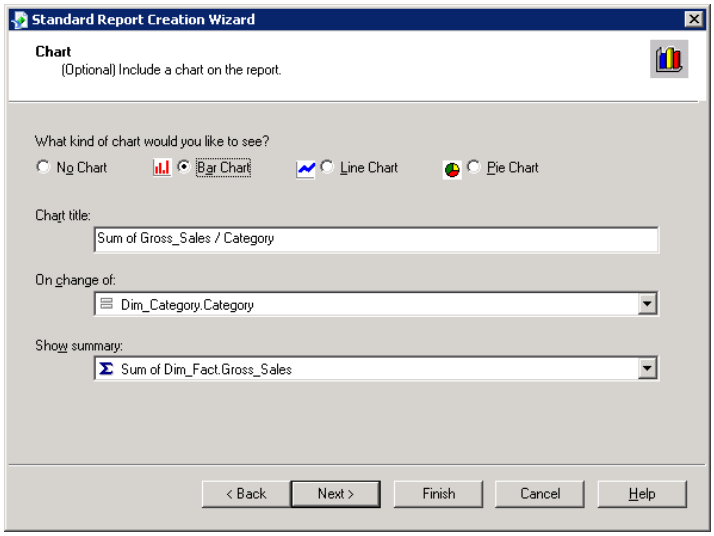
12. Click Next.
13. Click Next.
14. Add the Product_Name, Date, and Gross_Sales fields.



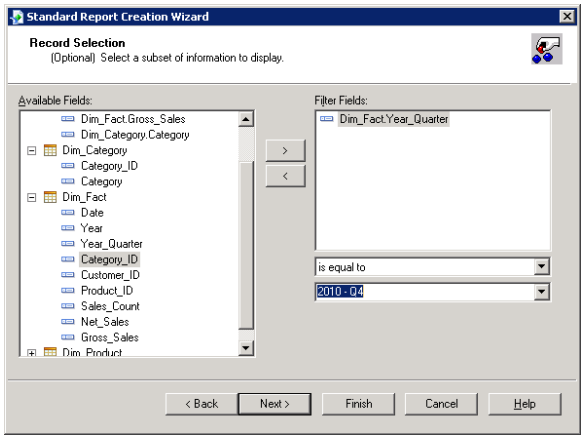
15. Click Next.
16. Add Category to group the records by category.



17. Click Next.
18. Click Next.
19. Click Next.
20. Click Bar Chart.

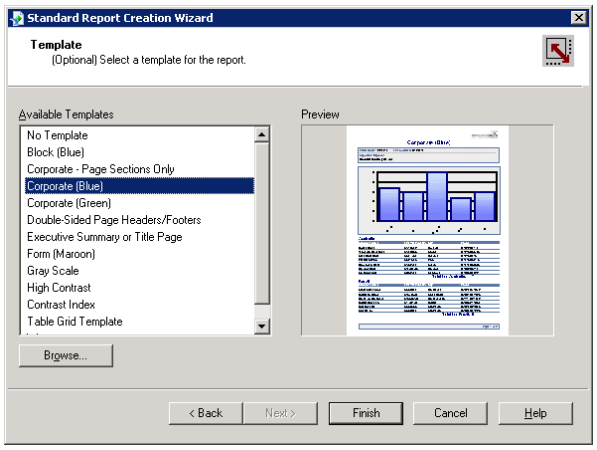


21. Click Next.
22. Add Year Quarter to the Filter Fields.
23. Set the filter is equal to 2010 – Q4.



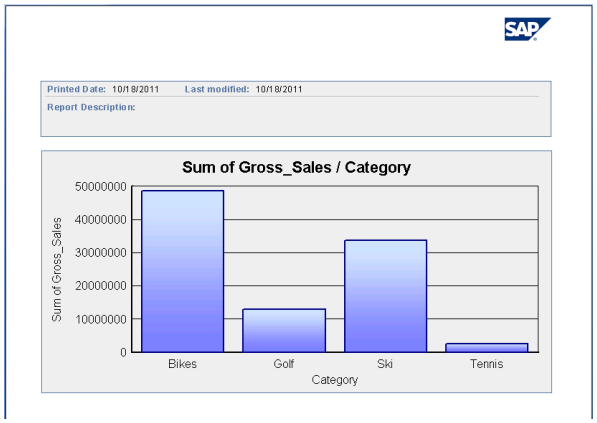
24. Click Next.

25. Click Corporate (Blue).

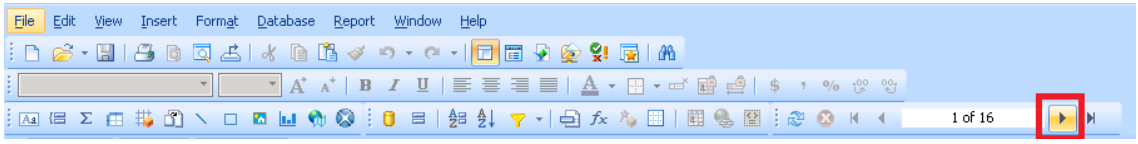


26. Click Finish.

The first page of your report should look like this.



27. Click the Show Next Page button.



The second page of your report should look like this.

Printed Date: 10/18/2011 Last modified: 10/18/2011

Bikes

Category	Product_Name	Date	Gross_Sales
Bikes	Descent Competitior	9/10/2011 12:00:00AM	852,000
Bikes	Romeo Hybrid Bicyc	9/10/2011 12:00:00AM	141,600
Bikes	Triump Pro Cycling H	9/10/2011 12:00:00AM	25,620
Bikes	Triump Pro Cycling H	9/10/2011 12:00:00AM	34,020
Bikes	Triump Pro Cycling H	9/10/2011 12:00:00AM	21,042
Bikes	Romeo Hybrid Bicyc	9/10/2011 12:00:00AM	120,800
Bikes	Romeo Hybrid Bicyc	9/10/2011 12:00:00AM	217,600

28. Click Golf in the Groups pane on the left.

    You should see the data for the Golf category.

Golf

Category	Product_Name	Date	Gross_Sales
Golf	Golf Balls	12/10/2011 12:00:00AM	16,540
Golf	Tees	12/10/2011 12:00:00AM	8,270
Golf	Tees	12/10/2011 12:00:00AM	6,900
Golf	Golf Balls	12/10/2011 12:00:00AM	8,700
Golf	Berta Golf Clubs	12/10/2011 12:00:00AM	227,000
Golf	Clone Golf Clubs	12/10/2011 12:00:00AM	107,500
Golf	Golf Balls	12/10/2011 12:00:00AM	14,400
Golf	Berta Golf Clubs	12/10/2011 12:00:00AM	264,000

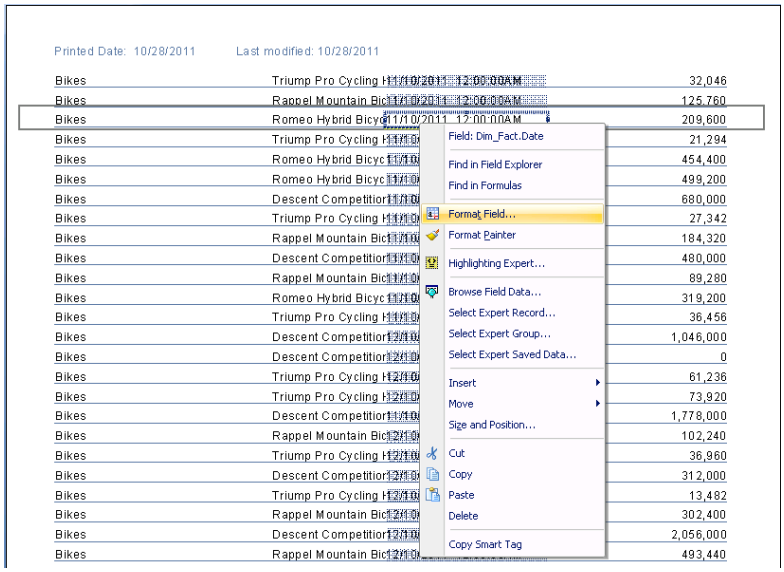
29. Click Show Previous Page.

    Notice the total is calculated at the end of each section.

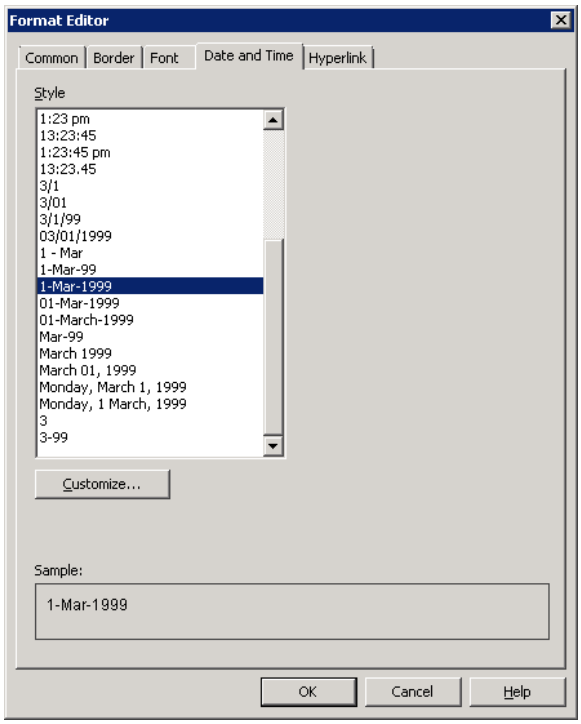
Bikes	Rappel Mountain Bic	12/10/2011 12:00:00AM	240,480
Bikes	Romeo Hybrid Bicyc	12/10/2011 12:00:00AM	373,600
Bikes	Rappel Mountain Bic	12/10/2011 12:00:00AM	420,000
Bikes	Romeo Hybrid Bicyc	12/10/2011 12:00:00AM	700,000
Bikes	Descent Competitior	12/10/2011 12:00:00AM	516,000
Bikes	Romeo Hybrid Bicyc	12/10/2011 12:00:00AM	206,400

Total for Bikes: 48,451,570.00

30. Right click one of the dates and choose Format Field...



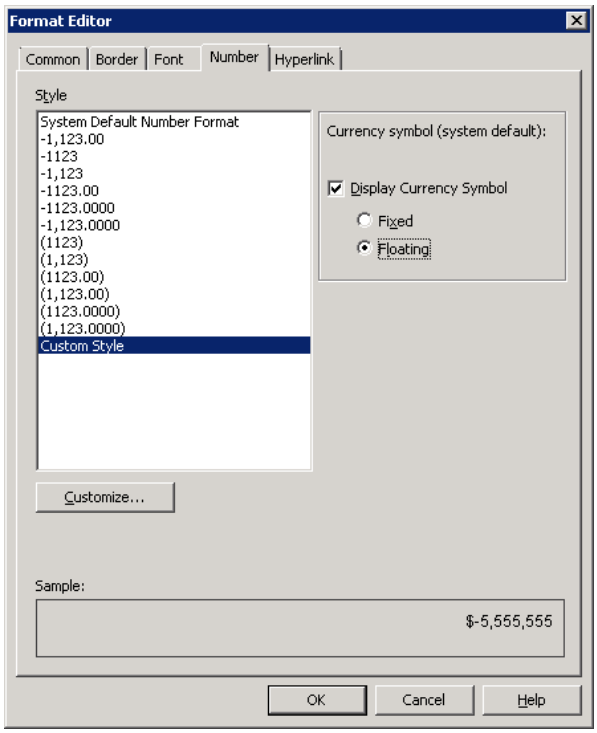
31. Scroll down and select the 1-Mar-1999 format and click OK.



32. Click the Align Right button.

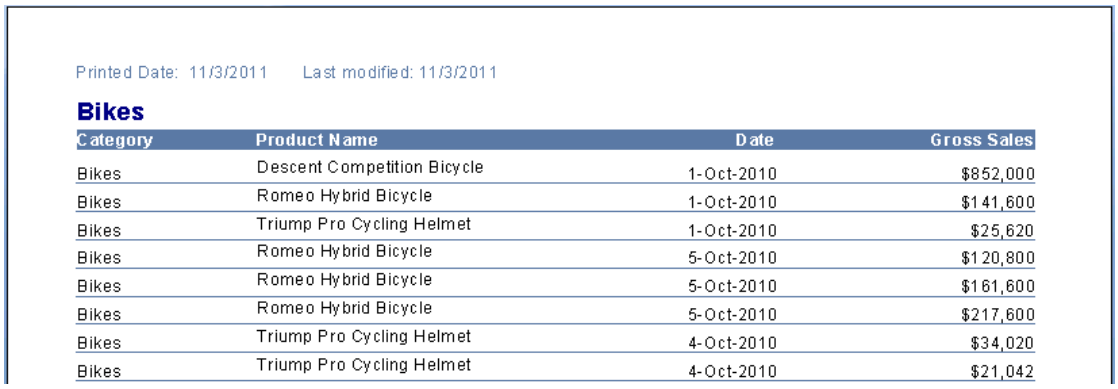
33. Right click one of the Gross Sales values and choose Format Field...

34. Select the Display Currency Symbol option and click OK.



35. Click the Design tab.
36. Move and resize the Category and Product Name columns so that the full product names can be displayed.
37. Right click the Product_Name header and choose Edit Text.
38. Click inside the header and replace the _ with a space.
39. Align the Date and Gross Sales titles to the right.
40. Click Preview

    Your report should now look like the image.



Printed Date: 11/3/2011 Last modified: 11/3/2011

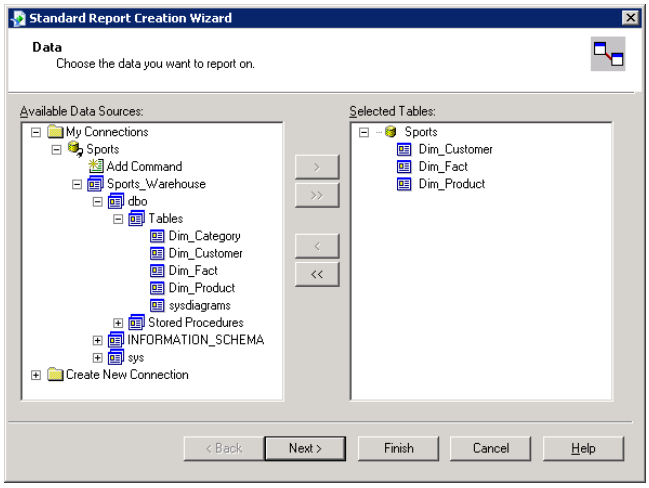
Bikes

Category	Product Name	Date	Gross Sales
Bikes	Descent Competition Bicycle	1-Oct-2010	$852,000
Bikes	Romeo Hybrid Bicycle	1-Oct-2010	$141,600
Bikes	Triump Pro Cycling Helmet	1-Oct-2010	$25,620
Bikes	Romeo Hybrid Bicycle	5-Oct-2010	$120,800
Bikes	Romeo Hybrid Bicycle	5-Oct-2010	$161,600
Bikes	Romeo Hybrid Bicycle	5-Oct-2010	$217,600
Bikes	Triump Pro Cycling Helmet	4-Oct-2010	$34,020
Bikes	Triump Pro Cycling Helmet	4-Oct-2010	$21,042

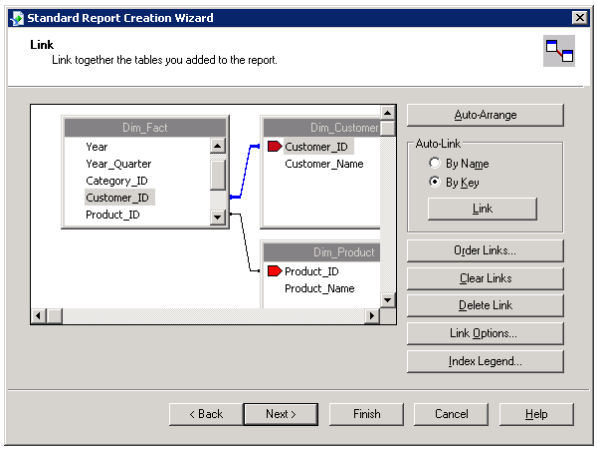
41. Save your report as Product Gross Sales Q4 2010.

Solution 4 – Create a Crystal Report in Design View

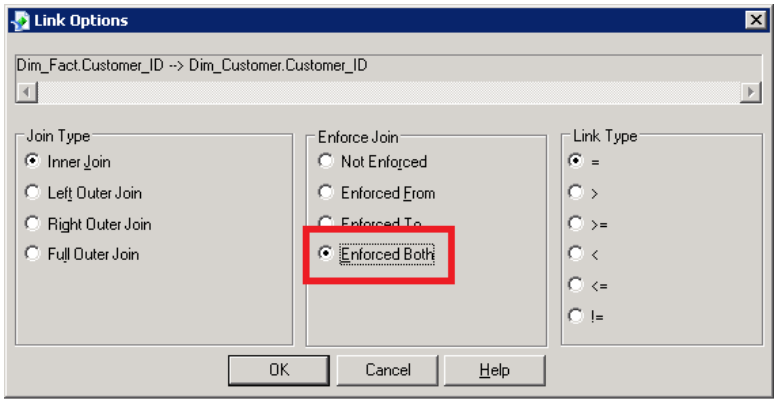
1. Open Crystal Reports 2011.
2. Click New Report.
3. Use the existing Sports database connection and add the Customers, Facts, and Products tables.



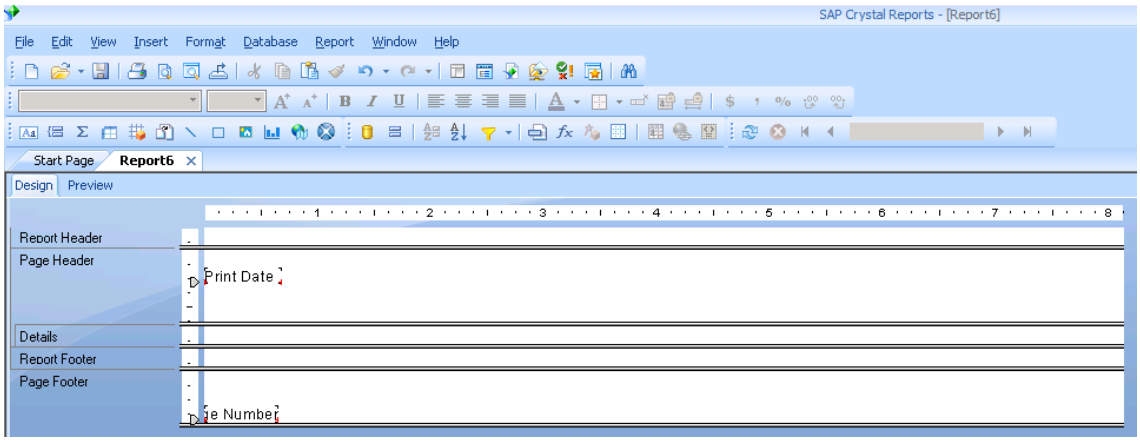
4. Click Next.
5. Double-click the join between Dim_Fact and Dim_Customer.



6. Click Enforce Both and click OK.

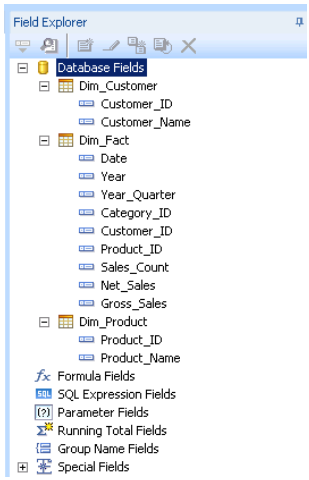


7. Double-click the join between Dim_Fact and Dim_Product.
8. Choose Enforce Both and click OK.
9. Click Finish.
10. Click the Design Tab.
11. Click and drag to resize the Page Header section of the report.



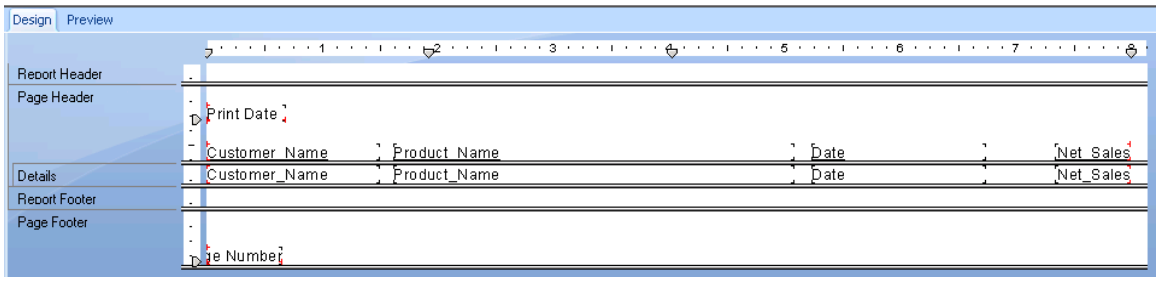
This allows space for both the Print Date and the Column Headers for each Field.

12. Click View Field Explorer.
13. Click the + buttons to expand the Database Fields tree.



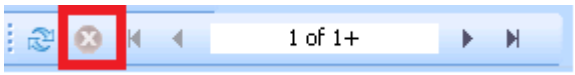
14. Click and drag to add the Customer_Name, Product_Name, Date, and Net_Sales fields to the Details section of the report.

15. Move and resize the fields to match the image.

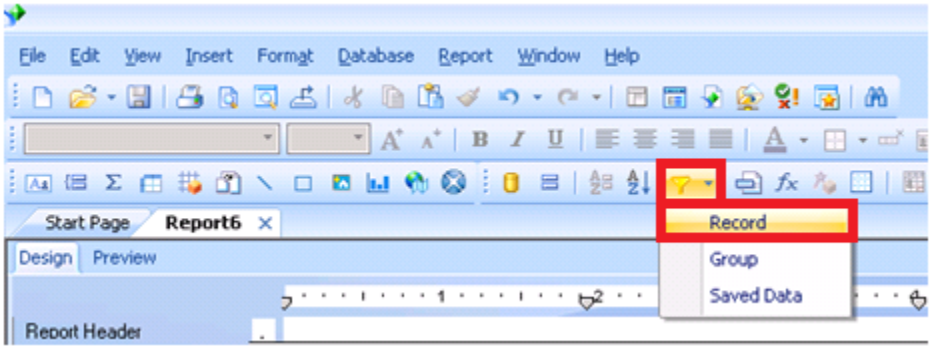


16. Click the Preview tab.
17. Right click a Date value and choose Format Field…

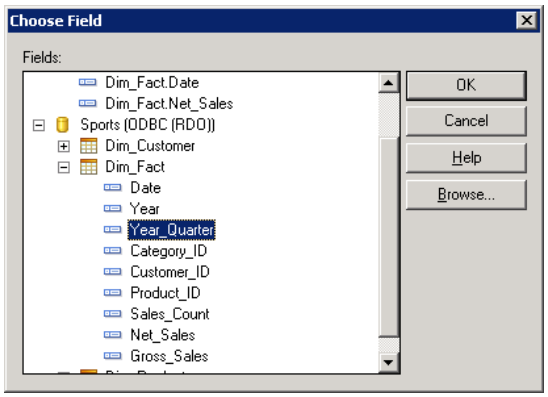
    If Format Field… is not enabled in the pop-up menu, you may need to click the Stop button on the record navigation toolbar.



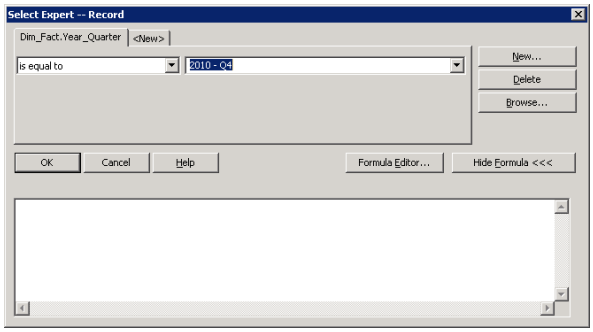
18. Choose the format March 01, 1999 and click OK.
19. Click one of the Net Sales values to select it.
20. Resize the column to ensure it is large enough to display the largest values.
21. Click the Design tab.
22. Click the Select Expert button and choose Record.



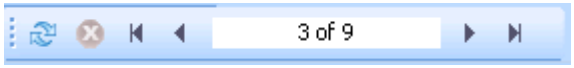
23. Select Year_Quarter and click OK.



24. Select is equal to.
25. Choose 2010 – Q4 and click OK.

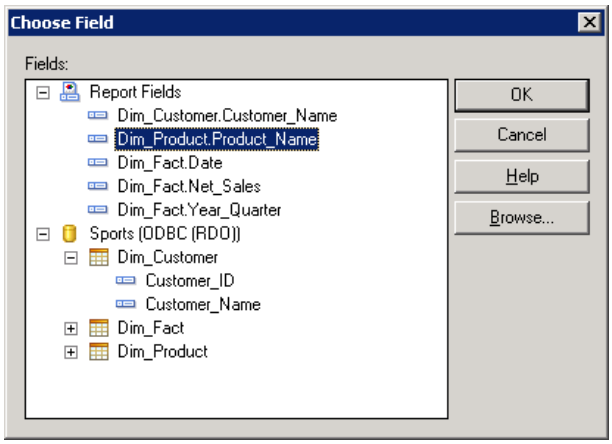


26. Click the Preview tab.
27. Click Refresh Data.
28. Use the navigation buttons to review the data.

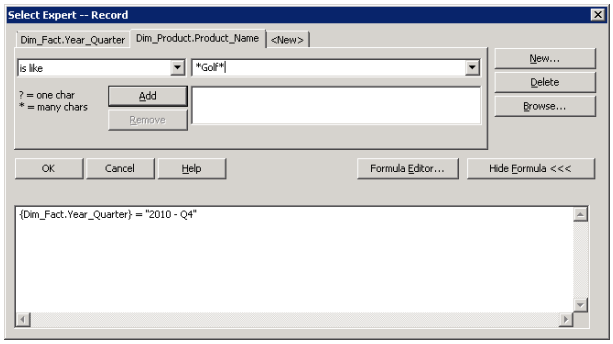


29. Click the Design tab.
30. Click Select Expert and choose Record.
31. Click New…

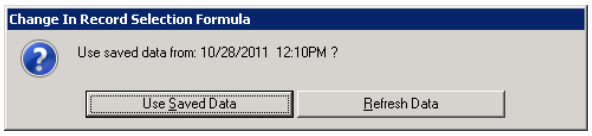
32. Click Dim_Product.Product_Name and click OK.



33. Choose is like.
34. Type *Golf* and click OK.



35. Click the Preview Tab.
36. Click Use Saved Data and click OK.



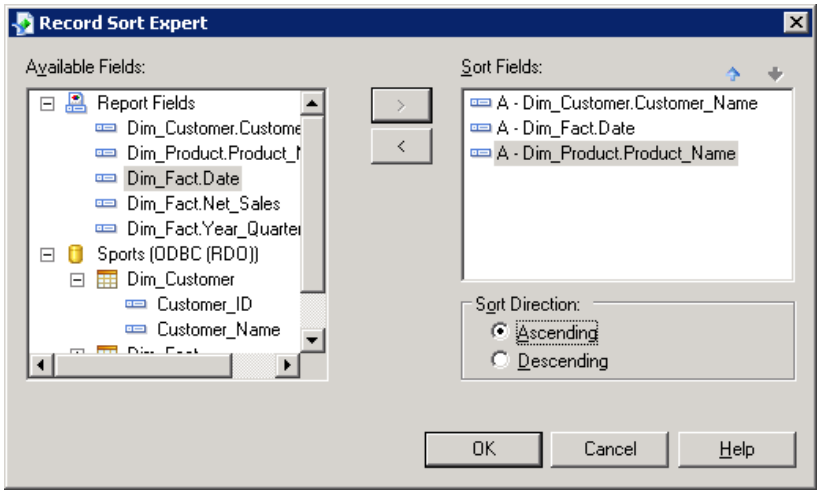
Your report should display the data shown here.

11/3/2011

Customer_Name	Product_Name	Date	Net_Sales
XoR Electronics	Berta Golf Clubs	October 01, 2010	86,920.00
Goohoo Services	Berta Golf Clubs	October 04, 2010	111,520.00
Goohoo Services	Golf Balls	October 04, 2010	7,462.00
ThinkSmart	Clone Golf Clubs	October 04, 2010	74,620.00
Janere Co	Clone Golf Clubs	October 05, 2010	66,420.00
SimLimSys	Berta Golf Clubs	October 06, 2010	169,740.00
Sportmitek	Golf Balls	October 07, 2010	5,133.20
Sporttagear	Golf Balls	October 07, 2010	15,317.60
Teltagear	Golf Balls	October 08, 2010	8,347.60
Allmugear	Clone Golf Clubs	October 08, 2010	42,230.00
Allmigear	Clone Golf Clubs	October 08, 2010	100,860.00
EGlobal	Berta Golf Clubs	October 11, 2010	439,240.00
Quebertini	Golf Balls	October 12, 2010	9,987.60
Microsystems Inc	Berta Golf Clubs	October 13, 2010	139,400.00
Zerg Systems	Berta Golf Clubs	October 15, 2010	738,650.00

37. Click Record Sort Expert.

38. Add Customer_Name, Date, and Product_Name as Sort fields.



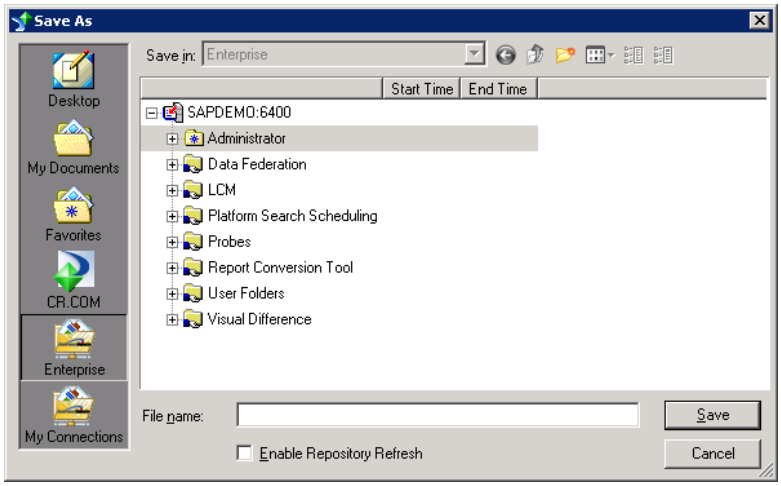
The records should be sorted alphabetically by customer, then by date, and finally by product name.

11/3/2011

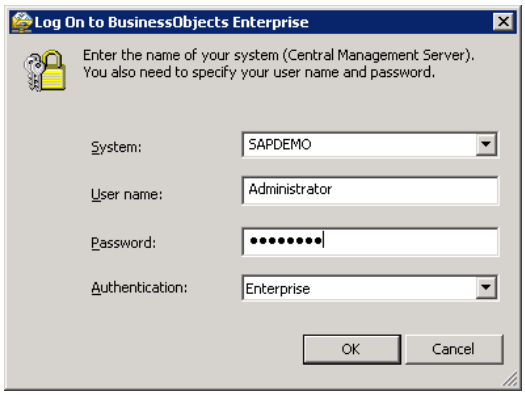
Customer_Name	Product_Name	Date	Net_Sales
Allmigear	Clone Golf Clubs	October 08, 2010	100,860.00
Allmitek	Clone Golf Clubs	November 03, 2010	86,510.00
Allmitek	Golf Balls	December 24, 2010	13,562.80
Allmubuy	Berta Golf Clubs	November 29, 2010	86,920.00
Allmugear	Clone Golf Clubs	October 08, 2010	42,230.00
Allmutek	Clone Golf Clubs	November 03, 2010	54,940.00
Alltabuy	Clone Golf Clubs	November 30, 2010	207,050.00
Alltatek	Berta Golf Clubs	November 04, 2010	198,440.00
Auclerc	Berta Golf Clubs	November 11, 2010	110,700.00
Biggs Brothers	Golf Balls	November 08, 2010	12,168.80
BomDia	Golf Balls	December 10, 2010	14,432.00
Dill Computers	Berta Golf Clubs	December 03, 2010	78,720.00
Dill Computers	Clone Golf Clubs	December 03, 2010	39,360.00
EGlobal	Berta Golf Clubs	October 11, 2010	439,240.00

39. Save the File > Save As…

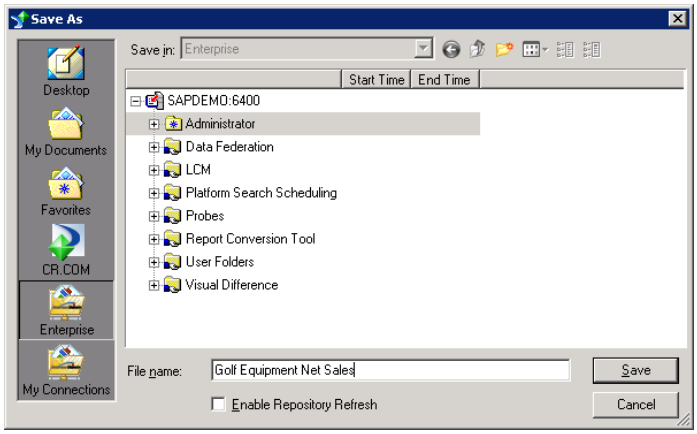
40. Click Enterprise.



41. Type the password Welcome1 and click OK.

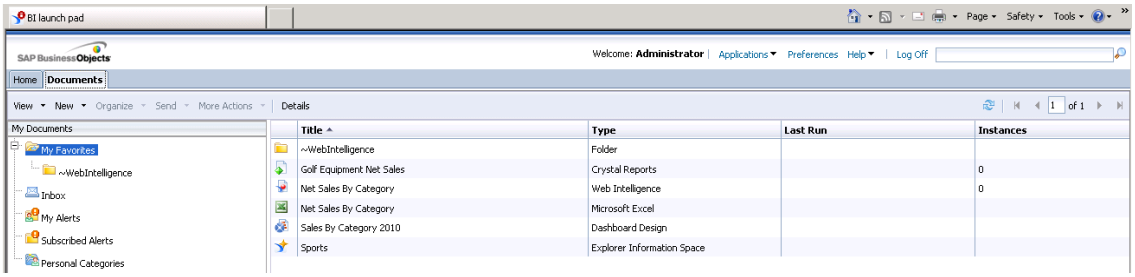


42. Click Administrator.
43. Type the file name Golf Equipment Net Sales.



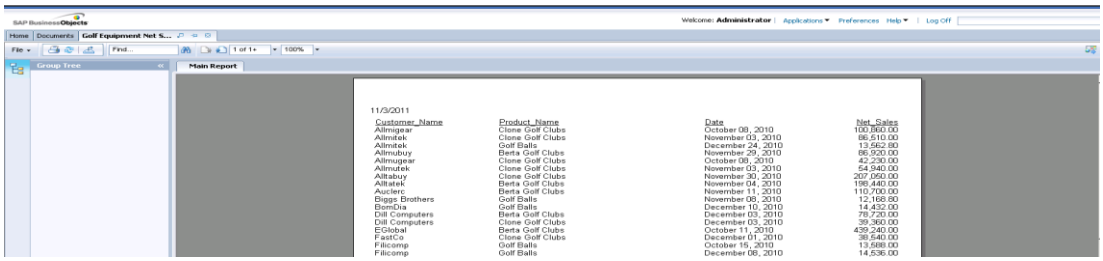
44. Click Save.

45. Open the BI launch pad and log in as Administrator.
46. Click the Documents tab.



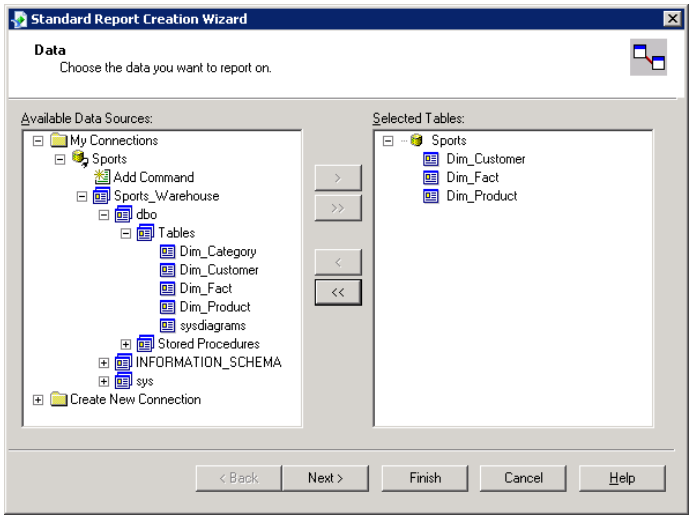
47. Double-click the Golf Equipment Net Sales Crystal report.

48. The report will open and display the data saved with the report.

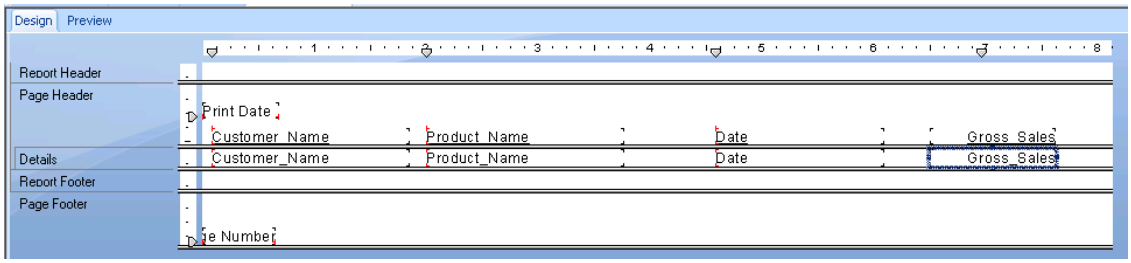


Solution 5 – Group and Summarize Records in a Crystal Report

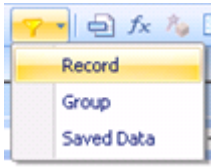
1. Create a new report in Crystal Reports 2011.
2. Use the Sports connection and add the Customers, Facts, and Products tables and click Next.



3. Configure the table joins to enforce joins and click Finish.
4. Click the Design tab.
5. Add the Customer_Name, Product_Name, Date and Gross_Sales columns to the report.

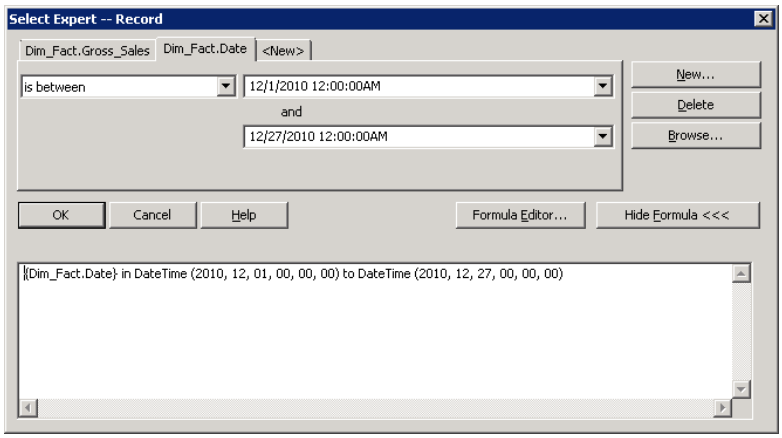


6. Click the Select Expert and choose Record.



7. Click New…

8. Choose Dim_Fact.Date is between and select the dates 12/1/2010 and 12/27/2010.



9. Click OK.
10. Click the Preview tab.
11. Click the Group Expert button.

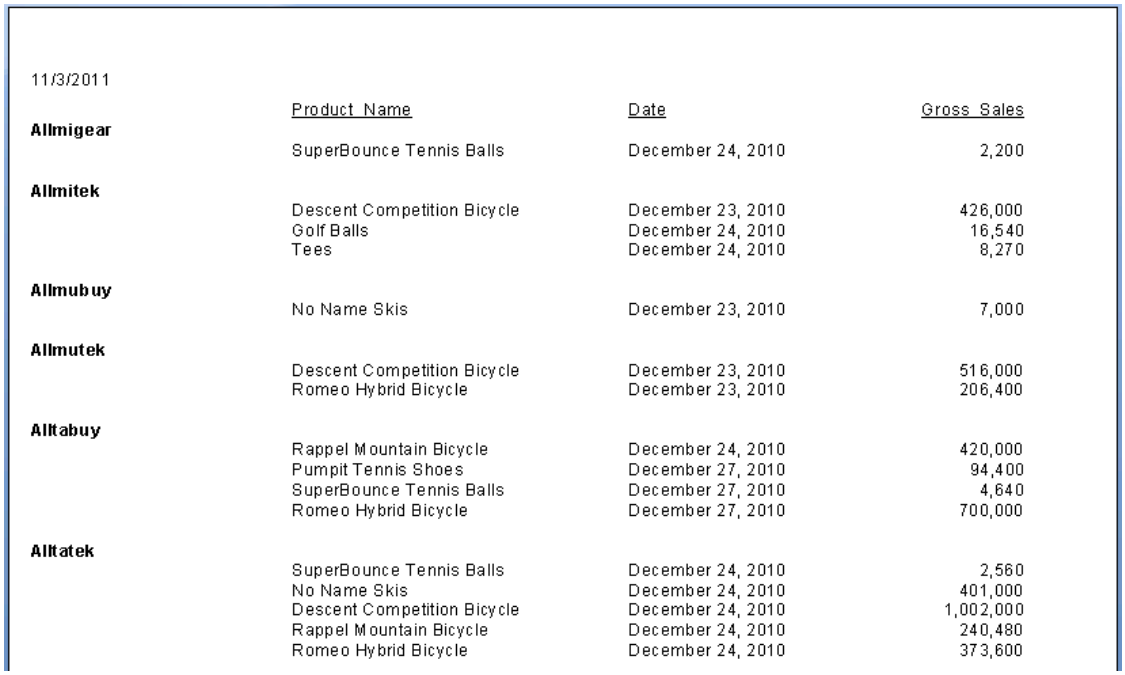
12. Double-click the Customer_Name field and click OK.
13. The records are now grouped by customer name.

11/3/2011

Customer_Name	Product_Name	Date	Gross_Sales
Allmigear			
Allmigear	SuperBounce Tennis Balls	December 24, 2010	2,200
Allmitek			
Allmitek	Descent Competition Bicycle	December 23, 2010	426,000
Allmitek	Golf Balls	December 24, 2010	16,540
Allmitek	Tees	December 24, 2010	8,270
Allmubuy			
Allmubuy	No Name Skis	December 23, 2010	7,000
Allmutek			
Allmutek	Descent Competition Bicycle	December 23, 2010	516,000
Allmutek	Romeo Hybrid Bicycle	December 23, 2010	206,400
Alltabuy			
Alltabuy	Rappel Mountain Bicycle	December 24, 2010	420,000
Alltabuy	Pumpit Tennis Shoes	December 27, 2010	94,400
Alltabuy	SuperBounce Tennis Balls	December 27, 2010	4,640
Alltabuy	Romeo Hybrid Bicycle	December 27, 2010	700,000

14. Right-click a date value and format the date.
15. Click the Design tab.
16. Click the Customer_Name field in the Details section of the report and press the Delete key.

17. Click the Preview tab.

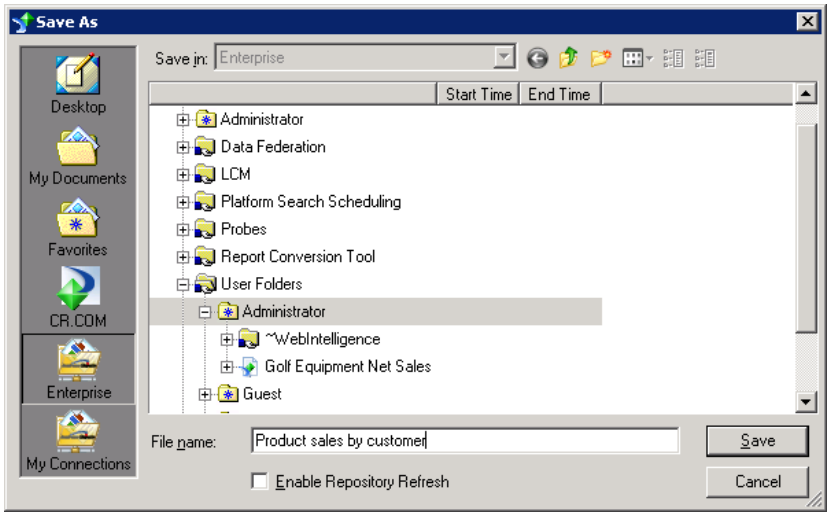


11/3/2011

	Product_Name	Date	Gross_Sales
Allmigear			
	SuperBounce Tennis Balls	December 24, 2010	2,200
Allmitek			
	Descent Competition Bicycle	December 23, 2010	426,000
	Golf Balls	December 24, 2010	16,540
	Tees	December 24, 2010	8,270
Allmubuy			
	No Name Skis	December 23, 2010	7,000
Allmutek			
	Descent Competition Bicycle	December 23, 2010	516,000
	Romeo Hybrid Bicycle	December 23, 2010	206,400
Alltabuy			
	Rappel Mountain Bicycle	December 24, 2010	420,000
	Pumpit Tennis Shoes	December 27, 2010	94,400
	SuperBounce Tennis Balls	December 27, 2010	4,640
	Romeo Hybrid Bicycle	December 27, 2010	700,000
Alltatek			
	SuperBounce Tennis Balls	December 24, 2010	2,560
	No Name Skis	December 24, 2010	401,000
	Descent Competition Bicycle	December 24, 2010	1,002,000
	Rappel Mountain Bicycle	December 24, 2010	240,480
	Romeo Hybrid Bicycle	December 24, 2010	373,600

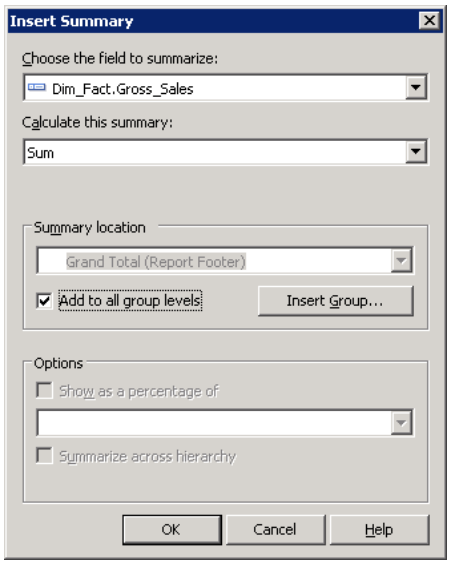
Now the customer name is only listed once for each group.

18. Click the Save button and save the report to the Administrator user folder with the file name Product sales by customer.

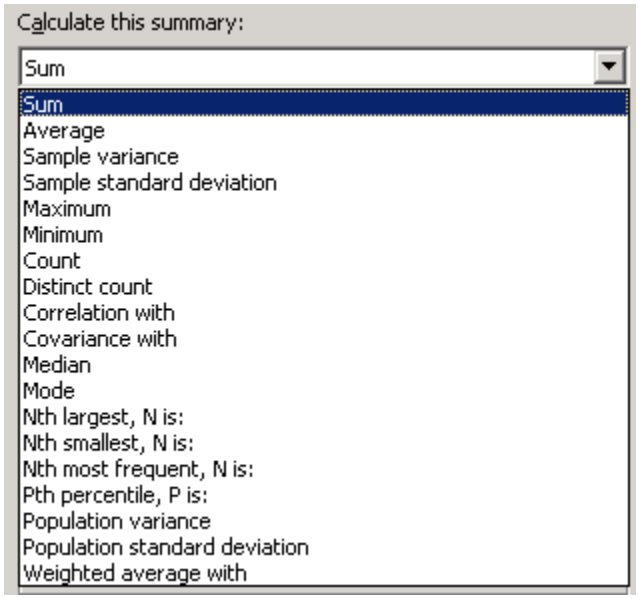


19. Click a Gross_Sales value.
20. Click Insert Summary.

21. Check the Add to all group levels option.



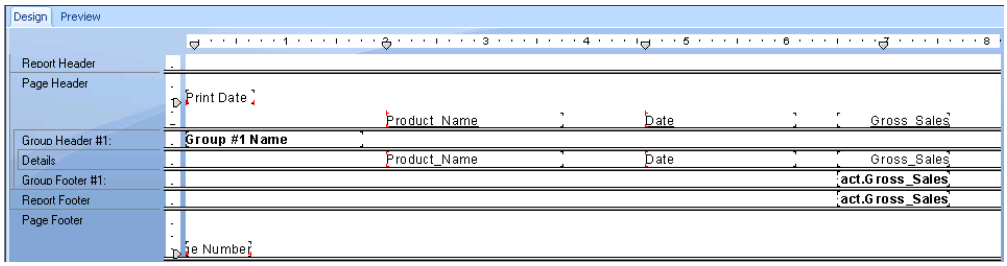
Note that you can change the Calculation type. The available calculations depend on the data type of the column that is being summarized.



22. Click OK.

23. Click the Design tab.

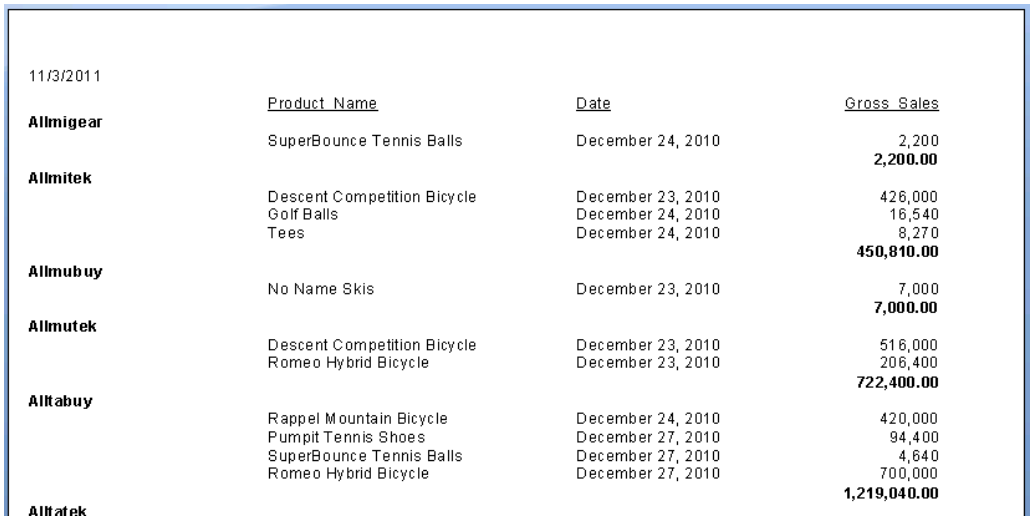
Note the position of the new summary fields in the group footer and report footer.



Summaries are typically used to display calculated values including averages and totals such as average sale, or total costs. Depending on the data type, different summary calculations are available including minimum, maximum, and statistical values such as median, mode, standard deviation, correlation, covariance and more.

24. Click the Preview tab.

A subtotal is added below each customer group. A grand total is added to the end of the report.



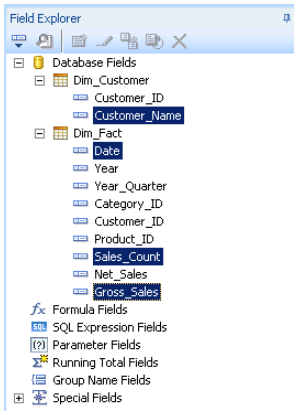
11/3/2011

	Product_Name	Date	Gross_Sales
Allmigear			
	SuperBounce Tennis Balls	December 24, 2010	2,200
			2,200.00
Allmitek			
	Descent Competition Bicycle	December 23, 2010	426,000
	Golf Balls	December 24, 2010	16,540
	Tees	December 24, 2010	8,270
			450,810.00
Allmubuy			
	No Name Skis	December 23, 2010	7,000
			7,000.00
Allmutek			
	Descent Competition Bicycle	December 23, 2010	516,000
	Romeo Hybrid Bicycle	December 23, 2010	206,400
			722,400.00
Alltabuy			
	Rappel Mountain Bicycle	December 24, 2010	420,000
	Pumpit Tennis Shoes	December 27, 2010	94,400
	SuperBounce Tennis Balls	December 27, 2010	4,640
	Romeo Hybrid Bicycle	December 27, 2010	700,000
			1,219,040.00
Alltatek			

Solution 6 – Create a Crystal Report with Parameters

1. Create a new report in Crystal Reports 2011.
2. Use the Sports connection and add the Customers and Facts tables.
3. Configure the joins to enforce relationships.
4. Use the Field Explorer to add the Customer_Name, Date, Sales_Count, and Gross_Sales fields to the report.

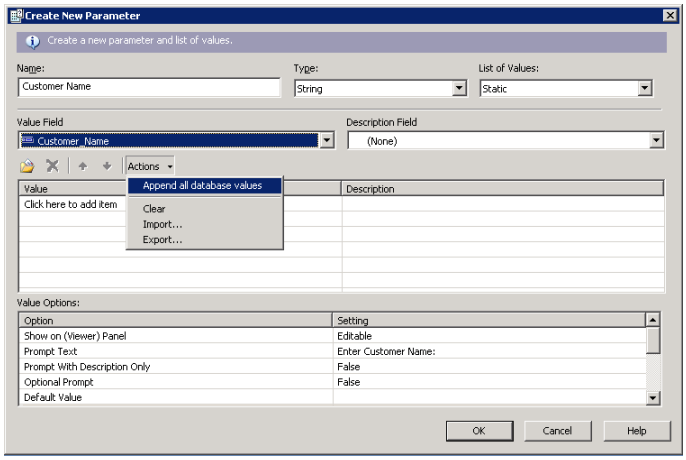
Note you can use CTRL + click to select multiple fields and drag them to the report.



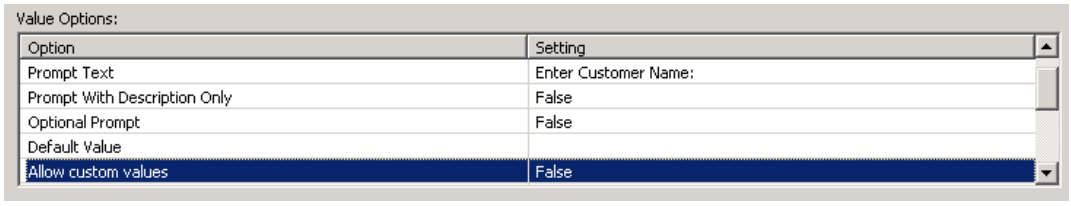
5. In the Field Explorer right-click Parameter Fields and choose New…

6. Type Customer Name in the name field.
7. Choose Customer_Name in the Value Field.
8. Click the Actions button under the Value Field and choose Append all database values.

   This pastes all of the Customer Names into a static list of options.



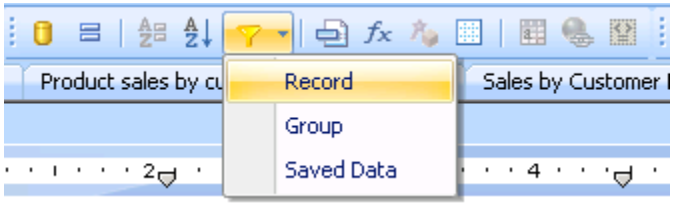
9. In the Value Options section scroll down and change the Allow custom values option to False.



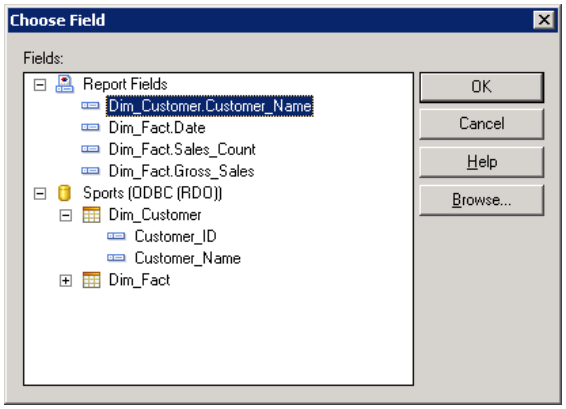
   The “allow custom values” option would allow report consumers to type any value as a customer name.

10. Click OK.

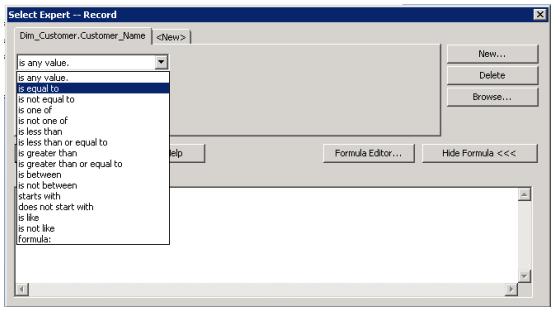
11. Click the Select Expert and choose Record.



12. Click Customer_Name and click OK.

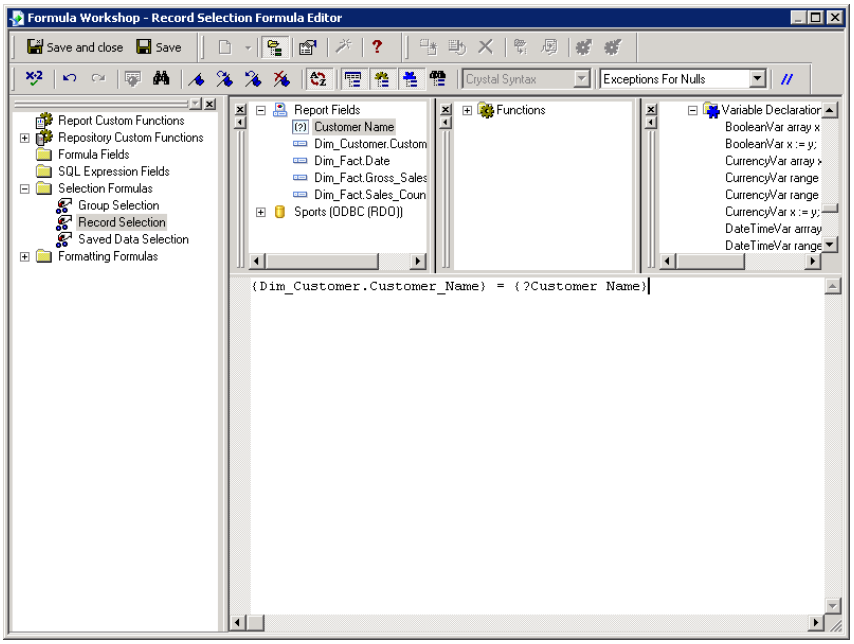


13. Choose the is equal to operator.



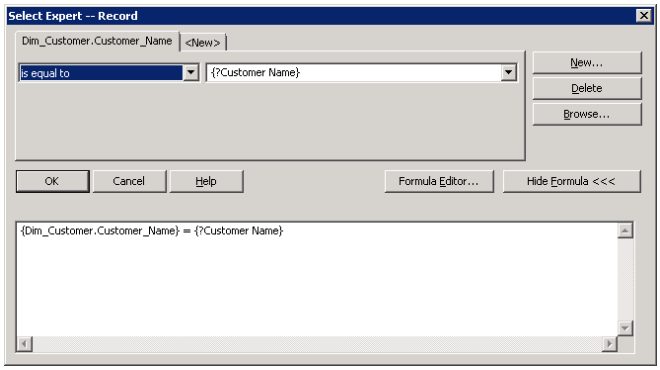
14. Choose {?Customer Name}
    a. Or Click the Formula Editor… button.
    b. Double-click the Customer Name Parameter in the Report Fields list.

c. Modify the expression to match the example below.

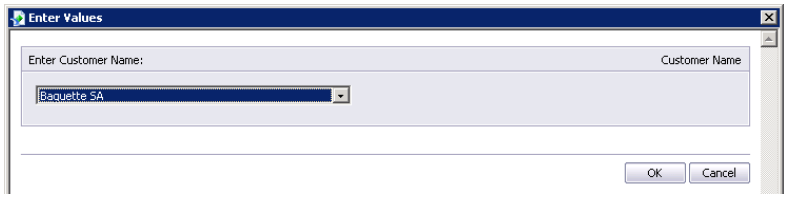


d. Click Save and Close.

15. Click OK.

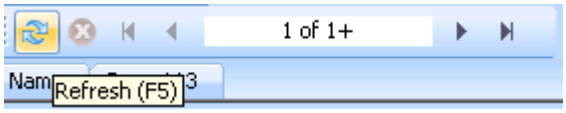


16. Click the Preview tab.
17. Select a customer and click OK.

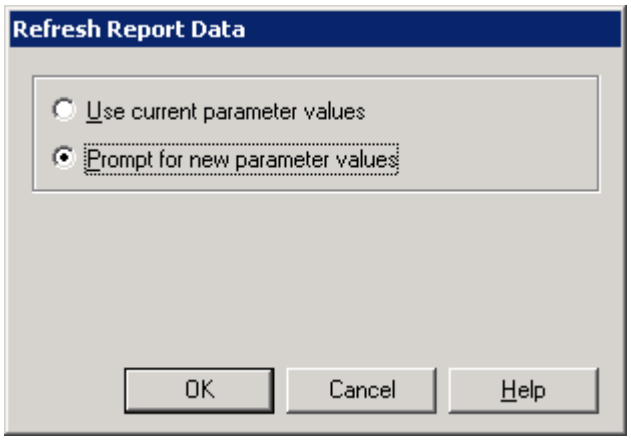


The report should show records for the customer which you selected.

18. Click the Refresh button.

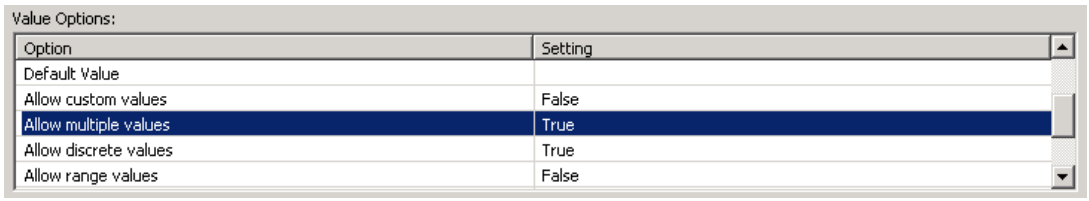


19. Choose Prompt for new parameter values.



20. Select a different customer and click OK.

21. Click the Design tab.
22. Double-click the Customer Name parameter in the Field Explorer.
23. In the value options dialog, change the Allow multiple values option to true.

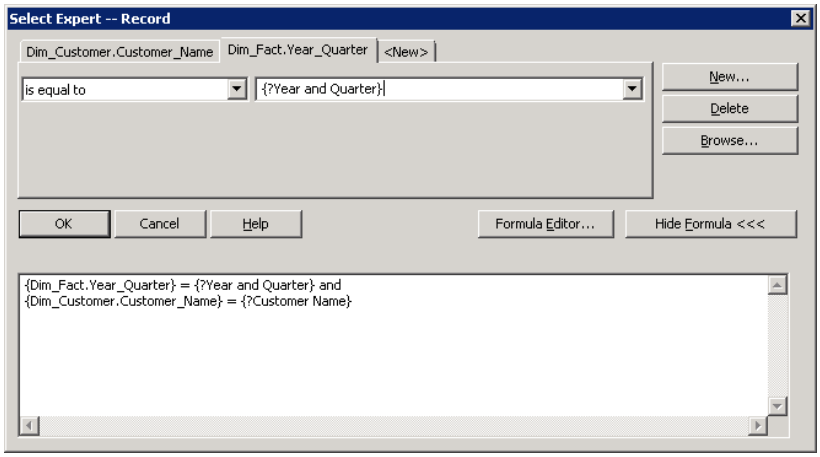


24. Click the Preview tab.
25. Click the Refresh button.
26. Choose two or more cities and click OK.

    Navigate in the report to see that only records for the selected customers are displayed in the report.

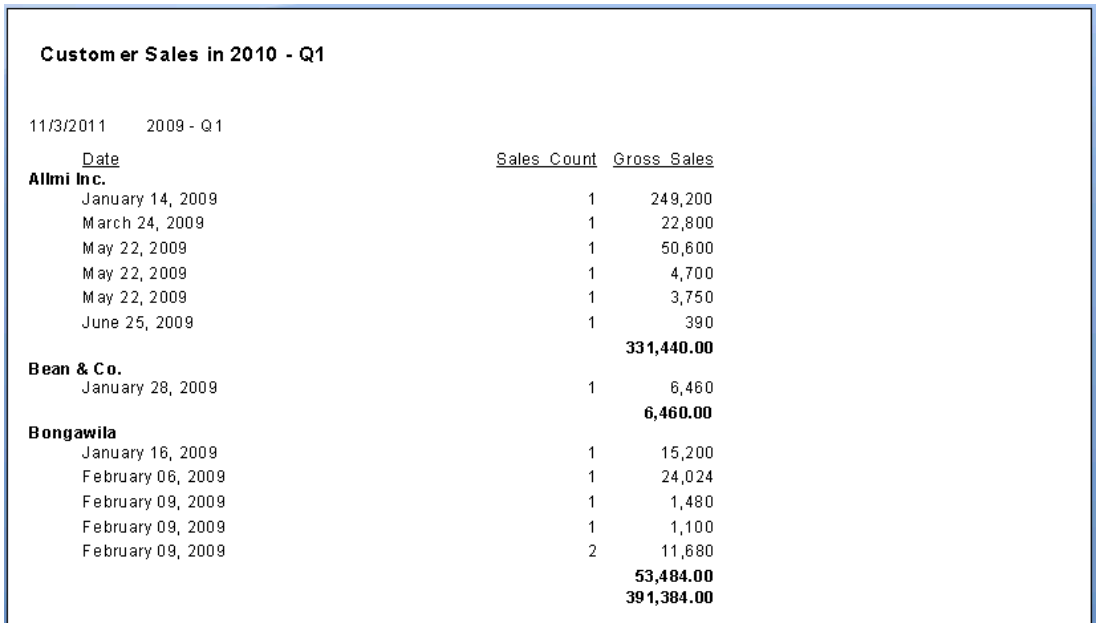
27. Click the Design tab.
28. Use the Field Explorer to add the Year_Quarter field to the Page Header section of the report.
29. Add another parameter to allow report consumers to select the Year and Quarter using the Year_Quarter field.

30. User the Record Selector to add another filter.



31. Add a text box to the report header (Click Insert > Text Object).
32. Add a title that reads “Customer Gross Sales in ” followed by the Year and Quarter parameter value.
33. Format the text as a title by modifying font properties.
34. Format the date values, and group the records by customer.
35. Delete the customer name field from the detail section of the report.
36. Add Gross Sales subtotals.
37. Sort the records by date.

Your completed report should look like the image below.



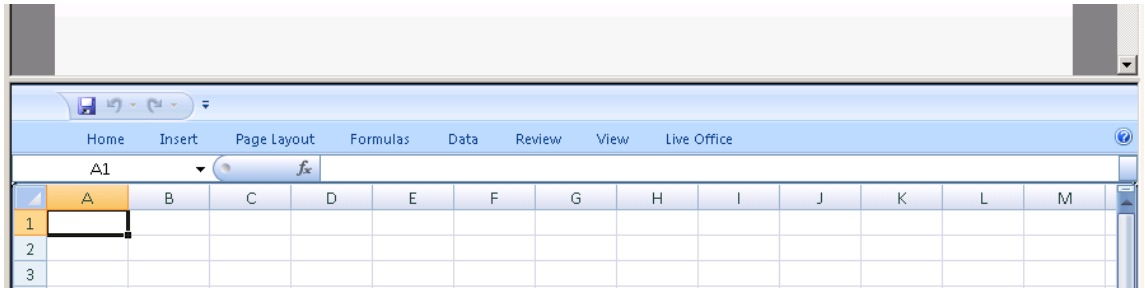
Custom er Sales in 2010 - Q1

11/3/2011 2009 - Q1

Date	Sales Count	Gross Sales
Allmi Inc.		
January 14, 2009	1	249,200
March 24, 2009	1	22,800
May 22, 2009	1	50,600
May 22, 2009	1	4,700
May 22, 2009	1	3,750
June 25, 2009	1	390
		331,440.00
Bean & Co.		
January 28, 2009	1	6,460
		6,460.00
Bongawila		
January 16, 2009	1	15,200
February 06, 2009	1	24,024
February 09, 2009	1	1,480
February 09, 2009	1	1,100
February 09, 2009	2	11,680
		53,484.00
		391,384.00

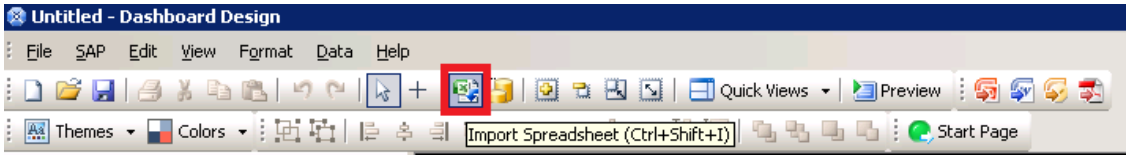
Solution 7 – Create a Dashboard from a Spreadsheet

1. Open Dashboard Design
   (Click Start > All Programs > Dashboard Design > Dashboard Design).
2. Click the New button.
3. Double-click the Home tab in the Excel spreadsheet to minimize the ribbon.



Note you can restore the ribbon by double-clicking Home again.

4. Click the import Spreadsheet button.



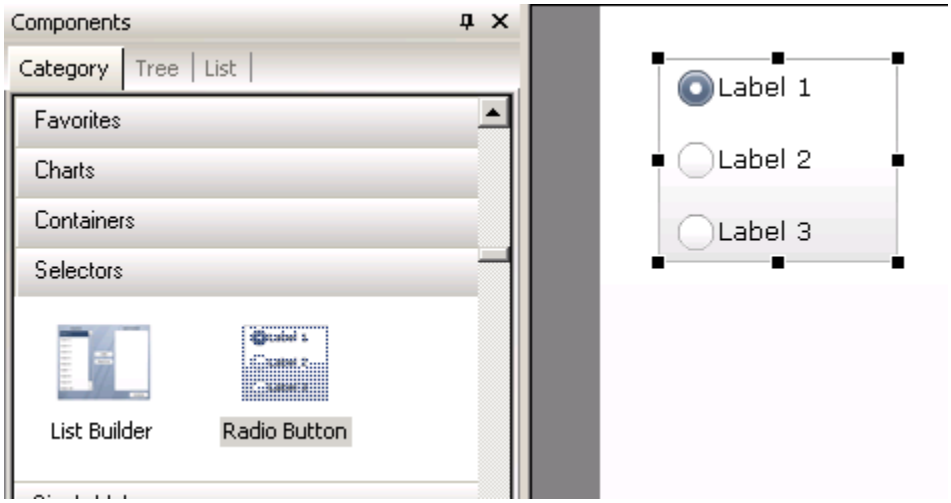
5. Navigate to Products Crosstab.xlsx spreadsheet.
6. Click Open.
7. The spreadsheet should now include data beginning in row 6.

		Crochet Cycling Gloves	SuperBounce Tennis Balls	Rappel Mountain Bicycle	No Name Skis	Romeo Hybrid Bicycle	Triump Pro Cycling Helmet	Berta Golf Clubs	Descent Competition Bicycle	Clone Golf Clubs	Tees
6											
7	Bikes	55,485		19,610,880		36,747,200	4,206,384		97,012,000		
8	Golf							28,617,000		12,393,500	988,680
9	Ski				21,245,000						
10	Tennis		431,550								
11											

8. Select the range A6:Q7 and copy.
9. Click in cell A1 and paste.

	A	B	C	D	E	F	G	H	I	J	K
1		Crochet Cycling Gloves	SuperBounce Tennis Balls	Rappel Mountain Bicycle	No Name Skis	Romeo Hybrid Bicycle	Triump Pro Cycling Helmet	Berta Golf Clubs	Descent Competition Bicycle	Clone Golf Clubs	Tees
2	Bikes	55,485		19,610,880		36,747,200	4,206,384		97,012,000		
3											
4											
5											
6		Crochet Cycling Gloves	SuperBounce Tennis Balls	Rappel Mountain Bicycle	No Name Skis	Romeo Hybrid Bicycle	Triump Pro Cycling Helmet	Berta Golf Clubs	Descent Competition Bicycle	Clone Golf Clubs	Tees
7	Bikes	55,485		19,610,880		36,747,200	4,206,384		97,012,000		
8	Golf							28,617,000		12,393,500	988,680
9	Ski				21,245,000						
10	Tennis		431,550								

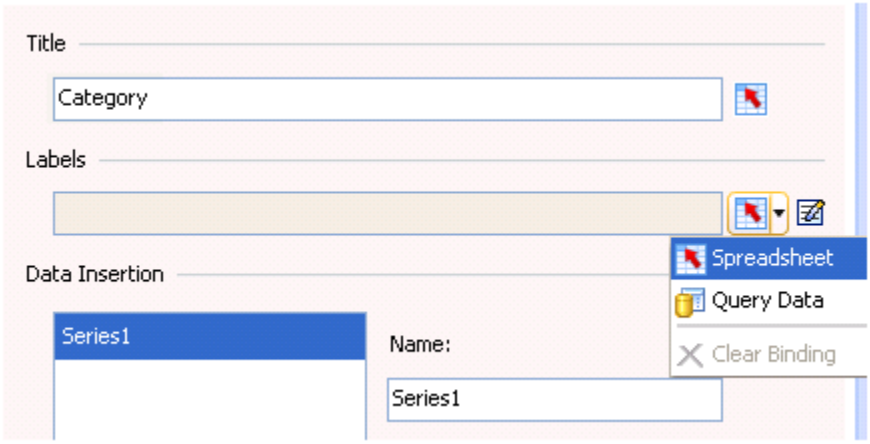
10. Add a radio button control to the canvas. The Radio Button control is in Components under Selectors.



11. Click the component and type Category in the Title field.

    Note: You can show or hide the properties pane on the right side of the screen by clicking View > Properties. The Properties dialog allows you to view and modify properties for the component currently selected on the canvas.

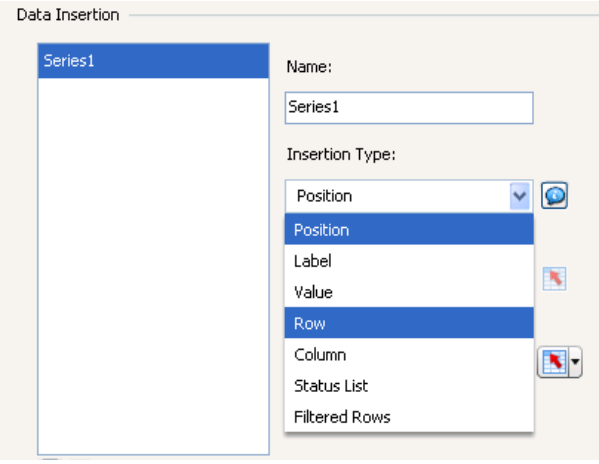
12. Click the down-arrow button to the right of the Labels field and choose spreadsheet.



13. Select the range A7:A11 and click OK.

    The radio button options should now list the categories.

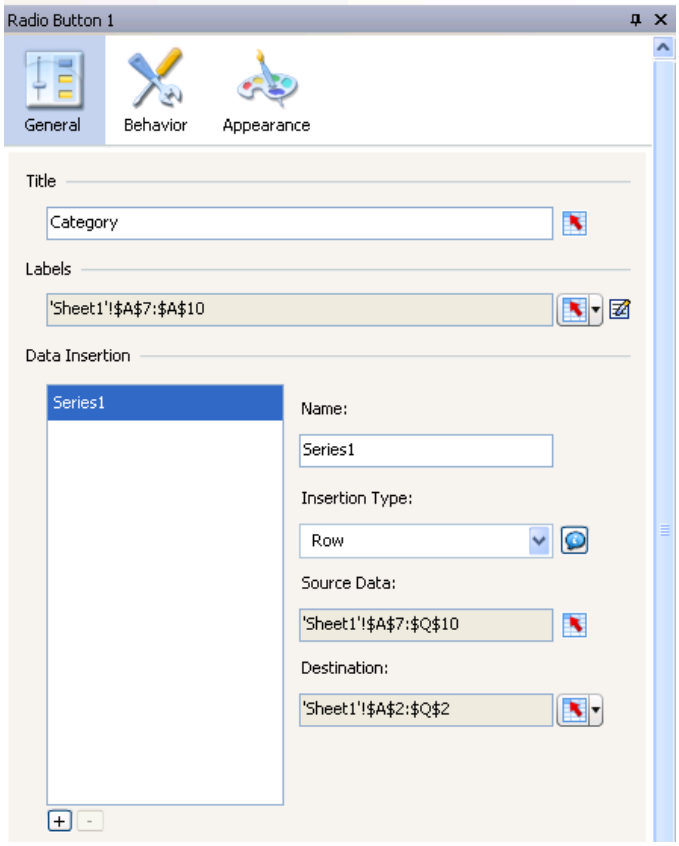
14. Click the Insertion type list and choose Row.



Insertion Type	Description
Position	When a series is selected, the position of the value within the series is entered in the target cell. For example, if the series contains three cells, when the first one is selected, a 1 is entered in the destination cell. When the second is selected, a 2 is entered and for the final one, a 3 is entered.
Value	When a selection is made, the value in the source cell for that selection is entered in the destination cell. For Bubble, OHLC, XY, Candlestick, and Tree Map charts, the value is based on the specified value set. For example, for a Tree Map chart, you might use the values for size or for color intensity.
Row	When a selection is made, the row of source data values corresponding to the selection is entered in the target row.
Column	When a selection is made, the column of source data values corresponding to the selection is entered in the destination column.
Range	When a selection is made, a value of 1 is entered in the cell in the range representing that selection and a value of 0 is entered in the other cells of the target

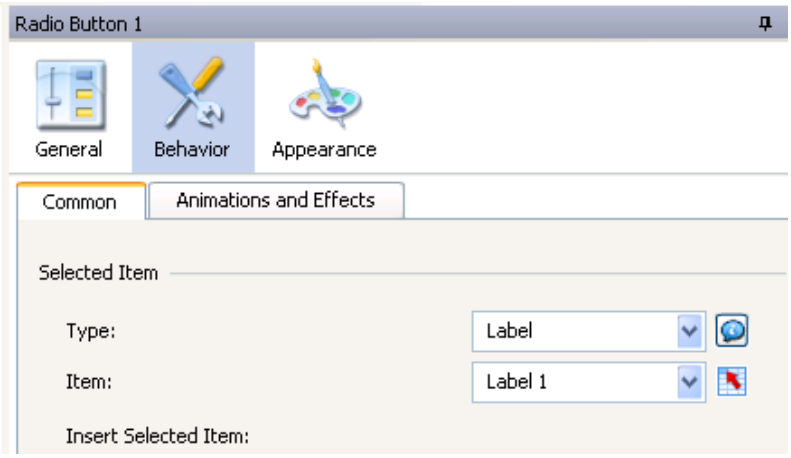
15. Click the button to the right of the Source Data field.
16. Select the range A7:Q11 and click OK.
17. Click the down-arrow to the right of the Destination field and choose Spreadsheet.

18. Select the range A2: Q2 and click OK.

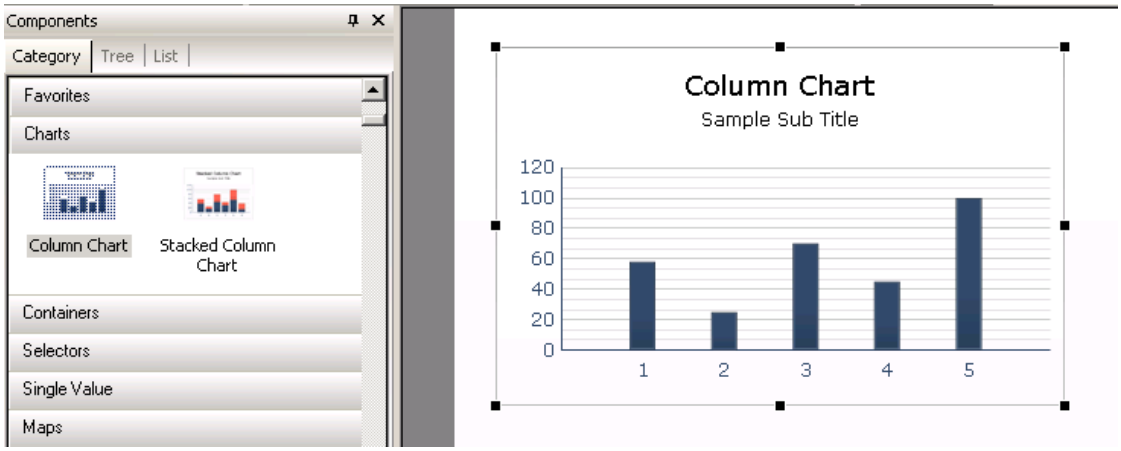


The destination is the location in the spreadsheet where the selected data is transferred. The destination range must be blank and large enough to store all the cells in the source range.

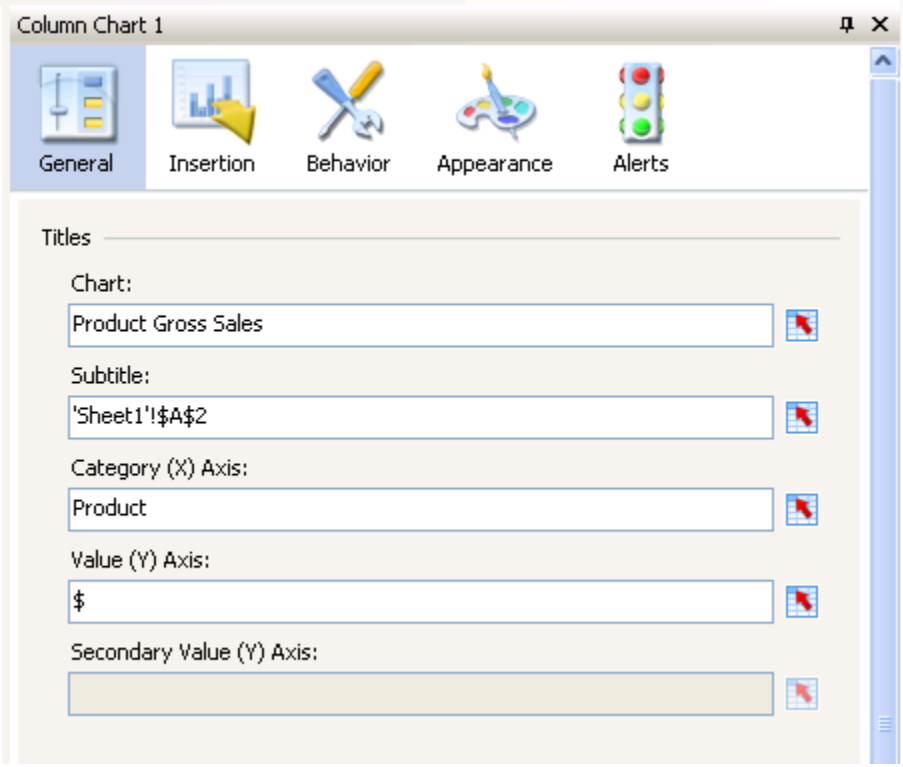
19. Click the Behavior tab.
20. Choose Label in the Selected Item Type list.
21. Choose Label 1 in the Selected Item Item list.



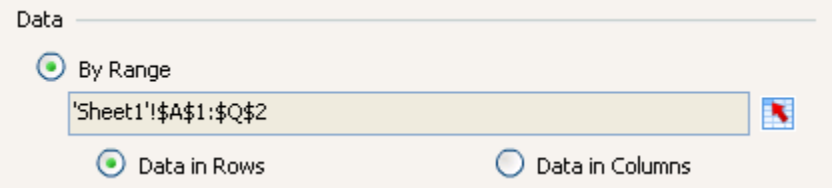
22. Add a column chart to the canvas.



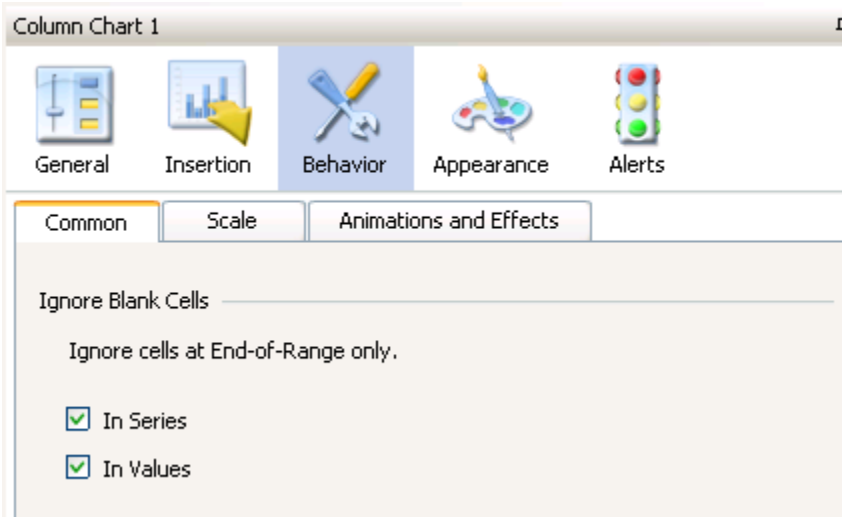
23. Click the column chart and configure the titles.



24. Click the button to the right of By Range.
25. Select the range A1:Q2.



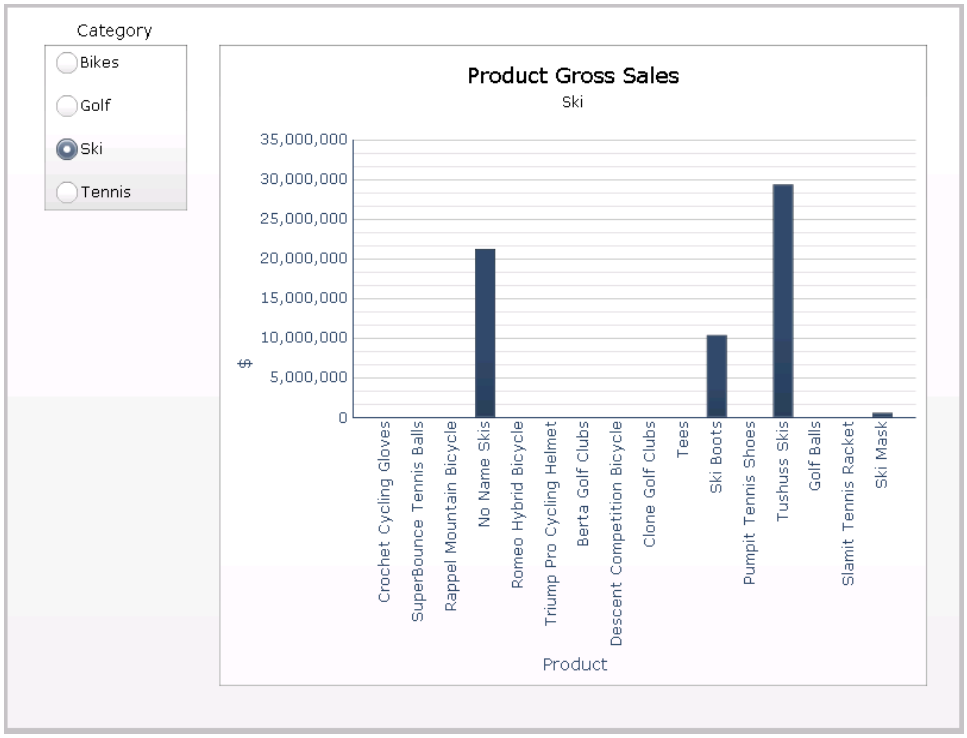
26. Click the Behavior tab.
27. Check the Ignore Blank Cells In Series and In Values options.



28. Click the Preview Button.

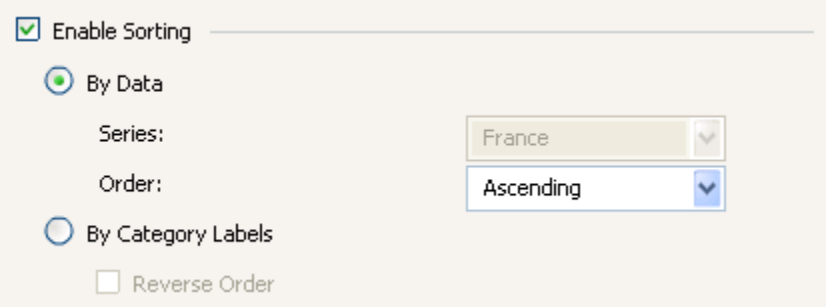
29. Test each category option.

    By default, the blank cells are not ignored. Therefore products from many categories are displayed in the chart with empty bars.



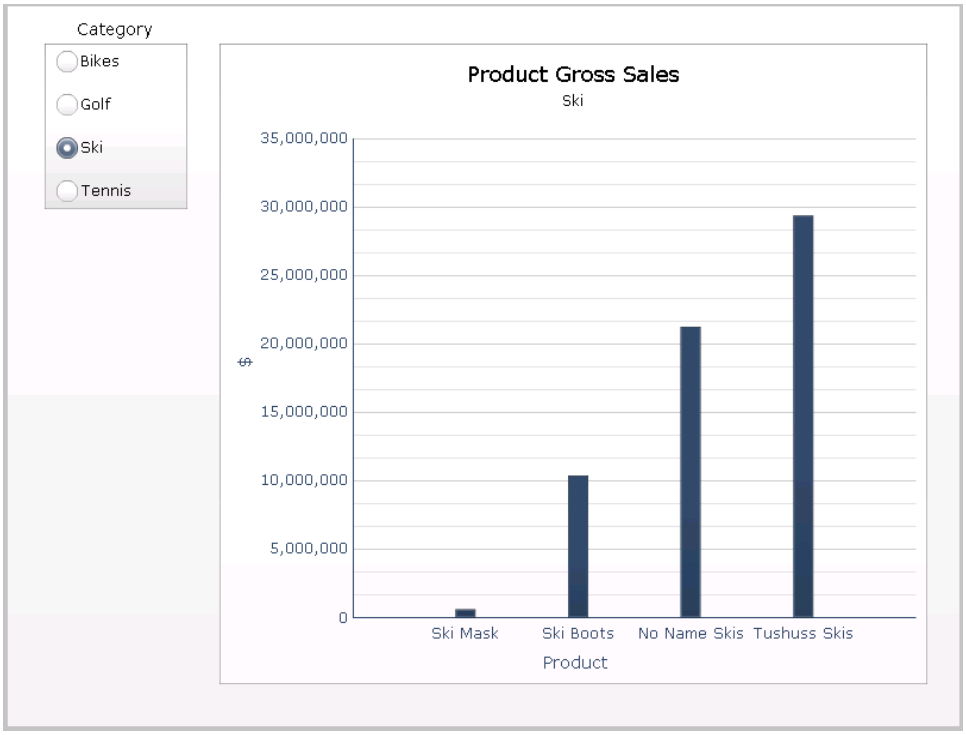
You can remove these blank columns by sorting the data.

30. Check the Enable Sorting By Data option.

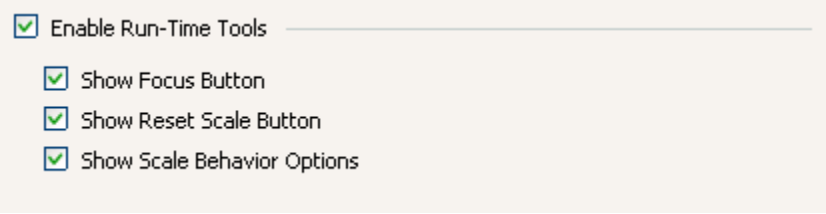


31. Click the Preview button.

The column graph should now only show columns for cities in the selected country.



32. Click the Preview button again.
33. Check the Enable Run-Time Tools option.

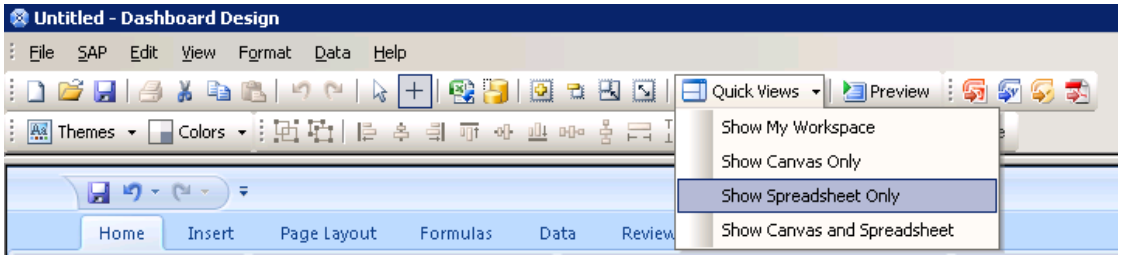


34. Click the Preview button again.

    Move your mouse over the button in the top left corner of the graph. Experiment with the different options.

Solution 8 – Create a Dashboard with a Single Value Input Control

1. Open Dashboard Designer and create a new dashboard.
2. Click QuickViews > Show Spreadsheet Only.



3. Enter the table of data into the spreadsheet.

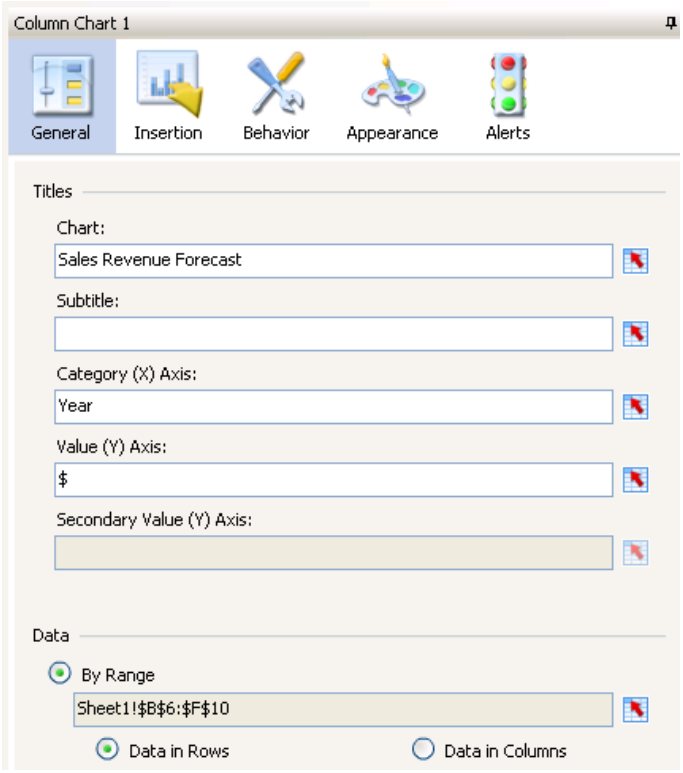
Growth Rate	
Minimum	-50%
Maximum	250%
Forecast	12%

		2009	2010	2011	2012*
	Q1	2,660,699.50	3,326,172.20	3,742,988.90	4,192,147.57
	Q2	2,279,003.00	2,840,650.80	4,006,717.50	4,487,523.60
	Q3	1,367,840.70	2,879,303.00	3,953,395.30	4,427,802.74
	Q4	1,788,580.40	3,186,120.00	3,356,041.10	3,758,766.03

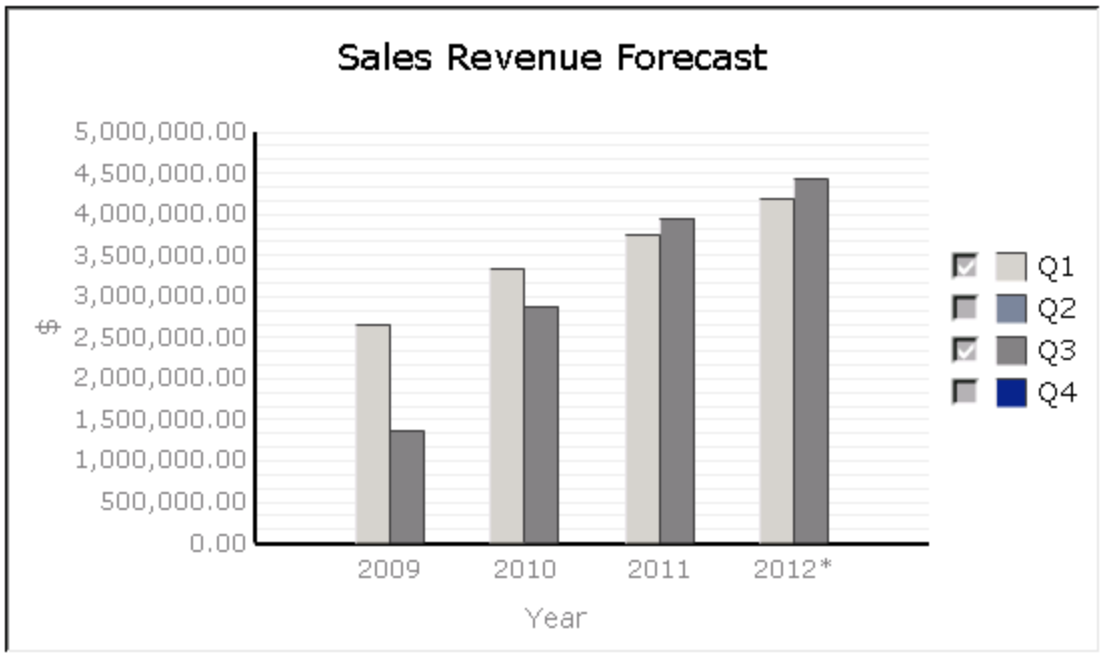
4. Click QuickViews > Show My Workspace.

5. Add a Column Chart to the canvas.

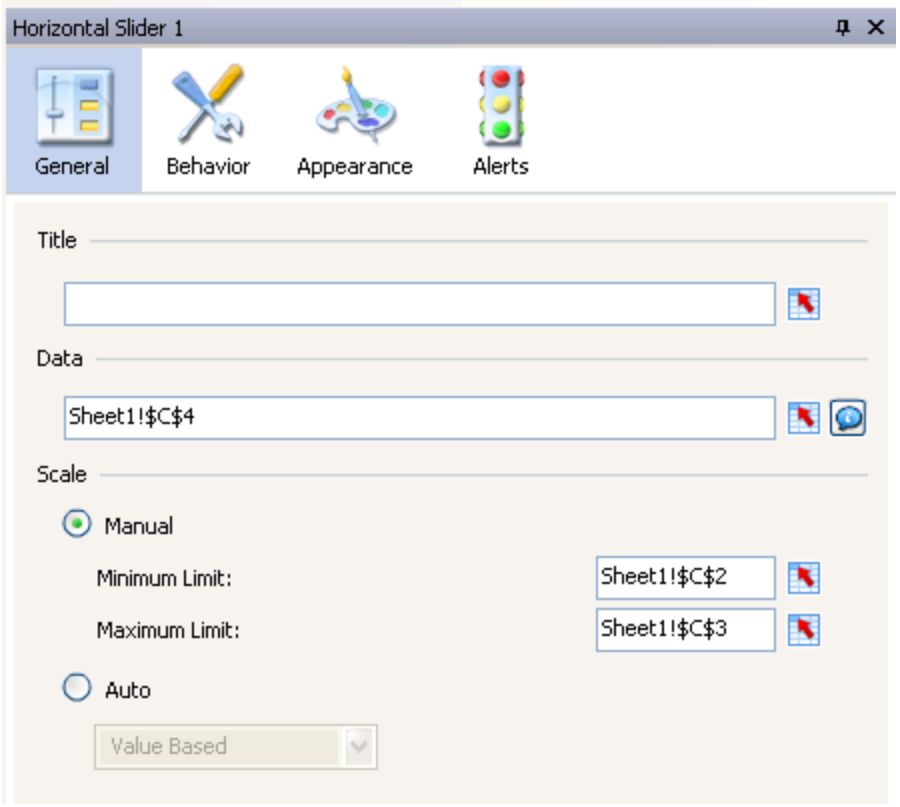
6. Configure the chart titles and set the data range as required.

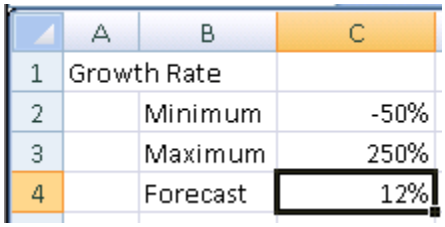


7. Click the Appearance tab.
8. Scroll down and select the Enable Hide/Show Chart Series at Run-Time.
9. Click the Preview button and experiment with the check boxes in the legend.



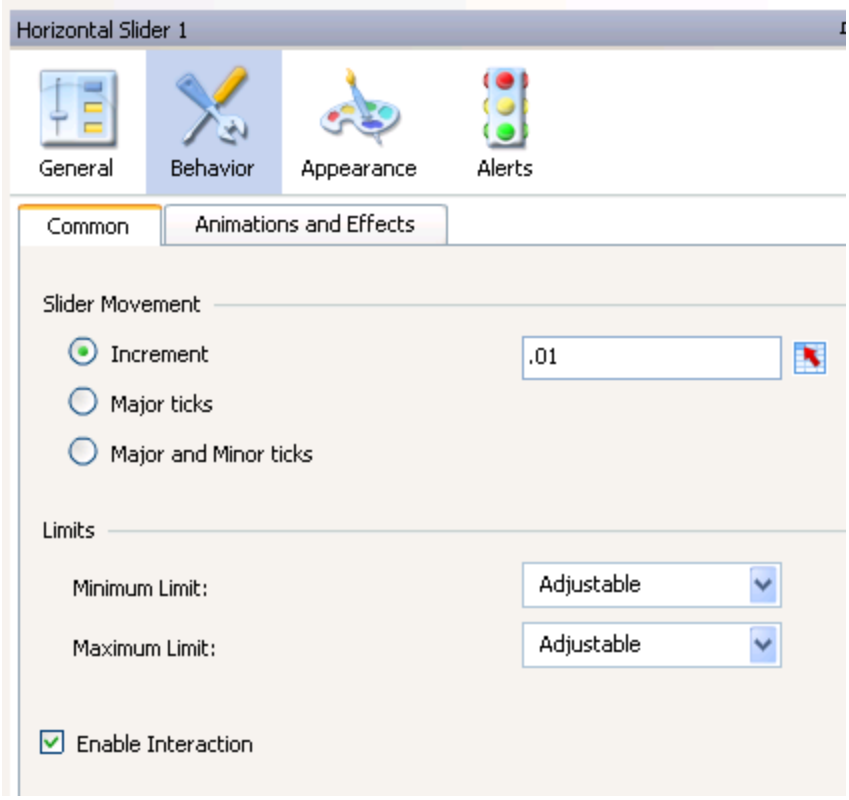
10. Click Preview again.
11. Add a horizontal slider under the chart.
12. Resize the slider to slightly less than the width of the chart.
13. Set the Data and Scale values.



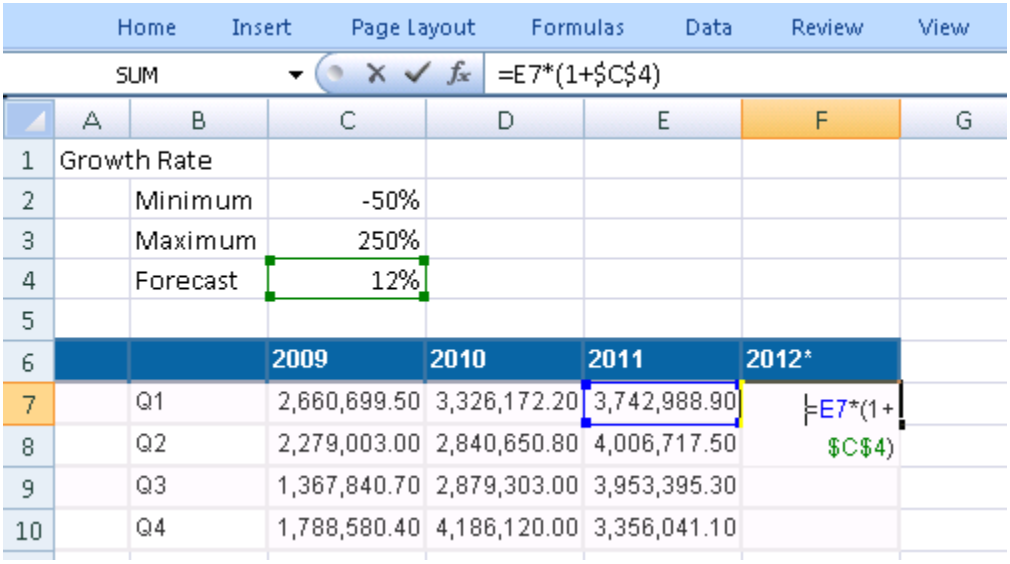


	A	B	C
1	Growth Rate		
2		Minimum	-50%
3		Maximum	250%
4		Forecast	12%

14. Click the Behavior tab.
15. Set the Increment to .01.
16. Change the Limits to Adjustable.
17. Ensure that the Enable Interaction option is selected.



18. Delete the 2012 Sales Revenue values and enter the formula =E7*(1+C4).



19. Paste the formula into F8:F10.

20. Click the Preview button.

    Note that this data can be displayed by rows or by columns, which will switch the years and quarters in the legend and x-axis.

Solution 9 – Filter Data by Chart Selection

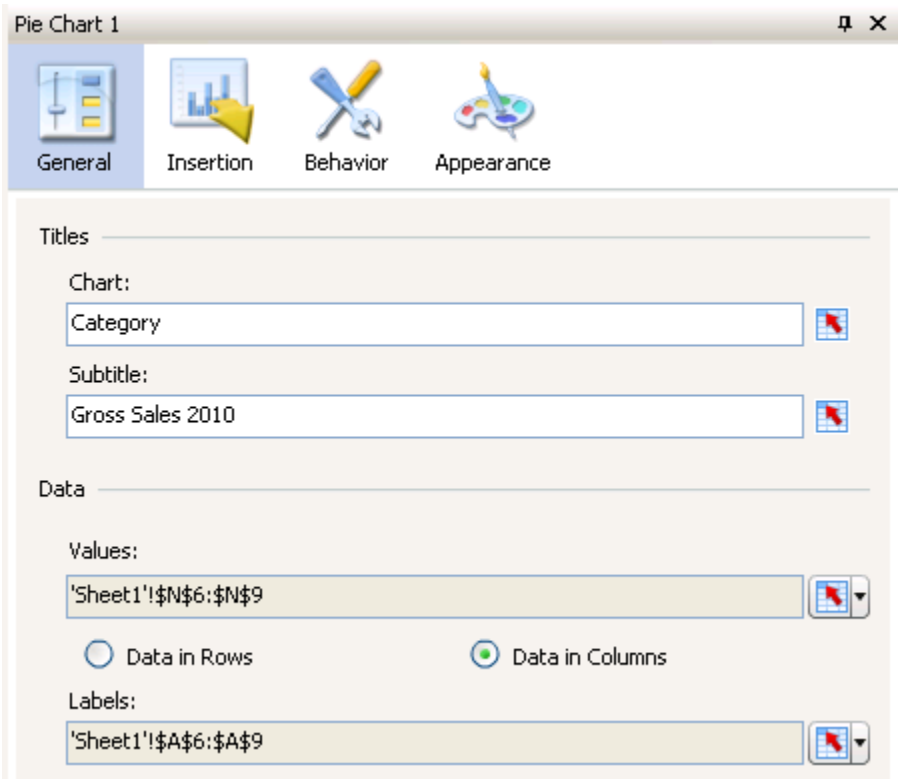
1. Open Dashboard Design and create a new dashboard.
2. Open Products Crosstab.xlsx from the Workbook Resources.

   Note: This data was generated by creating a crosstab based on the Sports universe with a Year filter.

3. Calculate annual totals for each category in column N.

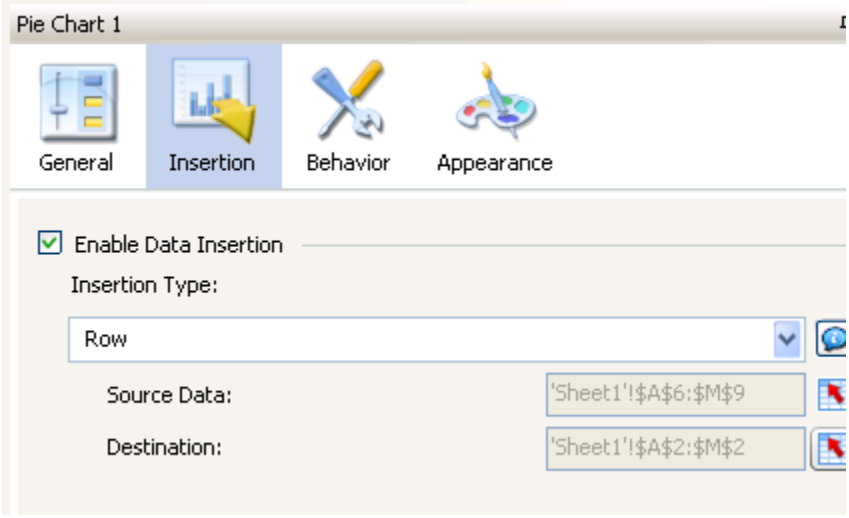
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		January	February	March	April	May	June	July	August	September	October	November	December	
2	Bikes	11,054,628	9,949,510	11,186,038	11,129,951	12,356,636	11,940,710	11,377,422	15,458,974	13,628,910	13,775,610	18,522,778	17,250,782	
3														
4		1	2	3	4	5	6	7	8	9	10	11	12	
5		January	February	March	April	May	June	July	August	September	October	November	December	Total
6	Bikes	11,054,628	9,949,510	11,186,038	11,129,951	12,356,636	11,940,710	11,377,422	15,458,974	13,628,910	13,775,610	18,522,778	17,250,782	157,631,949
7	Golf	2,568,430	3,018,900	2,807,470	3,190,770	3,455,200	3,712,960	3,618,020	4,132,830	4,202,320	3,776,260	5,255,070	3,965,990	43,704,220
8	Ski	3,204,635	1,085,825	1,565,310	353,925	496,920	846,375	2,923,910	5,882,335	11,596,560	13,621,335	11,839,845	8,190,450	61,607,425
9	Tennis	707,950	513,870	701,820	831,350	1,479,040	1,259,180	818,360	1,236,610	1,086,310	938,720	983,720	677,820	11,234,750

4. Add a Pie Chart control to the canvas.
5. Configure the titles and data range.



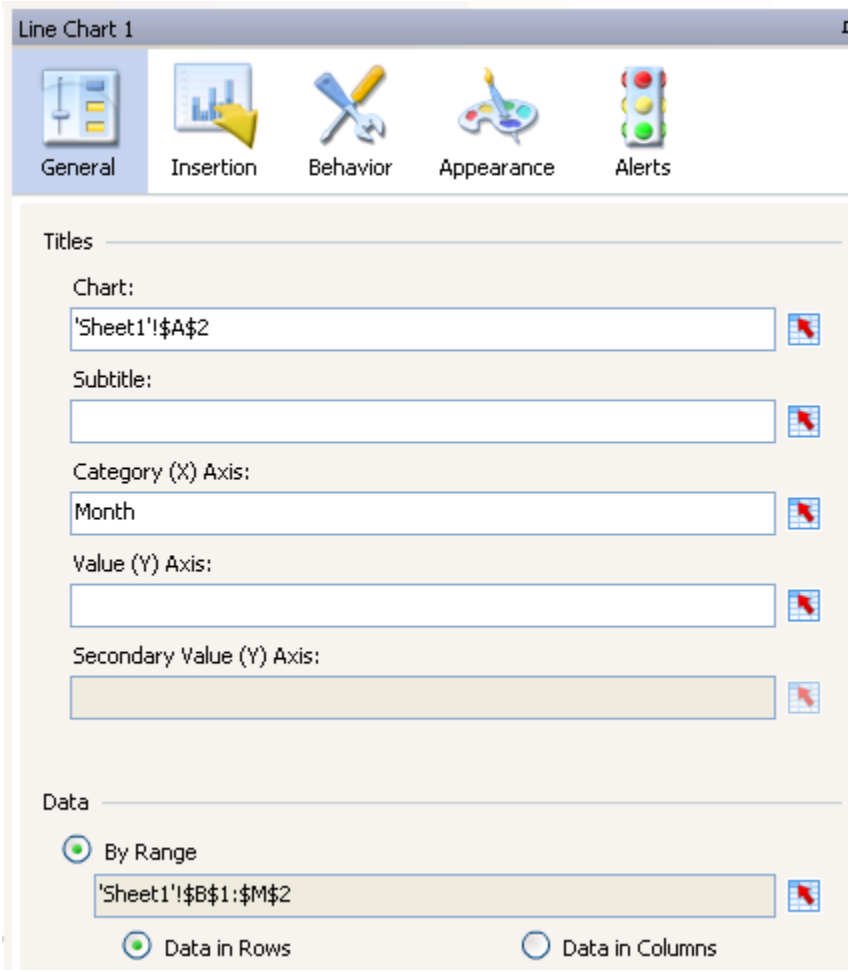
6. Remove the legend. (Deselect Enable Legend on the Appearance / Layout tab).

1. Configure the properties on the Insertion tab to insert the row of data that corresponds to the pie selection in row 2.

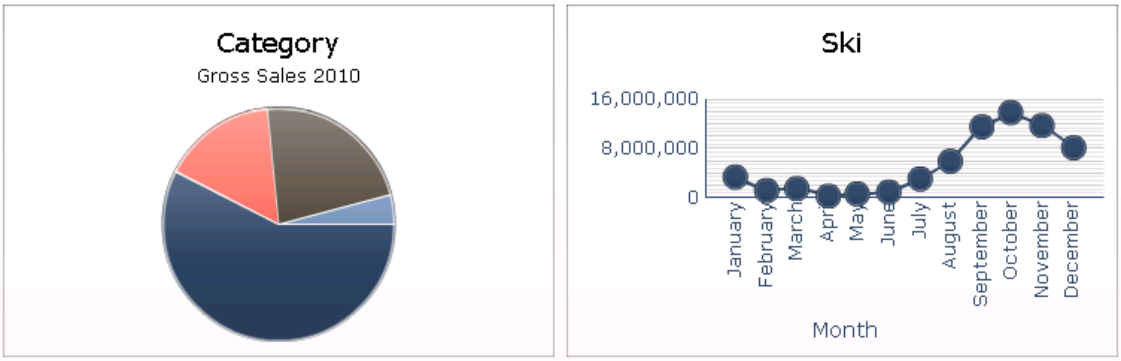


2. Add a Line Chart to the canvas.

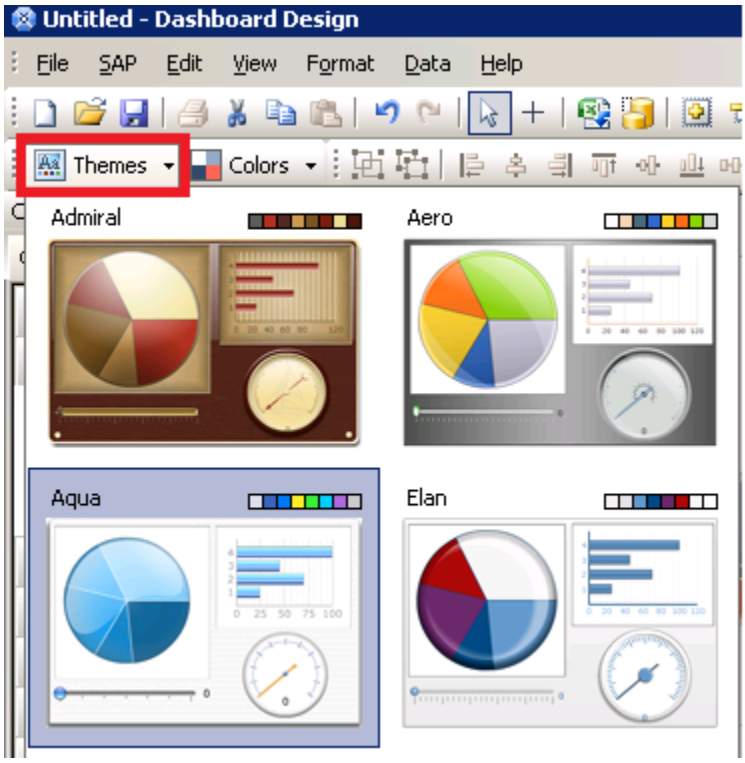
3. Configure the Line Chart to display the Gross Sales for the selected pie section (in row 2).



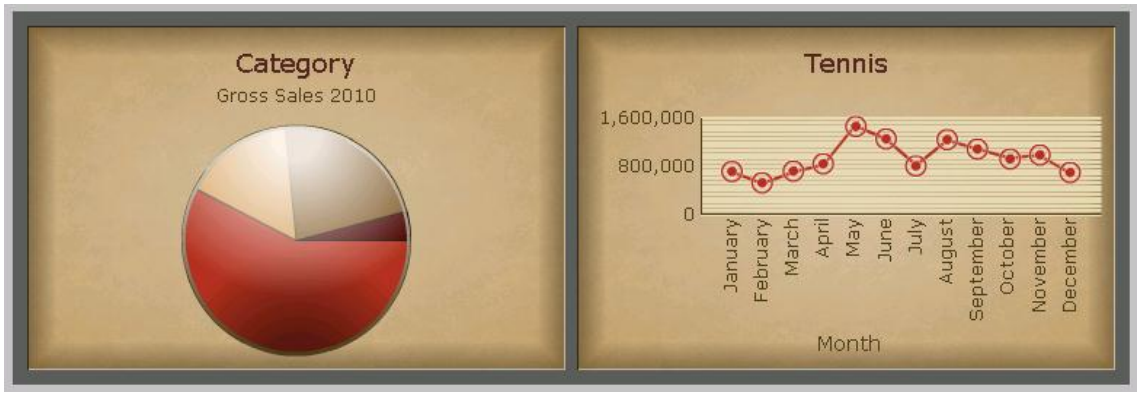
4. Click Preview and test the dashboard by selecting different sections of the pie chart.



5. Click the Themes button and apply a theme.



6. Resize the canvas as required.

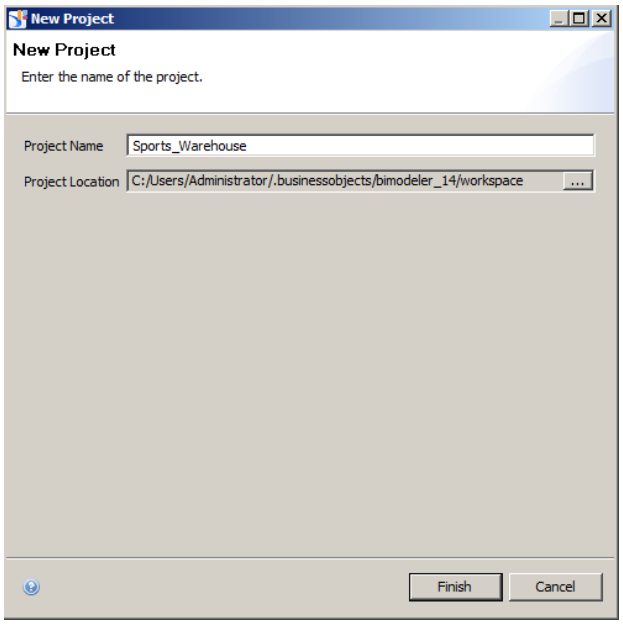


Solution 10 – Create a Sports_Warehouse Universe

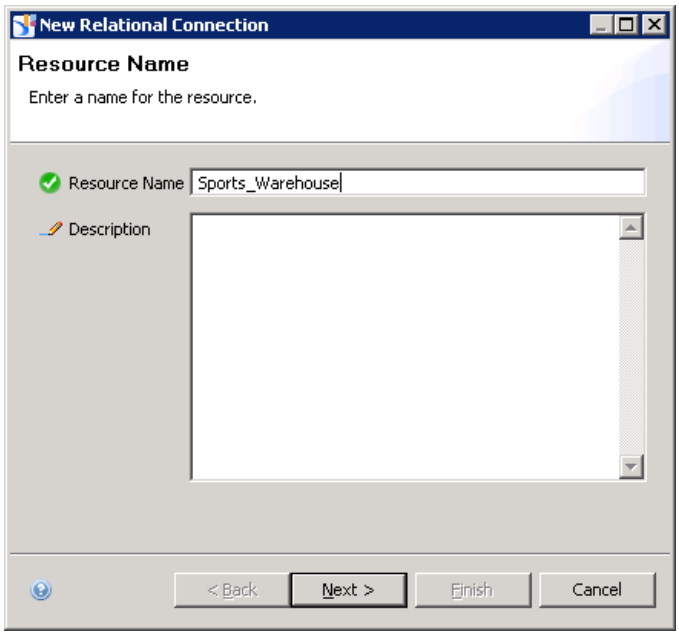
Part 1 - Create a Sports_Warehouse Connection

1. Open the information design tool
   (Click Start > All Programs > SAP BusinessObjects Enterprise XI 4.0 > SAP BusinessObjects Client Tools > Information Design Tool).
2. Click File > New > Project…

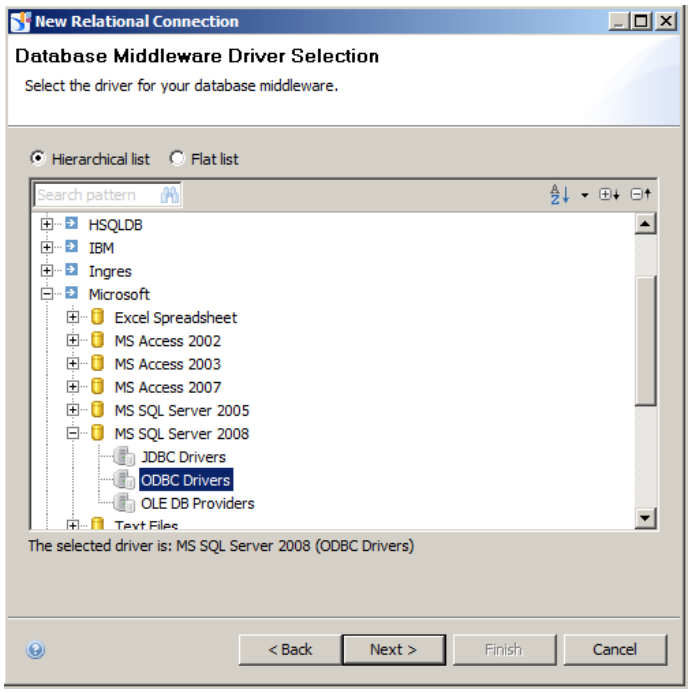
3. Type Sports_Warehouse and click Finish.



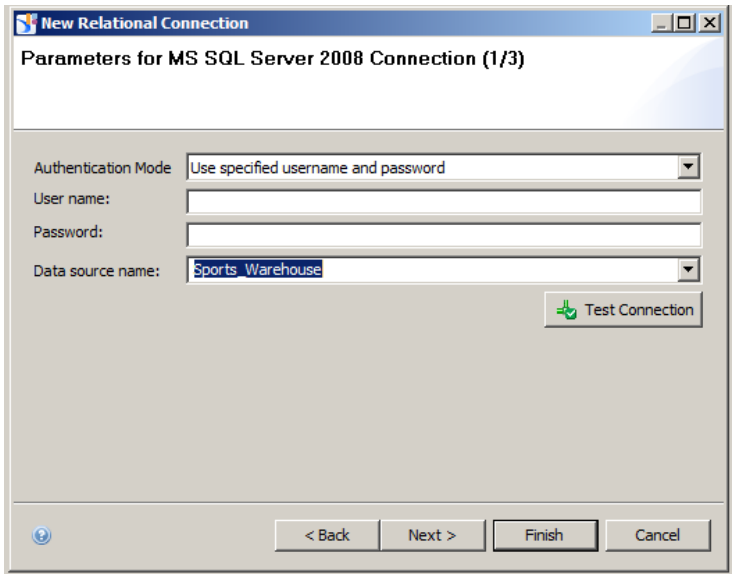
4. Right click the Sports project and choose New > Relational Connection…
5. Type Sports_Warehouse and click Next.



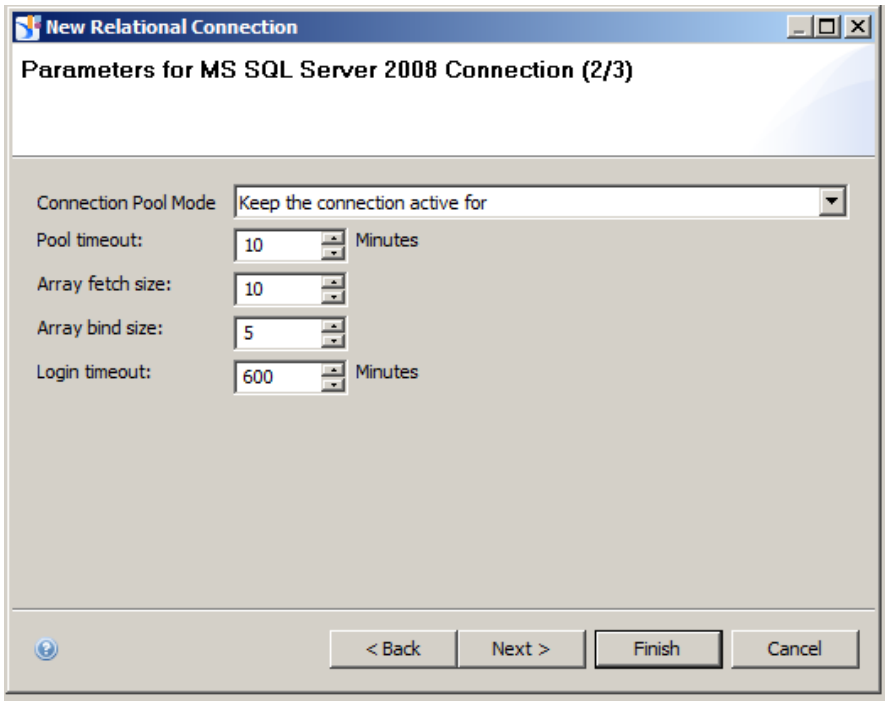
6. Select the Microsoft > SQL Server > ODBC driver and click Next.



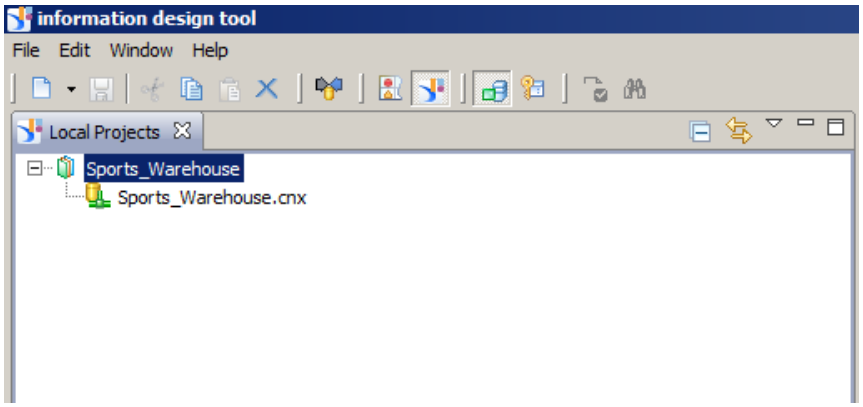
7. Choose the Sports data source name and click Test Connection.



8. Click Next>.

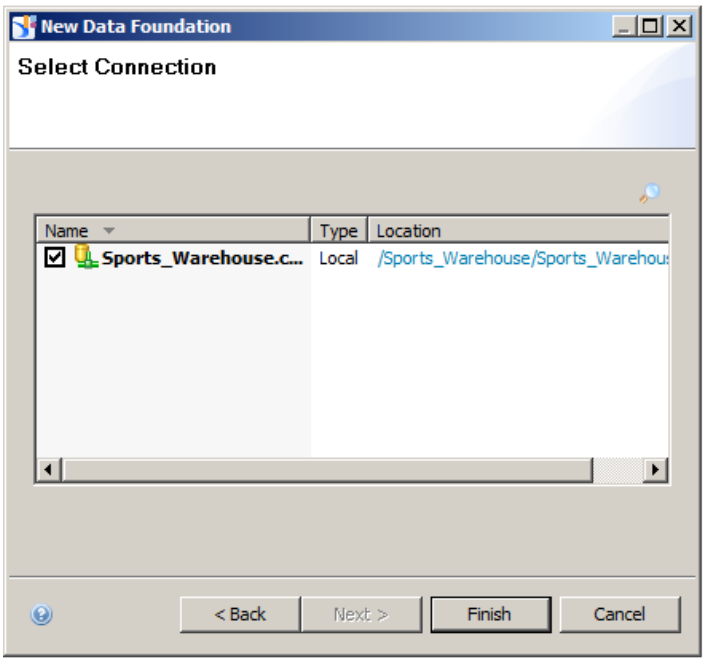


9. Click Next>
10. Click Next
11. Click Finish.
12. Expand the Sports_Warehouse project to see the new connection.

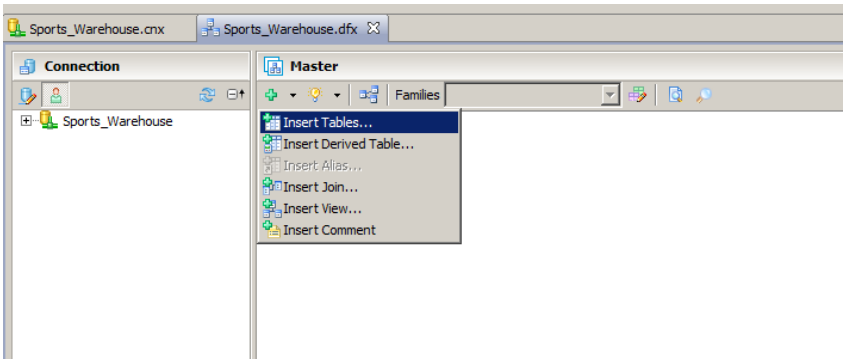


Part 2 - Create a Sports_Warehouse Data Foundation

1. Click File > New Data Foundation…
2. Type Sports_Warehouse and click Next>.
3. Click Next>.
4. Select the Sports_Warehouse data source and click Finish.

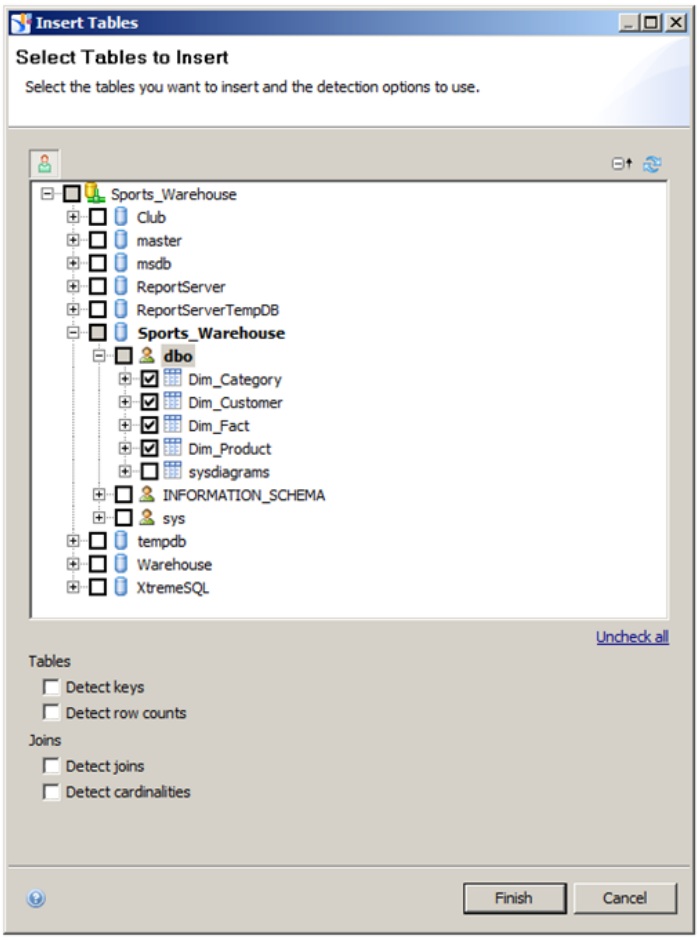


5. Click the Insert button and choose Insert Tables…



6. Expand the Sports_Warehouse connection and select the following tables:
   a. Dim_Category
   b. Dim_Customer
   c. Dim_Fact

d. Dim_Product



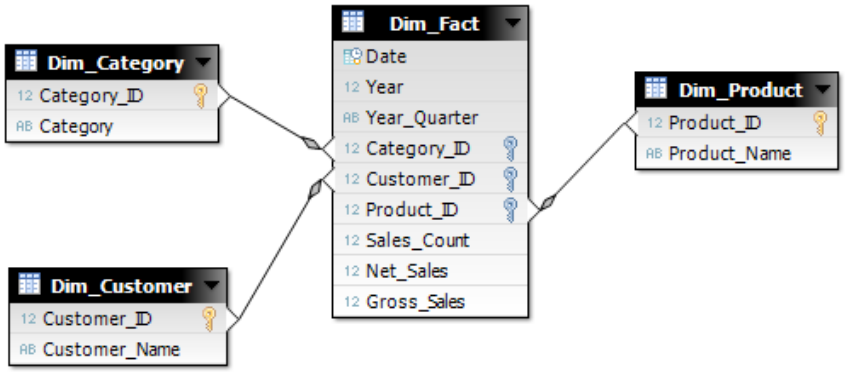
7. Click Finish.

   Note that you can select the Detect keys and Detect joins options to create keys and joins automatically. Join detection examines the tables and data for primary and foreign keys. However, automatic key and join detection may not always produce the results that you intend. For example, joins the join type may not meet your needs and sometimes more joins will be created that you want.

   You can also create keys by right-clicking a column and choosing Primary Key.

8. Set the Primary keys for each dimension table.
9. Create equi-joins between the dimension and fact tables.
10. Set the foreign keys for the fact table.

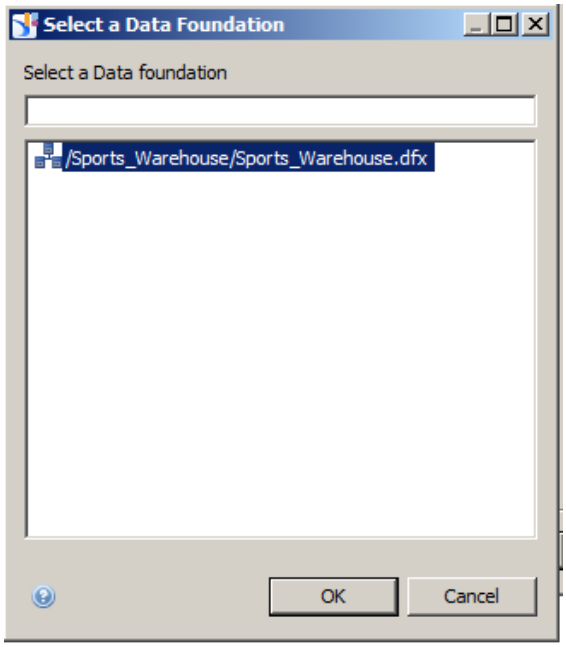
    Your data foundation should look like this.



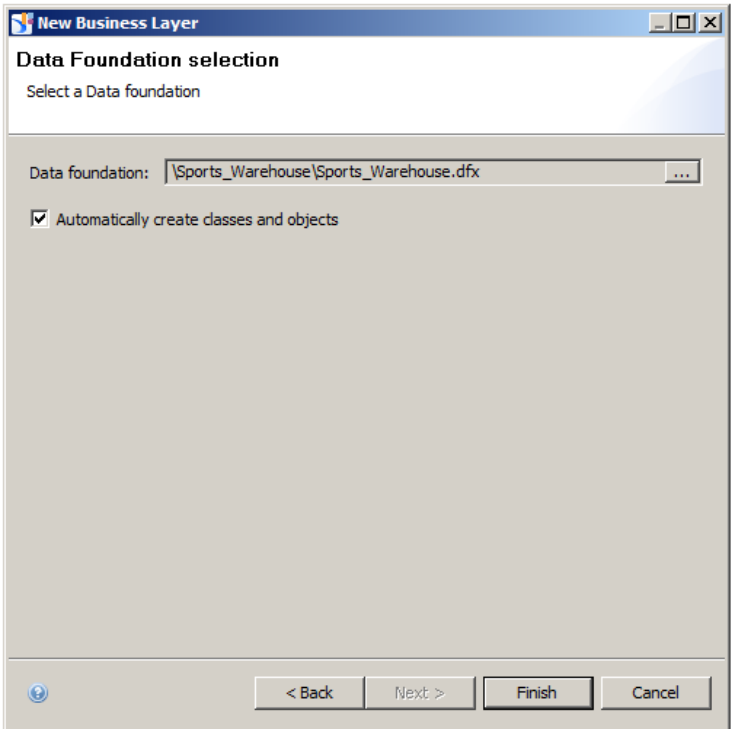
11. Click Save.

Part 3– Create a Sports_Warehouse Business Layer

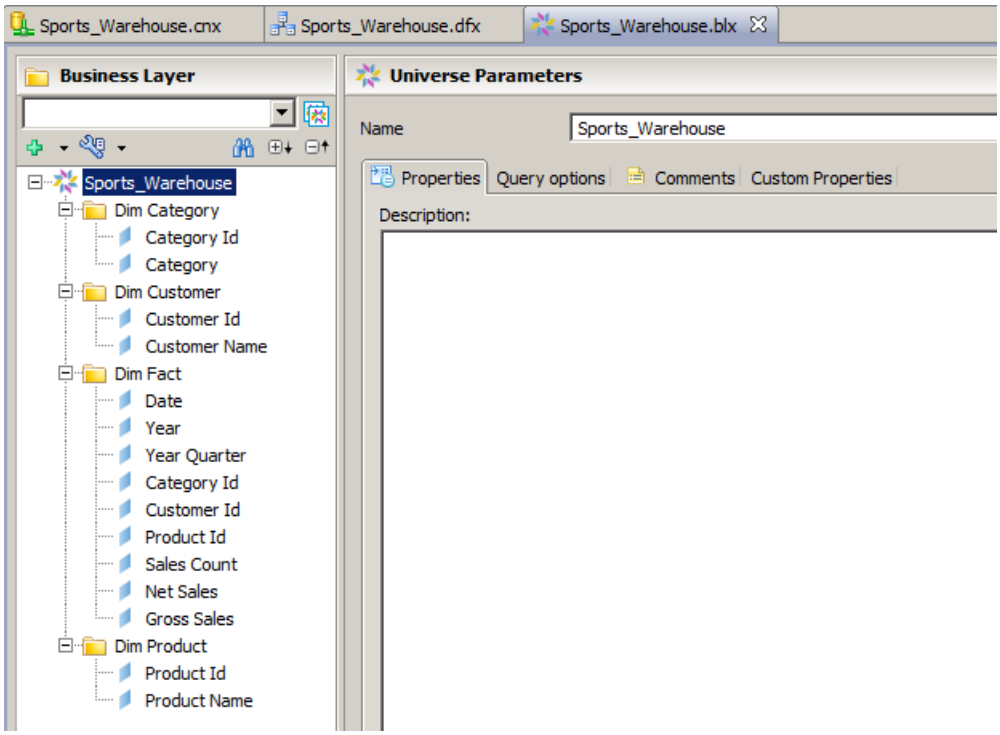
1. Right-click the Sports project and choose New > Business Layer.
2. Select Relational Data Source and click Next>.
3. Type Sports_Warehouse and click Next.
4. Click the … button.
5. Select the Sports_Warehouse.dfx and click OK.



6. Click Finish.



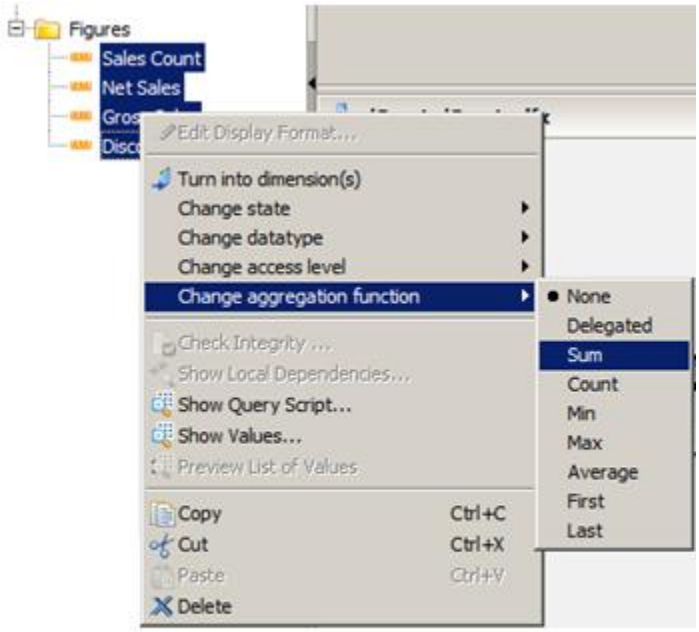
7. The following folders and business objects are created automatically for you.



8. Delete the Category Id, Customer Id, and Product Id from the Dim Fact folder.
   These objects are not required, and will only confuse end users of the universe.

9. Convert Sales Count, Net Sales, and Gross Sales into Measures.
   Select all three objects, right-click and choose Turn into measure(s).

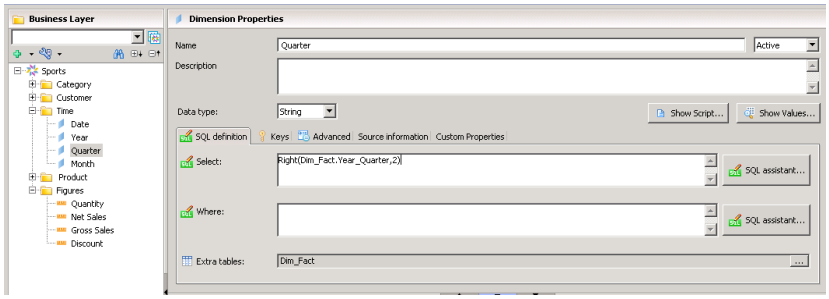
10. Select all three measures, right click and choose Change aggregation function > Sum.



   Note that the Aggregation Function is currently only used by Web Intelligence. The best practice is to use an aggregation function in the SQL definition select statement. The SQL definition select statement is used by queries in all of the client tools, not just Web Intelligence. The steps with a simple example are completed in another activity later in this workbook.

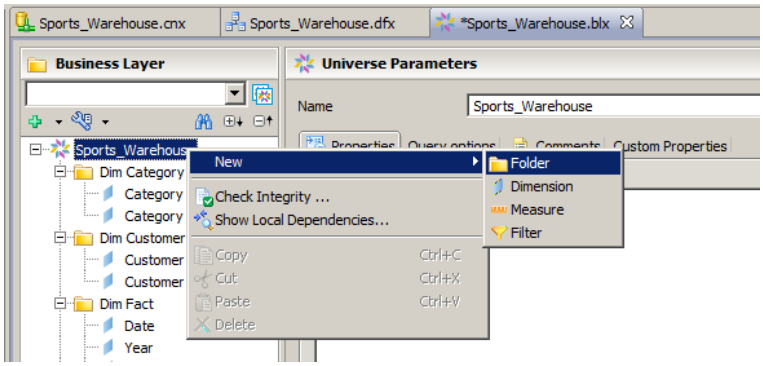
11. Click Sales Count, and change the name to Quantity.
12. Change the name of the Year Quarter dimension to Quarter.
13. Change the SQL definition select statement to:

    Right(Dim_Fact.Year_Quarter,2)



This function extracts the last 2 characters from the field (for example Q1 or Q2).

14. Right-click the Sports_Warehouse universe, and click New > Folder



15. Name the folder Figures, and add the description “This folder contains the numbers and values that can be summarized in a report.”

16. Drag the three measures into the Figures folder.

17. Remove the word Dim from each of the folder names.

18. Rename the “Fact” folder “Time”.

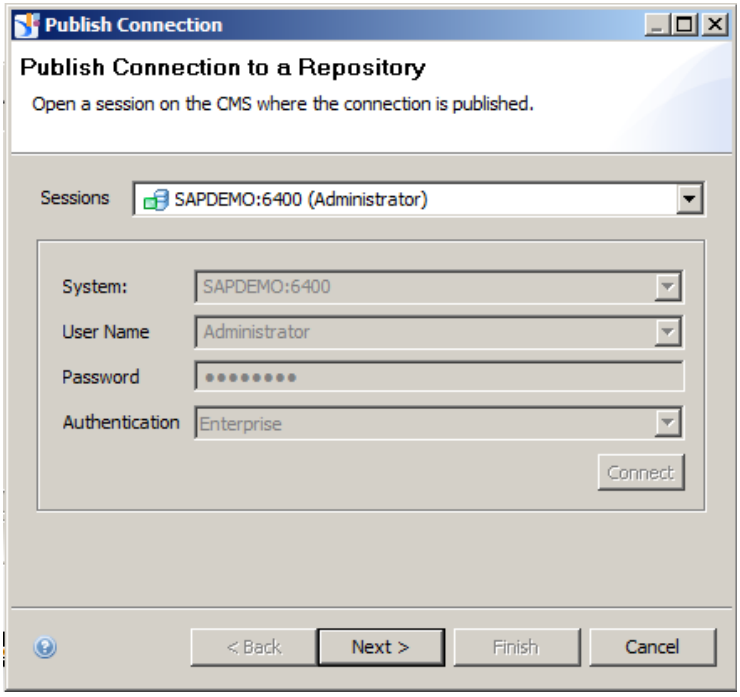
Part 4– Publish the Universe

1. Right-click the connection and choose Publish Connection to a Repository.
2. Enter these credentials and click Next.

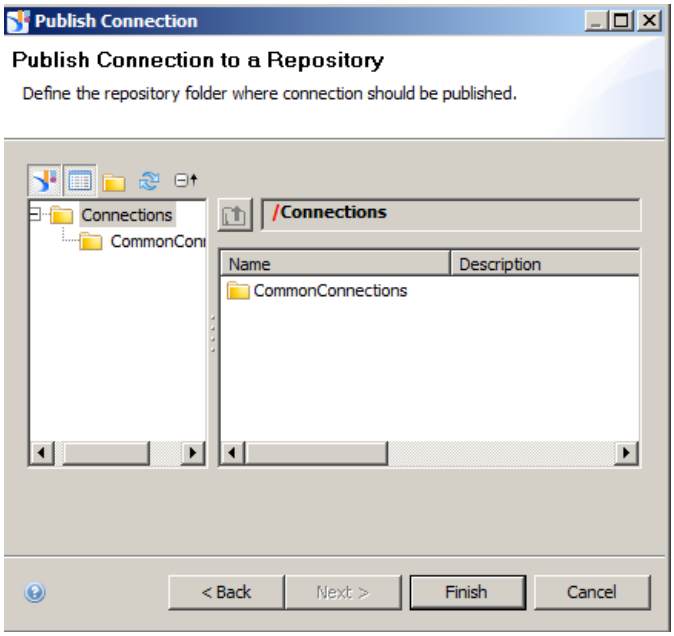
   System Name: SAPDEMO:6400

   User Name: Administrator

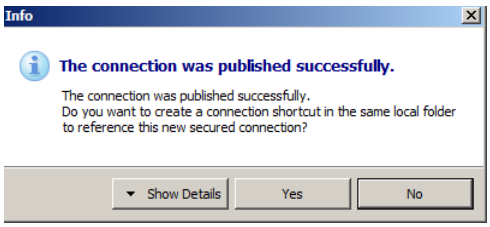
Password: Welcome1



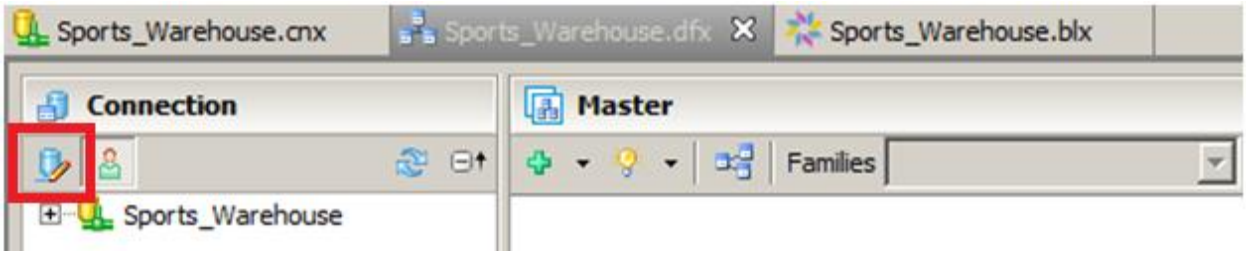
3. Click Finish.



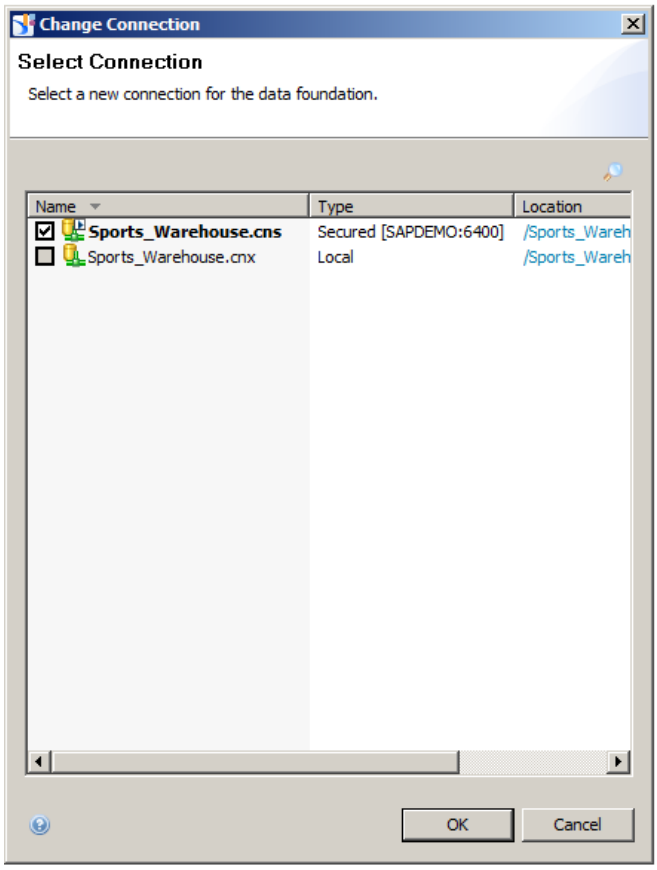
4. Click Yes.



5. Click Close.
6. Double-click the data foundation (Sports_Warehouse.dfx).
7. Click Change Connection.

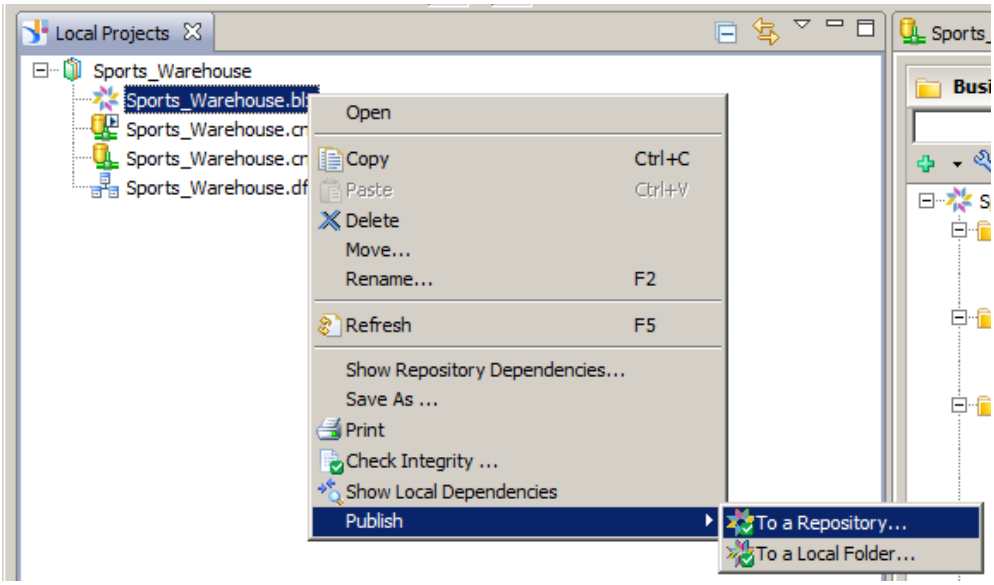


8. Select the new secured connection (Sports_Warehouse.cns) and click OK.

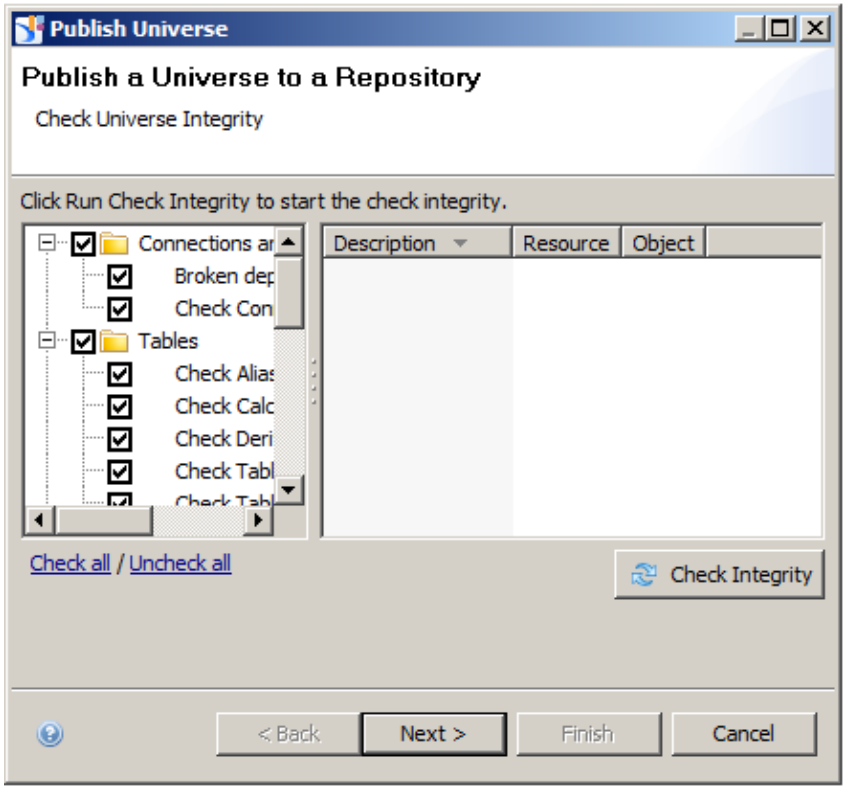


9. Click File > Save All…

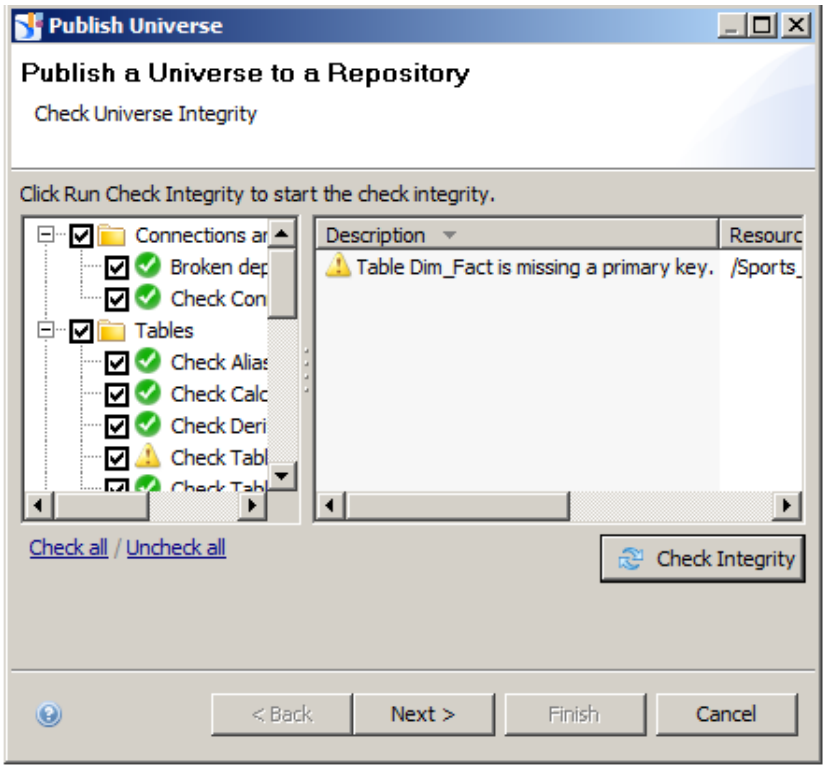
10. Right click the business layer (Sports_Warehouse.blx) and choose Publish > To a Repository…



11. Click the Check all link.



12. Click Check Integrity.

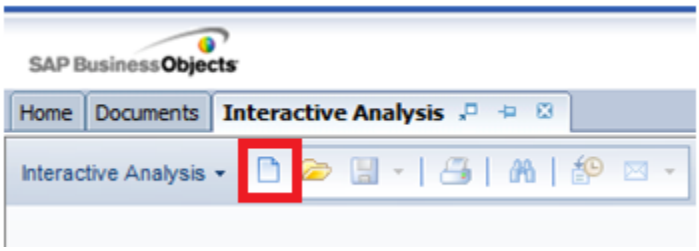


13. Click Next> .

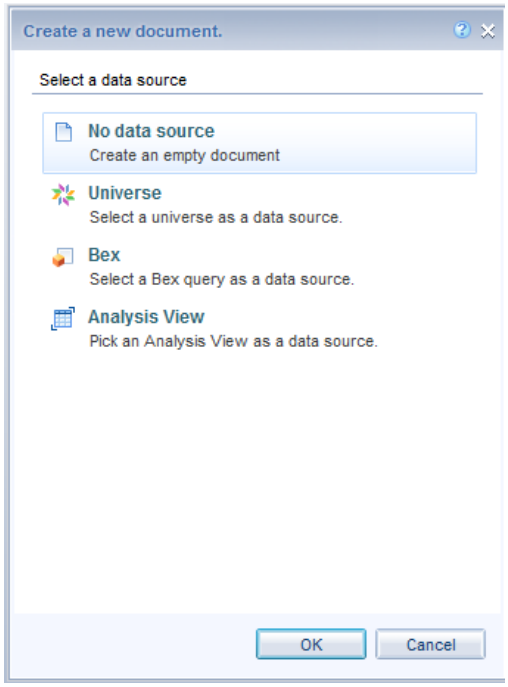
14. Click Finish.
15. Click Close.

Part 5– Test the universe

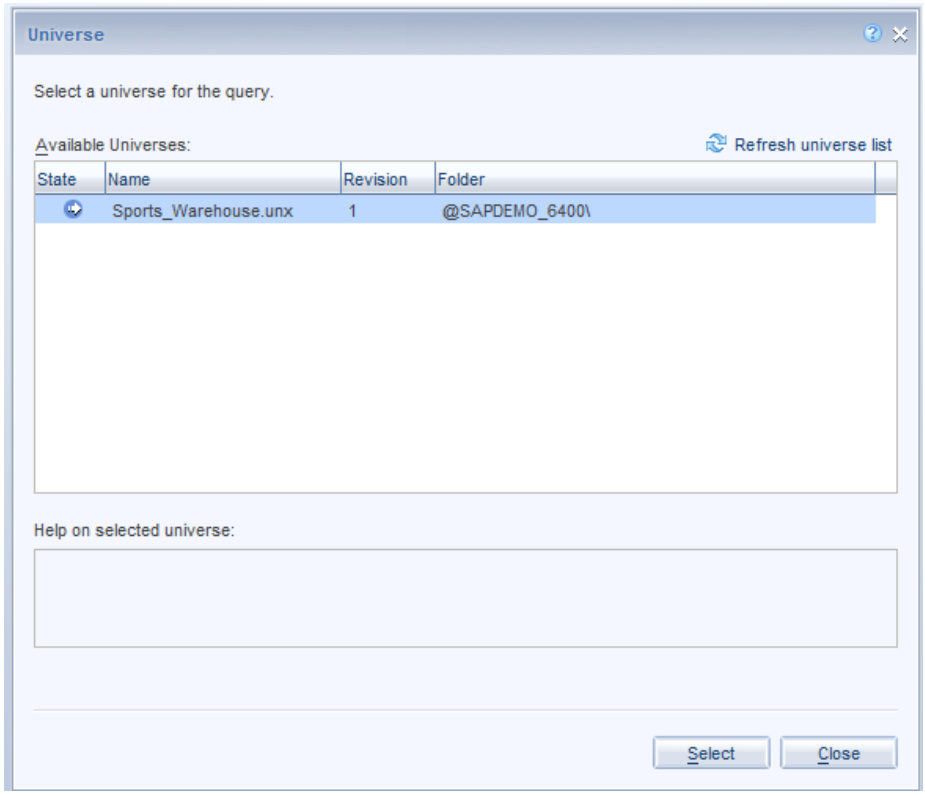
1. Open the BI launch pad (Start > All Programs > SAP BusinessObjects Enterprise XI 4.0 > SAP BusinessObjects Client Tools >SAP BusinessObjects Enterprise Java BI launch pad.
2. Login as Administrator with the password Welcome1.
3. Click Interactive Analysis (Web Intelligence).
4. Click New.



5. Select Universe and click OK.

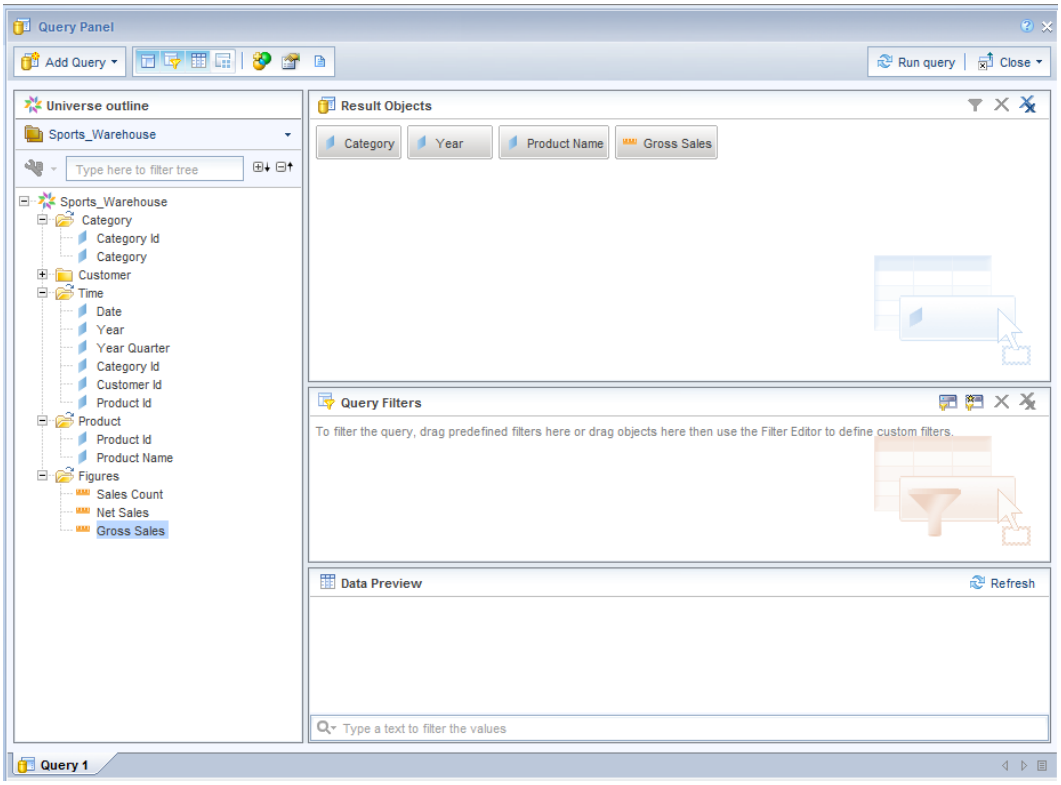


6. Select Sports_Warehouse.unx and click Select.



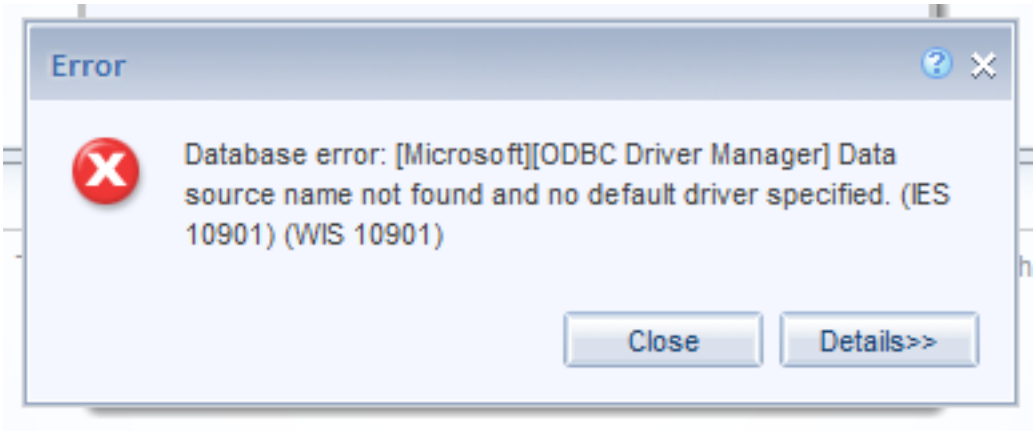
7. Add the following objects to the Query Results pane:
    a. Category

b. Year
c. Product Name
d. Gross Sales



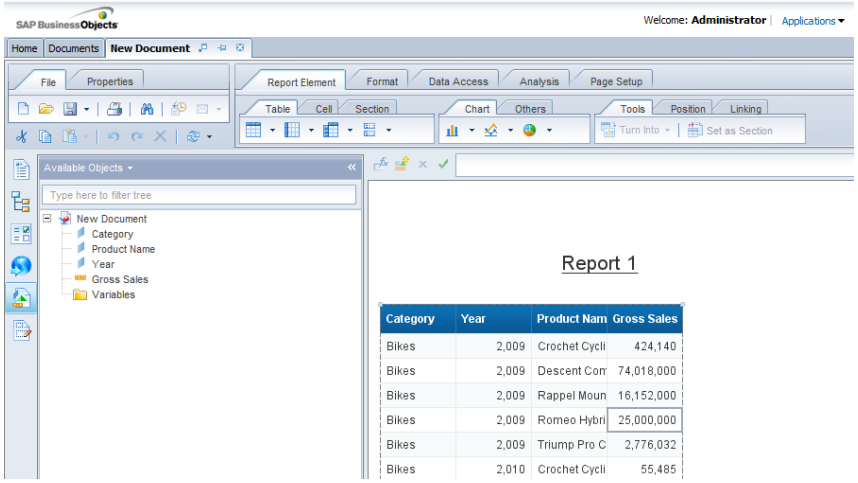
8. Click Run Query.

Note: You may see an error message if you have not created a DSN for both 32-bit and 64-bit database connectivity. Ensure that you create two DSNs with the same name.



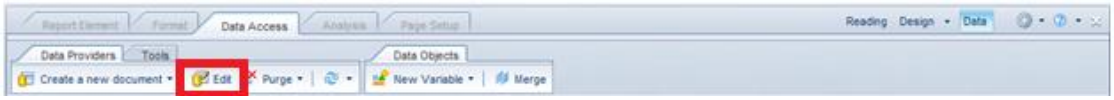
9. Check “Don’t notify me again.” and click OK.

   You should see a report similar to the image below.

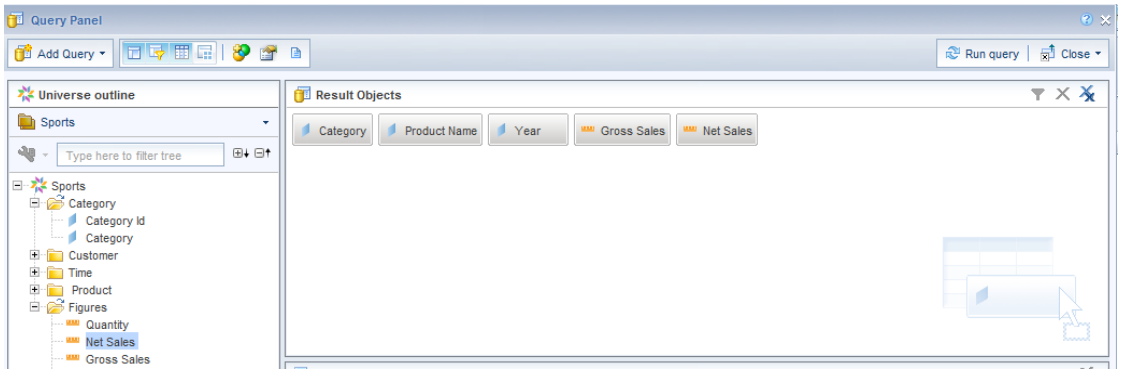


10. Click the Data Button on the toolbar.

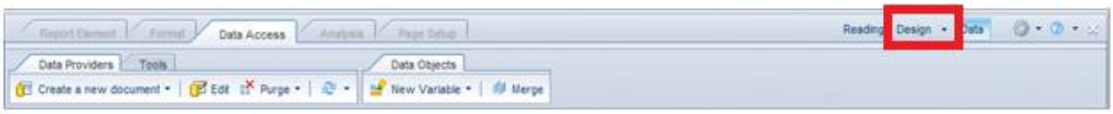
11. Click Edit



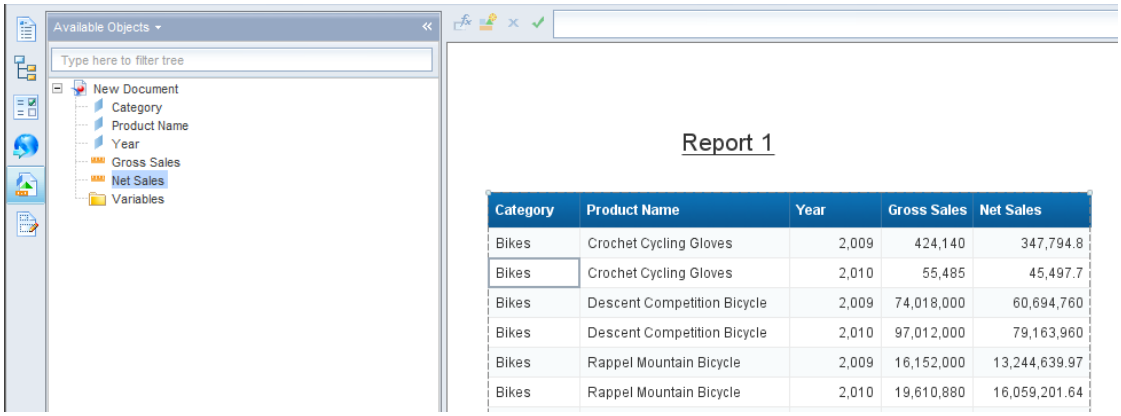
12. Add the Net Sales measure.



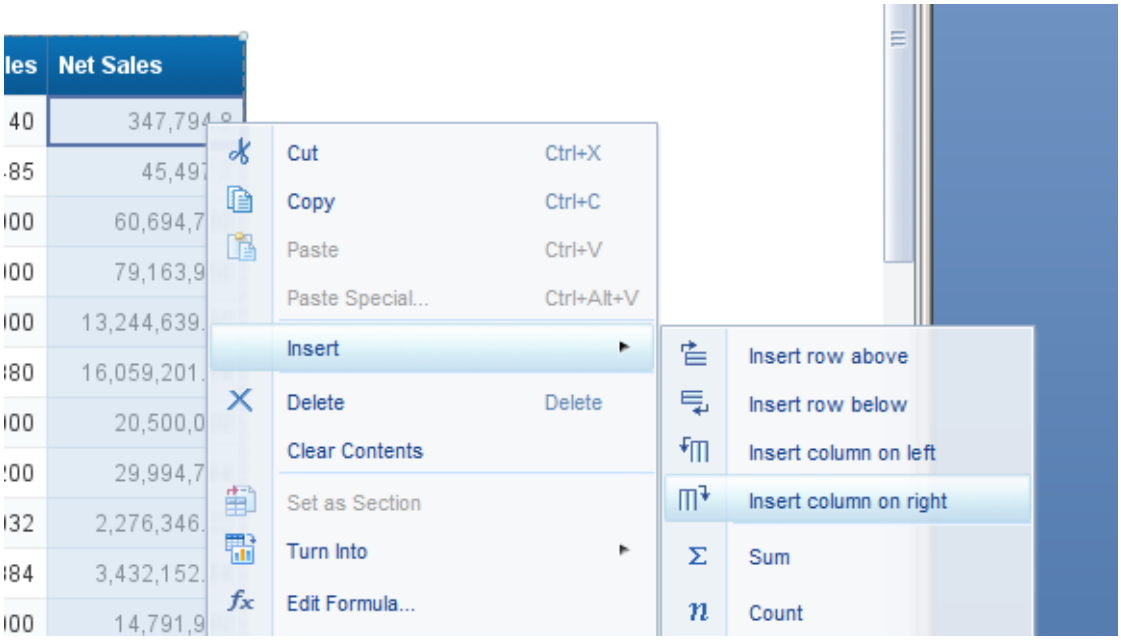
13. Click Run Query.
14. Click Design



15. Drag the Net Sales measure to the right of the Gross Sales column in the table.
16. Resize the columns.



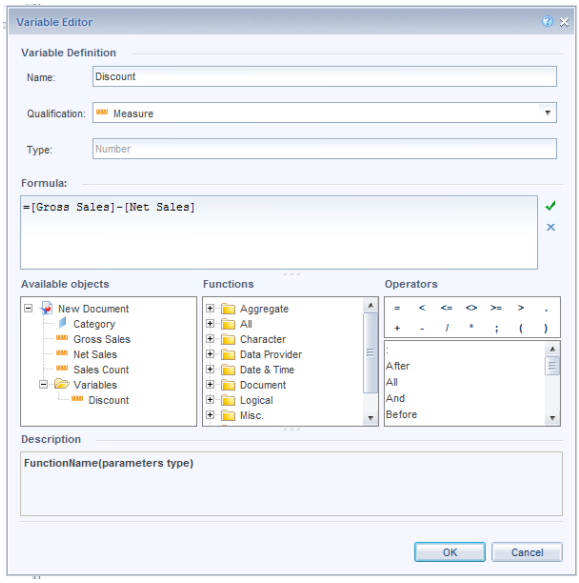
17. Right Click the new Net Sales column and choose Insert > Insert column on right.



18. Click in the new column and then click the Create Variable button.

19. Type Discount in the name field.
20. Choose Measure in the qualification list.

21. Enter the formula = [Gross Sales] – [Net Sales].



22. Click OK.
23. Click and drag the new Discount variable to the right of the Gross Sales Column.

Category	Product Name	Year	Gross Sales	Net Sales	Discount
Bikes	Crochet Cycling Gloves	2,009	424,140	347,794.8	76,345.2
Bikes	Crochet Cycling Gloves	2,010	55,485	45,497.7	9,987.3
Bikes	Descent Competition Bicycle	2,009	74,018,000	60,694,760	13,323,240
Bikes	Descent Competition Bicycle	2,010	97,012,000	79,163,960	17,848,040
Bikes	Rappel Mountain Bicycle	2,009	16,152,000	13,244,639.97	2,907,360.03

24. Delete the Product Name and Discount columns from the report. You can right click and choose Delete, or drag the column headings out of the report.

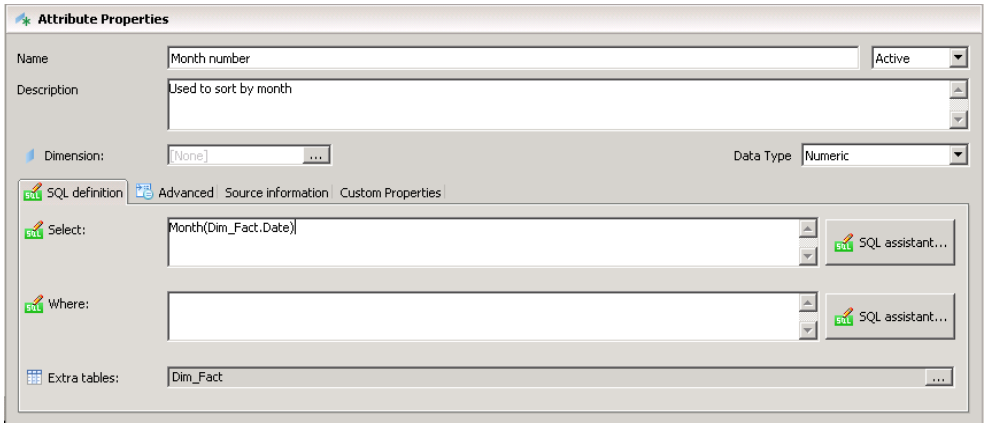
    You should see the following results.

Category	Year	Gross Sales	Net Sales
Bikes	2,009	118,370,172	97,063,540.99
Bikes	2,010	157,631,949	128,695,555.98
Golf	2,009	30,225,920	24,785,254.41
Golf	2,010	43,704,220	35,644,267.8
Ski	2,009	43,072,640	36,567,906.35
Ski	2,010	61,607,425	52,053,293.1
Tennis	2,009	7,426,680	6,089,877.6
Tennis	2,010	11,234,750	9,185,207.5

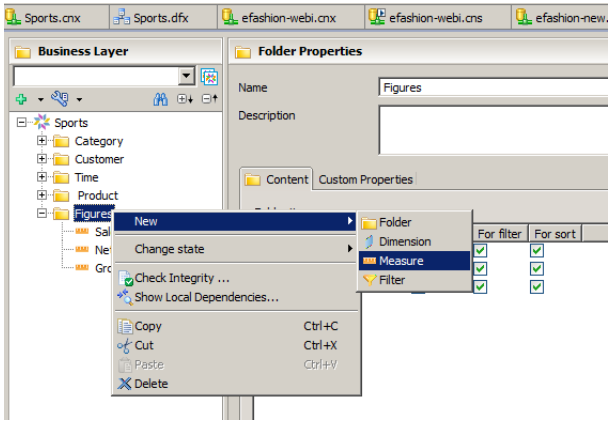
Solution 11 - Create Additional Universe Objects

1. Open the information design tool
2. Double click the Sports.blx business layer.
3. Expand all of the folders to view each object.
4. Right click the Time folder and choose New > Dimension.
5. Type “Month” in the Name field.
6. In the Select text box enter the formula:
   DATENAME(month, Dim_Fact.Date).

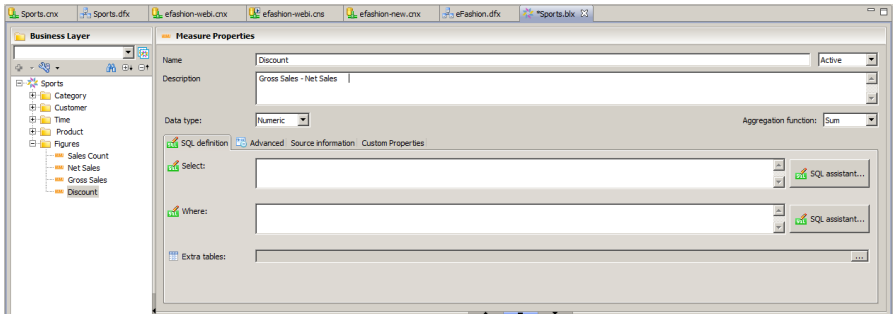
7. Right-click the Month object and choose New > Attribute.
8. Type “Month number” in the Name field.
9. Change the Data type to numeric.



10. In the business layer, right-click the Figures folder and choose New > Measure.

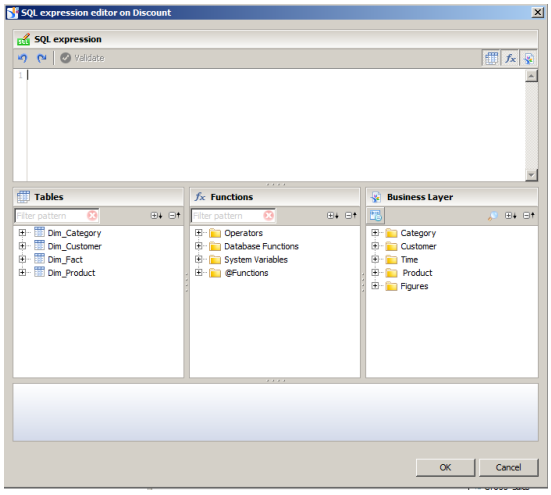


11. Type the name Discount.
12. Type “Gross Sales – Net Sales” in the description.



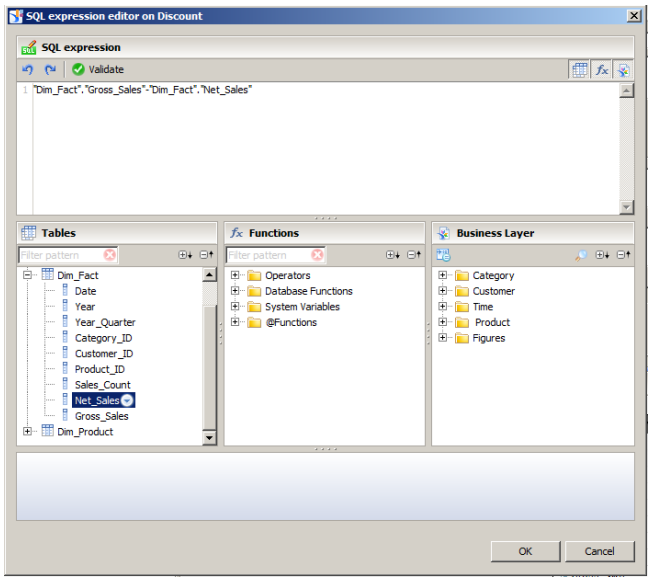
13. Click the SQL assistant… button to the right of the Select text box.

14. Expand the Dim_Fact table.



15. Double click Gross_Sales.
16. Click in the SQL Expression box and type “-”.

17. Double click Net_Sales.

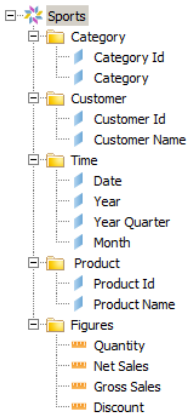


This formula calculates the discount (Gross Sales – Net Sales).

18. Click OK.

19. Double click the Year object and change the SQL definition select statement to CAST(Dim_Fact.Year as VarChar(4))
20. Change the data type of the Year object to String.

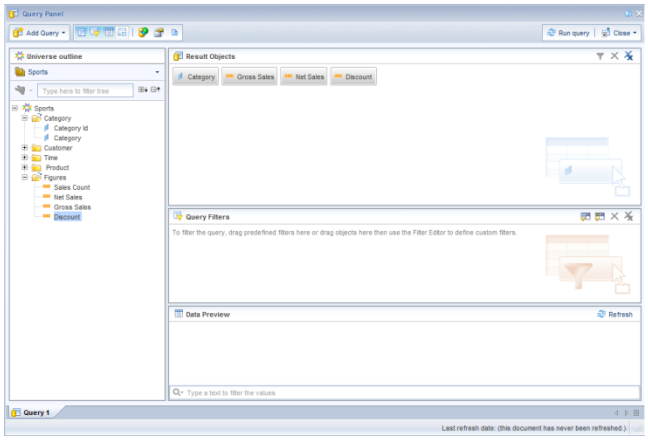
Your universe should now contain the following objects.



21. Click File > Save All…
22. Publish the business layer. (Right-click Sports.blx and choose Publish > To a repository… Review Solution 10 Part 4 for more information).

23. Log into the BI launch pad.
24. Create a New Web Intelligence document using the Sports universe.

25. Add Category, Gross Sales, Net Sales, and the new Discount measure.



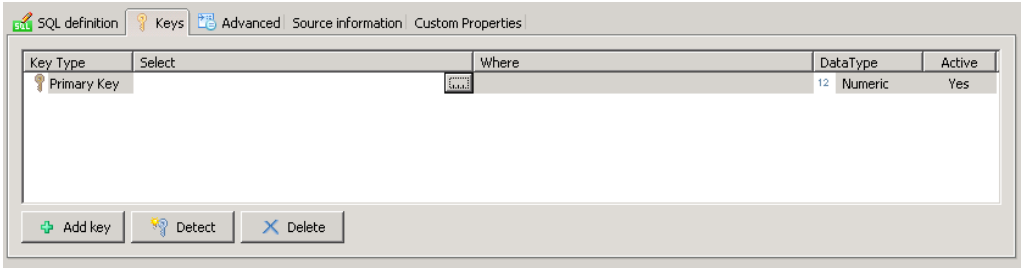
26. Click Run Query.

Your report should return these values.

Category	Gross Sales	Net Sales	Discount
Bikes	276,002,121	225,759,096.97	50,243,024.03
Golf	73,930,140	60,429,522.21	13,500,617.79
Ski	104,680,065	88,621,199.45	16,058,865.55
Tennis	18,661,430	15,275,085.1	3,386,344.9

Solution 12– Optimize Performance with Index Awareness

1. Open the information design tool and open the Sports.blx business layer.
2. Add index awareness to the Category, Customer name, and Product name dimensions.
    a. Click Category.
    b. Click the Keys tab.
    c. Click Add Key.
    d. Click Select in the new row.
    e. Click …

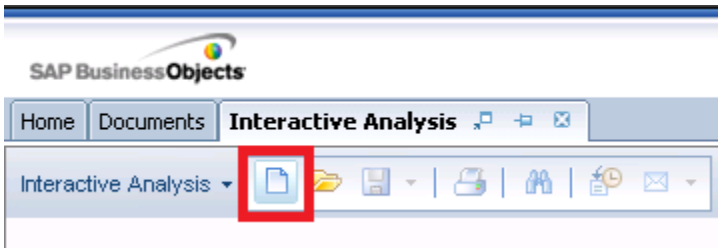


    f. Expand Dim_Category.
    g. Double-click Category_ID.
    h. Repeat steps a – f for the Customer name and Product name dimensions.

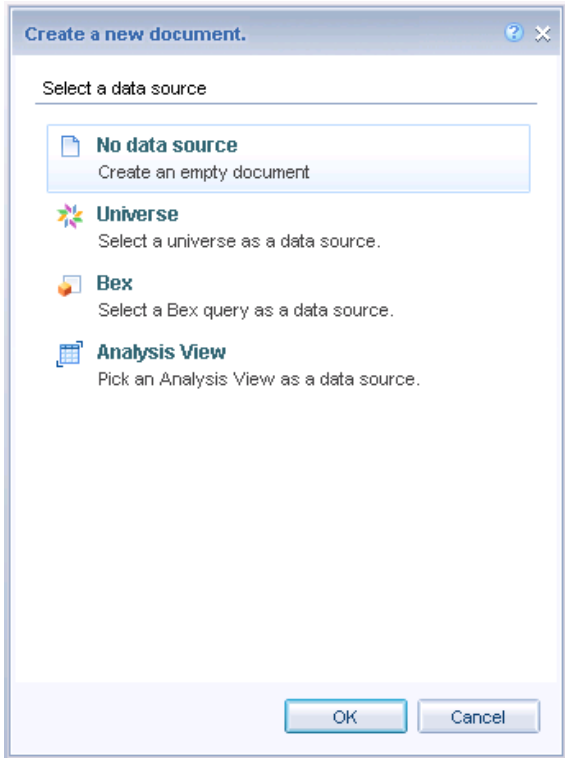
3. Save and publish the universe.

Solution 13 – Testing the Universe in Web Intelligence.

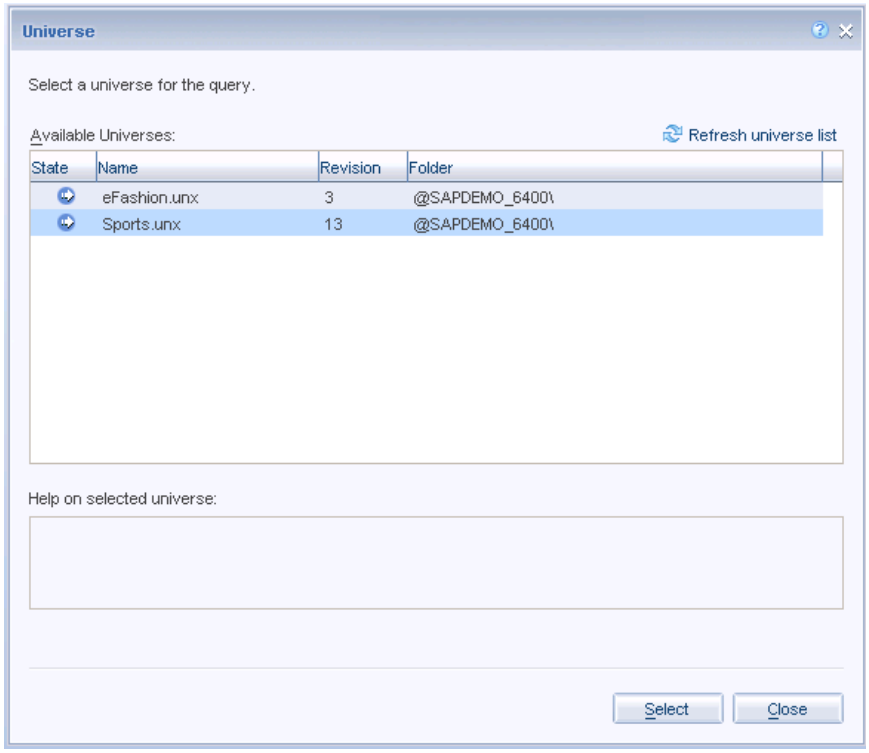
1. Log into the BI launch pad
2. Open Web Intelligence (Interactive Analysis) from My Applications.



3. Click Universe.

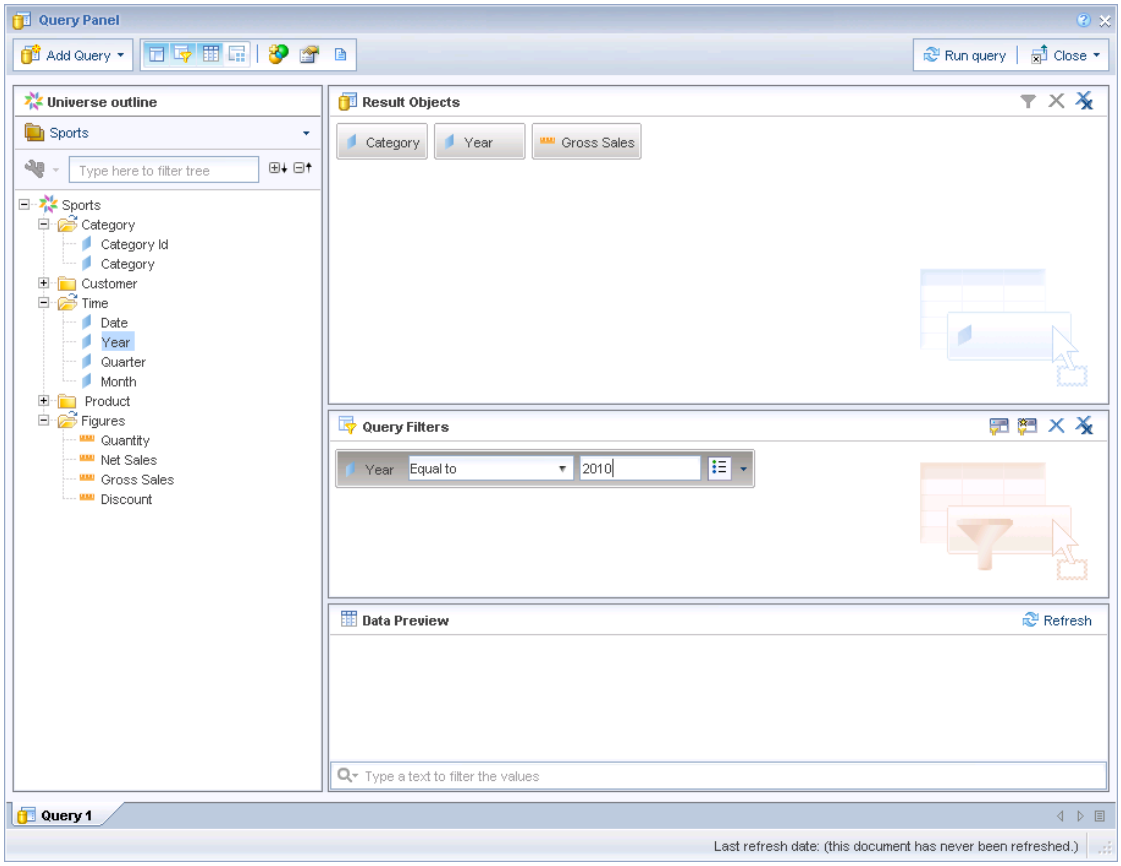


4. Double-click Sports.unx



5. Open the folders and double-click Category, Year, and Gross Sales.
6. Drag the Year dimension to the Query Filters.

7. Modify the filter: Year Equal to 2010.



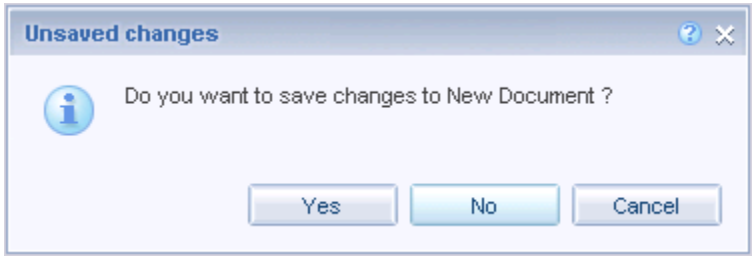
8. Click Run Query in the top right corner.
9. Double-click the right border of the Gross Sales column to resize it.

Report 1

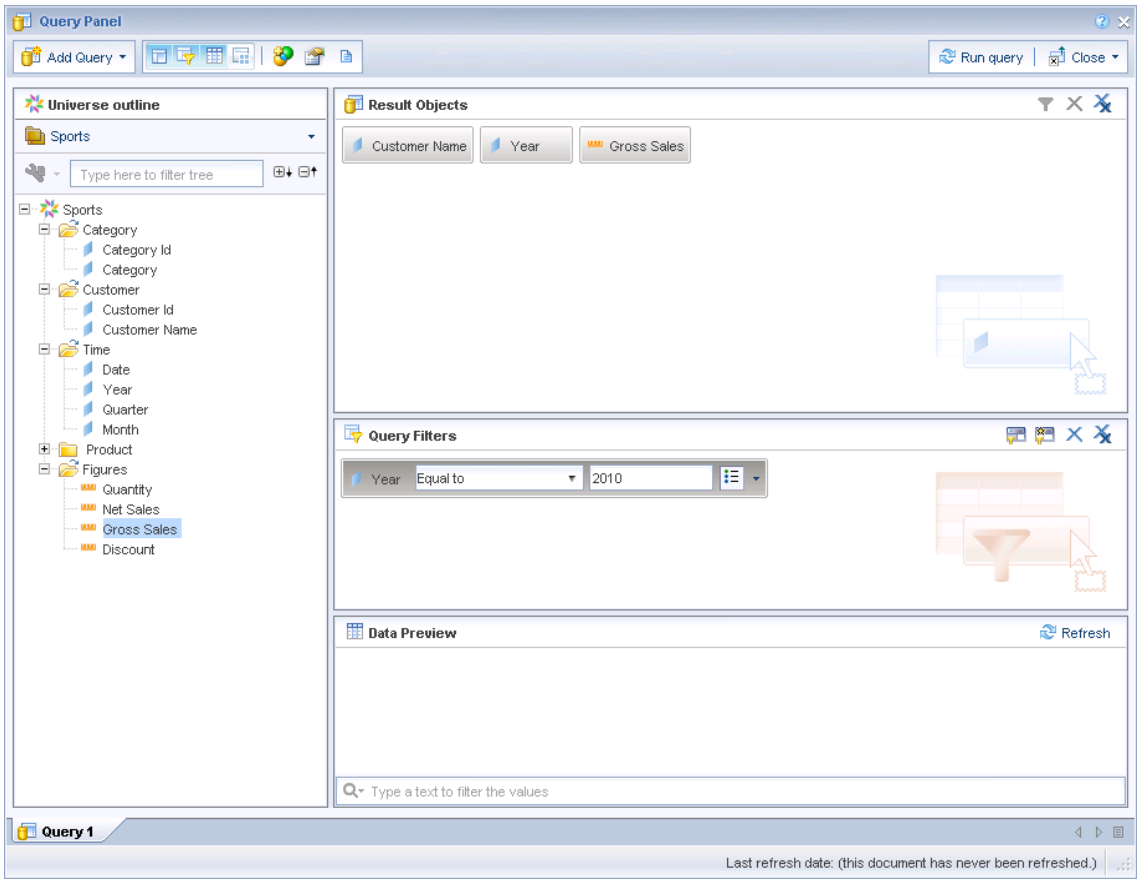
Category	Year	Gross Sales
Bikes	2010	157,631,949
Golf	2010	43,704,220
Ski	2010	61,607,425
Tennis	2010	11,234,750

10. Click New.

11. Click No.



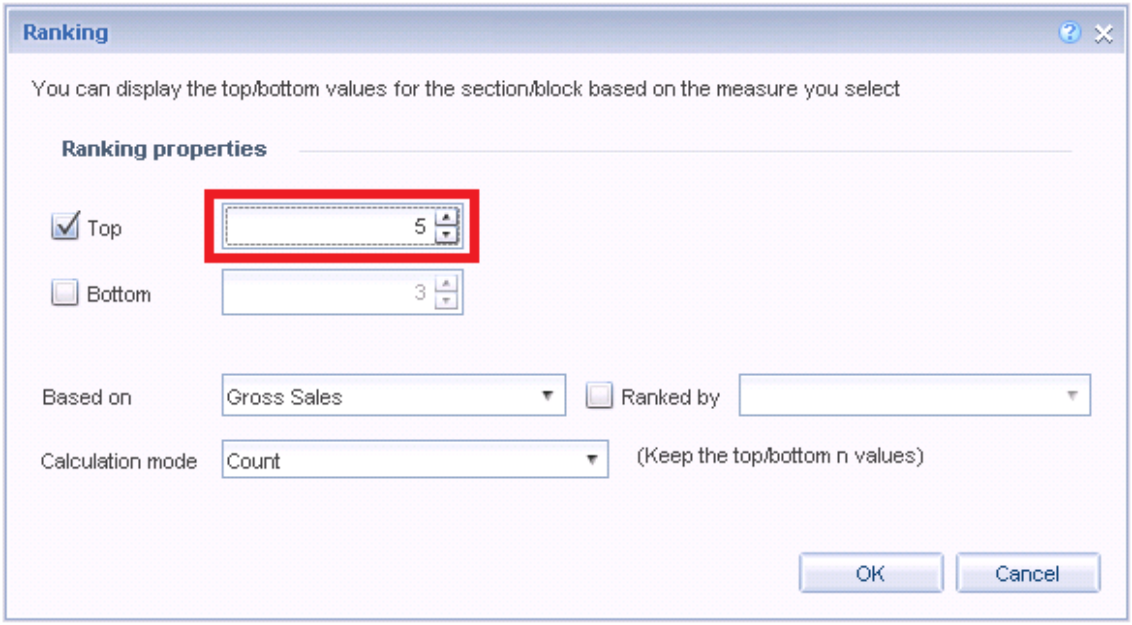
12. Double-click Universe.
13. Double-click Sports.unx.
14. Open the folders and double-click Customer Name, Year, and Gross Sales objects
15. Drag the Year dimension to the Query Filters.
16. Modify the filter: Year Equal to 2010.



17. Click Run Query.
18. Click Analysis.
19. Click anywhere in the Gross Sales column.

20. Click Ranking.

21. Change the Top value to 5.



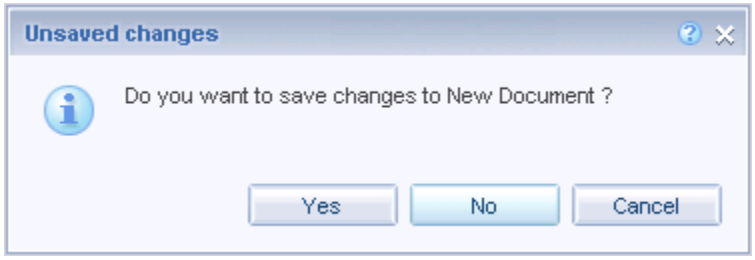
22. Click OK.
23. Double-click the right border of the Customer Name column to resize it.

Report 1

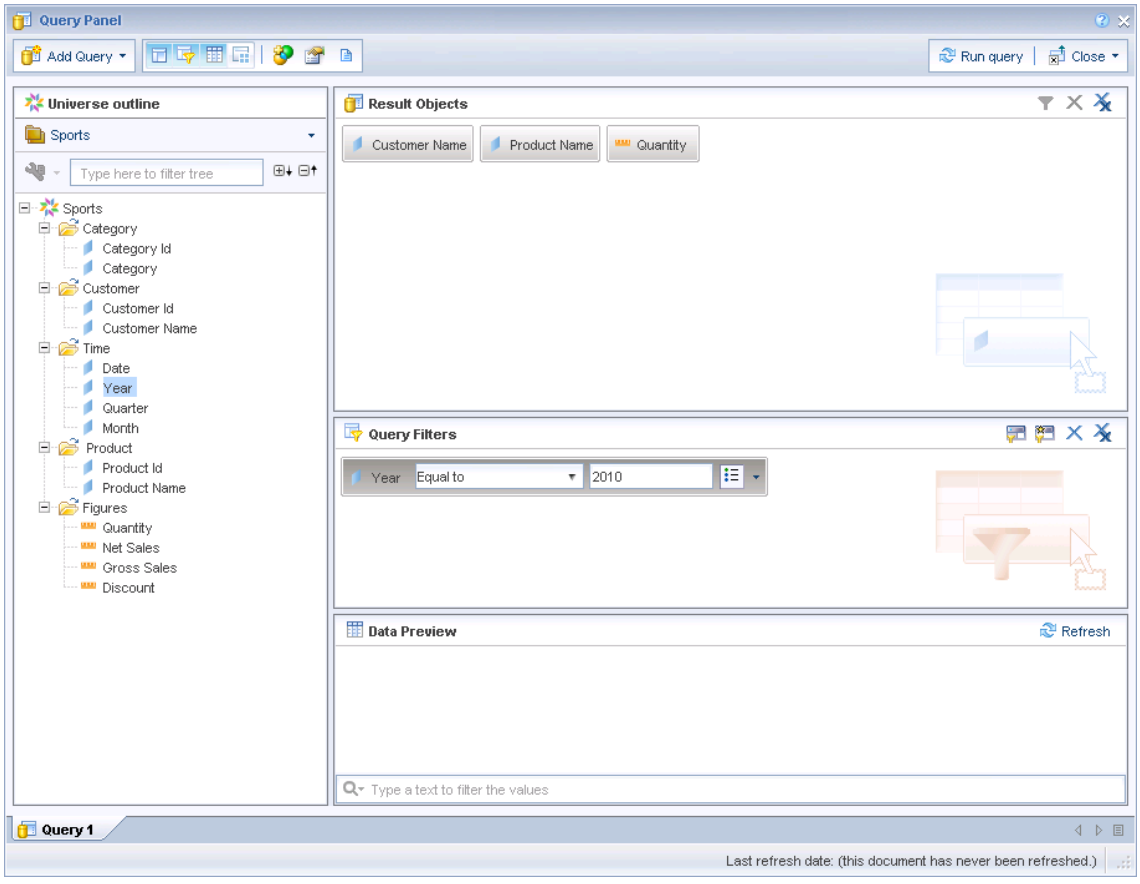
Customer Name	Year	Gross Sales
Zerg Systems	2010	12,997,066
Tekmutek	2010	9,735,035
Glicomp Inc	2010	9,558,003
Galaxian	2010	9,209,351
Alltatek	2010	8,088,686

24. Click New.

25. Click No.



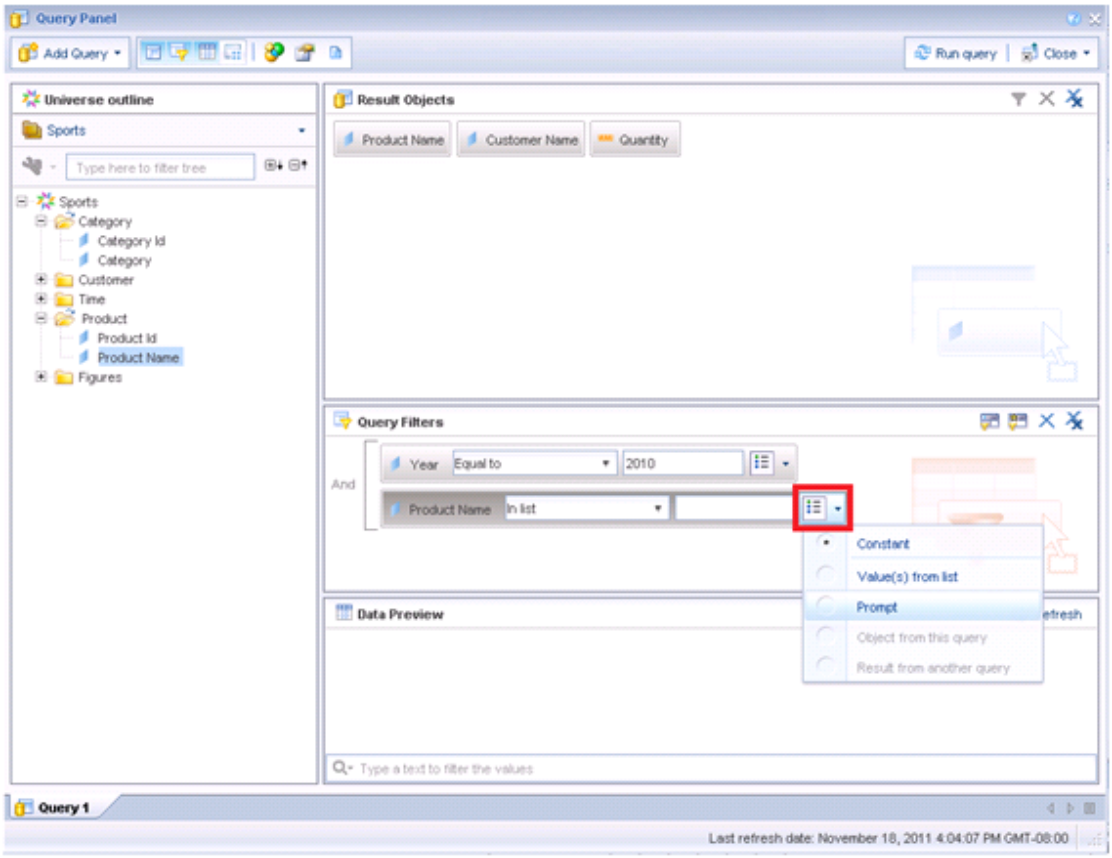
26. Double-click Universe.
27. Double-click Sports.unx.
28. Open the folders and double-click Product Name, Customer Name , and Quantity.
29. Add a year equal to 2010 filter.



30. Click Run Query.
31. Resize the columns as required.
32. Click Edit.

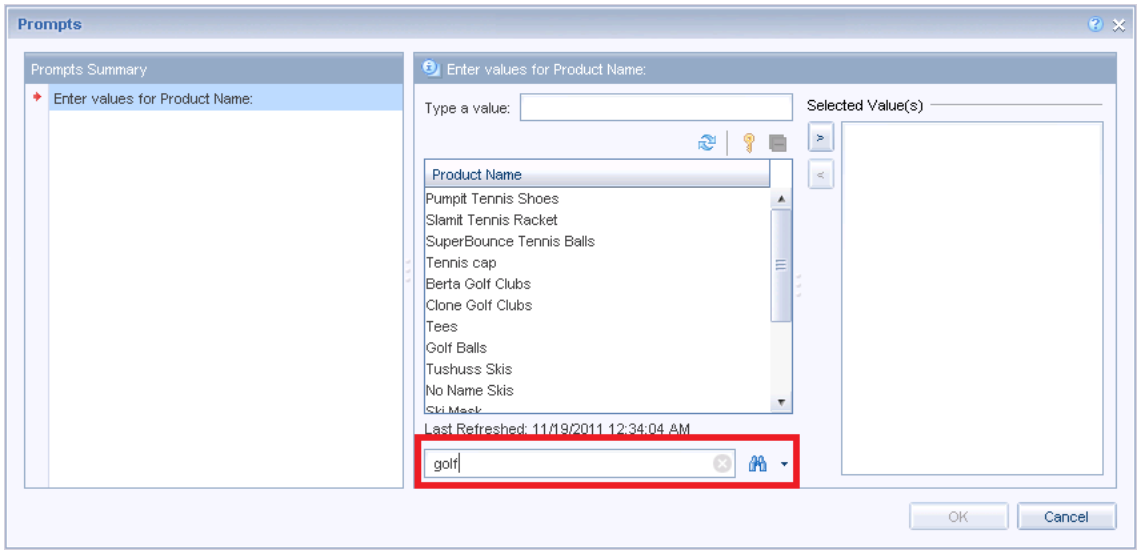
33. Drag Product Name to the Query Filters pane.

34. Click the down-arrow button to the right of the filter and choose Prompt.

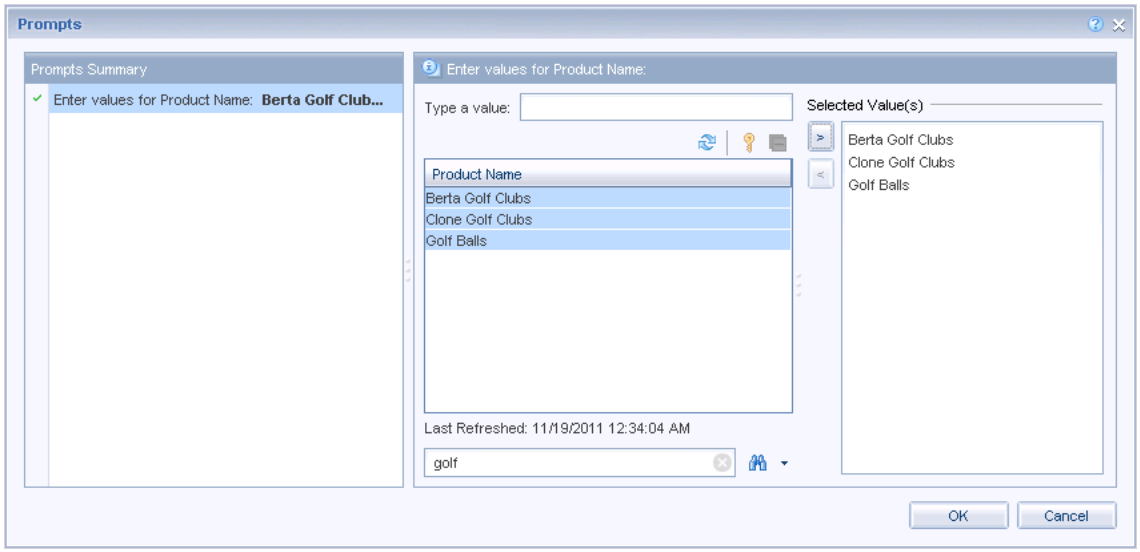


35. Click Run query.

36. Type golf and click the Search button.



37. Select all three golf products and click the add button.



38. Click OK.

39. Resize the columns as required.

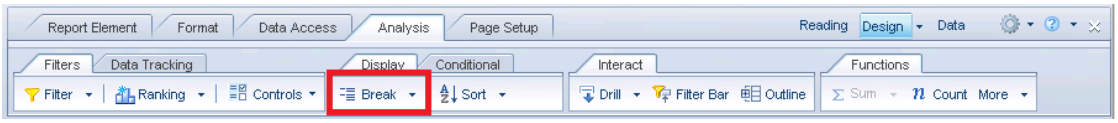
Report 1

Product Name	Customer Name	Quantity
Berta Golf Clubs	Allmibuy	1
Berta Golf Clubs	Allmitek	1
Berta Golf Clubs	Allmubuy	4
Berta Golf Clubs	Allmugear	3
Berta Golf Clubs	Allmu Inc.	1
Berta Golf Clubs	Allmutek	3
Berta Golf Clubs	Alltabuy	1

40. Click Analysis.

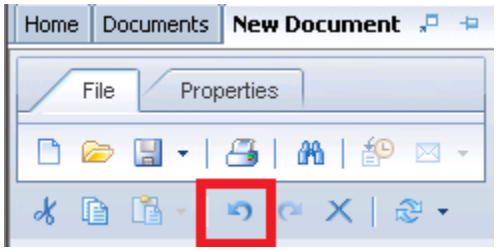
41. Click anywhere in the Product Name column.

42. Click the Break button.



The document is now broken into three tables, one for each product. Scroll down the report to view the Clone Golf Clubs table.

43. Click Undo.



44. Scroll up to the top of the table.

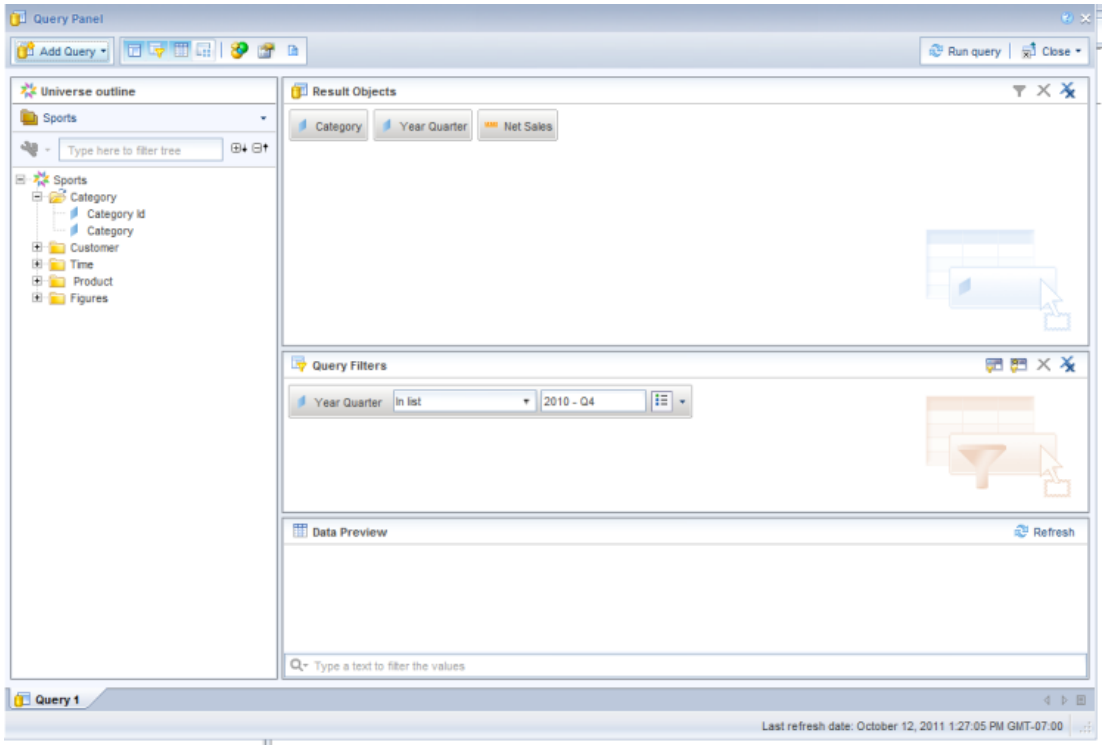
45. Click and drag a cell from the Product Name column above the table.

The report is no2 broken into sections, with one table for each section. Each section includes a header with the Product Name above the table.

44. Click Undo.

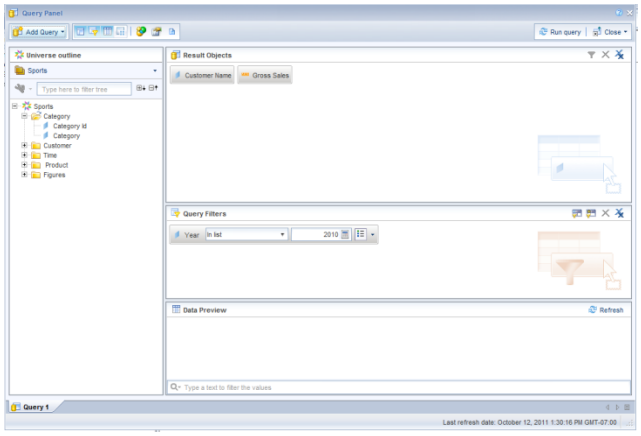
Answer the following questions.

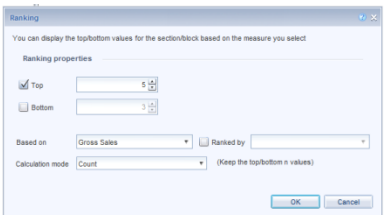
1. In Q4, 2010 which category had the highest Net Sales?



Category	Year Quarter	Net Sales
Bikes	2010 - Q4	39,333,362.18
Golf	2010 - Q4	10,537,273.2
Ski	2010 - Q4	28,671,580.6
Tennis	2010 - Q4	2,121,558.1

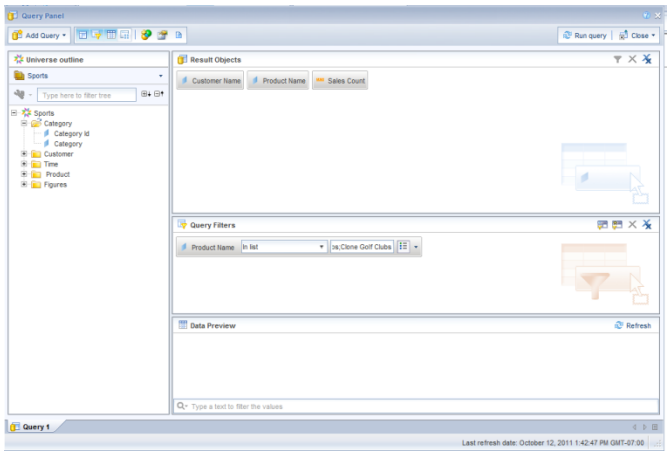
2. Who were the top 5 customers in Gross Sales for 2010?





Customer Name	Gross Sales
Zerg Systems	12,997,066
Tekmutek	9,735,035
Glicomp Inc	9,558,003
Galaxian	9,209,351
Alltatek	8,088,686

3. Which customers purchased Golf Clubs? Which type did they buy and how many?



Customer Name	Product Name	Sales Count
Allmibuy	Berta Golf Clubs	1
Allmibuy	Clone Golf Clubs	3
Allmigear	Clone Golf Clubs	1
Allmitek	Berta Golf Clubs	1
Allmitek	Clone Golf Clubs	1
Allmubuy	Berta Golf Clubs	5
Allmubuy	Clone Golf Clubs	4
Allmugear	Berta Golf Clubs	5
Allmugear	Clone Golf Clubs	5
Allmu Inc.	Berta Golf Clubs	4
Allmu Inc.	Clone Golf Clubs	4
Allmutek	Berta Golf Clubs	4
Allmutek	Clone Golf Clubs	3
Alltabuy	Berta Golf Clubs	2
Alltabuy	Clone Golf Clubs	4

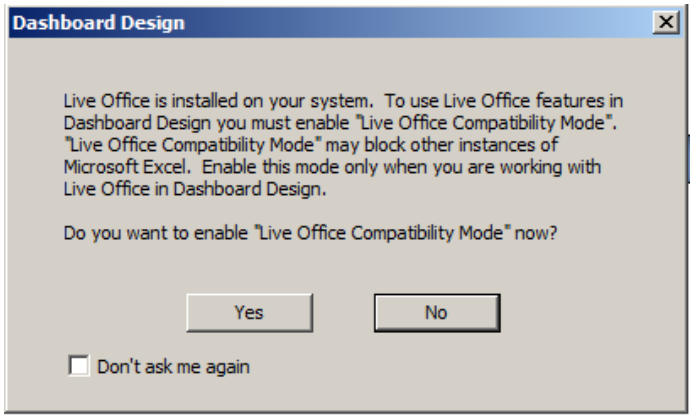
Solution 14 – Creating a Dashboard

Part 1– Create a Dashboard

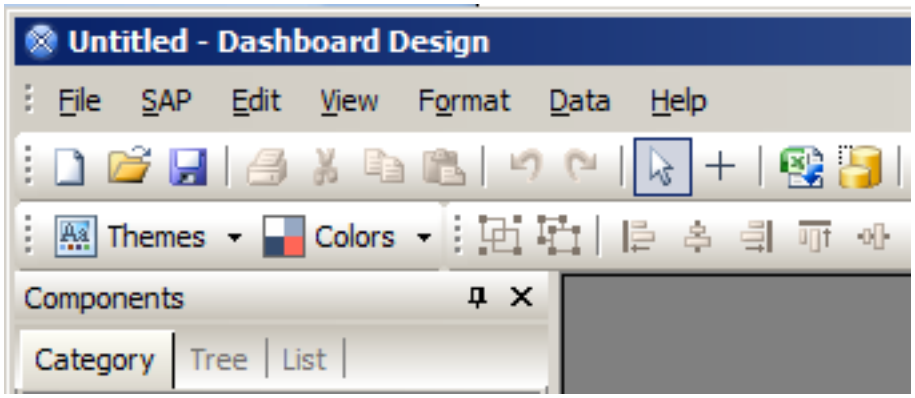
In this activity you will use a universe query as your dashboard's data source. Follow the steps to see how the Dashboard Design query builder retrieves data from the universe.

1. Open Dashboard Design.
   (Click Start > All Programs > Dashboard Design > Dashboard Design).

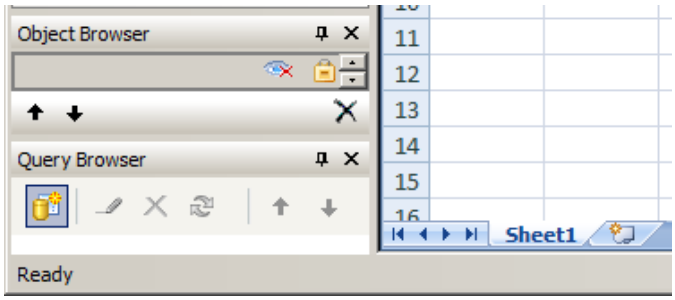
2. Click No.



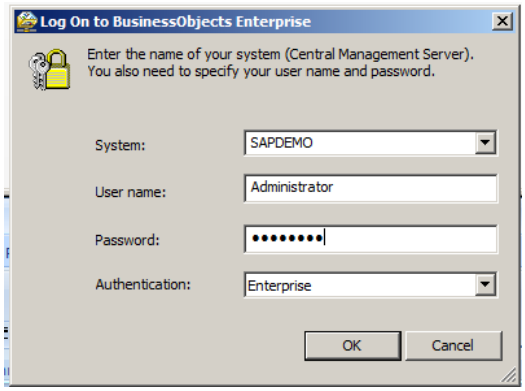
3. Click New.



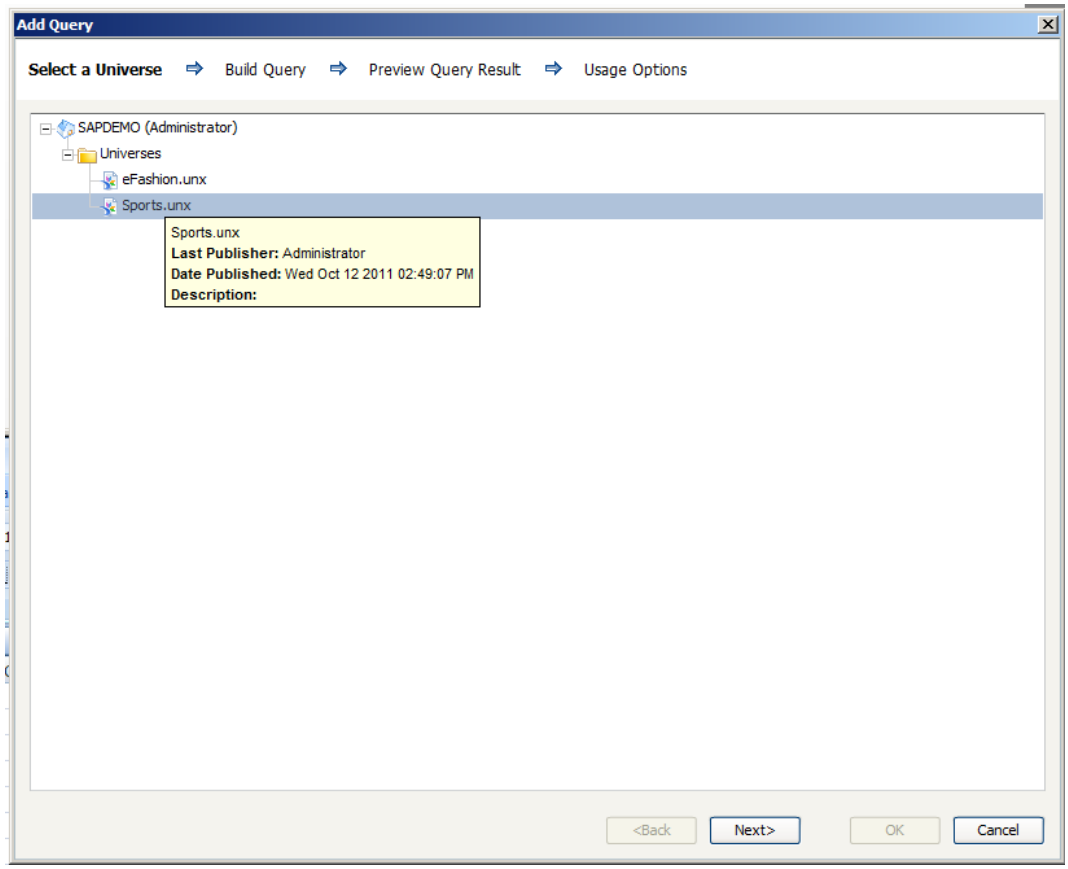
4. Click Add Query…



5. Type the password Welcome1 and click OK.

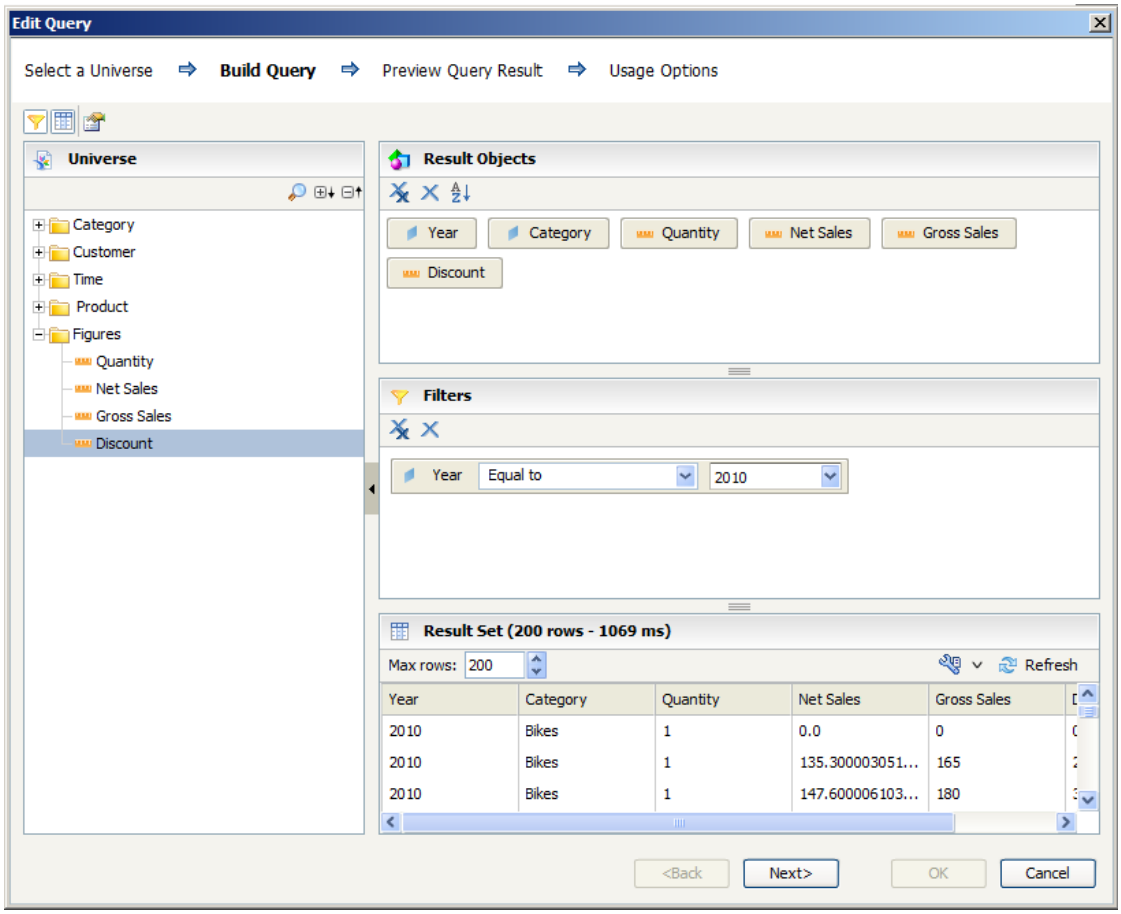


6. Click the Sports.unx universe and click Next.

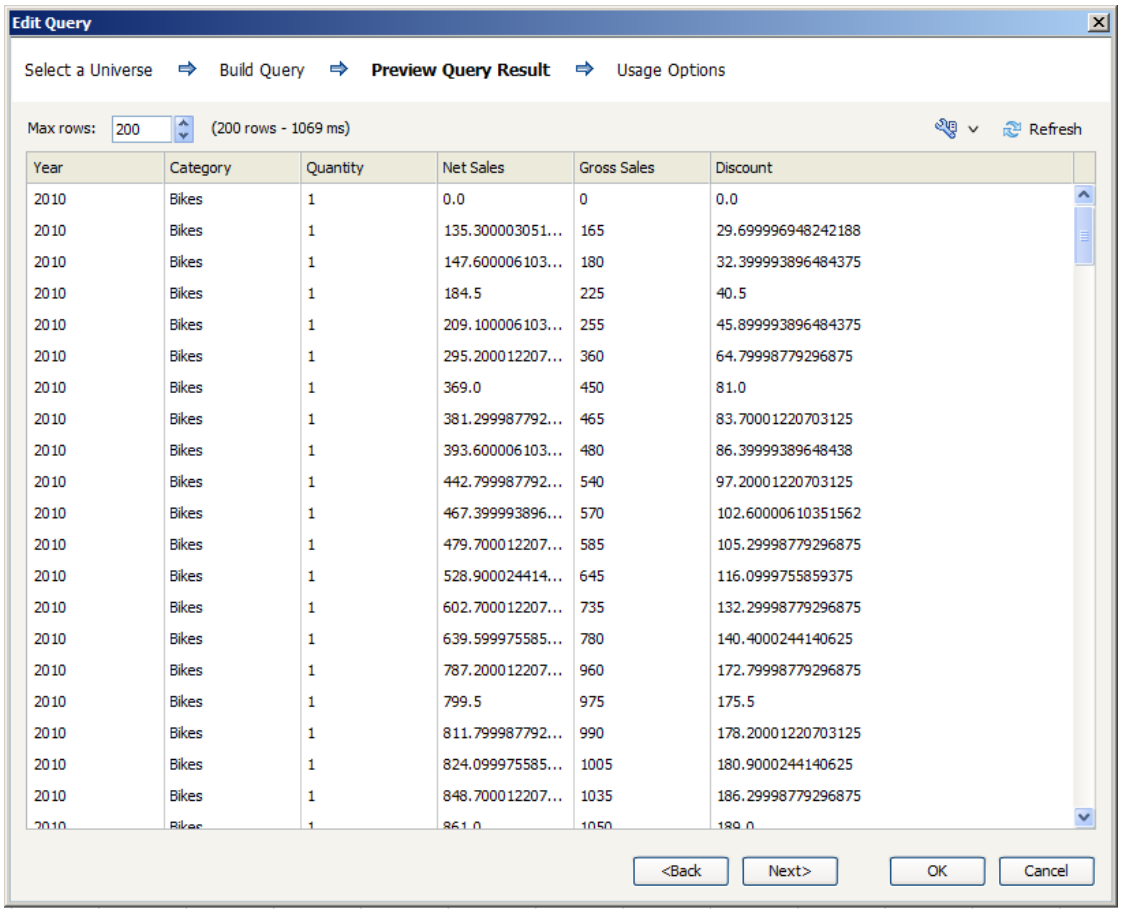


7. Add Year, Category, Quantity, Net Sales, Gross Sales, and Discount.

8. Add the filter Year Equal to 2010 and click Next.



9. Click Next.



Note that the Dashboard Design Query Builder does not aggregate the fact records. In Web Intelligence, this query would return a single row for each Category and Year, and display the total value for each measure.

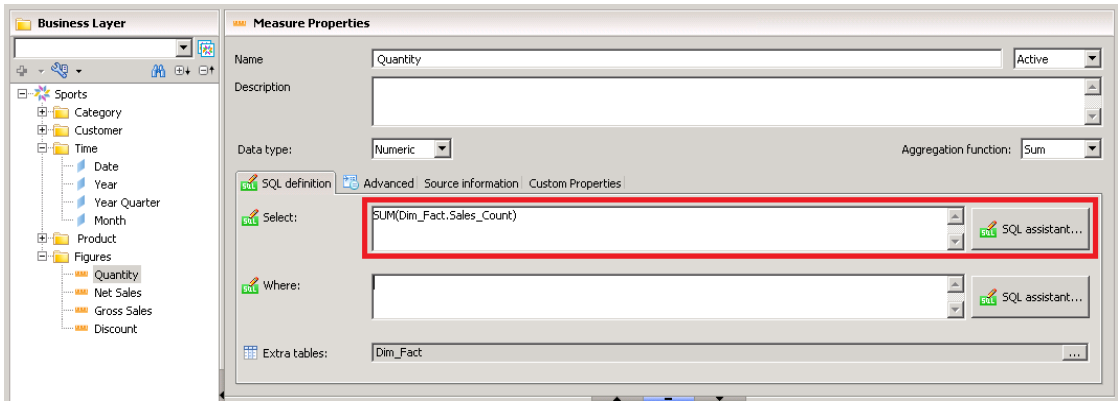
10. Click Cancel.

Part 2 – Modify the Measure Objects

In this activity you will add the SQL Sum function to the measures in the Sports universe. This will ensure that values can be grouped and aggregated in Dashboard Design queries. Without the Sum function, the Query Builder in Dashboard Design does not group records and sum values.

1. Open the Information Design Tool.
2. Open the Sports.blx business layer.
3. Click the Quantity measure.
4. Change the SQL definition Select: statement to

   SUM (Dim_Fact.Sales_Count)



5. Modify the remaining measure to use the SUM() function.

   SUM(Dim_Fact.Net_Sales)
   SUM(Dim_Fact.Gross_Sales)
   SUM(Dim_Fact.Gross_Sales-Dim_Fact.Net_Sales)

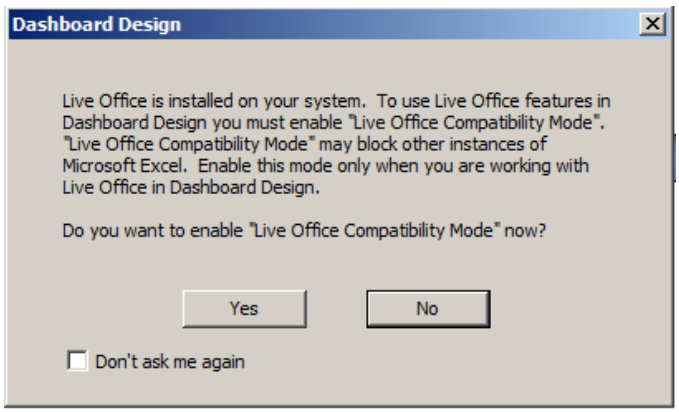
6. Click File > Save All…

7. Right click Sports.blx and choose Publish > To a Repository…

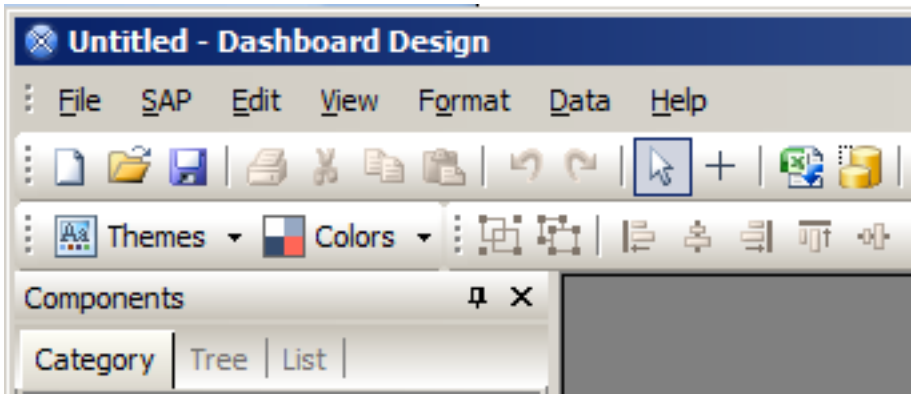
Part 3 – Create a Dashboard Column Chart

In this activity you will use a universe query as your dashboard's data source.

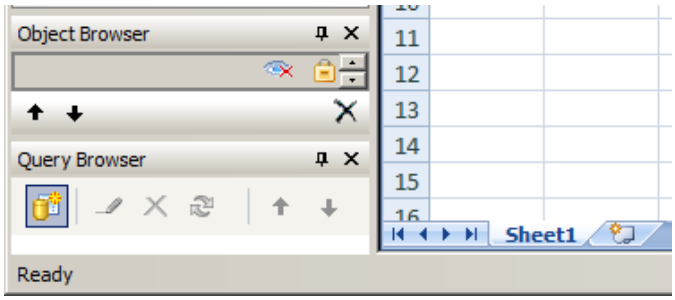
1. Open Dashboard Design.
2. Click No.



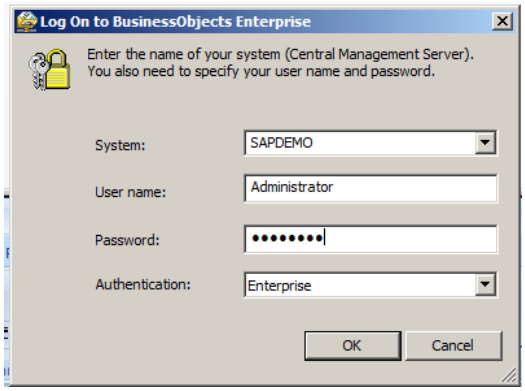
3. Click New.



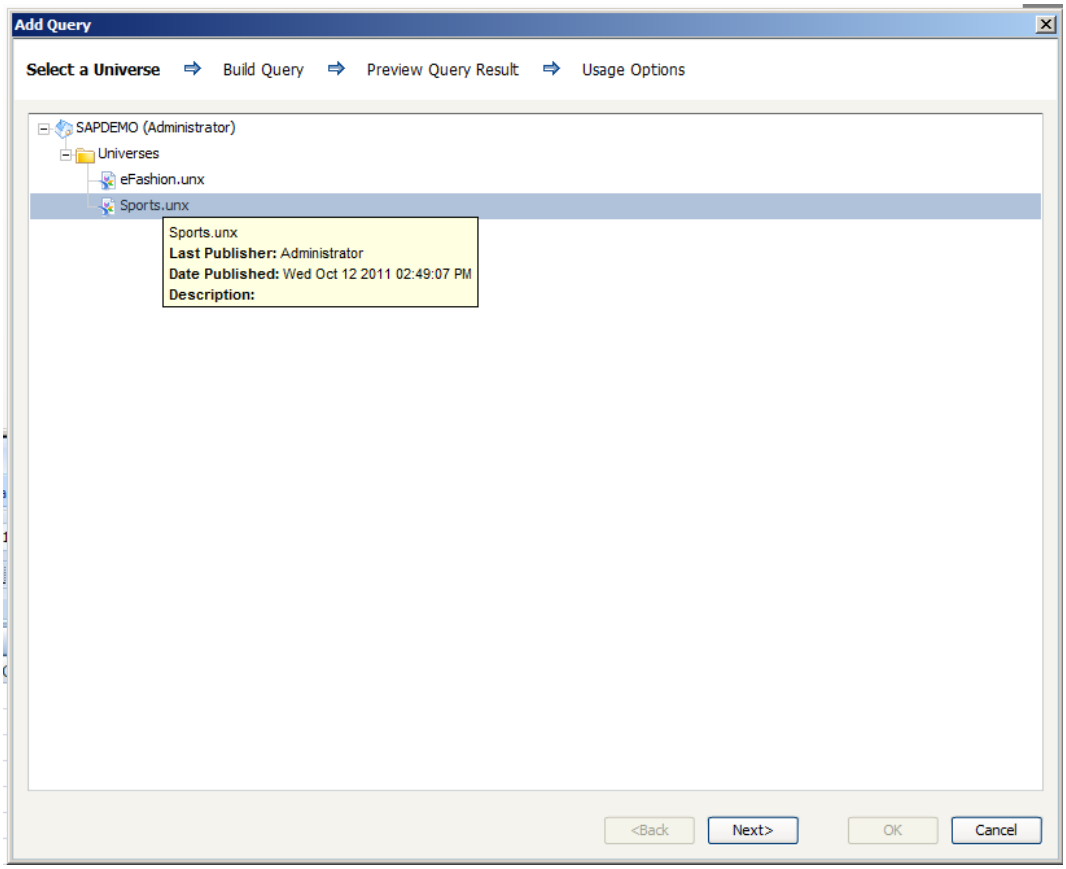
4. Click Add Query…



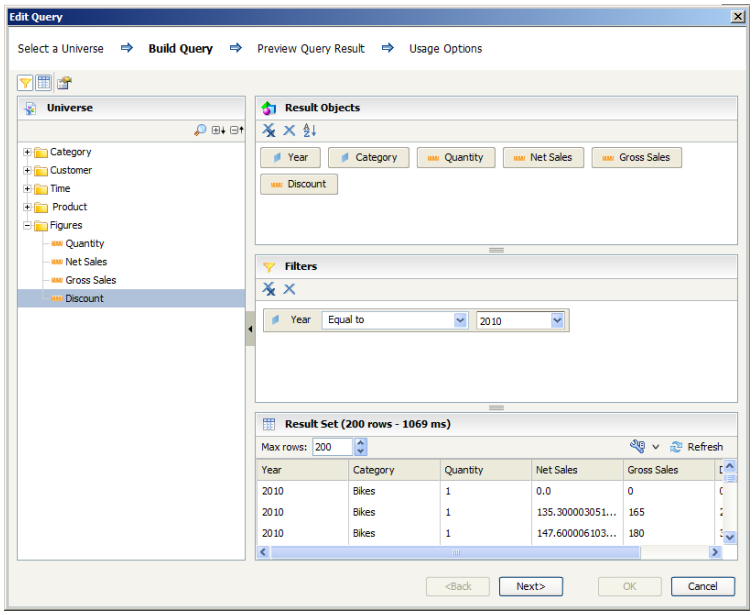
5. Type the password Welcome1 and click OK.



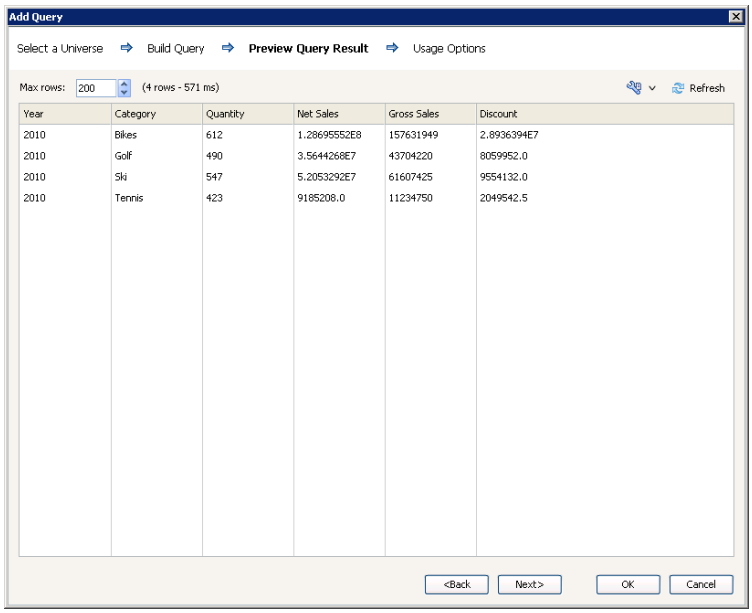
6. Click the Sports.unx universe and click Next.



7. Add Year, Category, Quantity, Net Sales, Gross Sales, and Discount.
8. Add the filter Year Equal to 2010 and click Next.

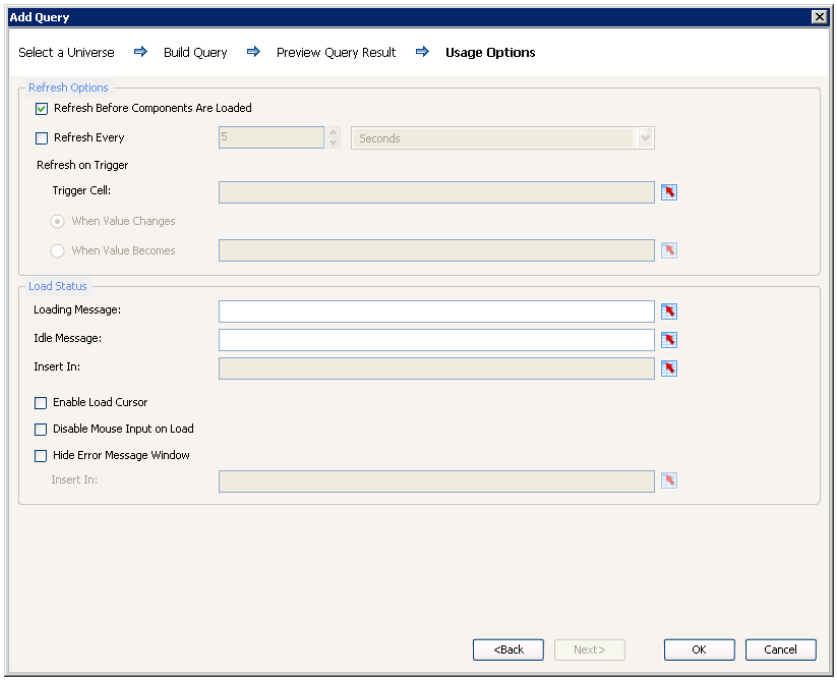


9. Click Next.



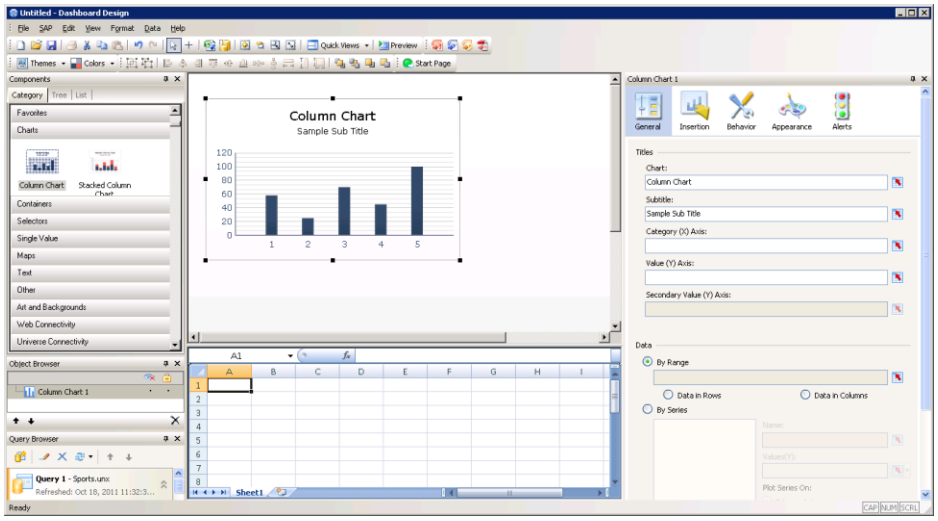
Note that the Dashboard Design Query Builder now aggregates the fact records correctly. This query can be used to create a variety of visualizations.

10. Click Next.

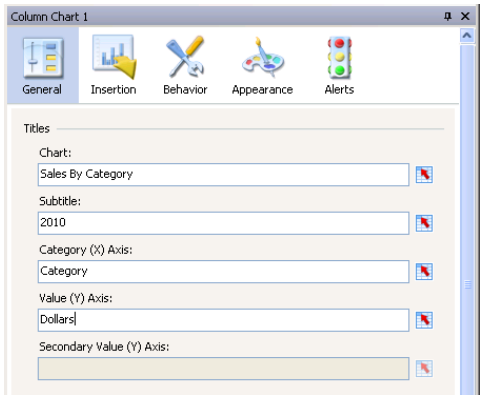


11. Click OK.

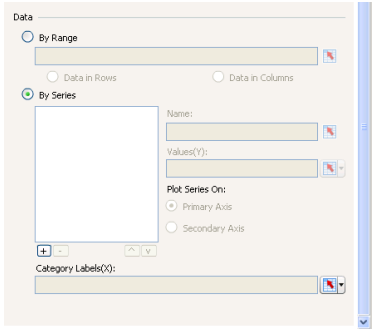
12. Drag a Column Chart onto the Canvas.



13. Enter the titles shown below.

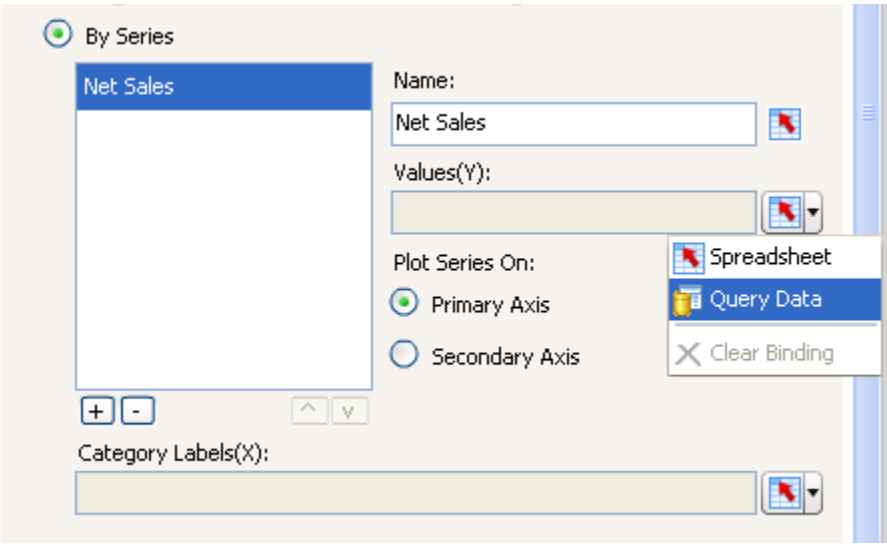


14. Scroll down and click By Series.



15. Click the + button to add a new series.
16. Type the name Net Sales.

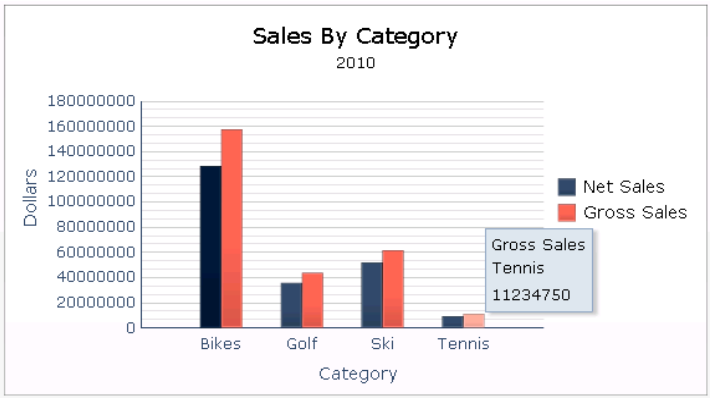
17. Click the menu button beside the Values(Y) field and click Query Data.



18. Click Net Sales.
19. Click OK.
20. Click + to add another series.
21. Type the name Gross Sales.
22. Click the menu button beside the Values(Y) field and click Query Data.
23. Click Gross Sales and click OK.
24. Click the menu button beside the Category Labels (X) field and click Query Data.
25. Click Category and click OK.
26. Resize the graph.
27. Click the Fit Canvas to Component button.

28. Click the Preview button.

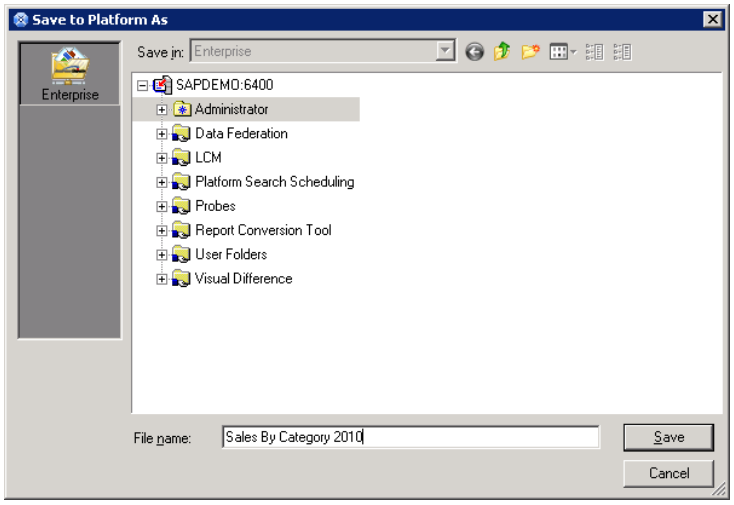
Your dashboard should look like the following image:



29. Click the Preview button again.
30. Click Save.
31. Type the name Sales by Category 2010.

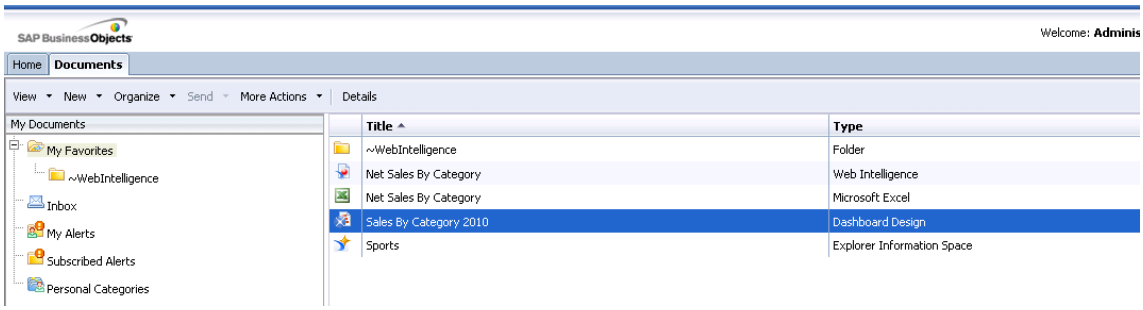
Part 4 – Save the Dashboard to the BI Platform

1. Click File > Save to Platform.
2. Type your login credentials.
3. Enter a suitable name and location for the Dashboard.

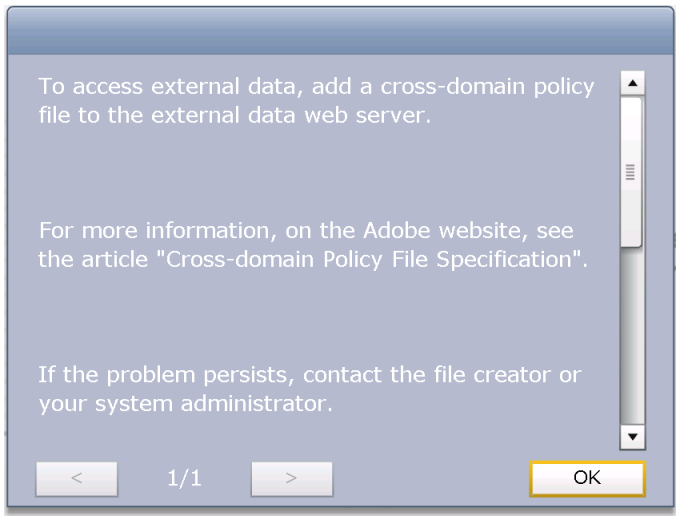


4. Click Save.
5. Login to the BI launch pad.
6. Click the Documents tab.

7. Navigate to the folder where you saved the Dashboard.



8. Double click the dashboard to view it.



Because SAP BusinessObjects Dashboards publishes to the Adobe flash format, your dashboards are subject to the Adobe security restrictions. To access data across domains you must create a cross domain policy file.

9. Copy and Paste the following into a text editor.

```
<?xml version="1.0"?>
<!DOCTYPE cross-domain-policy SYSTEM
"http://www.macromedia.com/xml/dtds/cross-domain-policy.dtd ">
<cross-domain-policy>
<allow-http-request-headers-from domain="*" headers="*"
secure="false" />
<allow-access-from domain="*" secure="false" />
</cross-domain-policy>
```

10. Save the file as crossdomain.xml in

For more information see 7.1.2.1 To create a cross-domain policy file in the user guide.

11.

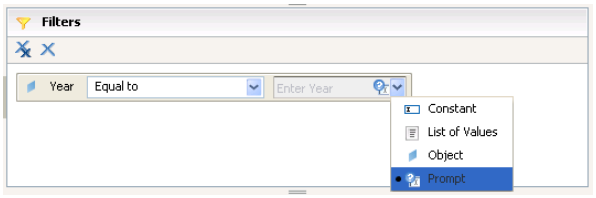
12.

13.

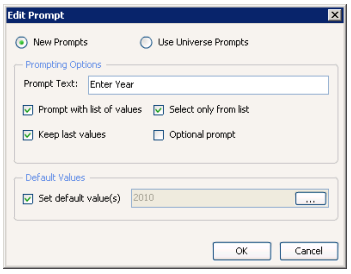
Solution 15 – Create an Interactive Dashboard

Part 1 – Create a Universe Query

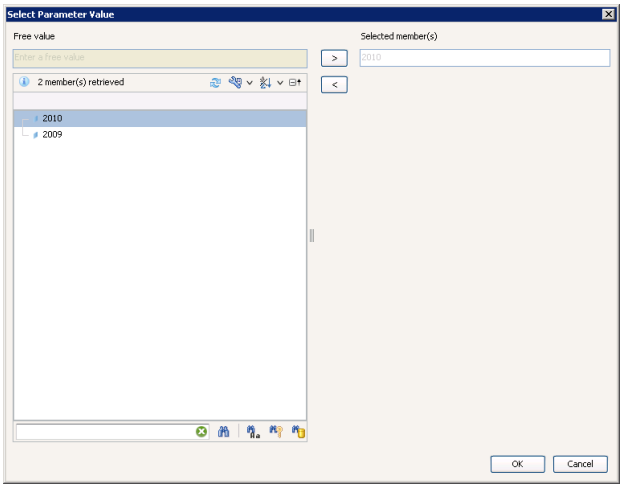
1. Open SAP BusinessObjects Dashboards.
2. Click File > New > New.
3. Click Add Query.
4. Select the Sports.unx universe.
5. Create a query including Category, Year, Net Sales, Gross Sales, and Discount
6. Drag the Year dimension to the Filters pane.



7. Select Prompt.
8. Check Set default value(s)

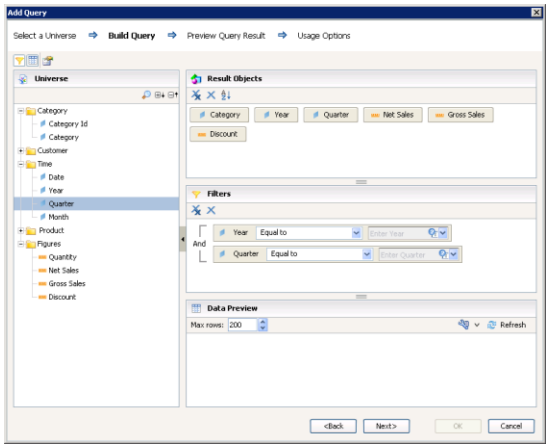


9. Click the … button
10. Choose 2010 as the default value.

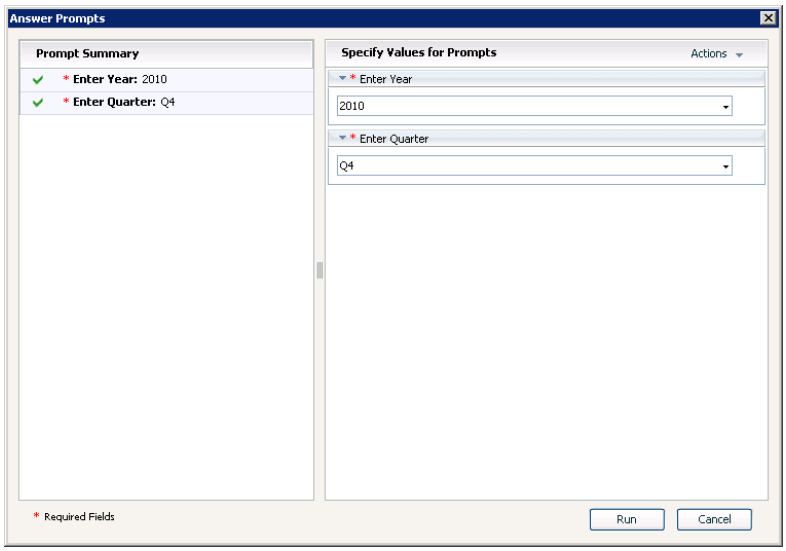


11. Click OK.
12. Click OK.
13. Drag Quarter to the Filters pane.

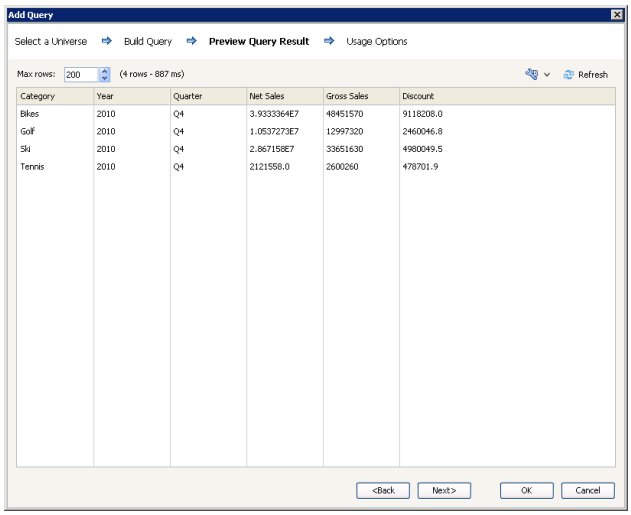
14. Choose Prompt and set the default value to Q4.



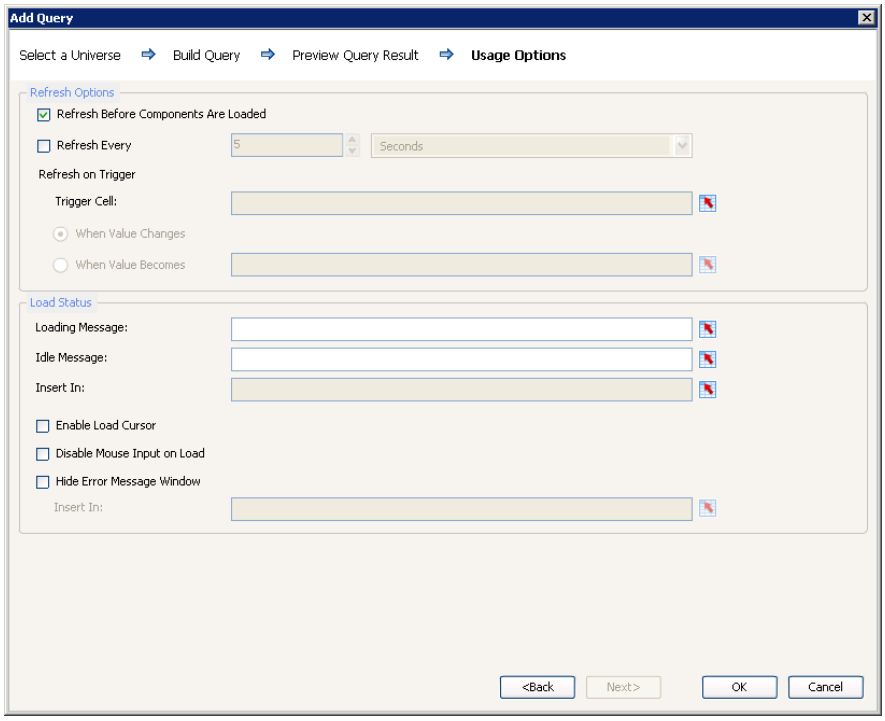
15. Click Next.



16. Click Run.



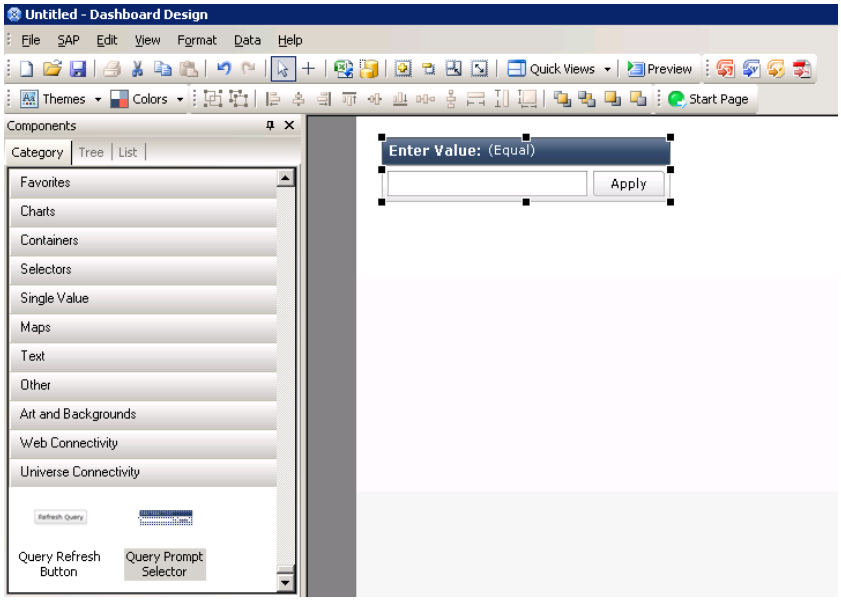
17. Click Next.



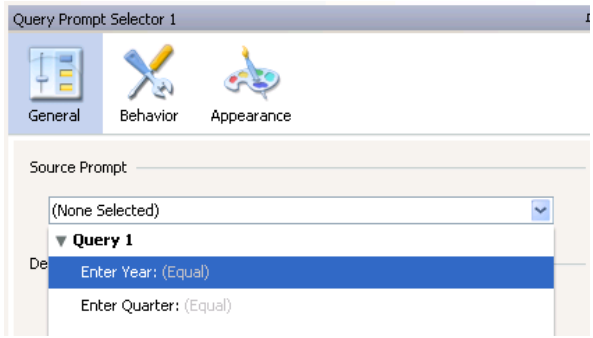
18. Click OK.

Part 2 – Add Query Prompts

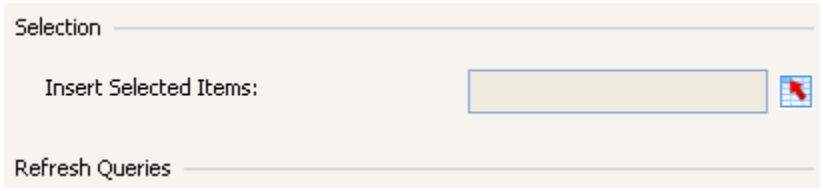
1. Click the Universe Connectivity tab.
2. Drag a Query Prompt Selector control onto the canvas. You will find the Query Prompt Selector under Components in Universe Connectivity.



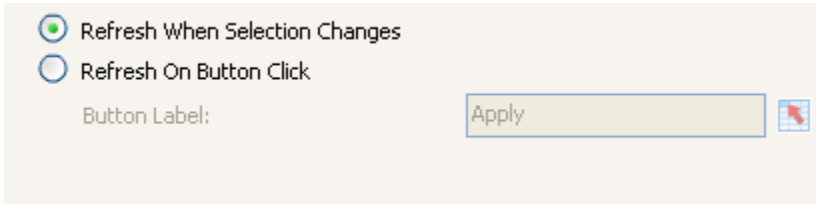
3. Click the Source Prompt drop down list and choose Enter Year: (Equal).



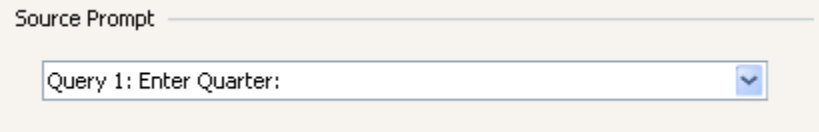
4. Click cell A1 in the Spreadsheet and type Year.
5. Click the Insert Selected Items: button.



6. Click cell B1 and click OK.
7. Scroll down and select Refresh When Selection Changes.



8. Drag another Query Prompt Selector component onto the canvas.
9. Select Enter Quarter: (Equal) in the Source Prompt drop down list.



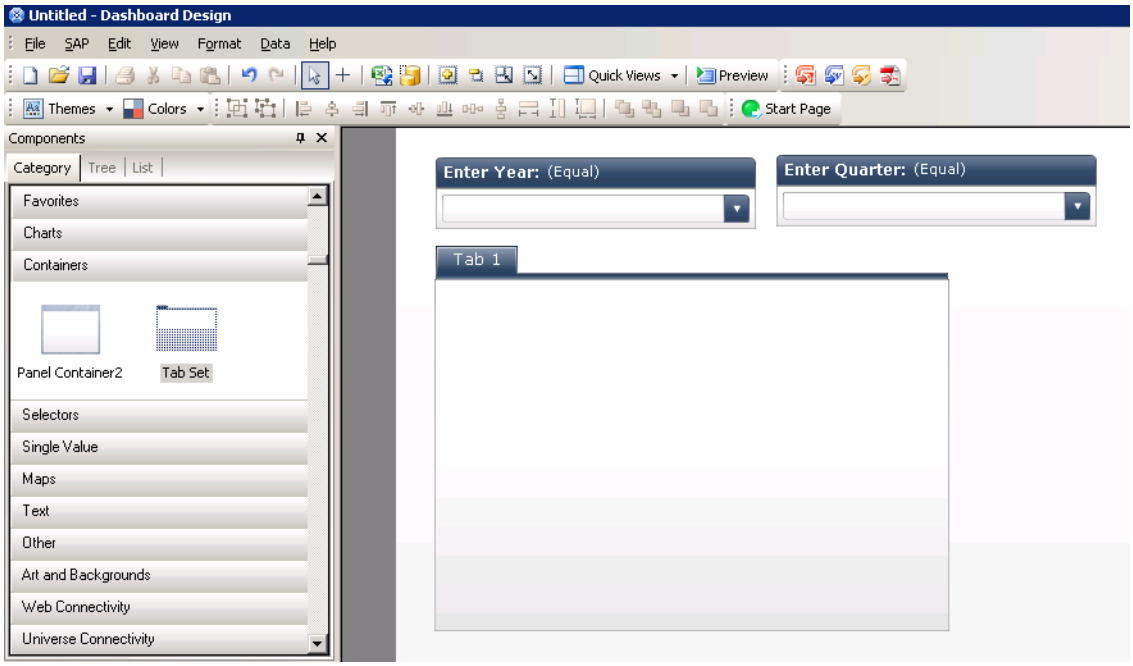
10. Repeat steps 4 to 7 to configure the Query Prompt Selector.
11. Click cell A3 and type Subtitle.
12. Click cell B3 and enter the formula

    =B1 & " – " & B2.

    This formula will create a subtitle based on the selection in the Query Prompt Selectors. For example "2010 – Q4".

Part 3 – Add a Tab Control

1. Click Containers.
2. Scroll down.
3. Drag a Tab Set onto the canvas.



4. Click the Tab 1 and click the + button.

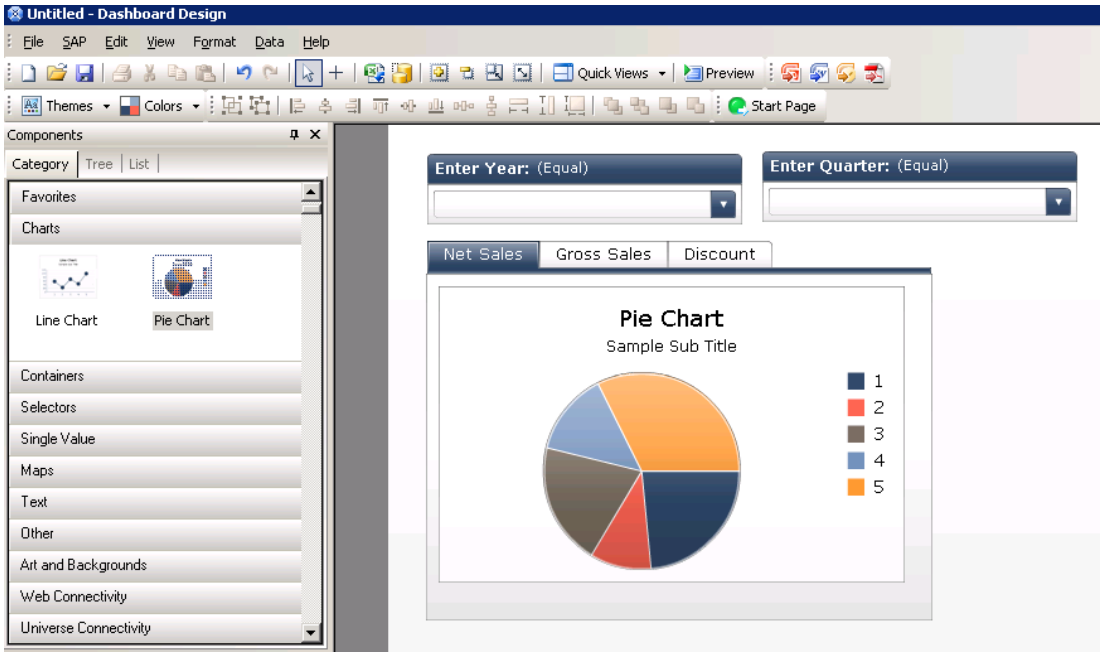
5. Type Net Sales and click OK.

6. Click the + button.
7. Type Gross Sales and click OK.
8. Click the + button again and add a Discount tab.
9. Click Tab 1.
10. Click the – button.

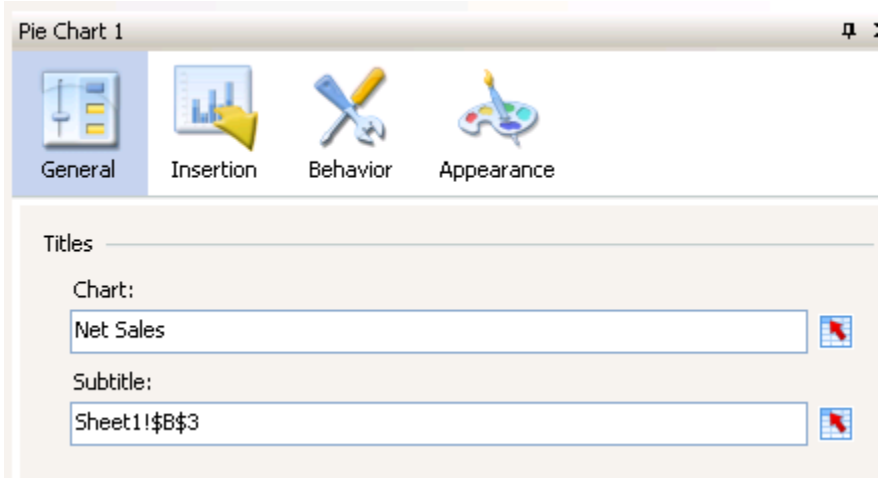
Part 4 – Add a Net Sales Pie Chart

1. Click the Net Sales tab.

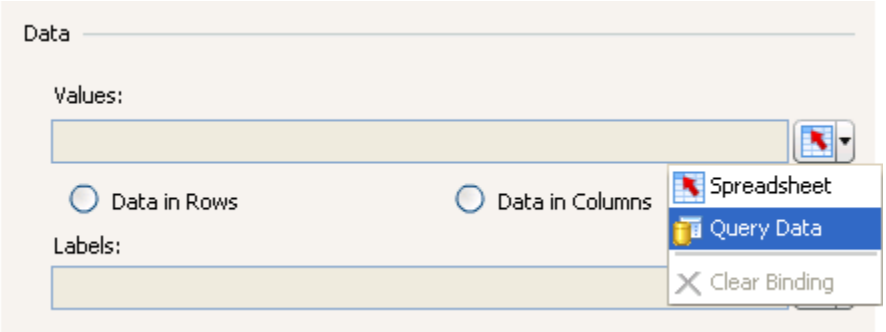
2. Drag a Pie Chart into the Net Sales tab.



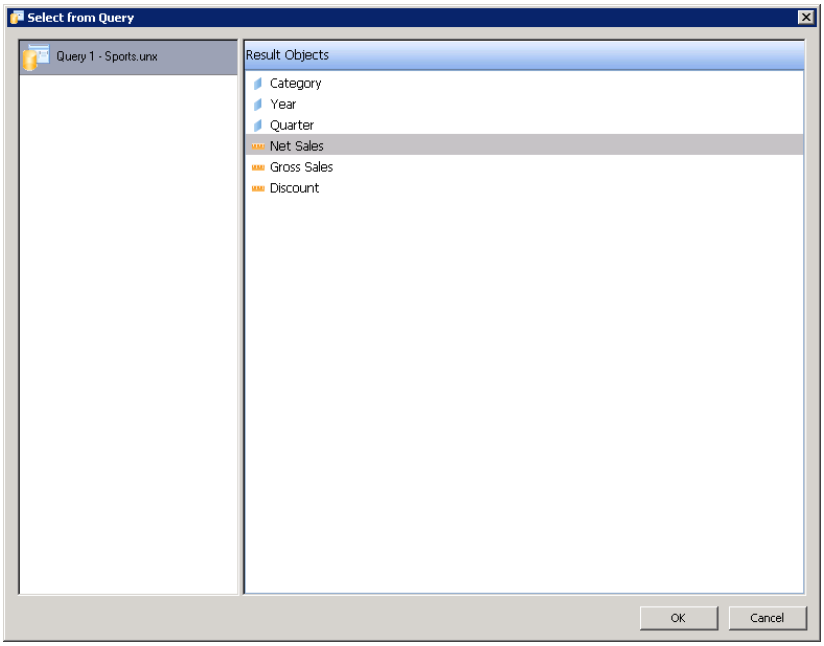
3. Click the Pie Chart.
4. Change the chart title to Net Sales.
5. Click the down-arrow to the right of the Subtitle field.
6. Click cell B3 and click OK.



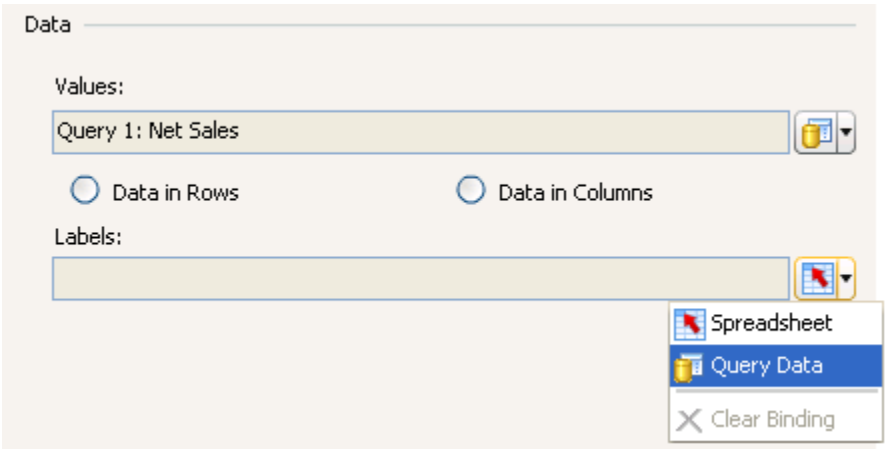
7. Click the down-arrow on the button to the right of the data Values field.



8. Click Query Data.
9. Click Net Sales and click OK.



10. Click the down-arrow to the right of the Labels field.



11. Click Query Data.
12. Click Category and click OK.
13. Click Preview.
14. Type the password Welcome1 if required.
15. Test the Query Prompt Selectors by choosing different year and quarter values.
16. Click Preview to return to design mode.

Part 5 – Add a Gross Sales Pie Chart

1. Right-click the Net Sales Pie Chart and choose Copy.
2. Click the Gross Sales tab.
3. Click inside the Gross Sales control to select it.

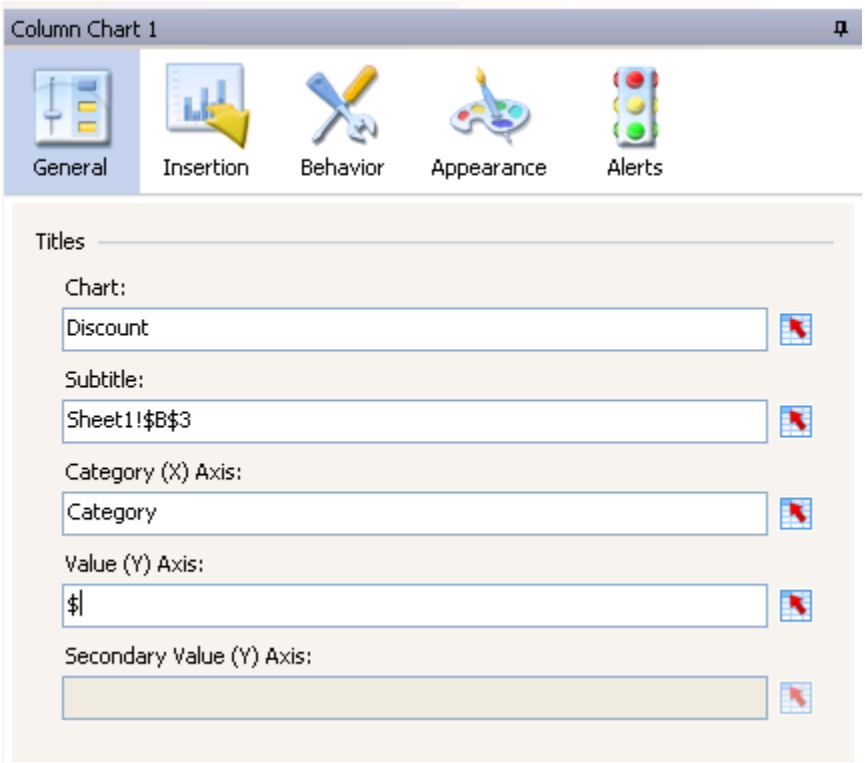
4. Right-click in the Gross Sales control and choose Paste.
5. Repeat the steps from the previous activity to configure the chart to display Gross Sales.
6. Click Preview.
7. Test the Query Prompt Selector controls and switch between the tabs.

   Notice that changing the prompt values updates both pie charts.

8. Click Preview to return to design mode.

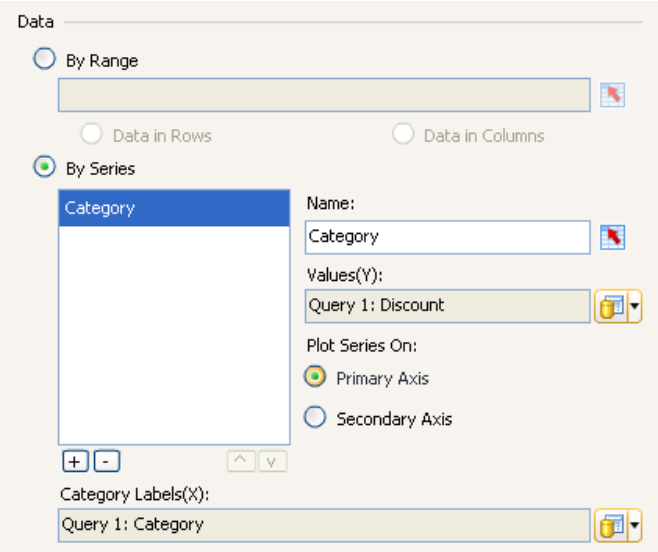
Part 6 – Create a Discount Column Chart

1. Click the Discount Tab.
2. Drag a Column chart into the Discount tab control.
3. Enter title values.



4. Click the By Series option.
5. Click the + button.
6. Type Category in the Name field.
7. Add the Discount measure in the Values(Y) field.

8. Add the Category Dimension in the Category Labels(x) field.



9. Click Preview.

10. Test the dashboard.

11. Click Preview to return to design mode.

Part 7 – Format the Canvas and Apply a Theme

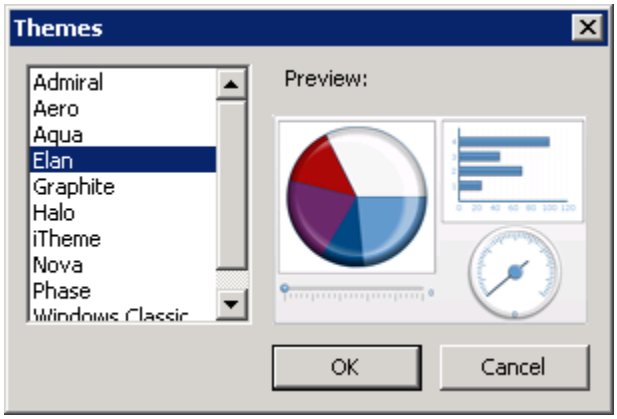
1. Resign the Query Prompt Selectors.
2. Use the Alignment toolbar buttons to position the controls.

3. Click the Fit Canvas to Components button.

4. Click the Increase Canvas button to add a border.

5. Click Format > Theme.

6. Select a Theme and click OK.

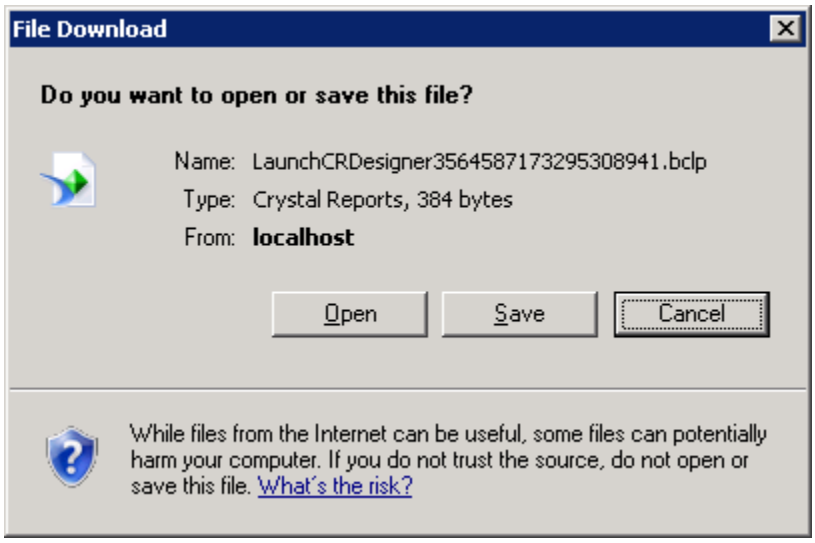


7. Click Preview and test the Dashboard.

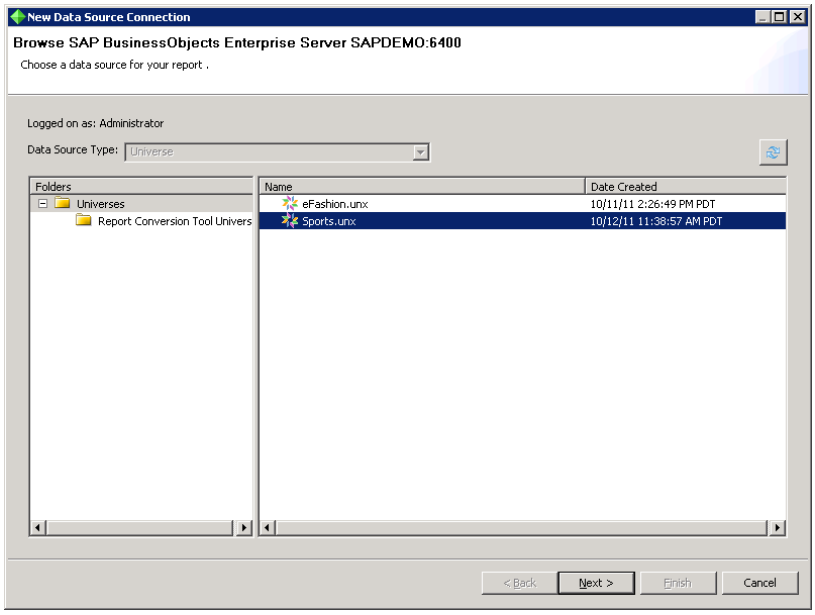
Solution 16 - Create a Crystal Report using Crystal Reports for Enterprise

1. Log into the BI Launch pad.
2. Click Crystal Reports for Enterprise in My Applications.

3. Click Open to launch the Crystal Reports for Enterprise application.

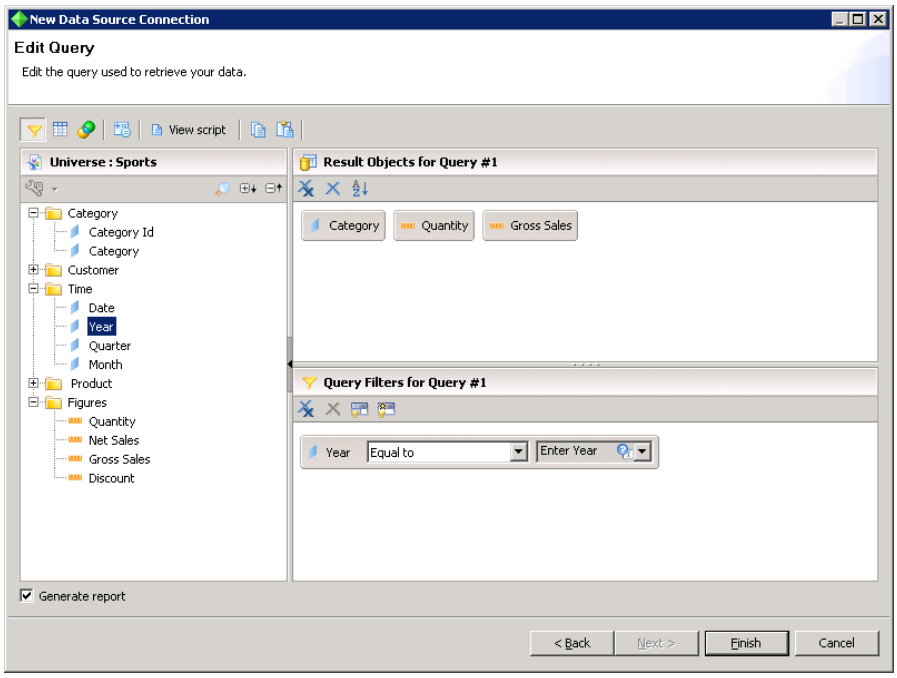


4. Click Sports.unx and click Next.

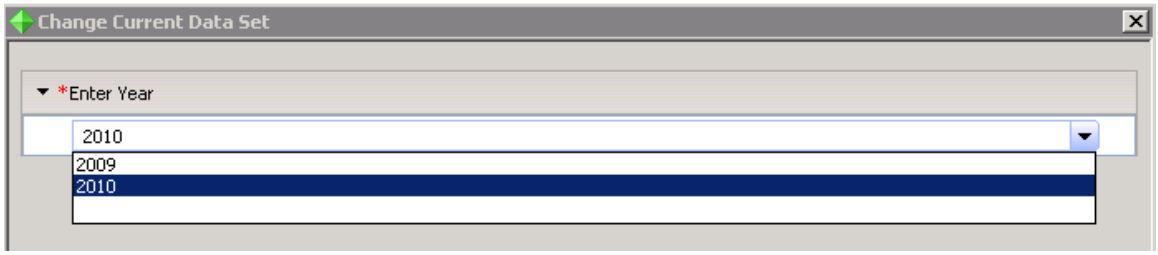


5. Add Category, Quantity, and Gross Sales to the Results Objects pane.
6. Add a Year filter which prompts the report consumer to select a year.

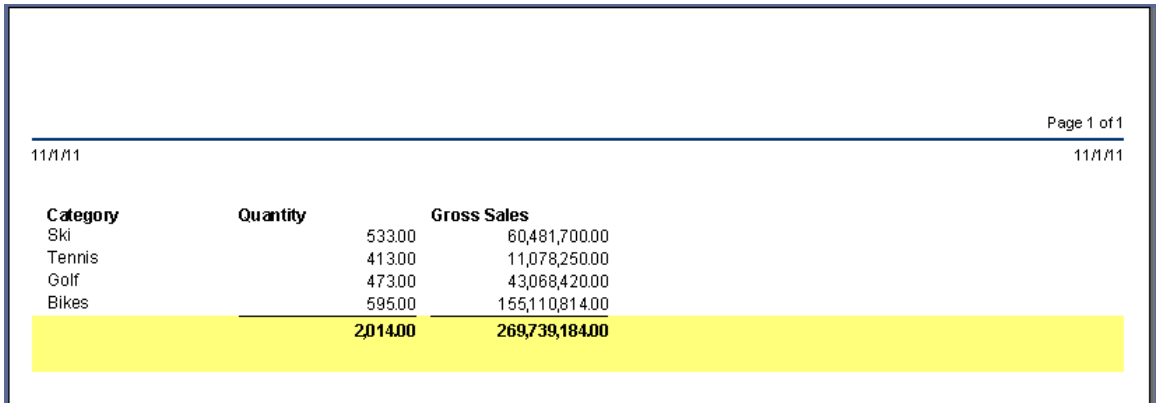
7. Click Finish.



8. Select the year 2010 and click OK.



9. Your report should look like the image below.



Page 1 of 1

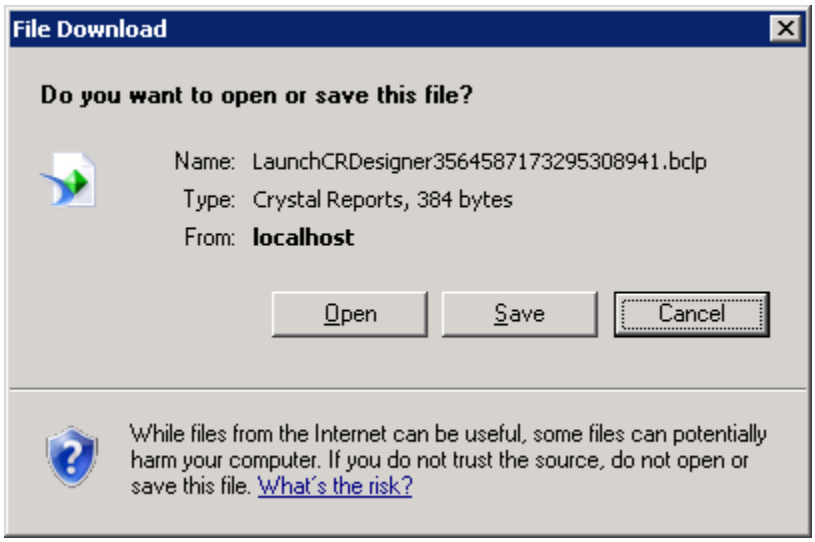
11/1/11 11/1/11

Category	Quantity	Gross Sales
Ski	533.00	60,481,700.00
Tennis	413.00	11,078,250.00
Golf	473.00	43,068,420.00
Bikes	595.00	155,110,814.00
	2,014.00	**269,739,184.00**

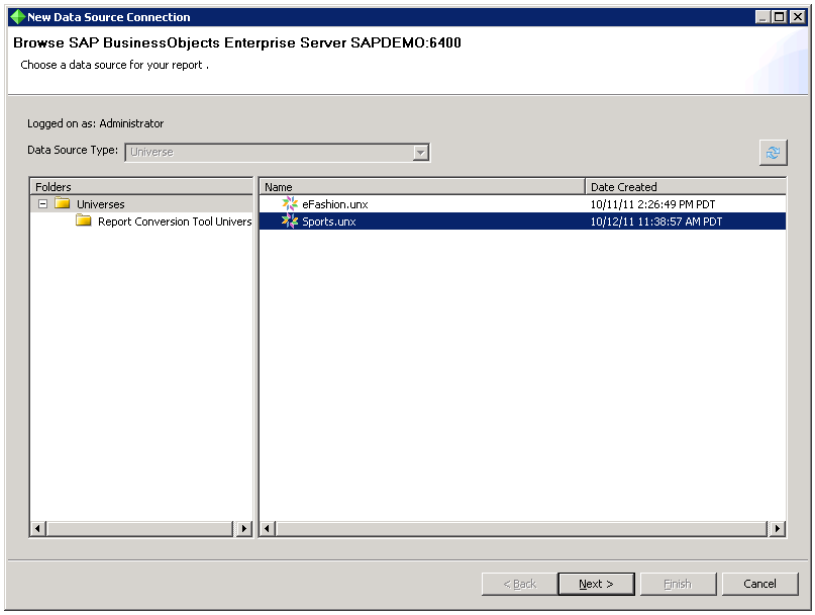
Solution 17 – Create a Crystal Report with a Crosstab

1. Log into the BI Launch pad.
2. Click Crystal Reports for Enterprise in My Applications.

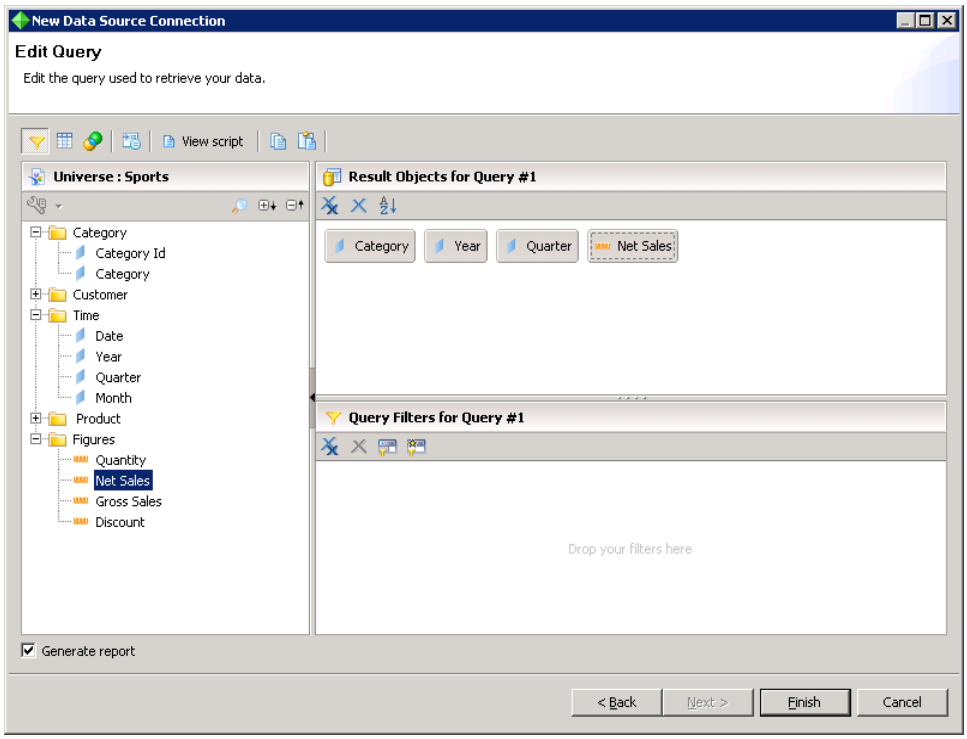
3. Click Open to launch the Crystal Reports for Enterprise application.



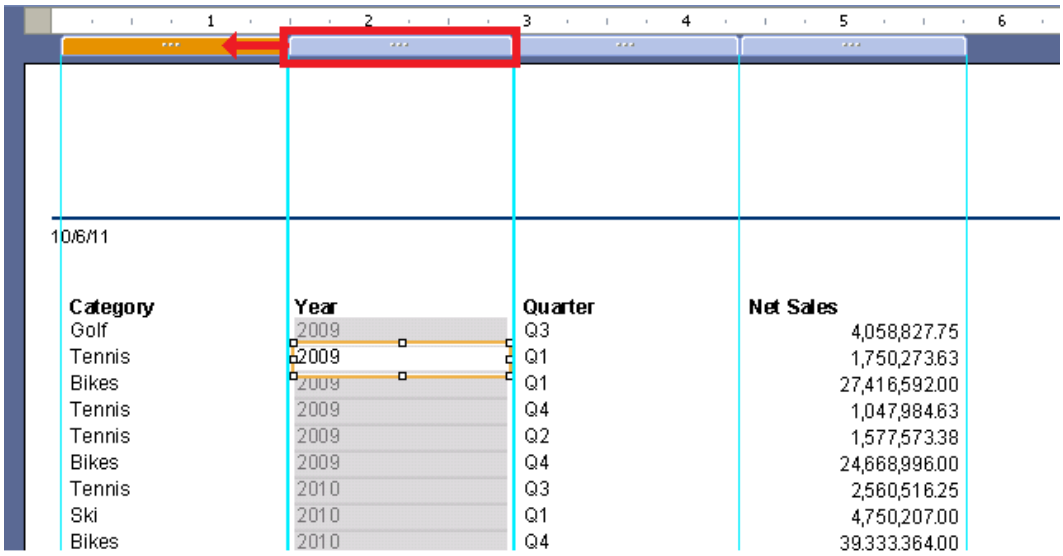
4. Click Sports.unx and click Next.



5. Add Category, Year, Quarter, and Gross Sales to the Results Objects pane.

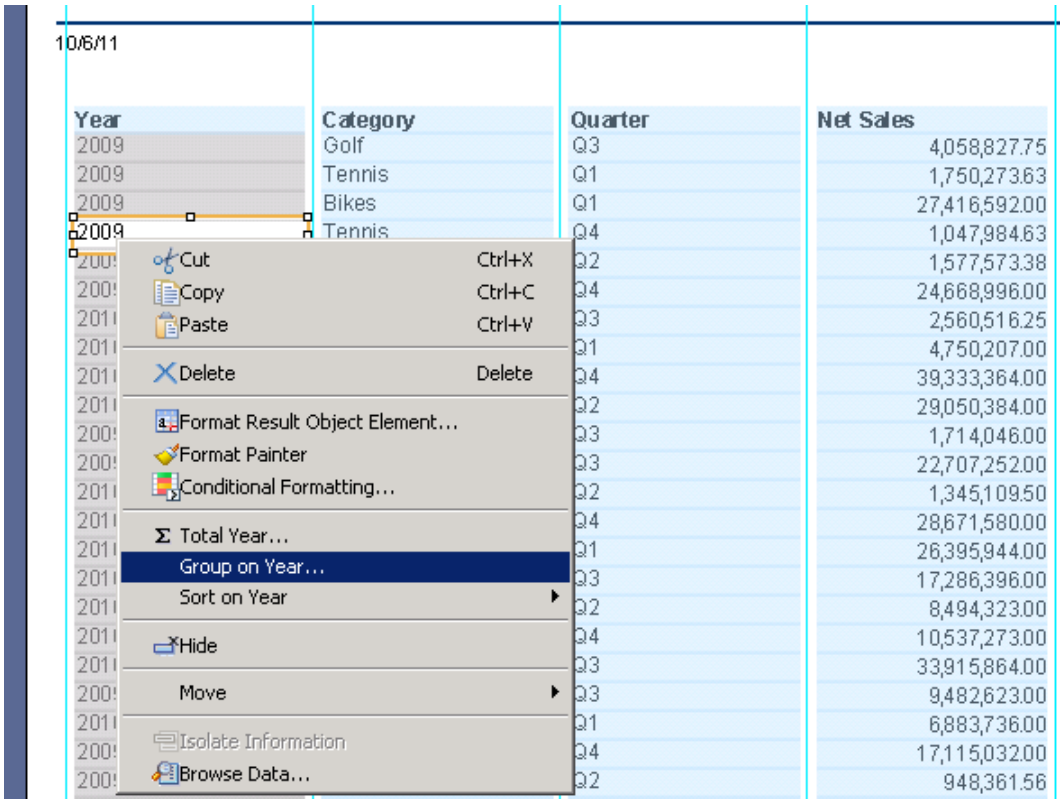


6. Click Finish.
7. Click any value in the year column to select it.
8. Click and drag the Year smart guideline and drag it over the Category smart guideline.



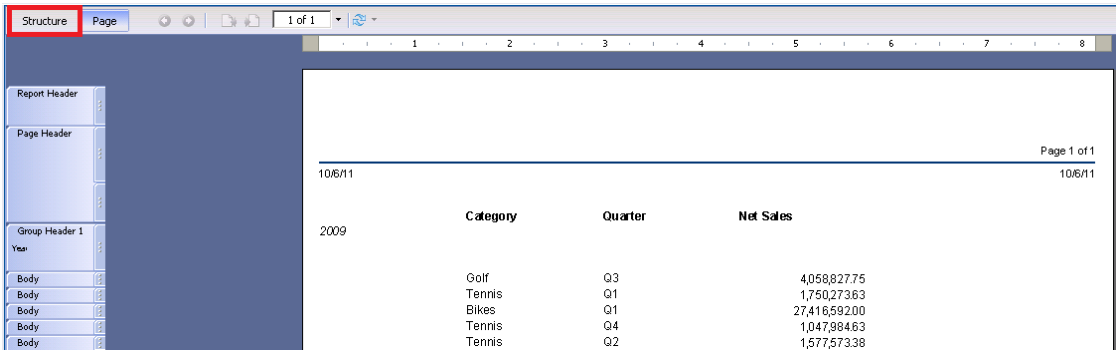
This will switch the order of the Year and Category columns in the report.

9. Right-click any value in the year column and choose Group on Year…

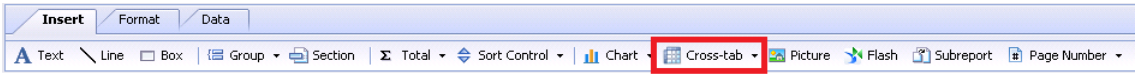


10. Click any value in the Year column and press the Delete key.

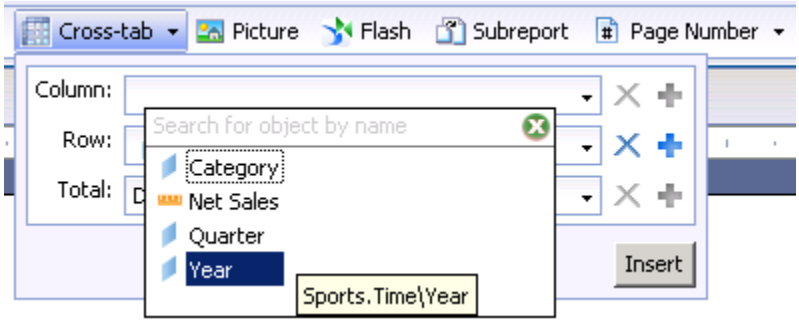
11. Click Structure.



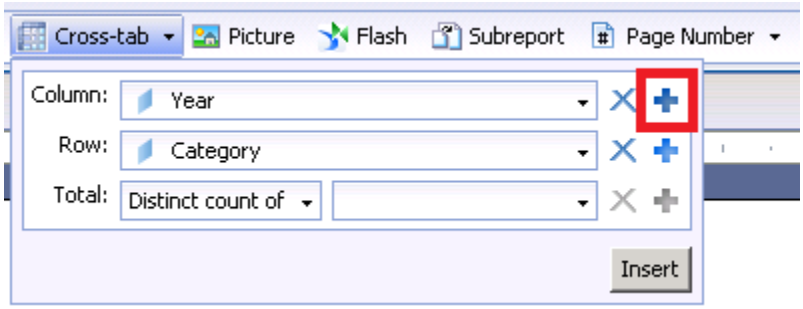
12. Click Cross-tab.



13. Click the Column drop-down and choose Year.

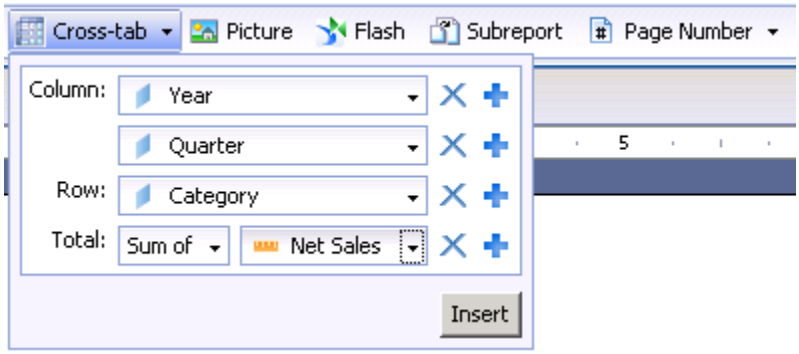


14. Click the + to the right of the Column field.

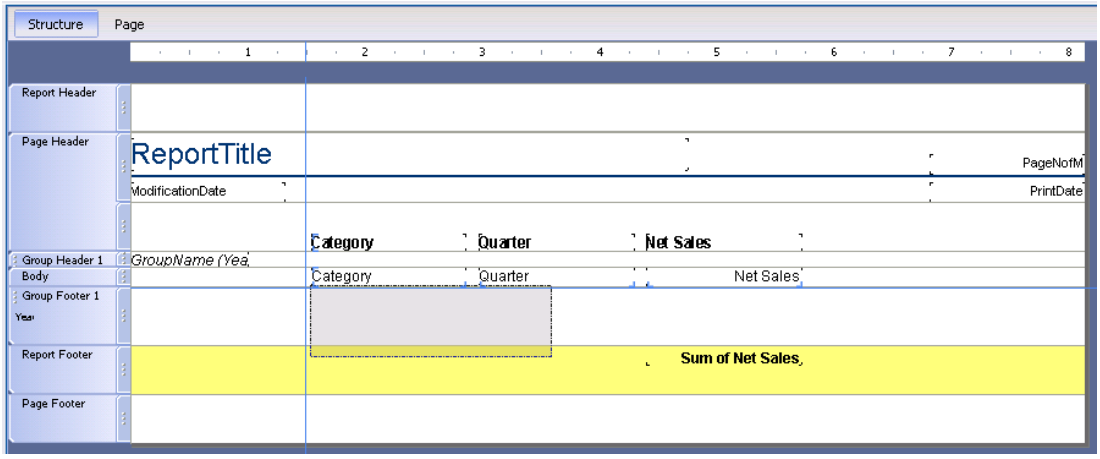


15. Choose Quarter in the second column drop-down.

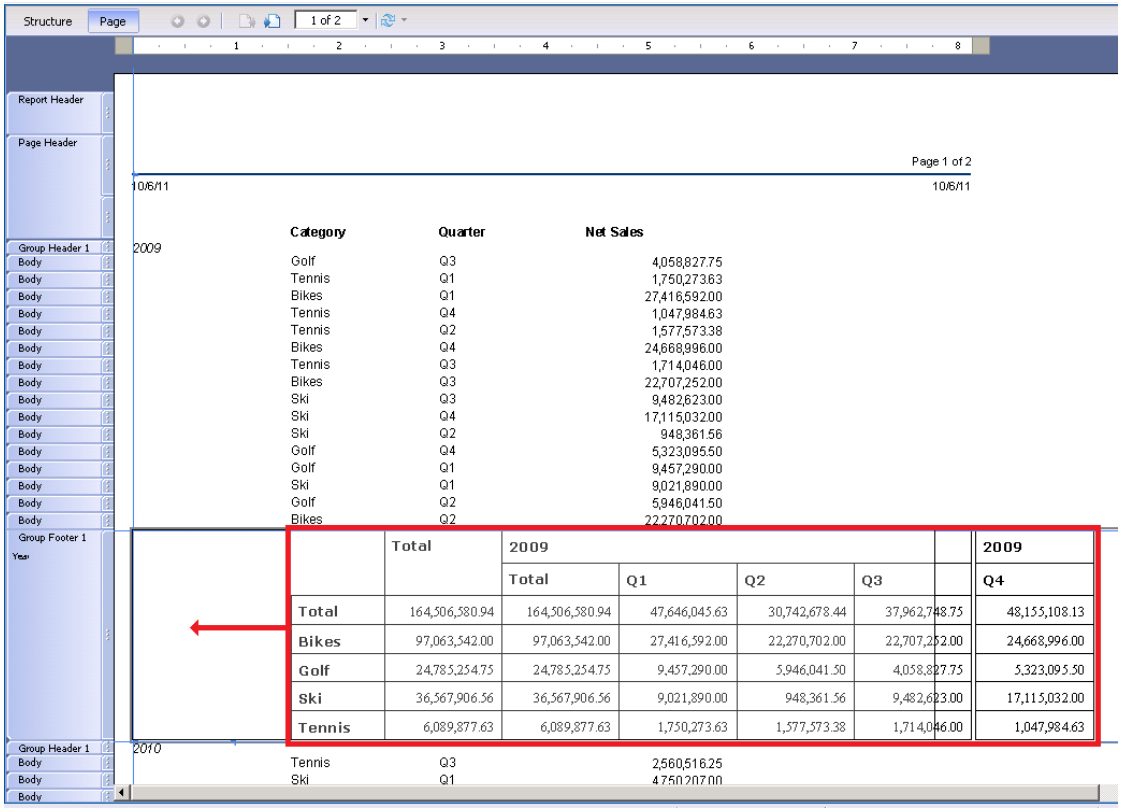
16. Change the total to Sum of Net Sales and click Insert.



17. Click in the Group Footer section of the report to place the Crosstab.



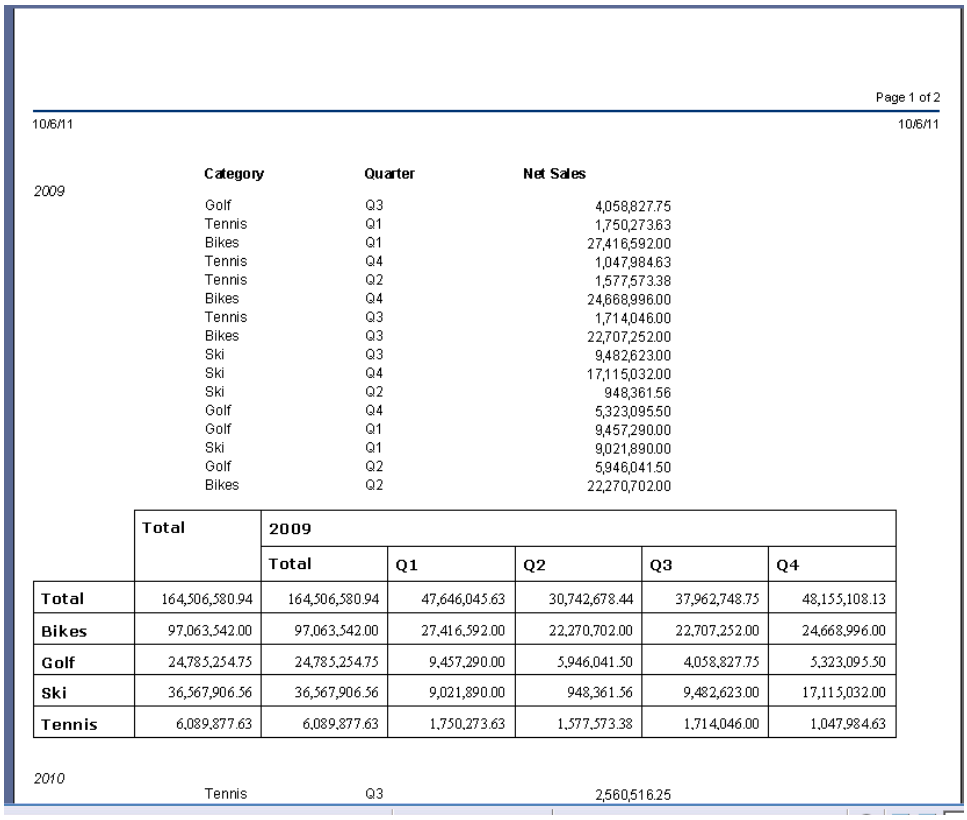
18. Click Page.
19. Click and drag to move the crosstab so that it will fit on a single page.



Notice that a gridline appears as you drag the crosstab to the left.

20. Click and drag the Group Footer selector to make the group footer larger.

21. Click and drag the Crosstab to add white space around it.



Page 1 of 2

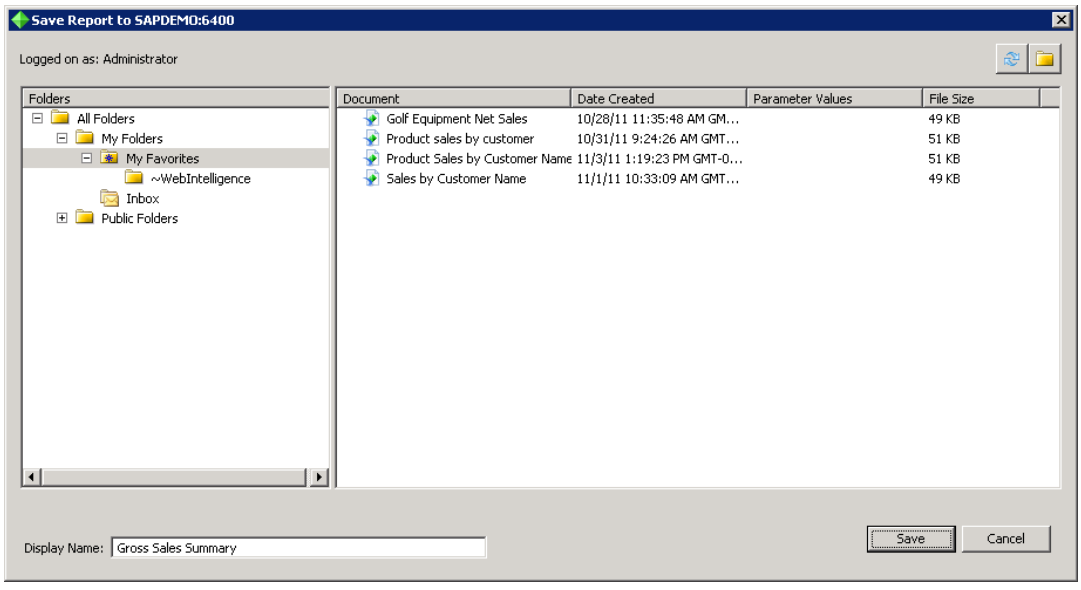
10/6/11 10/6/11

	Category	Quarter	Net Sales
2009			
	Golf	Q3	4,058,827.75
	Tennis	Q1	1,750,273.63
	Bikes	Q1	27,416,592.00
	Tennis	Q4	1,047,984.63
	Tennis	Q2	1,577,573.38
	Bikes	Q4	24,668,996.00
	Tennis	Q3	1,714,046.00
	Bikes	Q3	22,707,252.00
	Ski	Q3	9,482,623.00
	Ski	Q4	17,115,032.00
	Ski	Q2	948,361.56
	Golf	Q4	5,323,095.50
	Golf	Q1	9,457,290.00
	Ski	Q1	9,021,890.00
	Golf	Q2	5,946,041.50
	Bikes	Q2	22,270,702.00

	Total	2009				
		Total	Q1	Q2	Q3	Q4
Total	164,506,580.94	164,506,580.94	47,646,045.63	30,742,678.44	37,962,748.75	48,155,108.13
Bikes	97,063,542.00	97,063,542.00	27,416,592.00	22,270,702.00	22,707,252.00	24,668,996.00
Golf	24,785,254.75	24,785,254.75	9,457,290.00	5,946,041.50	4,058,827.75	5,323,095.50
Ski	36,567,906.56	36,567,906.56	9,021,890.00	948,361.56	9,482,623.00	17,115,032.00
Tennis	6,089,877.63	6,089,877.63	1,750,273.63	1,577,573.38	1,714,046.00	1,047,984.63

2010			
	Tennis	Q3	2,560,516.25

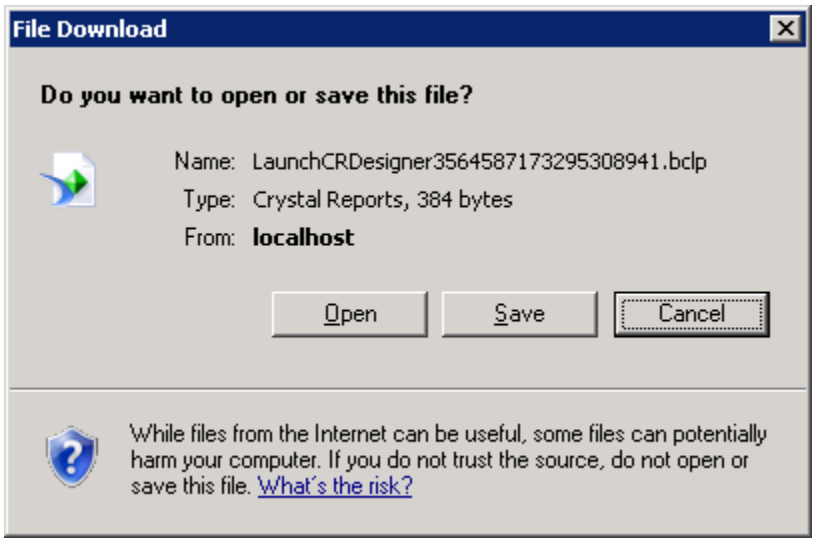
22. Click Save and save the report in My Favorites as Net Sales Summary.



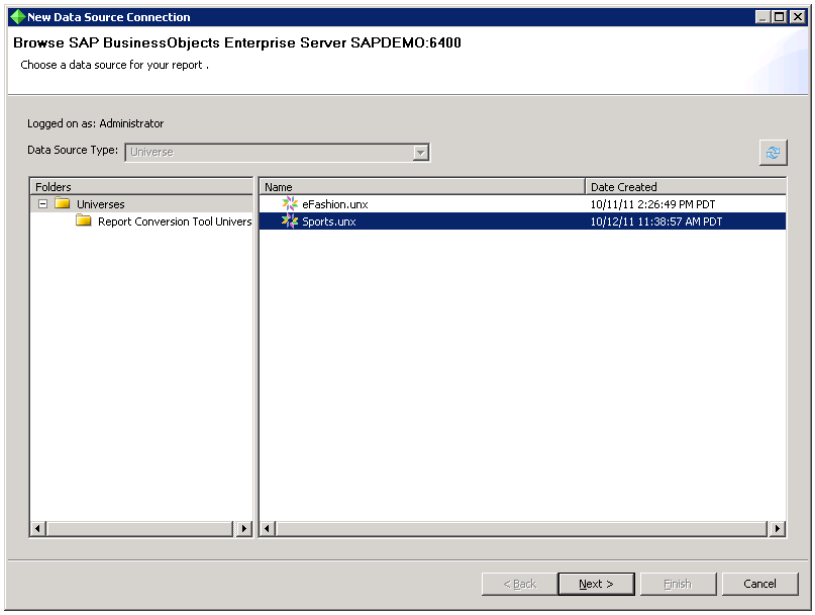
Solution 18 – Create a Simple Alert

1. Log into the BI Launch pad.
2. Click Crystal Reports for Enterprise in My Applications.

3. Click Open to launch the Crystal Reports for Enterprise application.



4. Click Sports.unx and click Next.



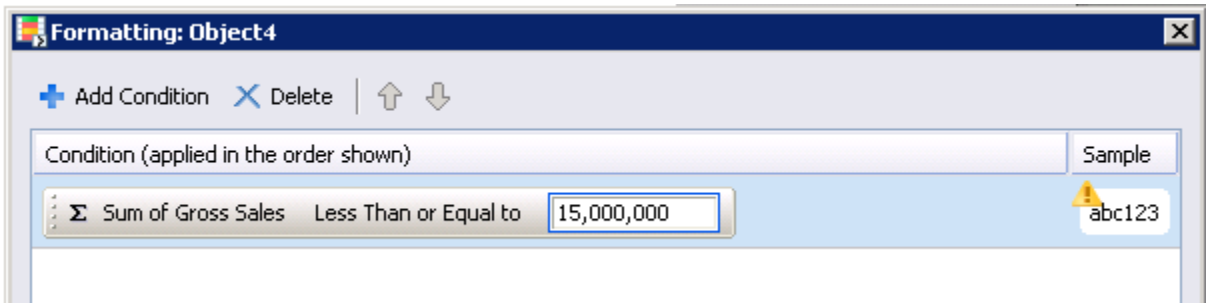
5. Add Year, Month, Month Number, Category, and Gross Sales to the Results Objects pane.

6. Right-click a year value and choose Group on Year…

7. Right-click a Month number and choose Sort on Month number > Ascending.
8. Right-click a Month number and choose Group on Month number…
9. Right-click a Month number and choose Delete.
10. Right-click a Gross Sales value and choose Total Gross Sales…

11. Click Insert.
12. Right-click any Total Gross Sales value and choose Conditional Formatting…
13. Click Add Condition.
14. Change the condition to:

    Sum of Gross Sales Less Than or Equal to 15,000,000

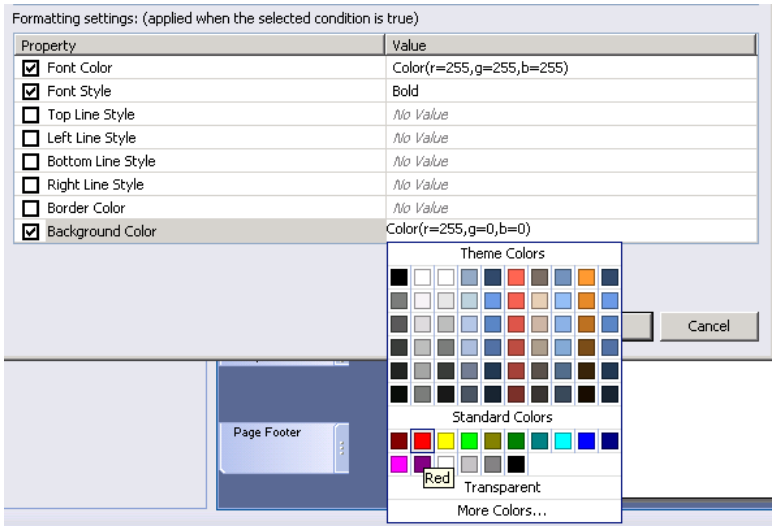


15. Change the following properties:

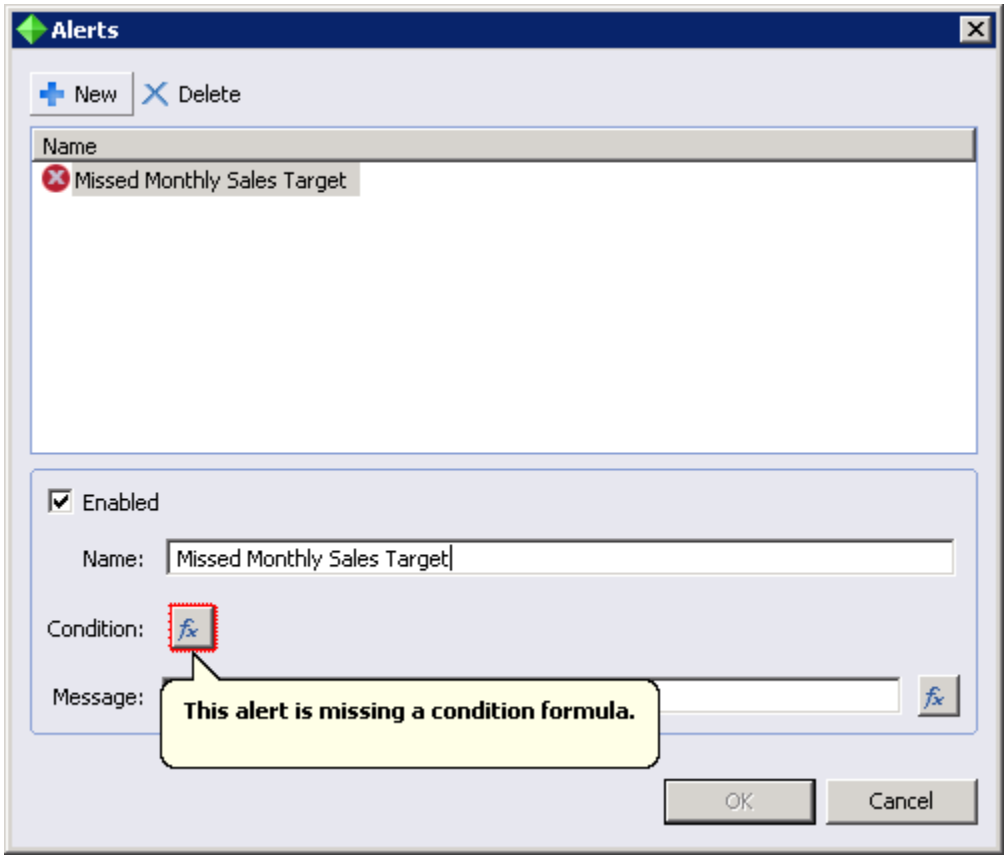
    Font Color (White)

    Font Style (Bold)

    Background Color (Red)



16. Click OK.
17. Click Save and type the name Monthly Gross Sales.
18. Click Data > Alerts…
19. Click New.

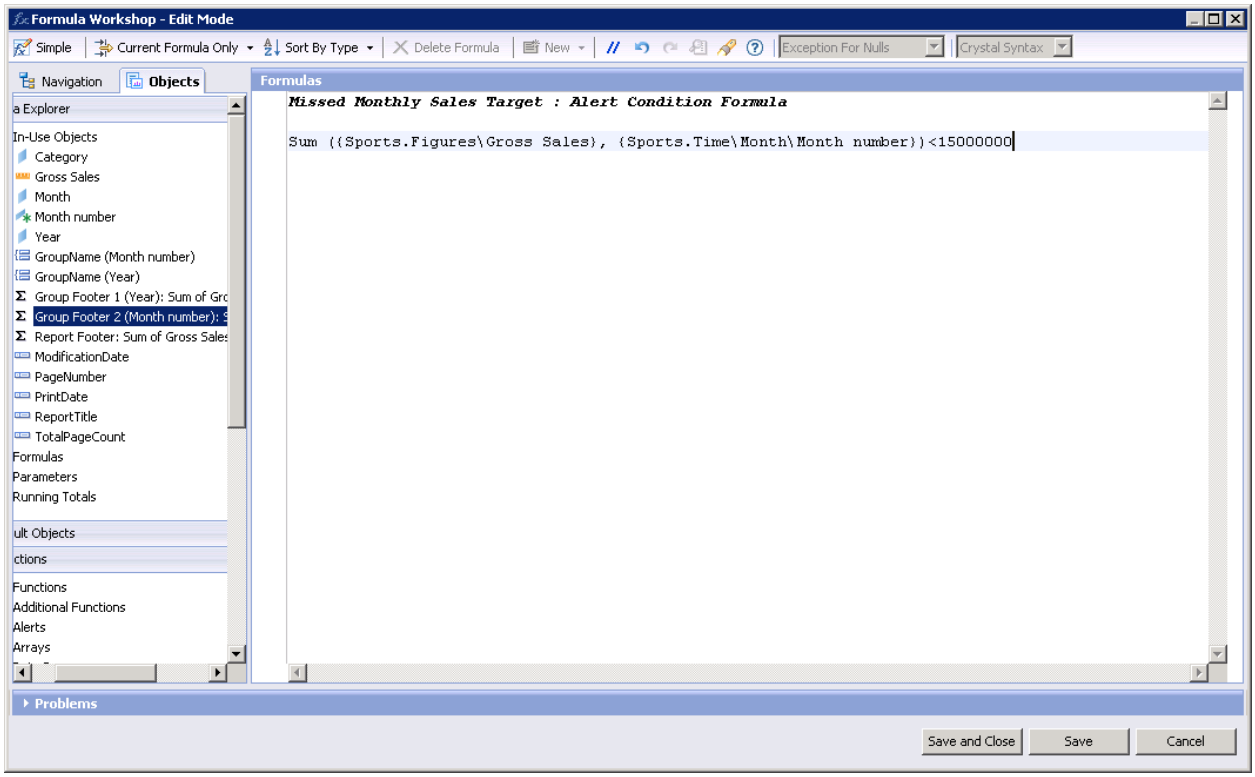


20. Type the name Missed Monthly Sales Target.

21. Click the Condition (*fx*).

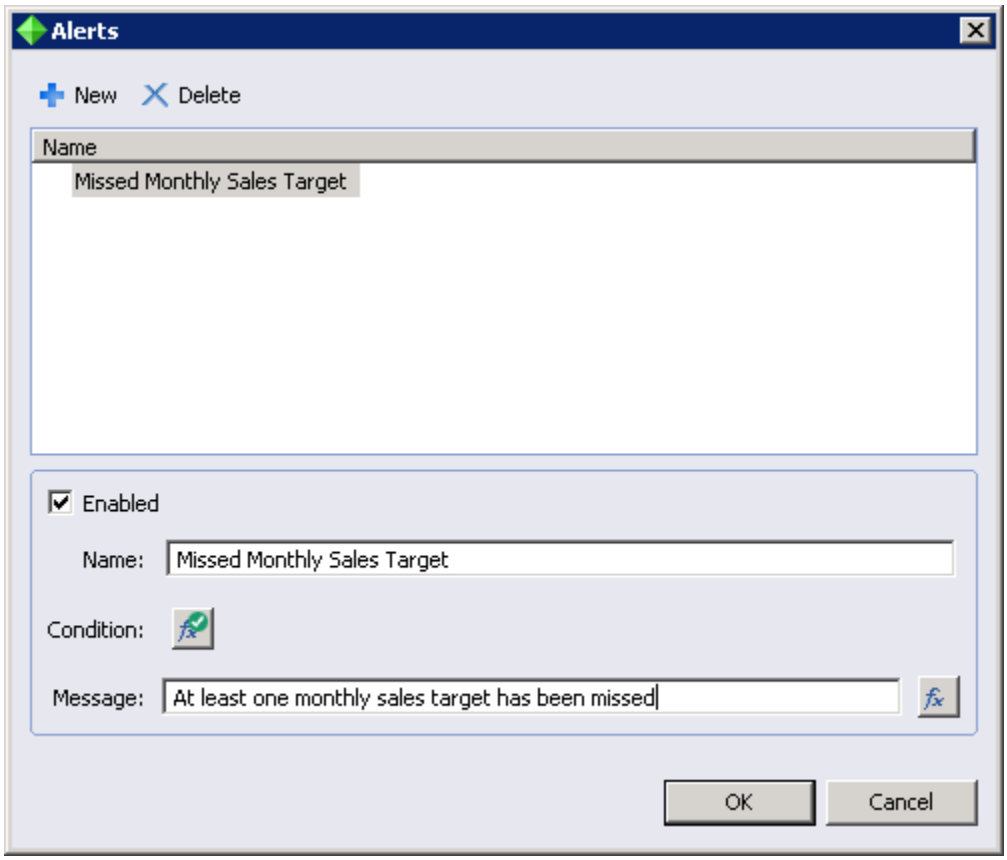
22. Double-click Group Footer 2 (Month number).

23. Type < 15000000.



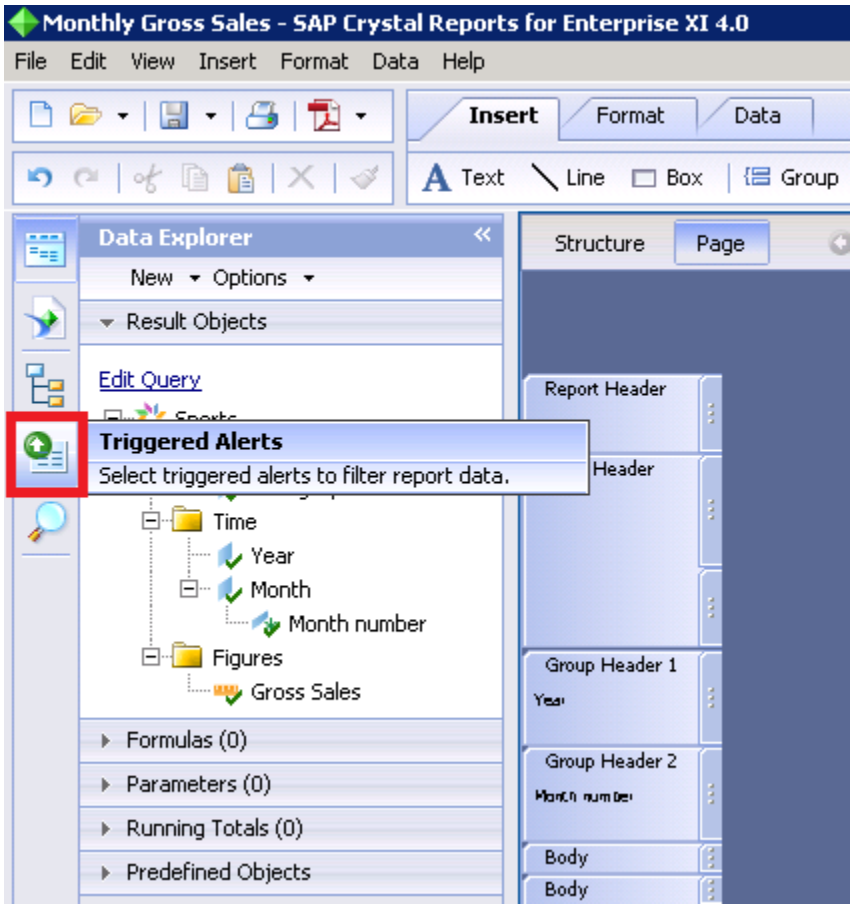
24. Click Save and Close

25. Type “At least one monthly sales target has been missed”.

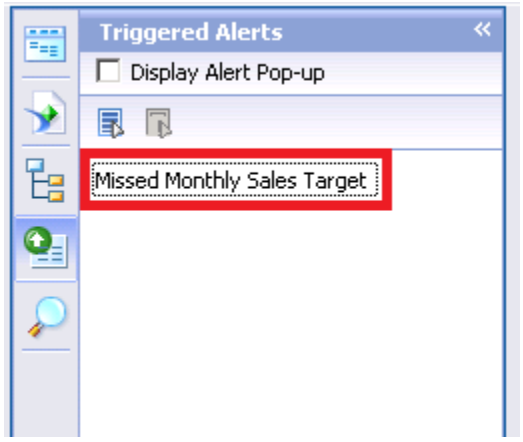


26. Click OK.
27. Click Save.
28. Click Refresh.

29. Click Triggered Alerts.



30. Click Missed Monthly Sales Target.



Notice that the report is filtered to display only data for months where the Total Gross Sales are less than 15 million.

31. Click Deselect All.

With the alert deselected, the report should display data for all months.

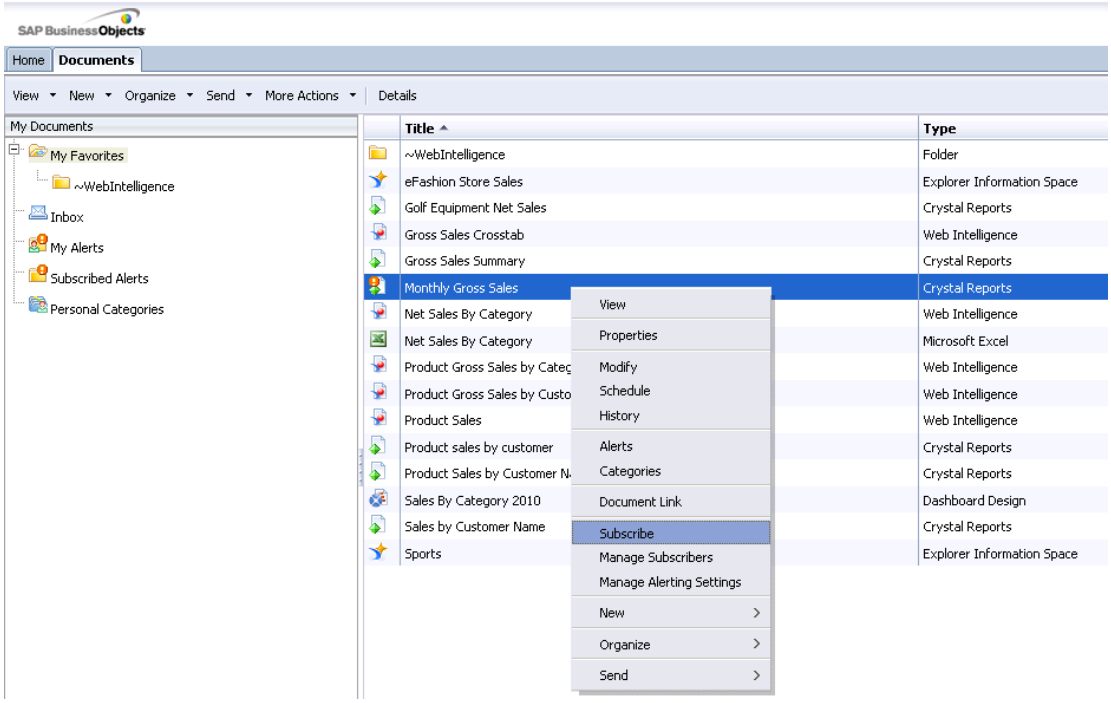
Note that you can optionally include a Pop-up alert when the report is opened.

Solution 19 – Subscribe to an Alert

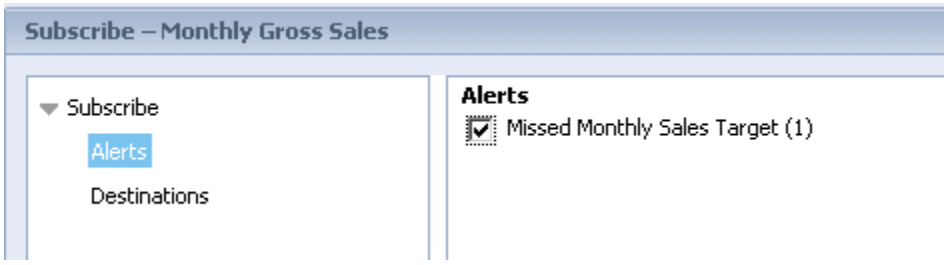
1. Log into the BI Platform.
2. Click Documents.

Notice that the icon for the Monthly Gross Sales report is different from any of the other Crystal Reports. The orange circle with an exclamation point indicates that this report includes an alert.

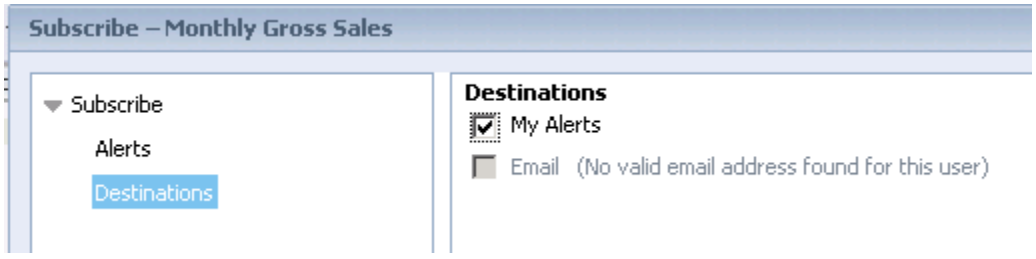
3. Right-click Monthly Gross Sales and choose Subscribe.



4. Select Missed Monthly Sales Target (1).

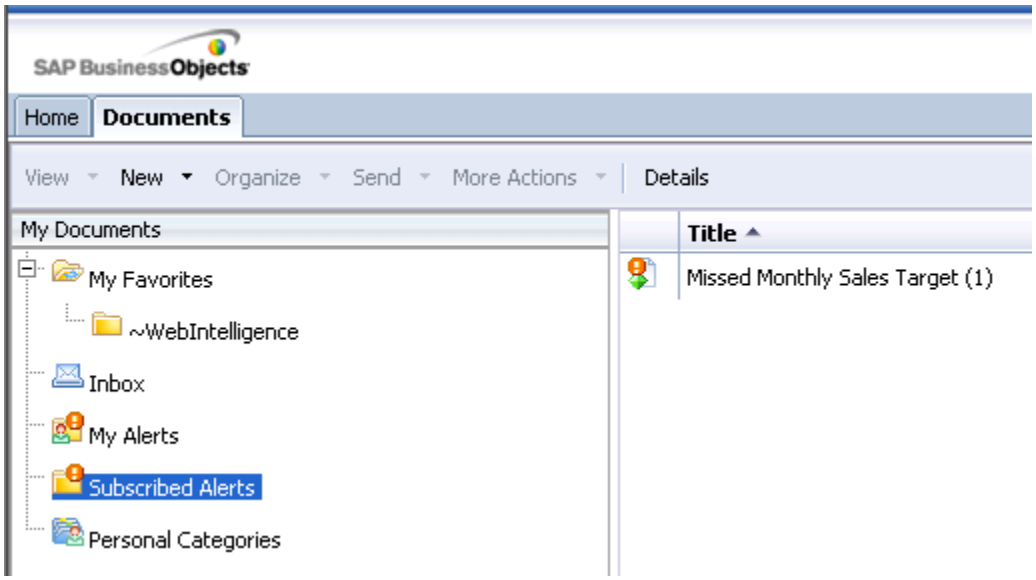


5. Click Destinations.
6. Select My Alerts.

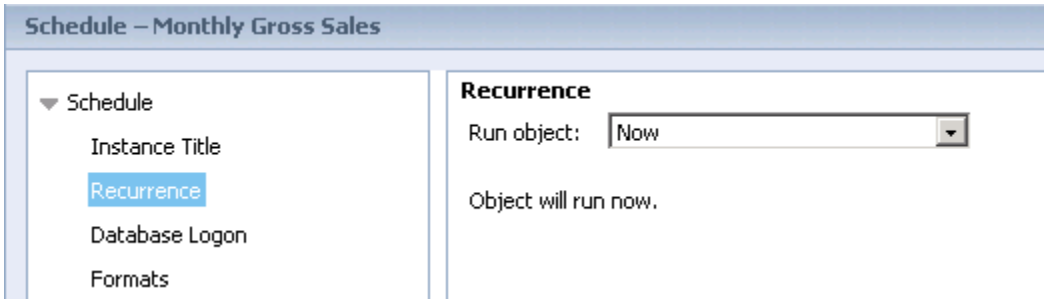


7. Click Save and Close.

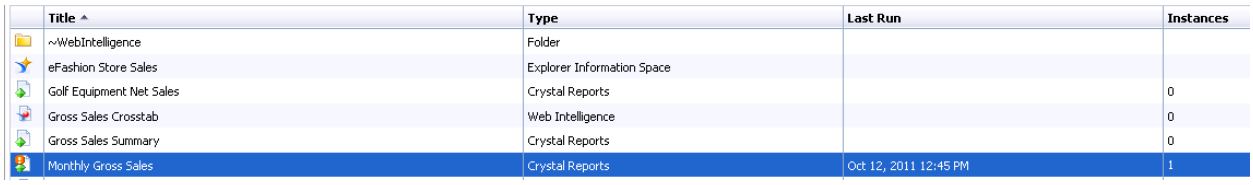
8. Click Subscribed Alerts.



9. Click My Favorites.
10. Right-click Monthly Gross Sales and choose Schedule.
11. Click Recurrence.

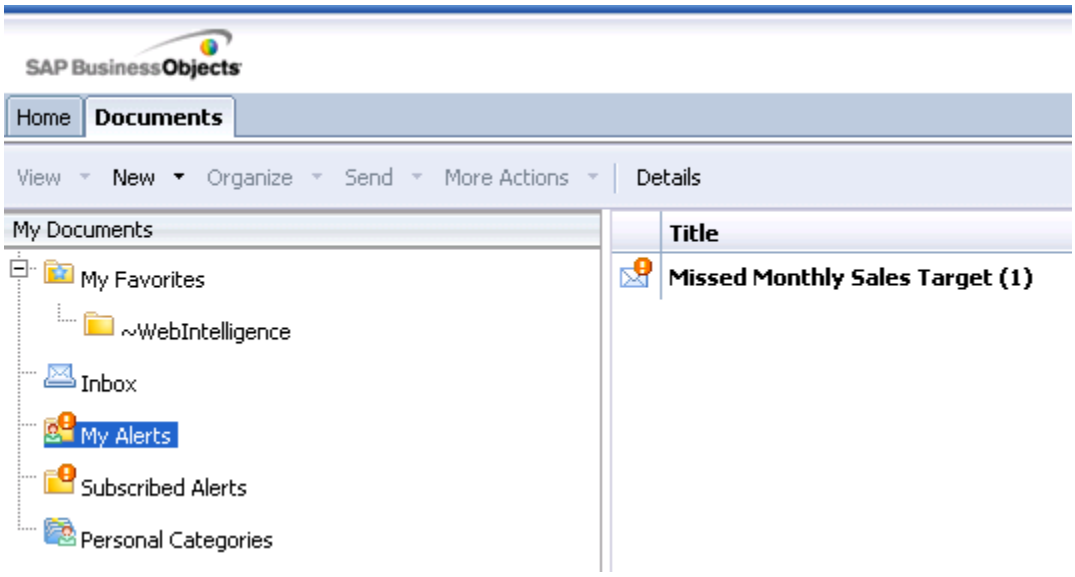


12. Click Schedule in the bottom left corner.

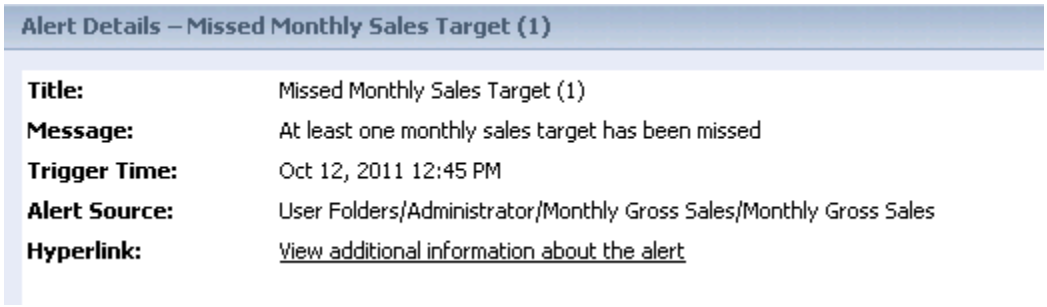


Once the report has run, a date will be added to the Last Run column.

13. Click My Alerts.



14. Right-click Missed Monthly Sales Target (1) and choose Alert Details.

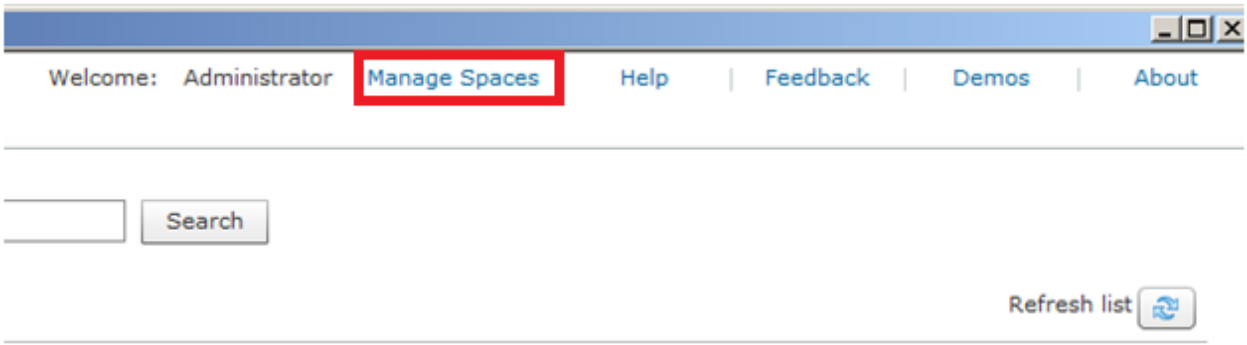


15. Click OK.
16. Click Favorites
17. Double-click the Monthly Gross Sales report to open it.

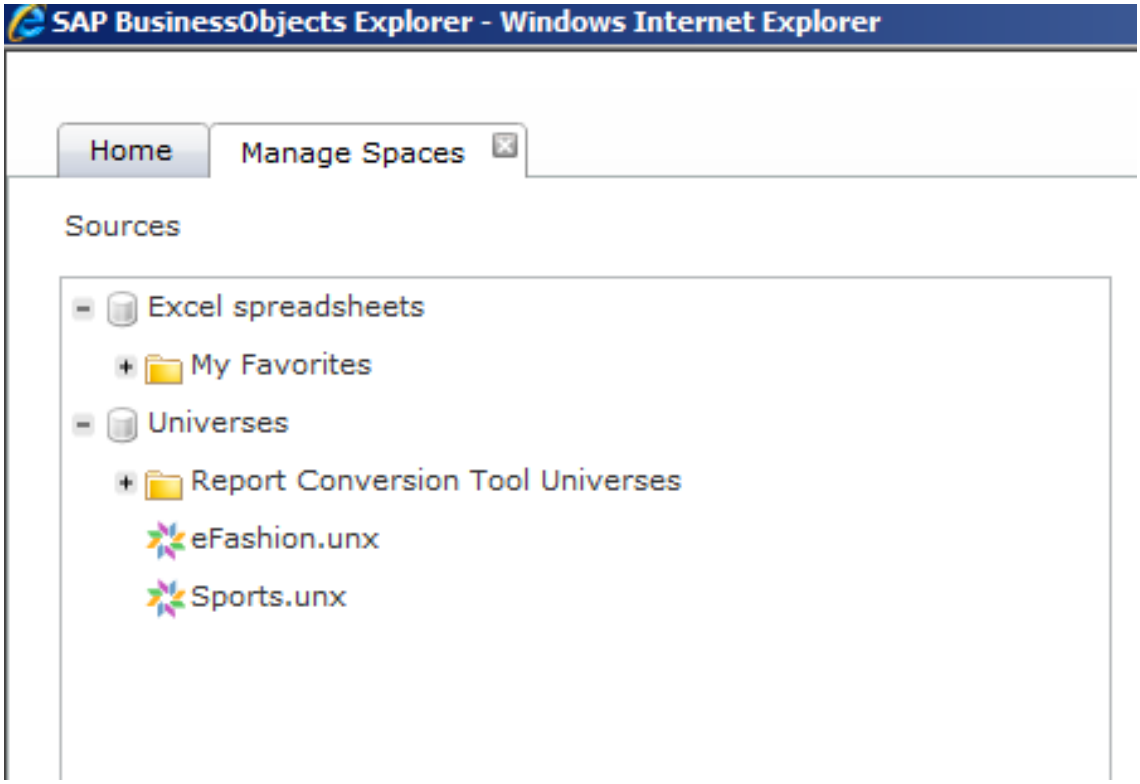
Solution 20 – Create an Information Space

1. Open the BI launch pad.
2. Click Explorer in My Applications.

3. Click Manage Spaces

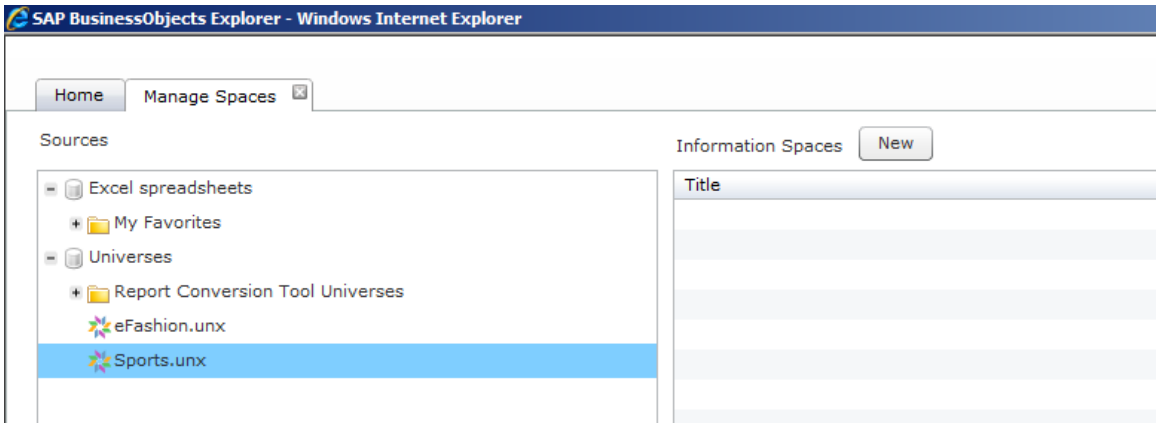


4. Expand Universes

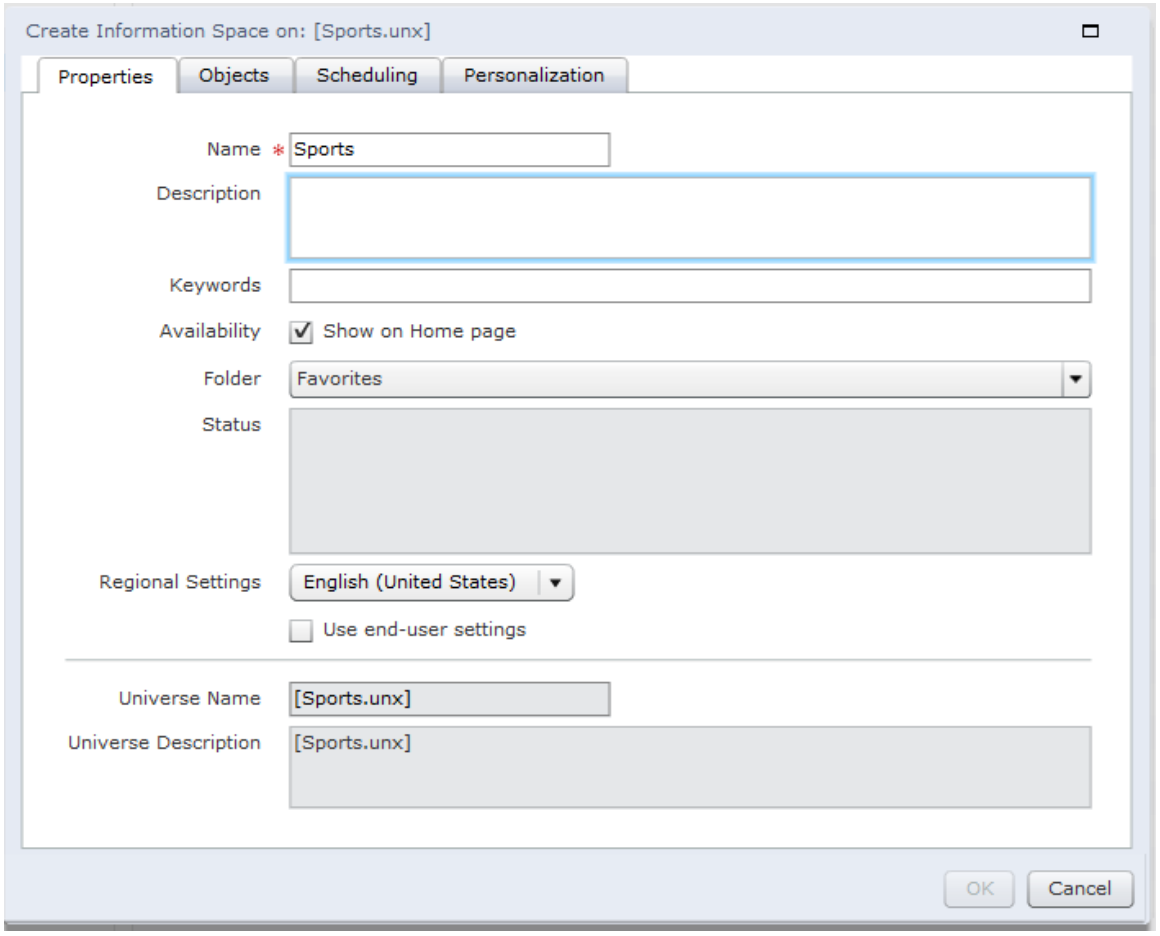


5. Click Sports.unx

6. Click New.

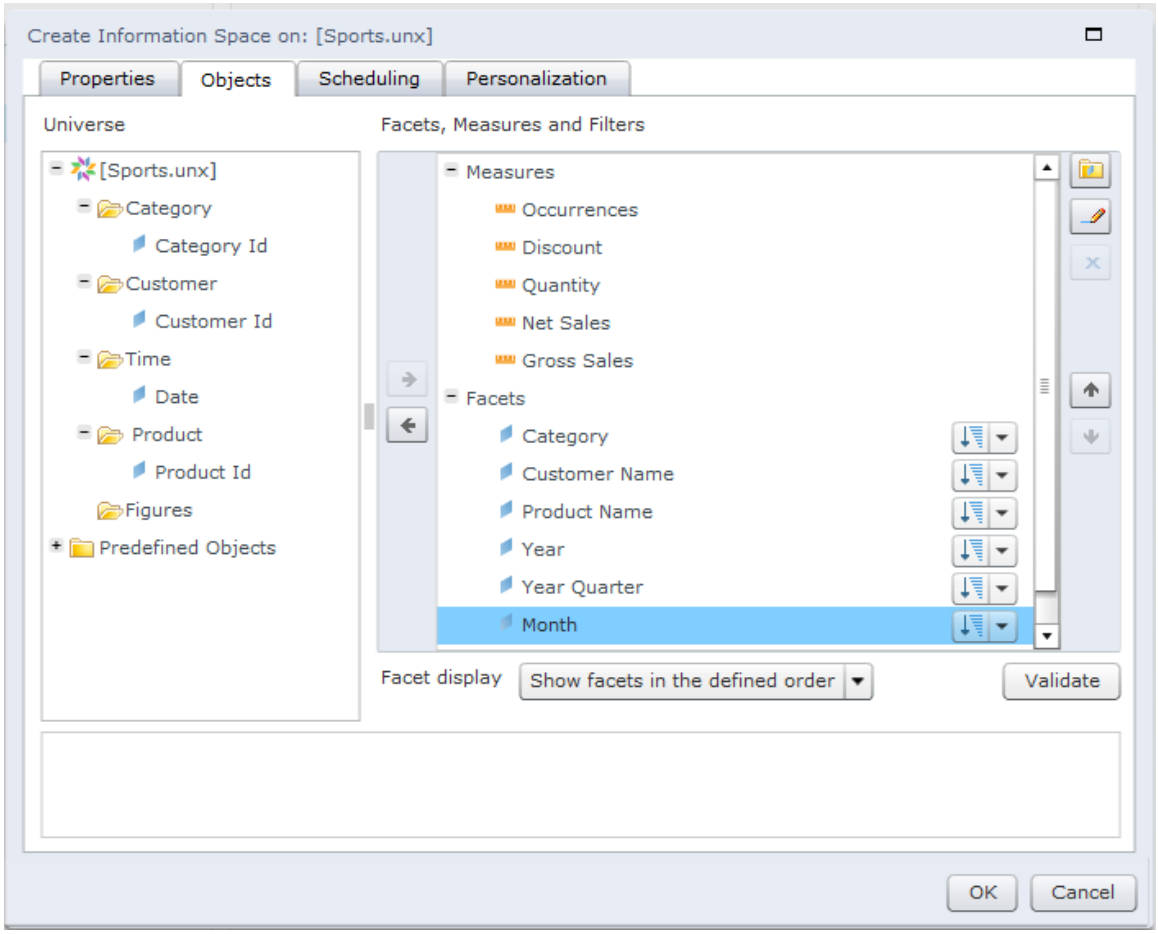


7. Type Sports in the Name field.



8. Click the Objects tab.

9. Add the objects and measures shown below.

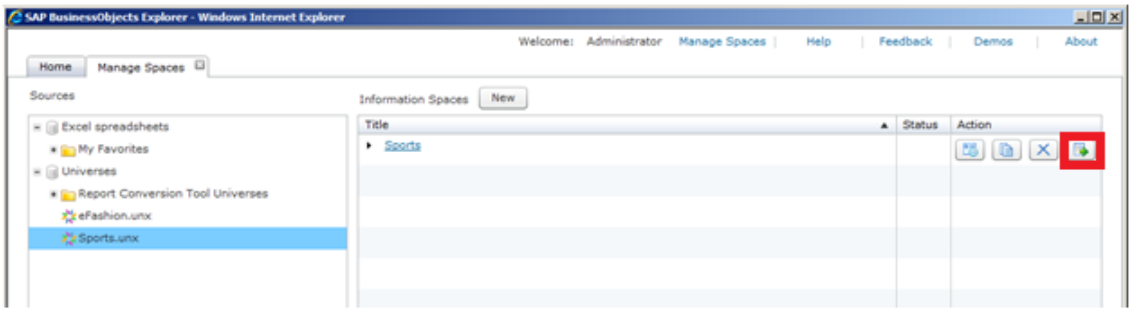


10. Click Validate

11. Click OK.

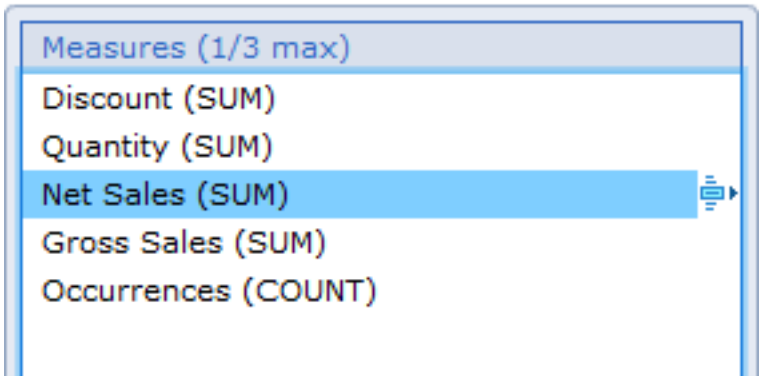
12. Click OK.

13. Click the Build Index button.

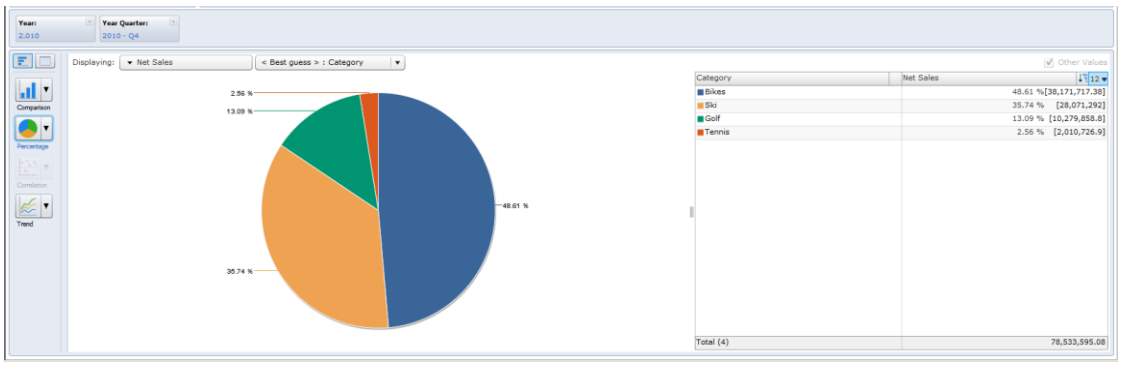


Solution 21– Explore the Sports Information Space

1. Login to the BI launch pad
2. Click Explorer in My Applications
3. Click the Sports information space
4. Click 2010
5. Click Q4 2010
6. Click the Net Sales (SUM) measure.

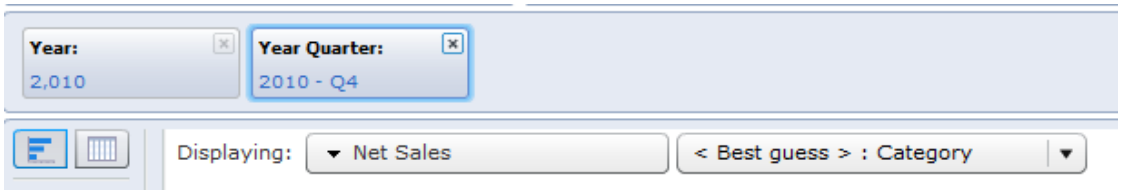


7. Click the percentage button and choose a Pie graph.

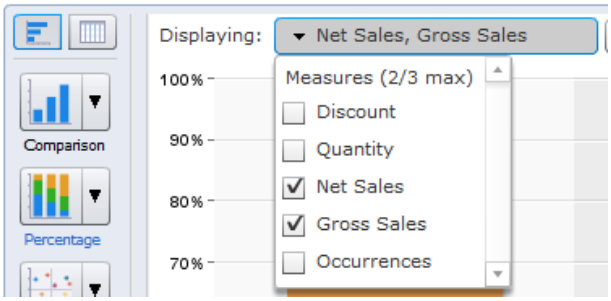


8. Click Bookmark.

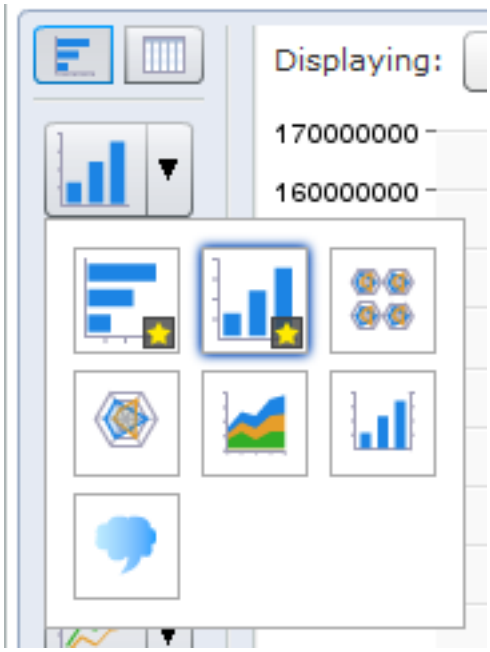
9. Click the x to delete the 2010 Q4 filter.



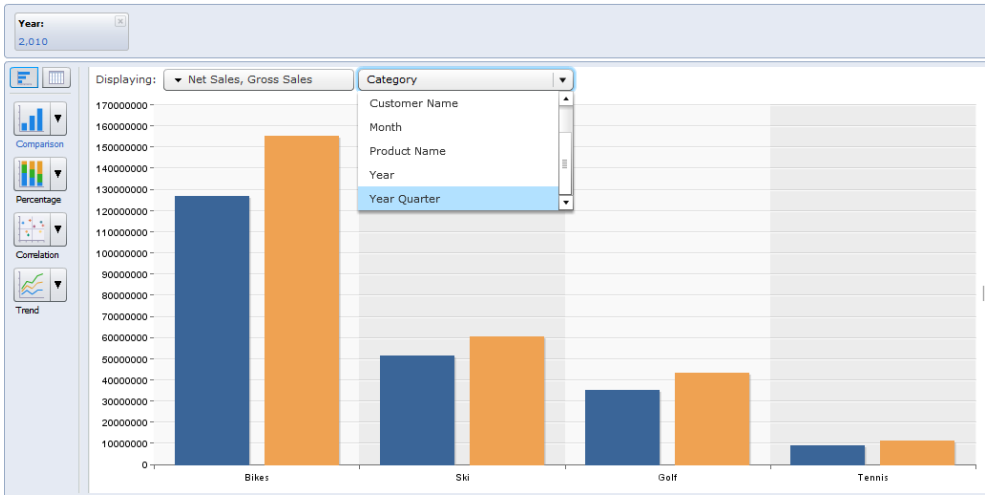
10. Click the displaying list and check Gross Sales.



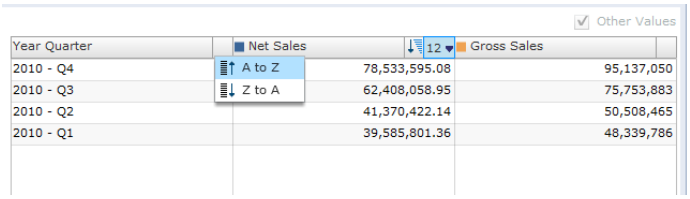
11. Click Comparison and choose a column graph.



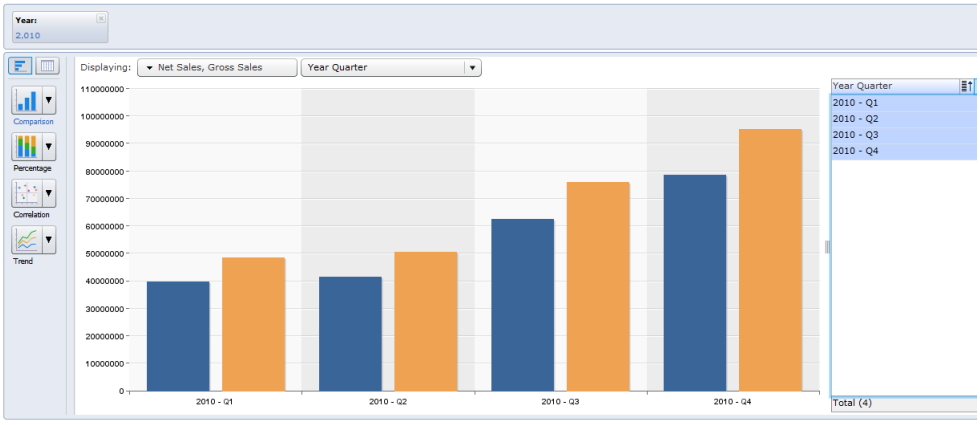
12. Click Category and choose Year Quarter.



13. Click the right side of the Year Quarter column in the data table and choose A to Z.



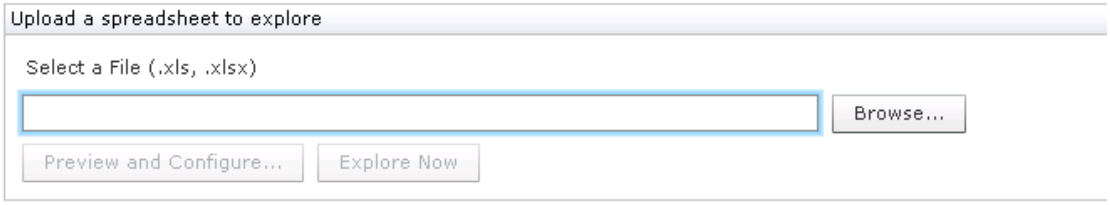
Your visualization should now look like the image.



Solution 22 –Explore a Microsoft Excel Spreadsheet

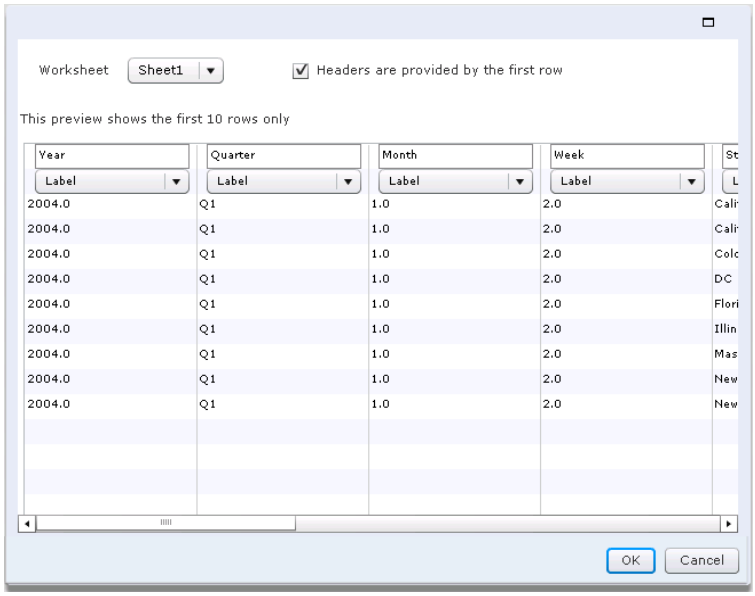
1. Open the BI Launch pad.
2. Open Explorer

3. Click the Browse… button to the right of the Select a File textbox in the bottom of the Explorer window.

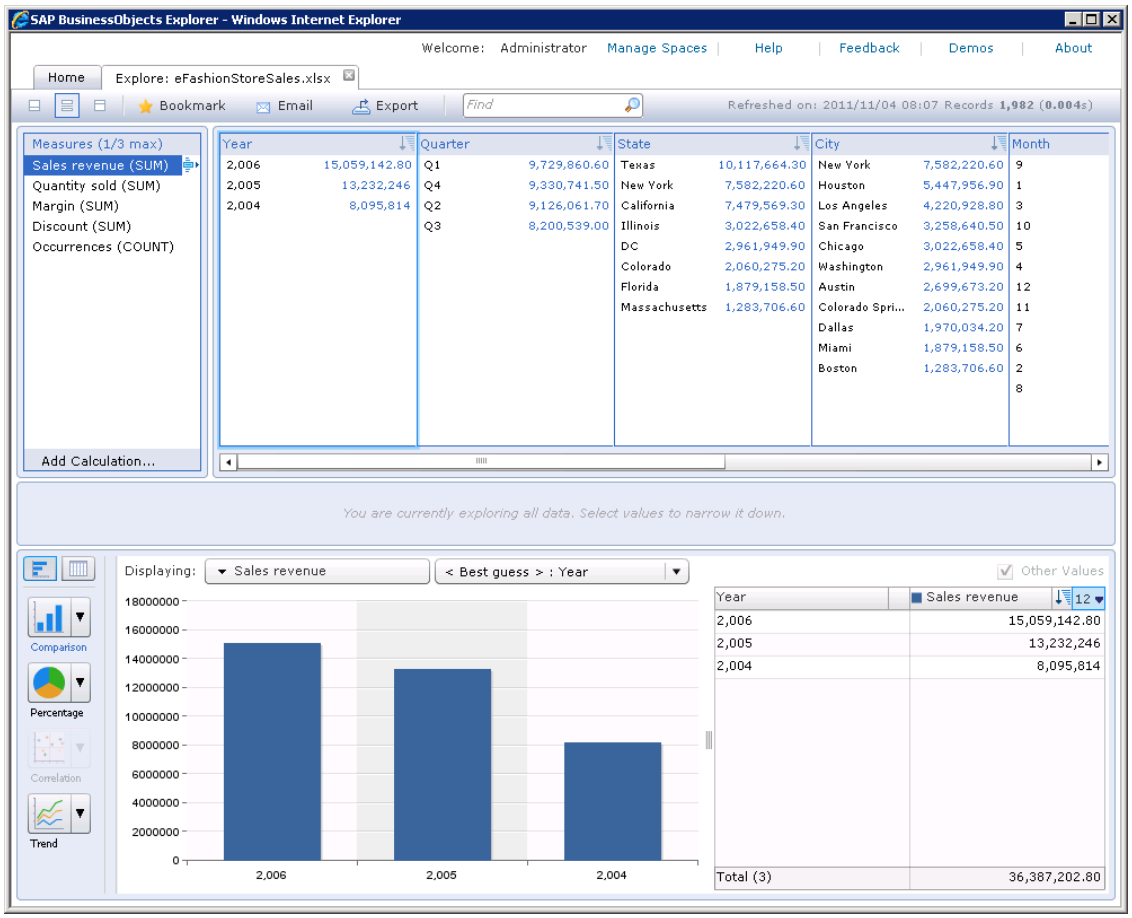


4. Navigate to the C:_Kits\Sample_Databases folder.
5. Click the eFashionStoreSales spreadsheet and click Open.
6. Click Preview and Configure

7. Change the Year, Month, and Week data types to Label – because these values would not be totaled.



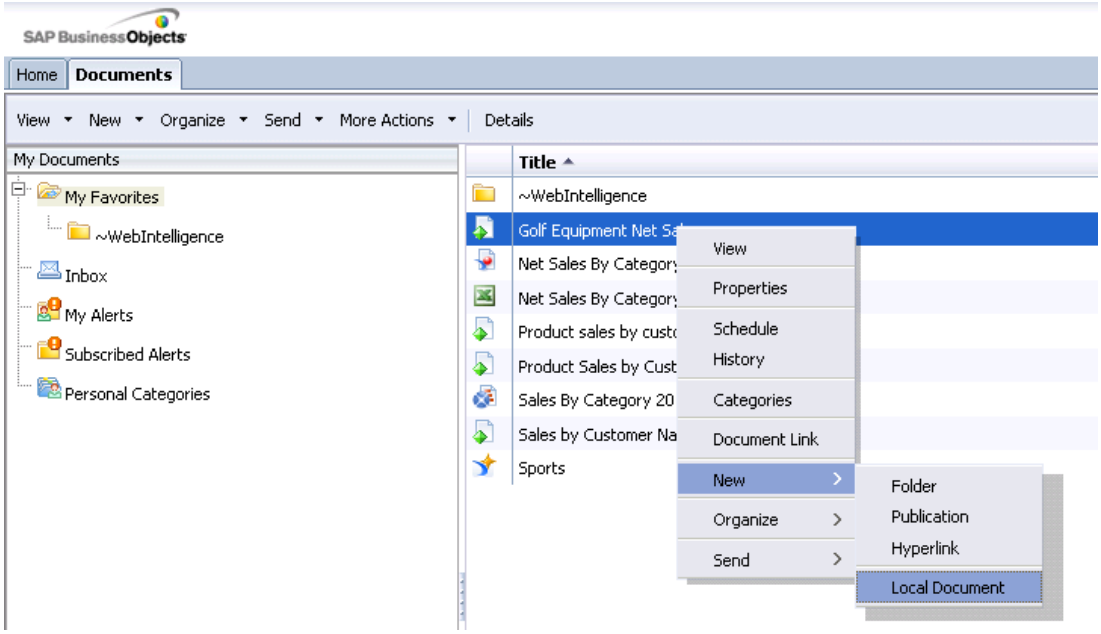
8. Click OK.
   You can explore the spreadsheet dataset the same way you explore an Information Space.



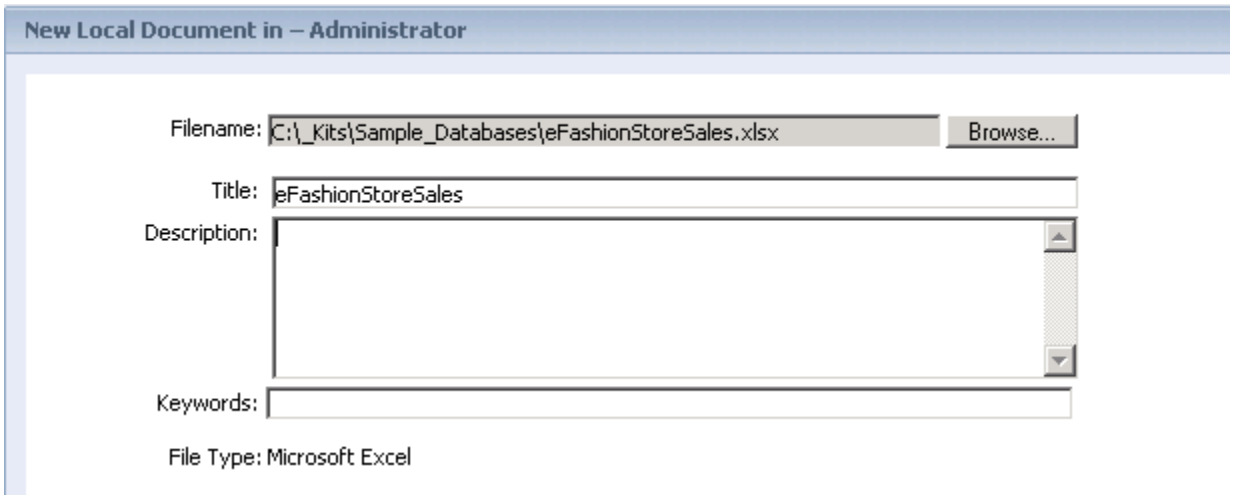
For example, you can drill into the data to visualize the performance of stores in Texas in a specific year and quarter.

Solution 23 –Create an Information Space Based on a Spreadsheet

1. Open the BI launch pad.
2. Click the Documents tab.
3. Right-click the right hand pane and choose New > Local Document.

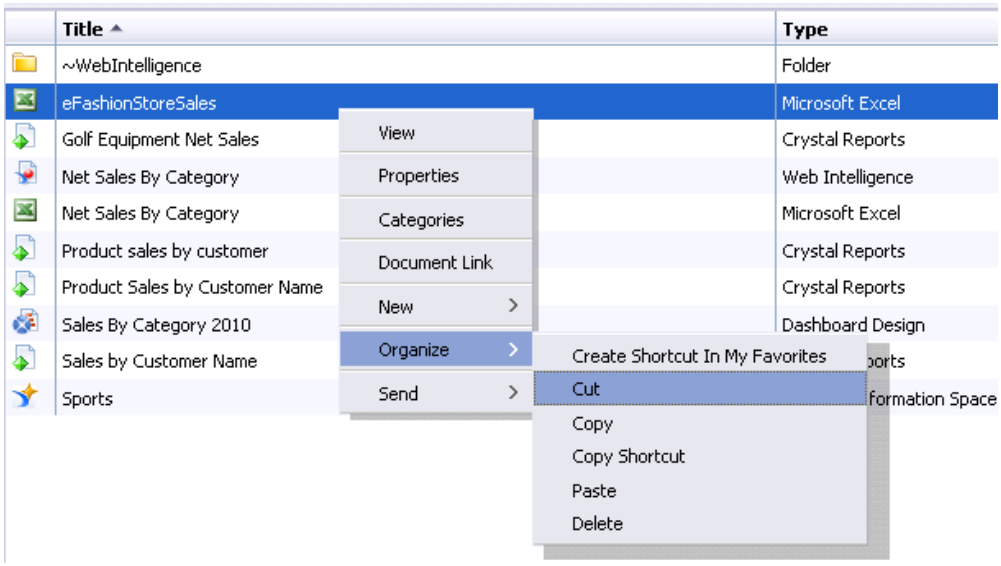


4. Click Folders in the bottom left of the screen.
5. Click Browse… and select C:_Kits\Sample_Databases\eFashionStoreSales.xlsx

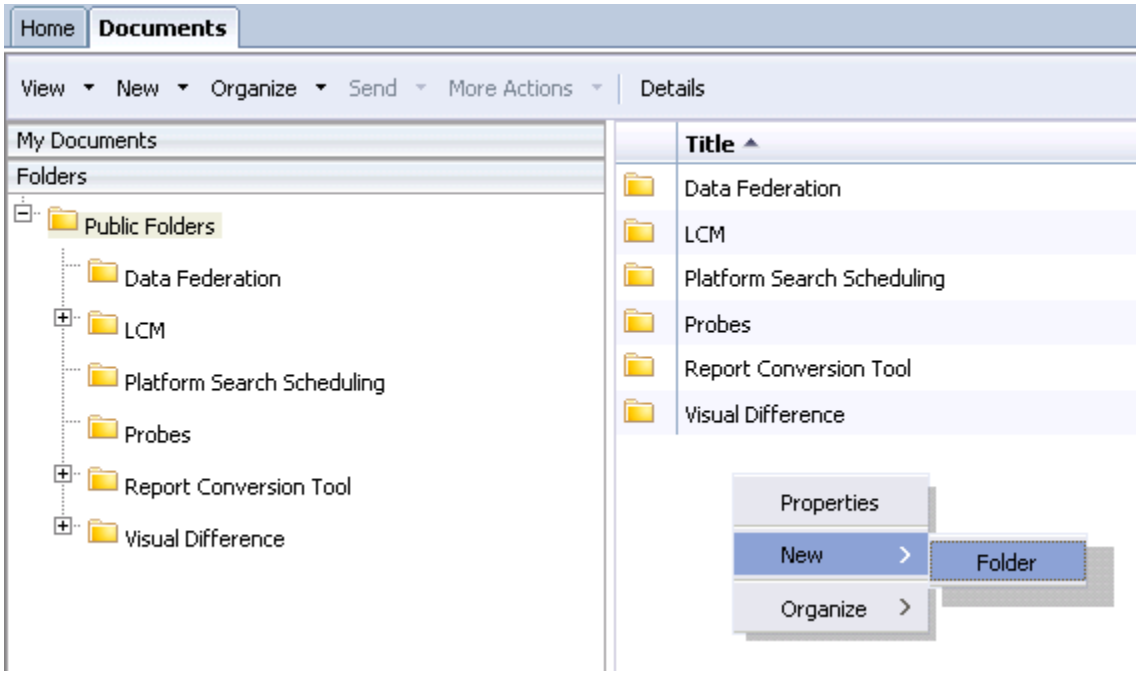


6. Click Add.

7. Right-click the eFashionStoreSales spreadsheet and choose Organize > Cut.

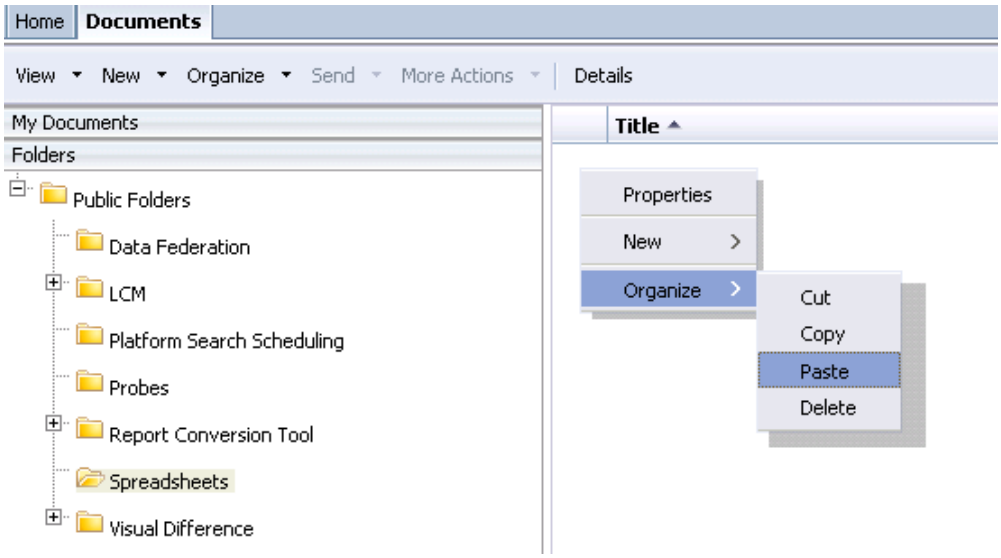


8. Click Folders in the bottom left corner of the screen.
9. Double click Public Folders
10. Right-click and choose New > Folder.

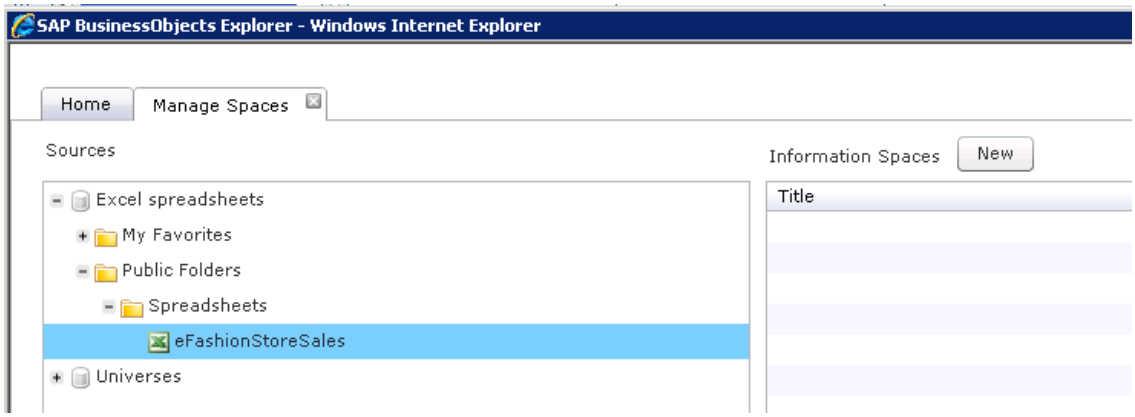


11. Type the name Spreadsheets and click OK.
12. Double-click the Spreadsheets folder.

13. Right-click and choose Organize > Paste.

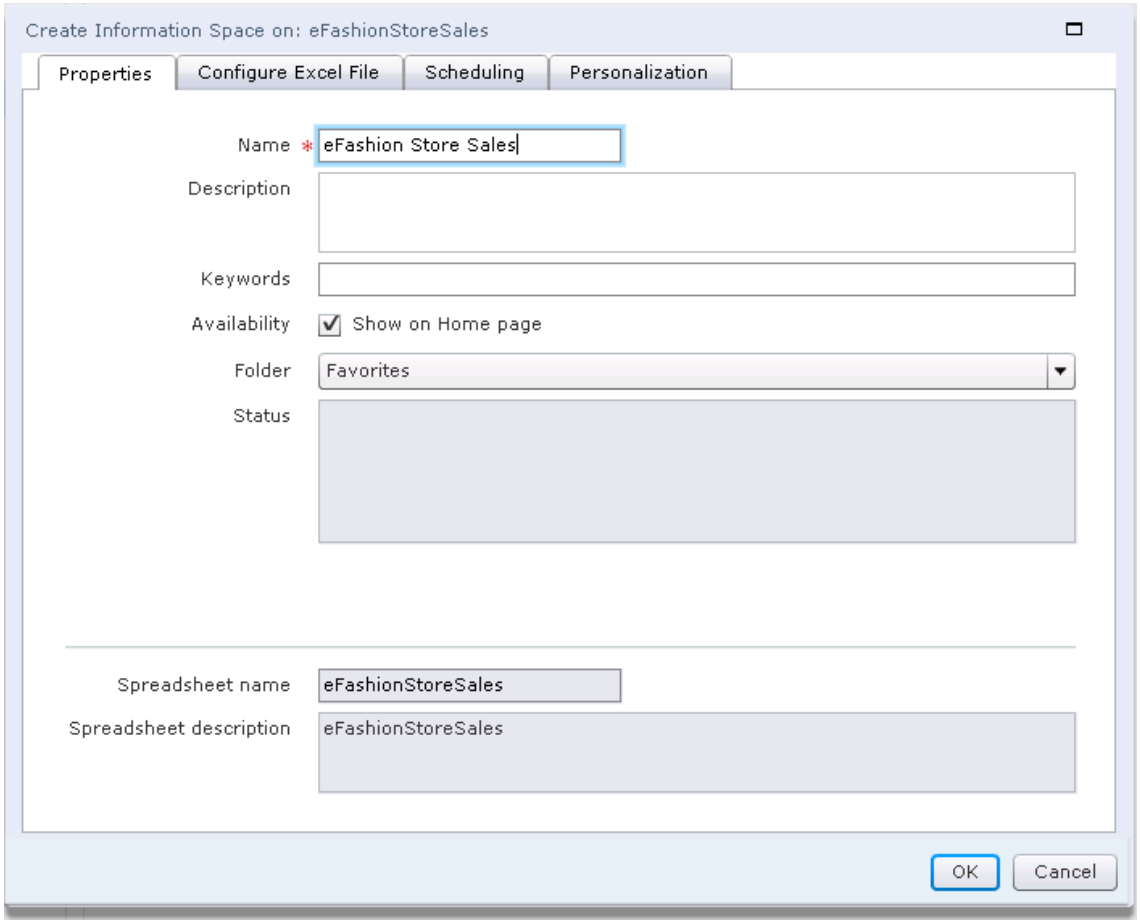


14. Click the Home tab.
15. Open Explorer from My Applications.
16. Click Manage Spaces.
17. Navigate to Excel Spreadsheets > Public Folders > Spreadsheets > eFashionStoreSales.

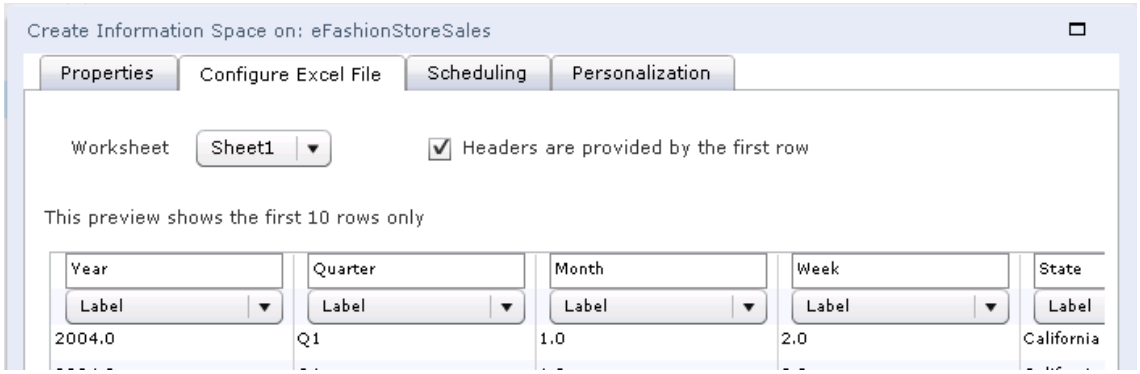


18. Click the New button to create a new Information Space.

19. Type the name eFashion Store Sales.



20. Click the Configure Excel File tab.
21. Change the data type of Year, Month, and Week to Label.

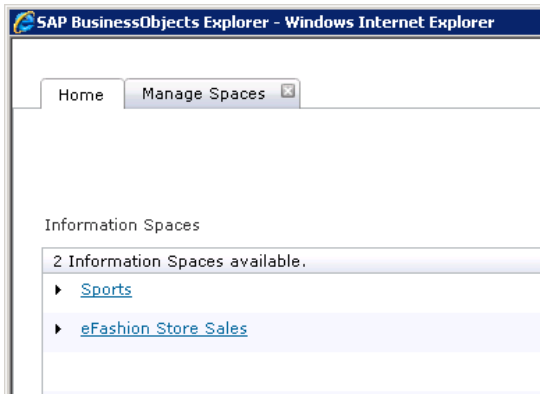


22. Click OK.

23. Click the Index Now button on the right.

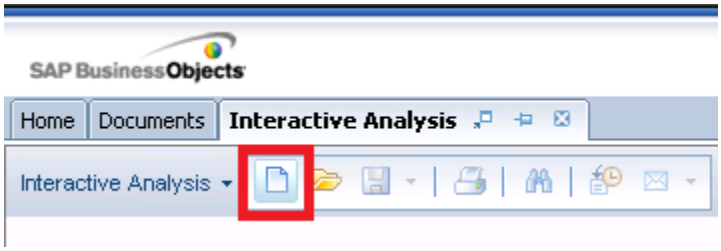
24. Click the Home tab.
25. Click Refresh list on the top right.

The new Information Space will appear in the list.

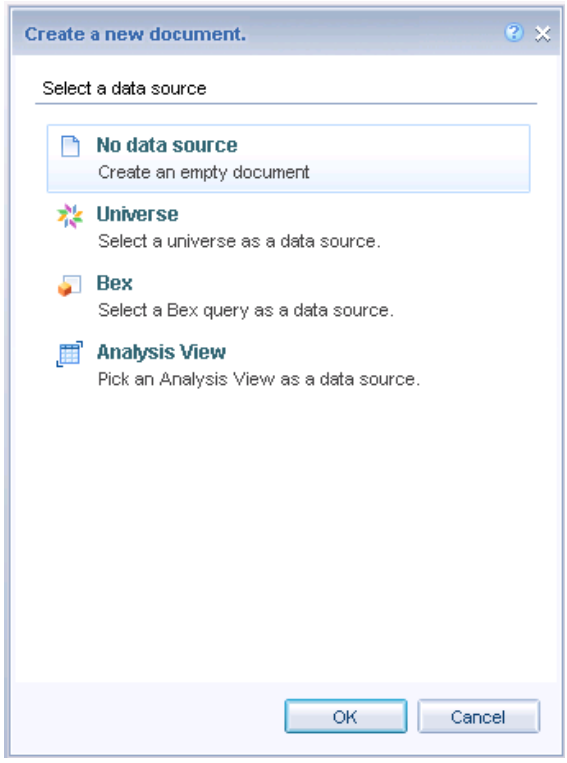


Solution 24 – Create a Web Intelligence Document

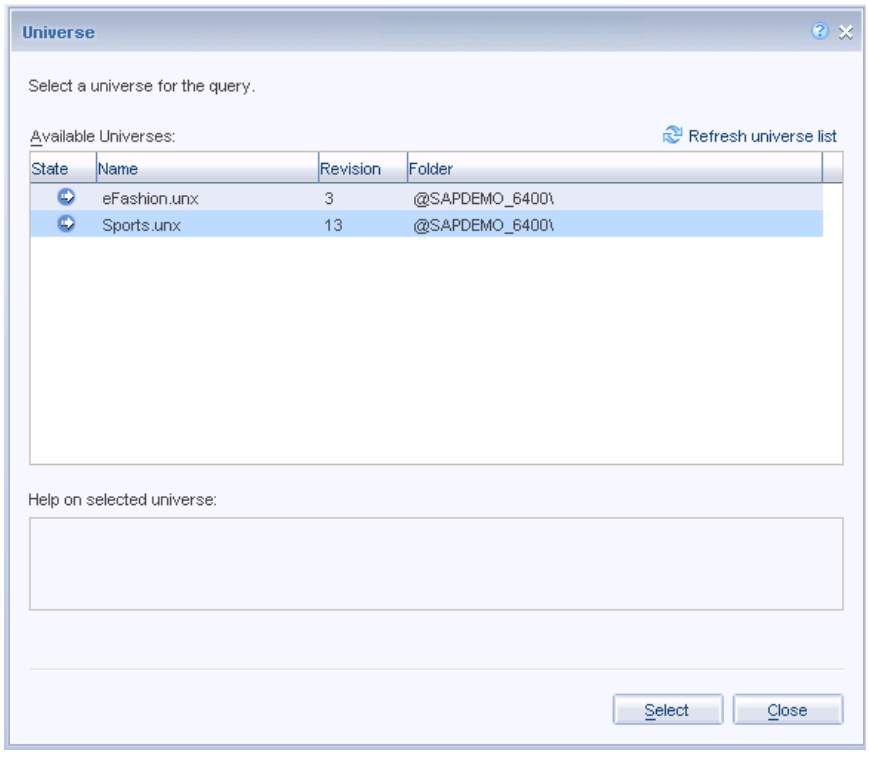
1. Log into the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Click New…



4. Click Universe.

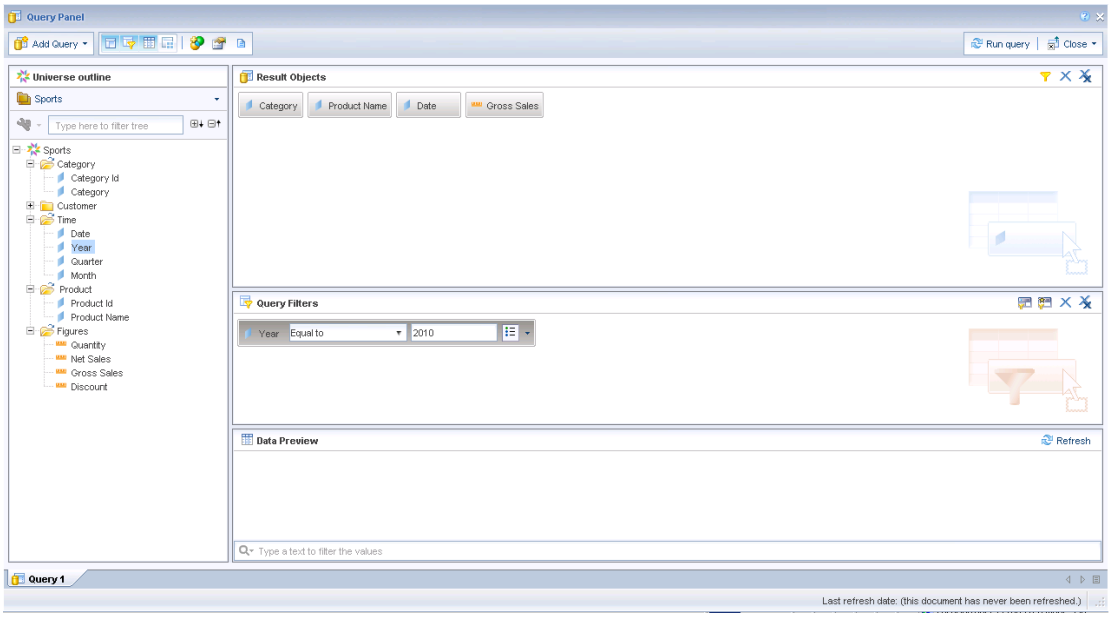


5. Double-click Sports.unix



6. Open the folders and double-click Category, Product Name, Date, and Gross Sales.

7. Drag the Year dimension to the Query Filters.
8. Modify the filter: Year Equal to 2010.



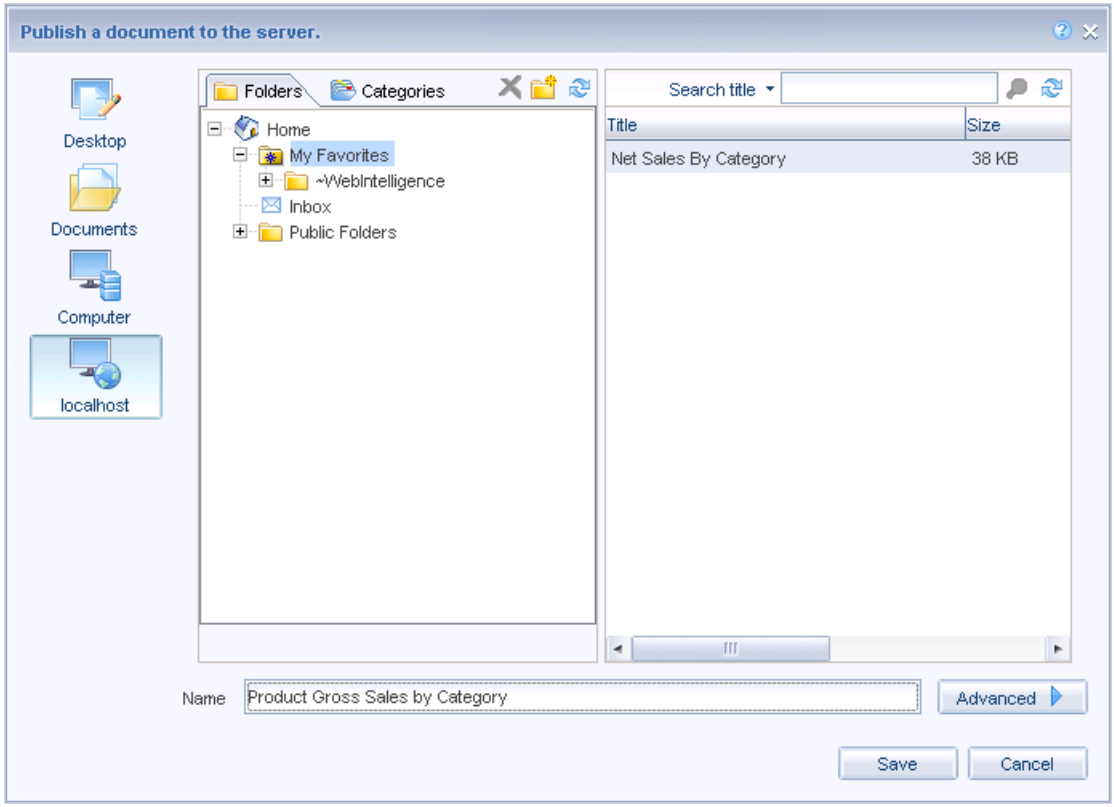
9. Click Run Query in the top right corner.
10. Click and drag the Product Name column border to resize the column.

Report 1

Category	Product Name	Date	Year	Gross Sales
Bikes	Crochet Cycling Gloves	1/10/11	2010	22,125
Bikes	Crochet Cycling Gloves	2/10/11	2010	17,580
Bikes	Crochet Cycling Gloves	3/10/11	2010	10,590
Bikes	Crochet Cycling Gloves	4/10/11	2010	4,560
Bikes	Crochet Cycling Gloves	5/10/11	2010	465
Bikes	Descent Competition Bicycle	1/10/11	2010	9,524,000
Bikes	Descent Competition Bicycle	2/10/11	2010	4,864,000

11. Click Save.

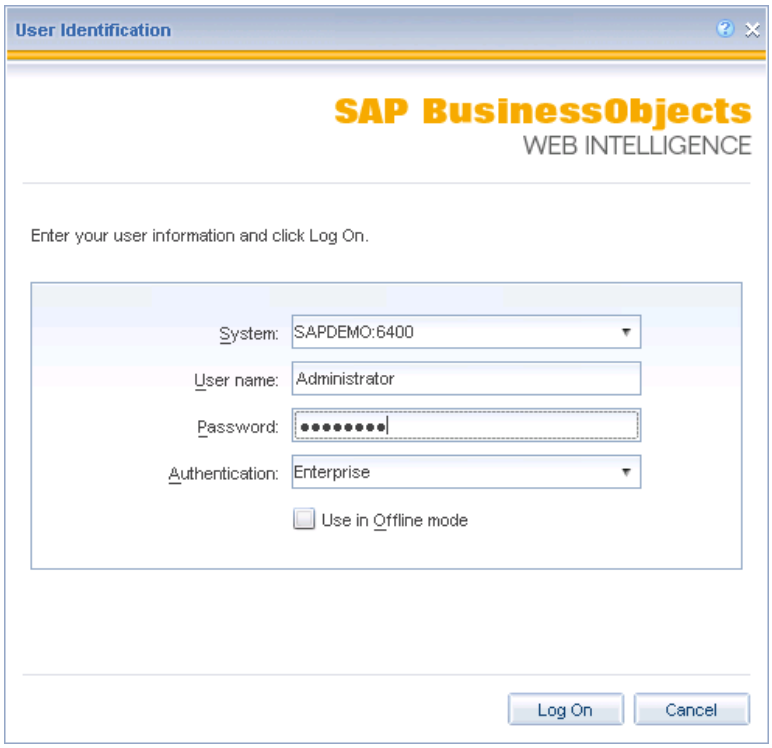
12. Type the file Name Product Gross Sales By Category.



13. Click Save.

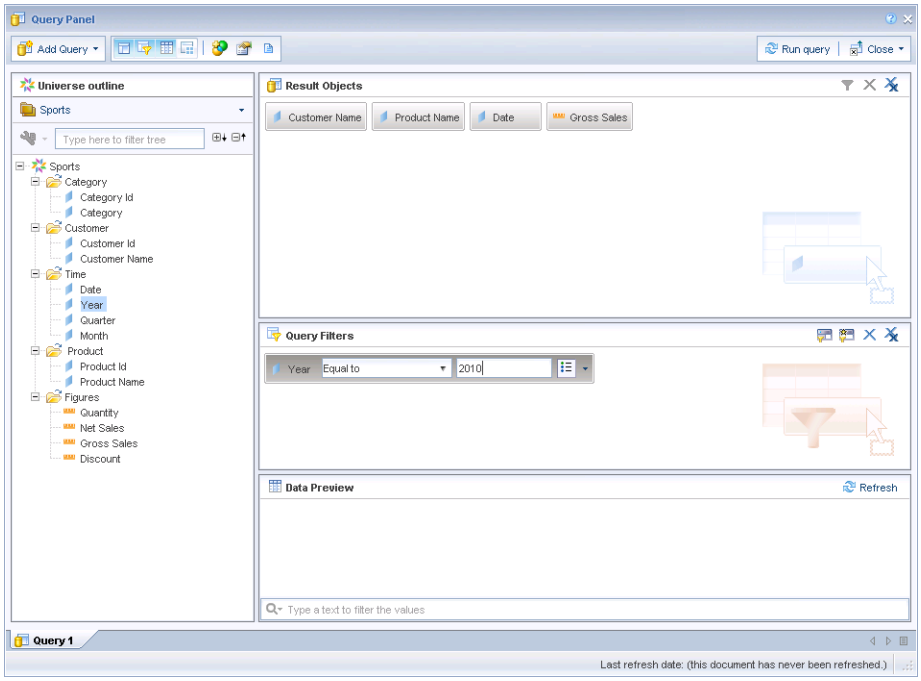
Solution 25 – Create a Web Intelligence Document using Web Intelligence Desktop

1. Click Start > All Programs > SAP BusinessObjects Enterprise XI 4.0 > SAP BusinessObjects Enterprise Client Tools > Interactive Analysis Desktop or Web Intelligence Rich Client).
2. Enter the login credentials including the password Welcome1 and click Log On.

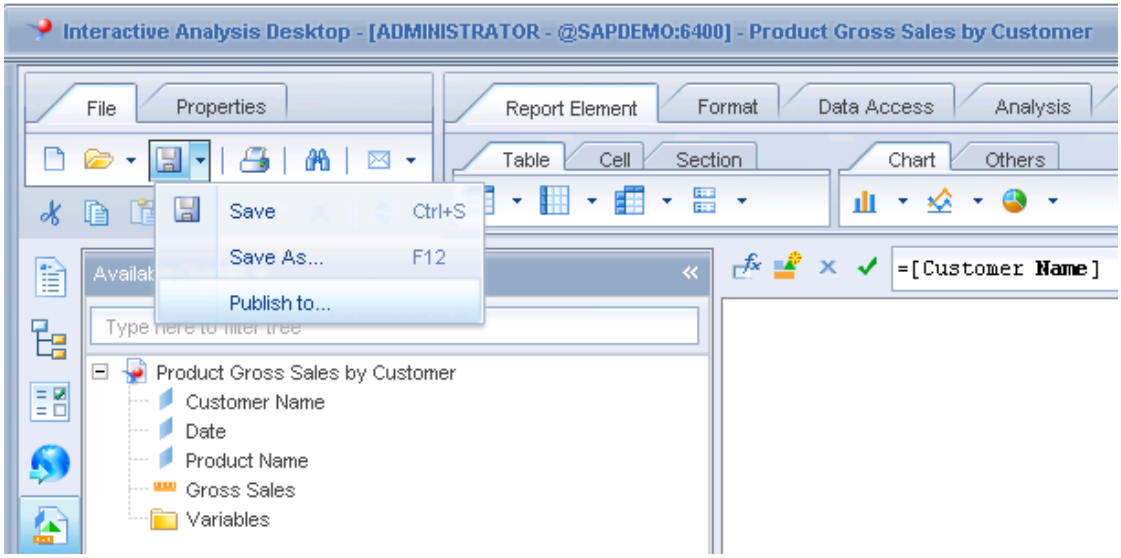


3. Select the Sports.unx universe.
4. Add Customer Name, Product Name, Date, and Gross Sales.

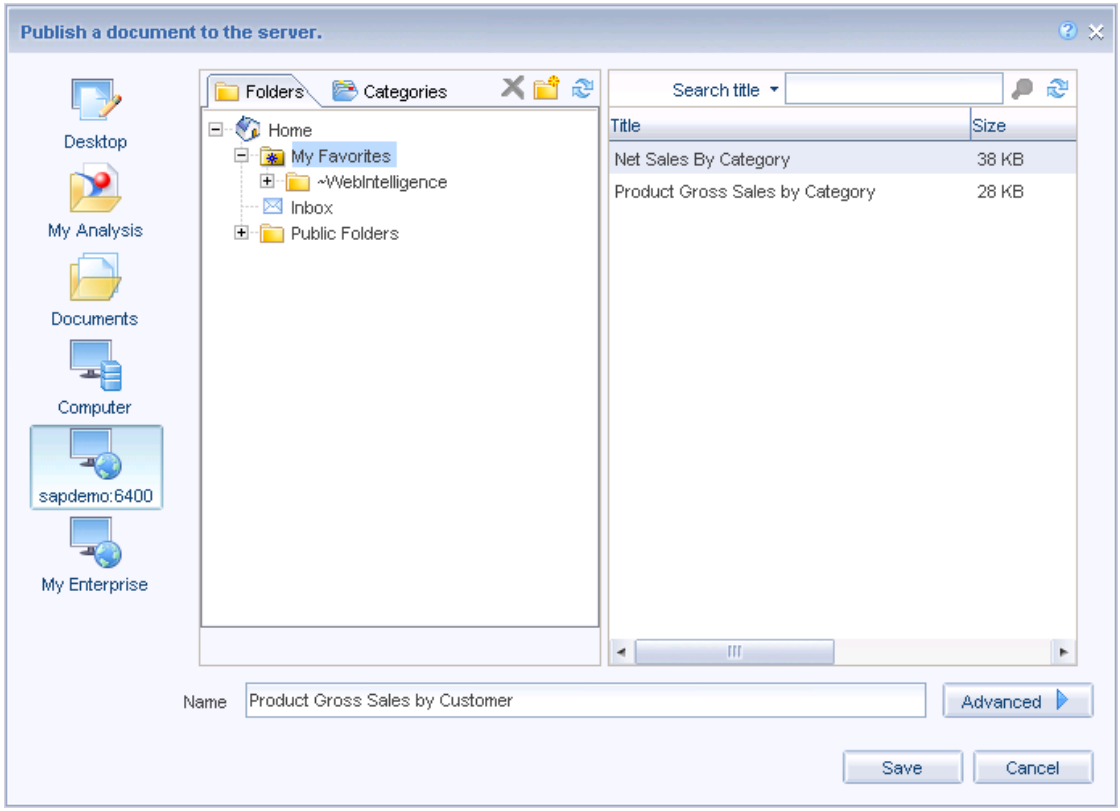
5. Add the filter Year Equal to 2010.



6. Click Run query.
7. Resize the Customer Name and Product Name columns.
8. Click Save.
9. Type the file name Product Gross Sales by Customer.
10. Click the down-arrow beside the Save button and choose Publish to…



11. Click Save.



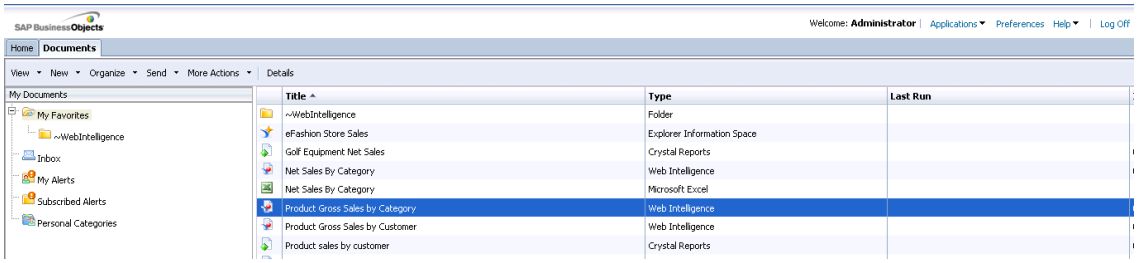
Note that you can publish Web Intelligence documents to public folders to share with multiple users.

You can also use Save As… to save a Web Intelligence document as a PDF or spreadsheet.

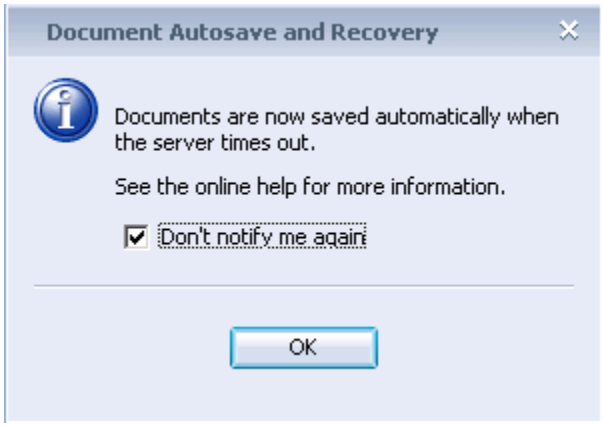
12. Close the Interactive Analysis Desktop client.

Solution 26 – Insert breaks, totals and subtotals

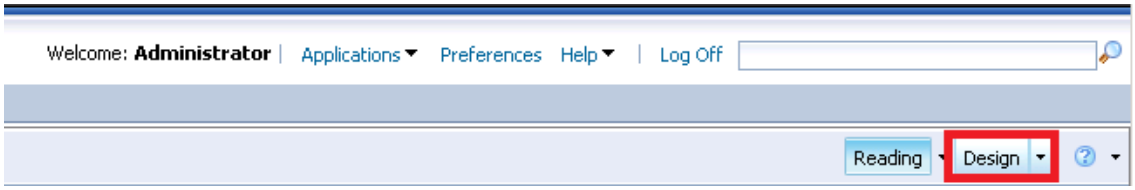
1. Open the BI launch pad.
2. Click Documents.
3. Double-click Product Gross Sales by Category.



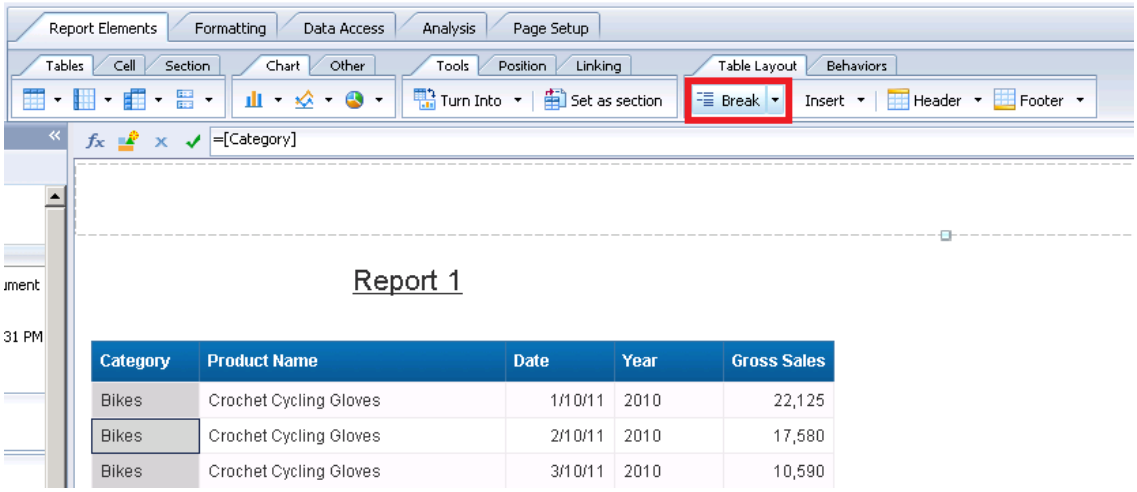
4. Click the Don't notify me again option and click OK.



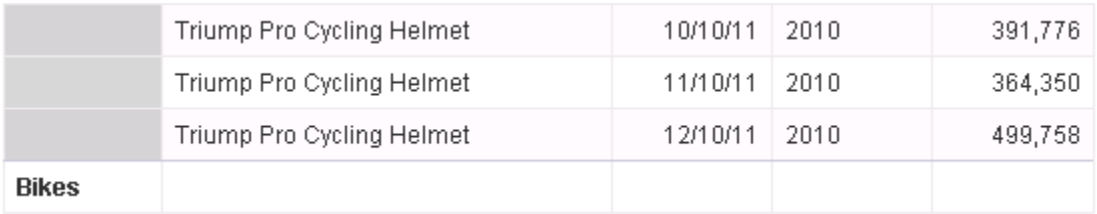
5. Click Design in the top right corner.



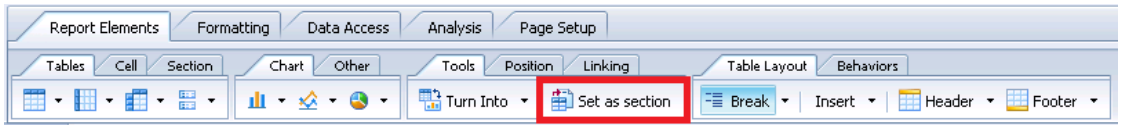
6. Click a cell in the Category column to select it.
7. Click Break.



8. Scroll down to view the footer row to each category.



9. Click in the Category column to select it.
10. Click Set as Section.

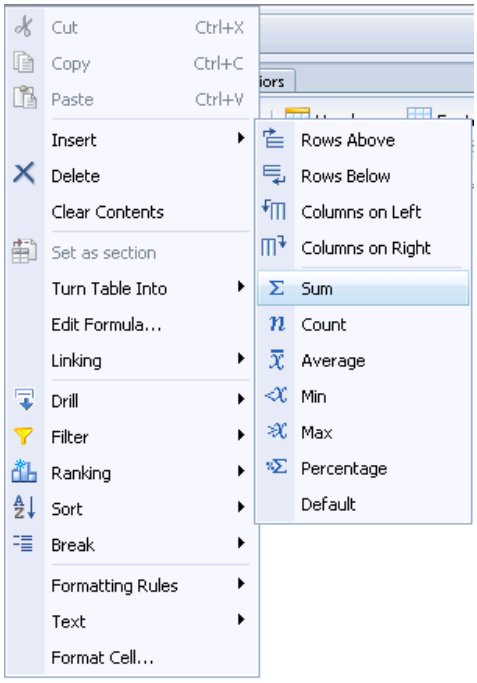


Each section has a title with the category name.

Bikes

Product Name	Date	Year	Gross Sales
Crochet Cycling Gloves	1/10/11	2010	22,125
Crochet Cycling Gloves	2/10/11	2010	17,580
Crochet Cycling Gloves	3/10/11	2010	10,590

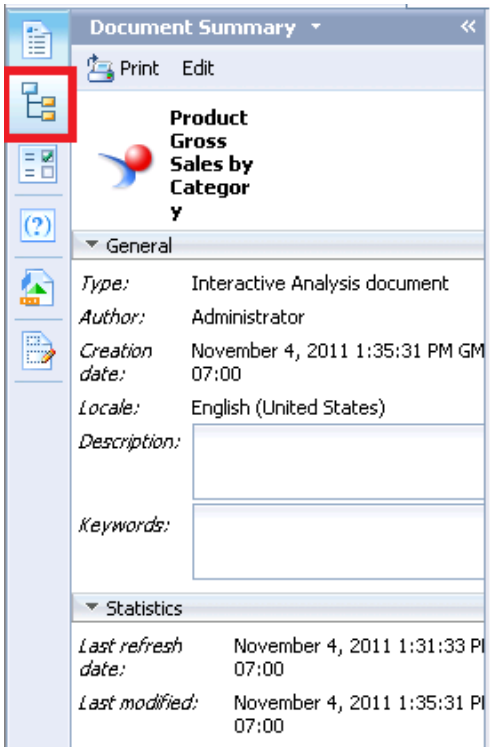
11. Scroll down to the bottom of the Bikes table.
12. Right click the cell in the bottom right corner of the table.



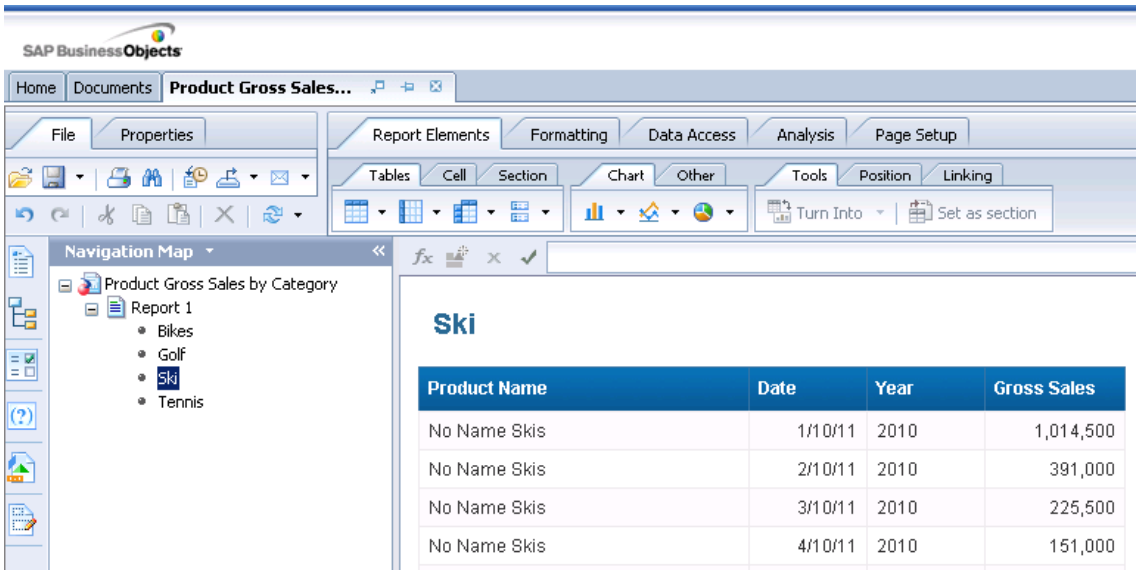
13. Double click the right hand border of the new cell to resize the column.

Triump Pro Cycling Helmet	11/10/11	2010	364,350
Triump Pro Cycling Helmet	12/10/11	2010	499,758
		Sum:	**155,110,814**

14. Click the Navigation Map button to the left of the report.



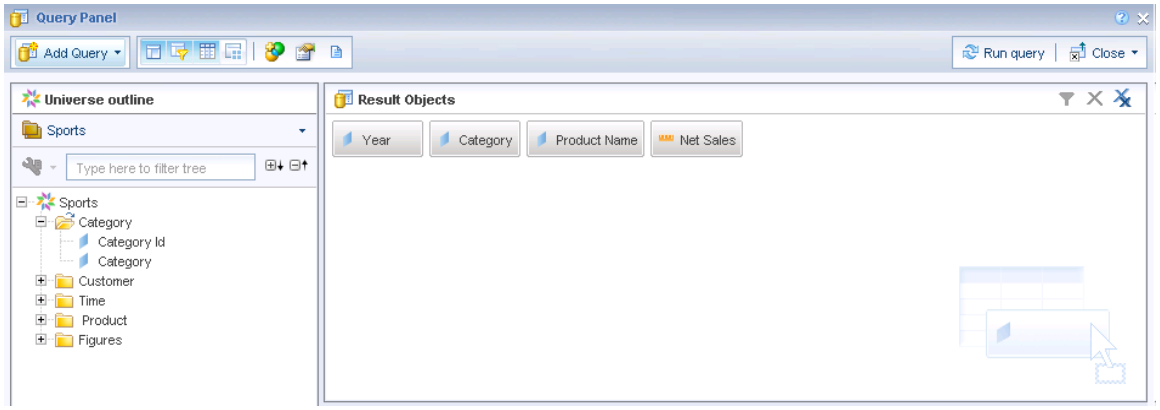
15. Expand Report 1 and click a category name to navigate to that section of the report.



16. Click Save.

Solution 27 – Sorting and Ranking

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add the Year, Category, Product Name, and Net Sales objects.

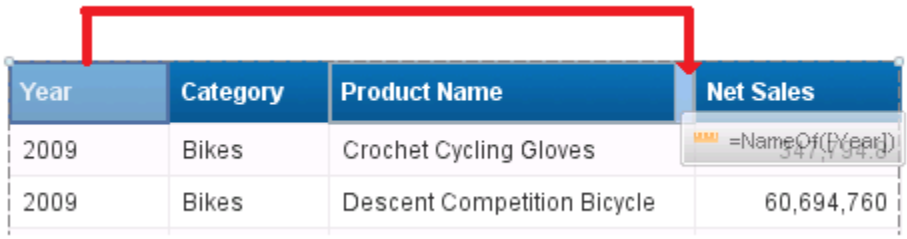


5. Click Run Query.

By default the records are sorted from left to right to the order they are presented in the document. In this example the records are sorted first by year, and then by category. Within each category the records are sorted alphabetically by product name.

Year	Category	Product Name	Net Sales
2009	Bikes	Crochet Cycling Gloves	347,794.8
2009	Bikes	Descent Competition Bicycle	60,694,760
2009	Bikes	Rappel Mountain Bicycle	13,244,639.97
2009	Bikes	Romeo Hybrid Bicycle	20,500,000
2009	Bikes	Triump Pro Cycling Helmet	2,276,346.22
2009	Golf	Berta Golf Clubs	14,791,980
2009	Golf	Clone Golf Clubs	8,061,420
2009	Golf	Golf Balls	1,340,109.61

Click and drag the year column header to the right of the Product Name column header.



Changing the order of the columns can change the order in which the records are sorted.

Now the same records are sorted first by Category, and then alphabetically by product name. Within each product name, the records are sorted by Year.

Category	Product Name	Year	Net Sales
Bikes	Crochet Cycling Gloves	2009	347,794.8
Bikes	Crochet Cycling Gloves	2010	45,497.7
Bikes	Descent Competition Bicycle	2009	60,694,760
Bikes	Descent Competition Bicycle	2010	79,163,960
Bikes	Rappel Mountain Bicycle	2009	13,244,639.97
Bikes	Rappel Mountain Bicycle	2010	16,059,201.64

6. Click the Analysis tab.

7. Click in the Net Sales column.
8. Click the Sort button.

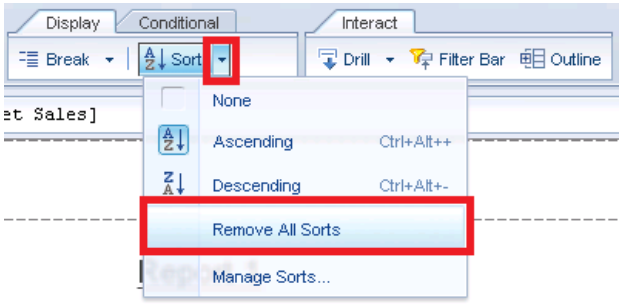
9. The records are now sorted in ascending order (lowest to highest) by Net Sales.

Category	Product Name	Year	Net Sales
Tennis	Tennis cap	2009	36,276.8
Bikes	Crochet Cycling Gloves	2010	45,497.7
Tennis	SuperBounce Tennis Balls	2009	238,898.8
Ski	Ski Mask	2009	345,130.35
Bikes	Crochet Cycling Gloves	2009	347,794.8
Tennis	SuperBounce Tennis Balls	2010	352,831.5
Ski	Ski Mask	2010	515,930.1

Note you should format the Net Sales as currency, and it will be easier to view the sorted values.

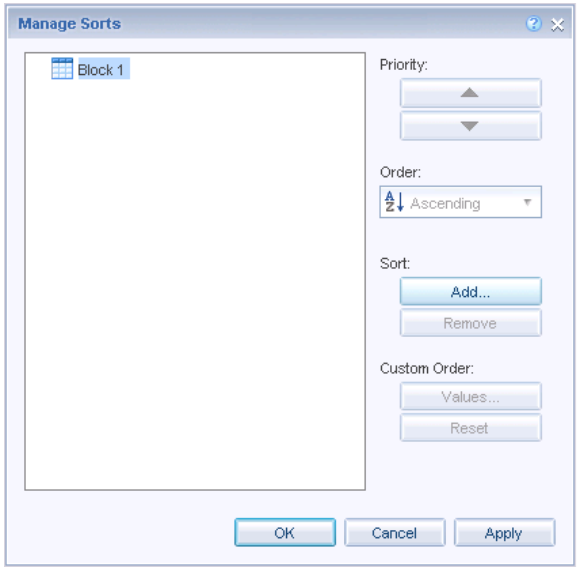
Category	Product Name	Year	Net Sales
Tennis	Tennis cap	2009	$36,276.80
Bikes	Crochet Cycling Gloves	2010	$45,497.70
Tennis	SuperBounce Tennis Balls	2009	$238,898.80
Ski	Ski Mask	2009	$345,130.35
Bikes	Crochet Cycling Gloves	2009	$347,794.80
Tennis	SuperBounce Tennis Balls	2010	$352,831.50

10. Click the down-arrow to the right of the Sort button and choose Remove All Sorts.

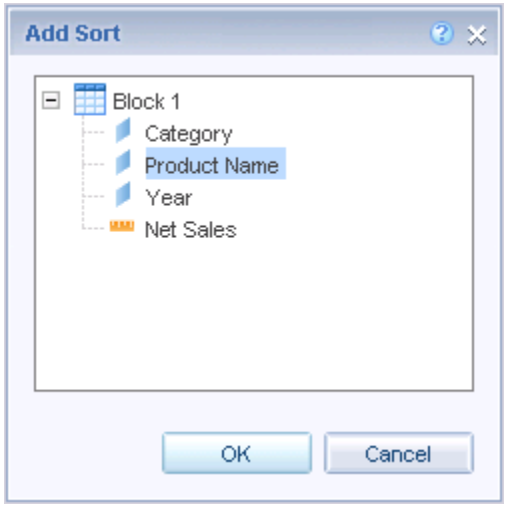


The records will be resorted in the default order.

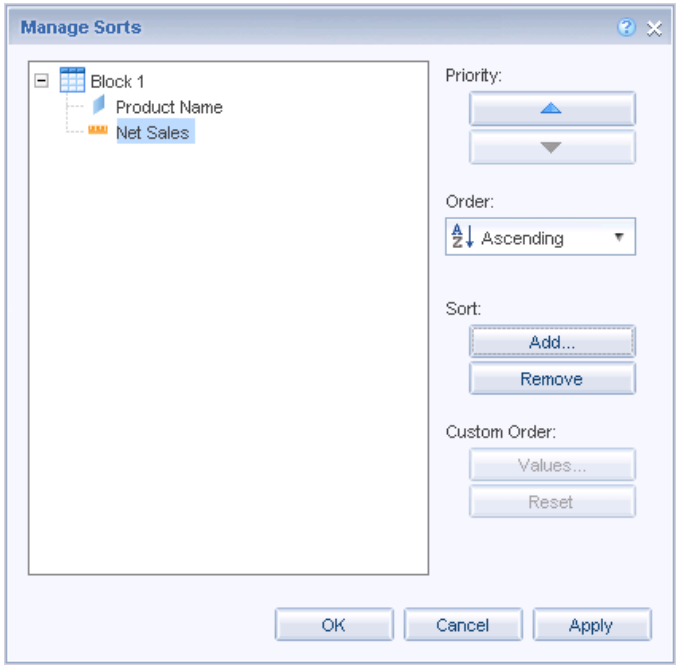
11. Click the down-arrow to the right of the Sort button and choose Manage Sorts.
12. Click Add.



13. Click Product Name and click OK.



14. Click Add and choose Net Sales.



15. Click OK.

Category	Product Name	Year	Net Sales
Golf	Berta Golf Clubs	2009	$14,791,980.00
Golf	Berta Golf Clubs	2010	$23,291,520.00
Golf	Clone Golf Clubs	2009	$8,061,420.00
Golf	Clone Golf Clubs	2010	$10,155,950.00
Bikes	Crochet Cycling Gloves	2010	$45,497.70
Bikes	Crochet Cycling Gloves	2009	$347,794.80
Bikes	Descent Competition Bicycle	2009	$60,694,760.00
Bikes	Descent Competition Bicycle	2010	$79,163,960.00
Golf	Golf Balls	2009	$1,340,109.61
Golf	Golf Balls	2010	$1,389,689.60

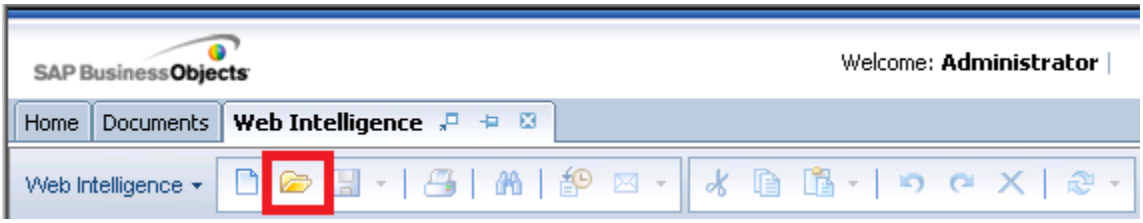
The records are now sorted alphabetically by product name and in ascending order by Net Sales. Note that the Crochet Cycling Gloves sold more in 2010 than in 2009. Net sales of most products increased, but sales of Crochet Cycling Gloves decreased.

16. Click in the Net Sales column.
17. Click the down-arrow to the right of Sort and choose Descending.

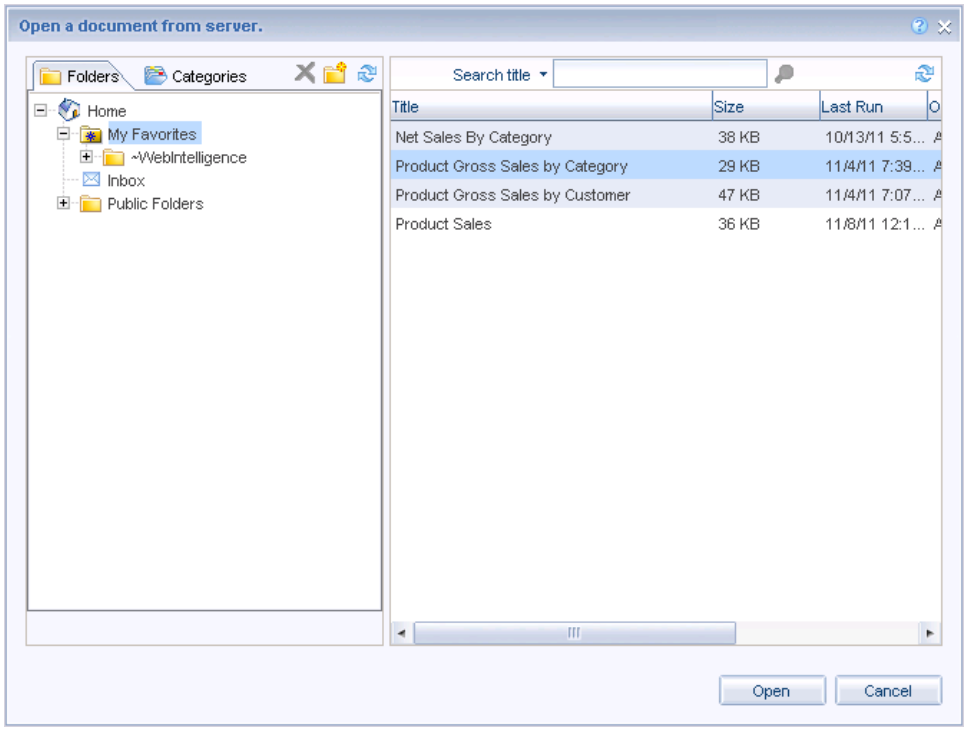
Records are still sorted alphabetically by product name, but are now sorted in from highest to lowest Net Sales.

Solution 28 – Modify a Web Intelligence Query and Document

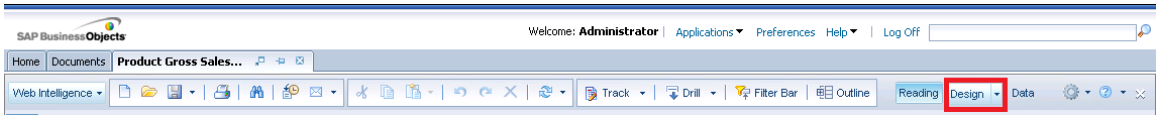
1. Open the BI launch pad.
2. Open Web Intelligence (Interactive Analysis) from My Applications.
3. Click Open.



4. Click Product Gross Sales by Category.
   This is the document you created in the first Web Intelligence activity.

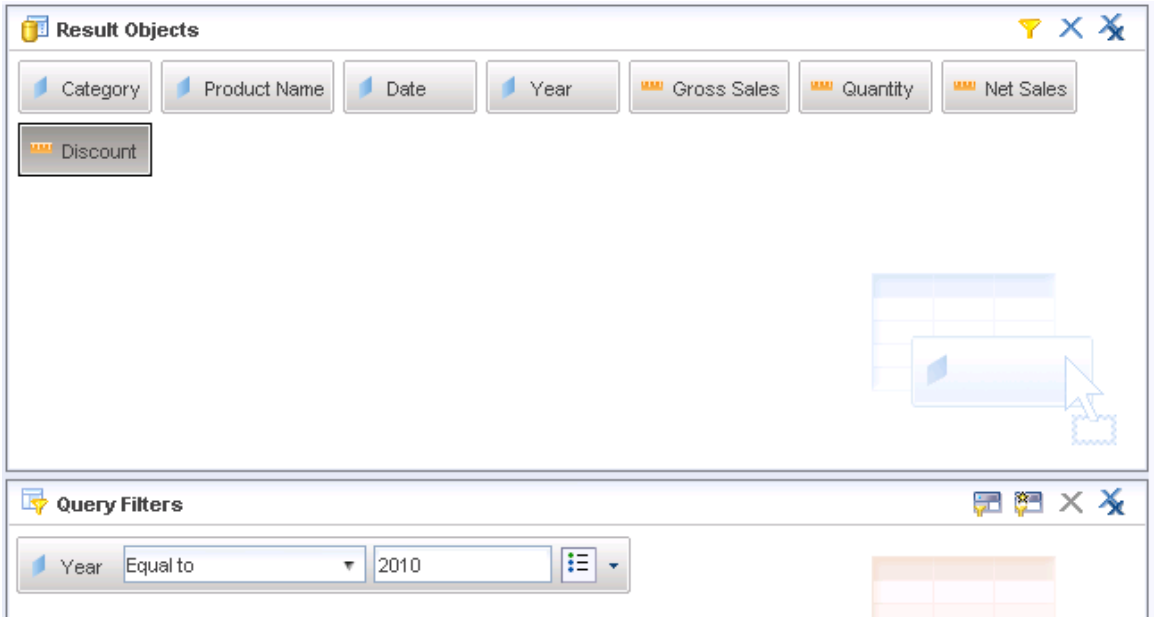


5. Click Open.
6. Click Design.

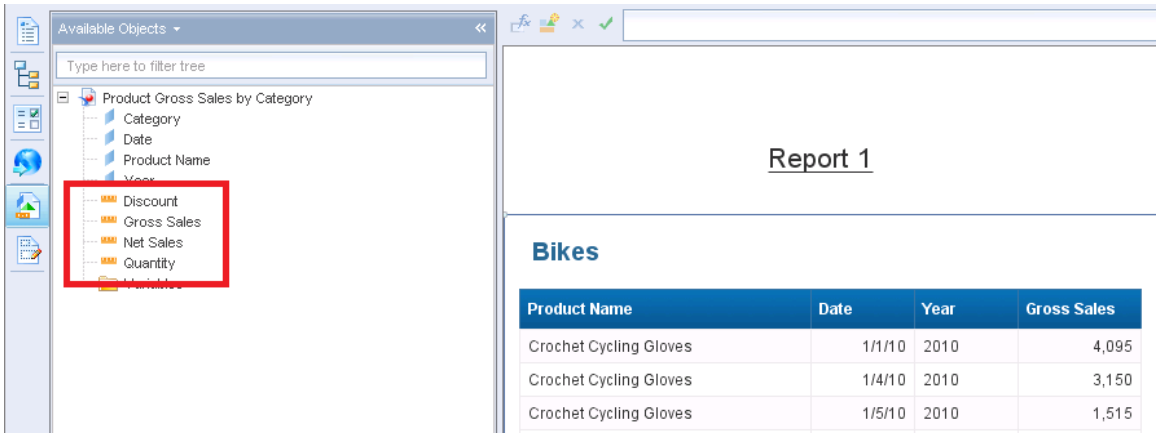


7. Click the Data Access tab.
8. Click Edit.

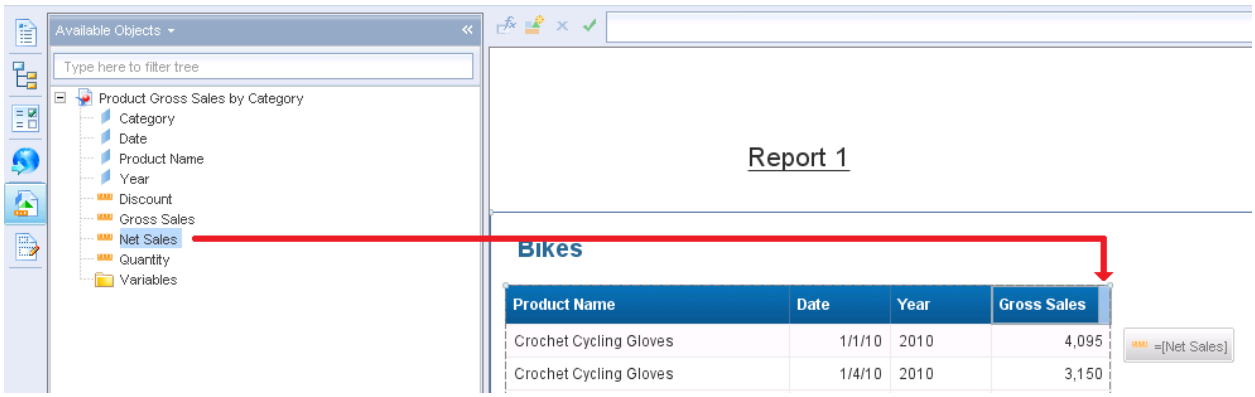
9. Add the Quantity, Net Sales, and Discount measures.



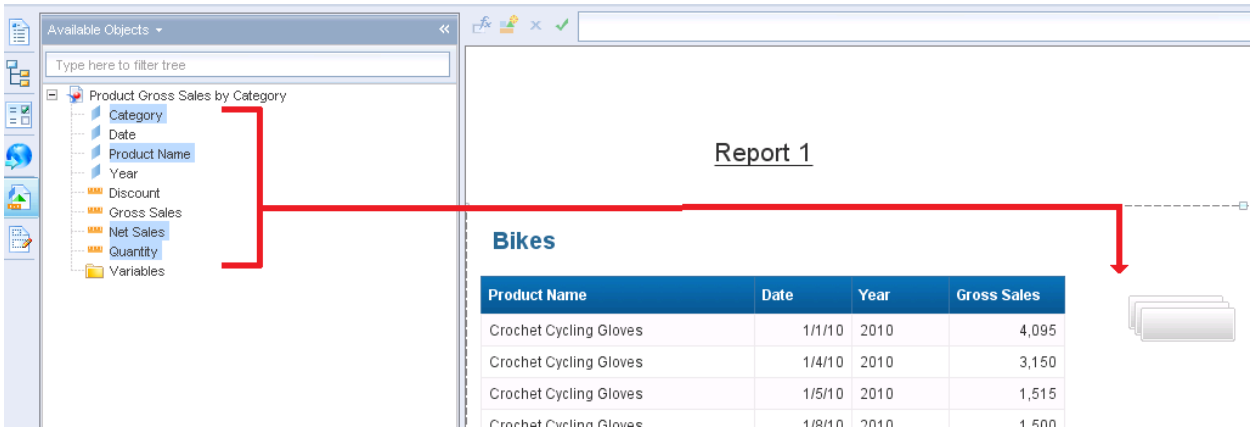
10. Click Run Query.
    Note that the existing table in the document does not change; however, the new measures are listed on the left panel under Available Objects.



You can add objects to an existing table, by dragging and dropping them to the left or right of any existing column.



Or you can drag and drop objects to a new location to create a completely new table using the selected objects.



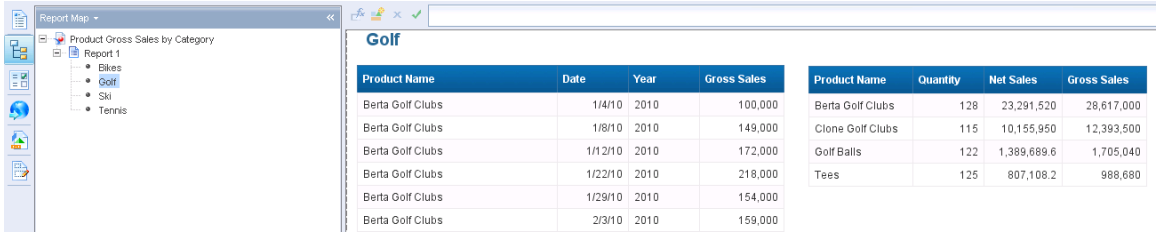
11. Add a table to the right of the existing table that displays net Quantity, Net Sales, and Gross Sales for each product.

Bikes

Product Name	Date	Year	Gross Sales
Crochet Cycling Gloves	1/1/10	2010	4,095
Crochet Cycling Gloves	1/4/10	2010	3,150
Crochet Cycling Gloves	1/5/10	2010	1,515
Crochet Cycling Gloves	1/8/10	2010	1,500
Crochet Cycling Gloves	1/11/10	2010	1,680
Crochet Cycling Gloves	1/12/10	2010	1,575
Crochet Cycling Gloves	1/13/10	2010	3,165
Crochet Cycling Gloves	1/18/10	2010	990

Product Name	Quantity	Net Sales	Gross Sales
Crochet Cycling Gloves	48	45,497.7	55,485
Descent Competition Bicycle	149	79,163,960	97,012,000
Rappel Mountain Bicycle	120	16,059,201.64	19,610,880
Romeo Hybrid Bicycle	141	29,994,744	36,747,200
Triump Pro Cycling Helmet	154	3,432,152.64	4,206,384

12. Use the Report Map to find a new table with the new data for each Category.



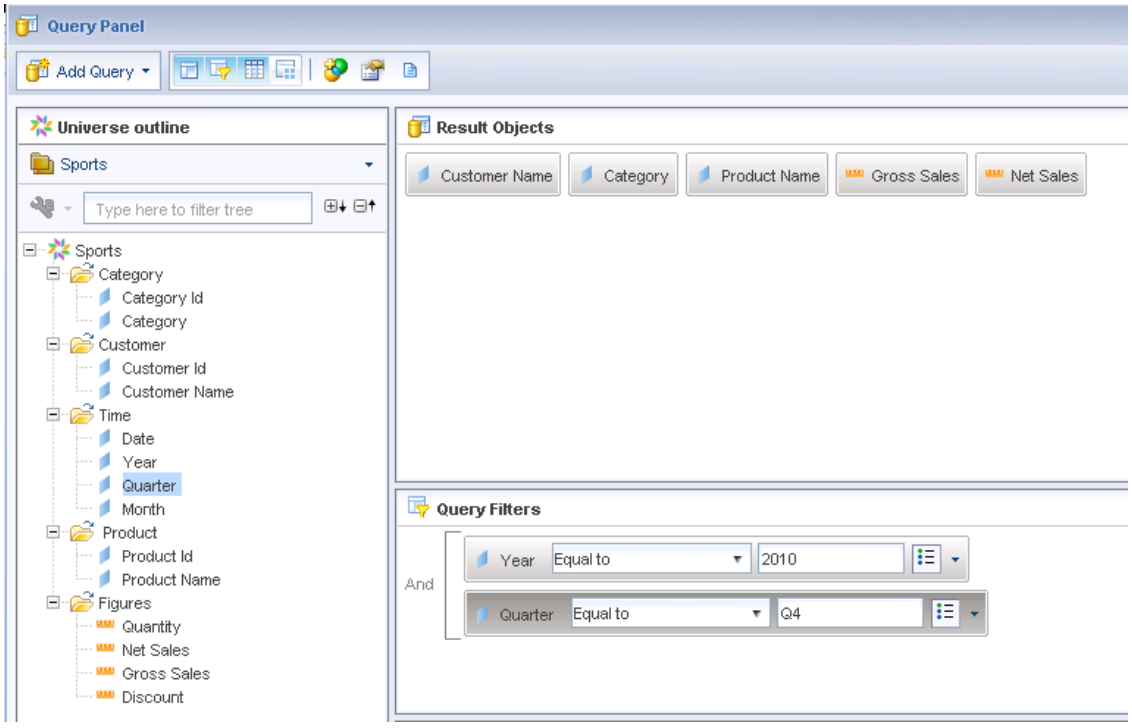
Product Name	Date	Year	Gross Sales
Berta Golf Clubs	1/4/10	2010	100,000
Berta Golf Clubs	1/8/10	2010	149,000
Berta Golf Clubs	1/12/10	2010	172,000
Berta Golf Clubs	1/22/10	2010	218,000
Berta Golf Clubs	1/29/10	2010	154,000
Berta Golf Clubs	2/3/10	2010	159,000

Product Name	Quantity	Net Sales	Gross Sales
Berta Golf Clubs	128	23,291,520	28,617,000
Clone Golf Clubs	115	10,155,950	12,393,500
Golf Balls	122	1,389,689.6	1,705,040
Tees	125	807,108.2	988,680

13. Save the report.

Solution 29 – Filter the Data in a Web Intelligence Document

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add the Customer Name, Category, Product Name, Gross Sales and Net Sales to the report.
5. Add the filter Year is equal to 2010.
6. Add the filter Quarter is equal to Q4.



Note that the "And" keyword in the Query Filters pane means that only records where both the Year and Quarter criteria have been met will be returned to the report.

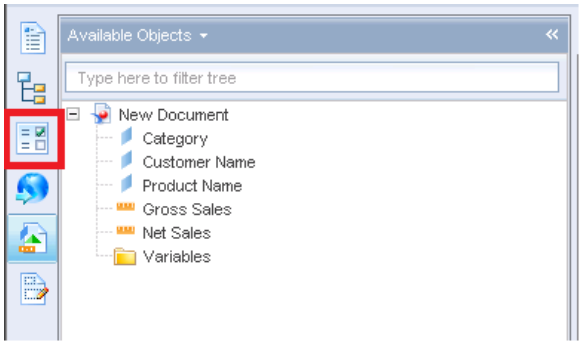
7. Click Run Query

8. Double-click the title. Erase the formula and type “Product Sales”.

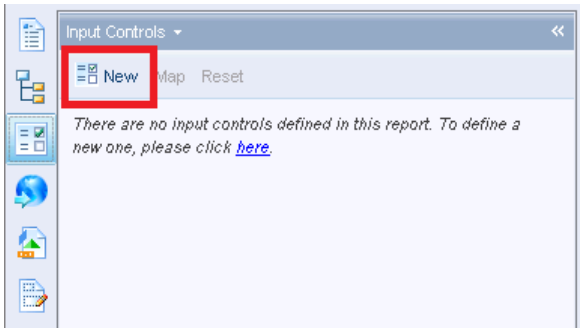
9. Resize the columns to best display the data.

Customer Name	Category	Product Name	Gross Sales	Net Sales
Allmigear	Bikes	Rappel Mountain Bicycle	204,480	167,673.59
Allmigear	Bikes	Triump Pro Cycling Helmet	36,456	29,893.92
Allmigear	Golf	Clone Golf Clubs	123,000	100,860
Allmigear	Ski	Ski Boots	156,000	134,160
Allmigear	Tennis	Pumpit Tennis Shoes	23,800	19,516
Allmigear	Tennis	SuperBounce Tennis Balls	4,740	3,886.8
Allmitek	Bikes	Descent Competition Bicycle	426,000	349,320
Allmitek	Golf	Clone Golf Clubs	105,500	86,510

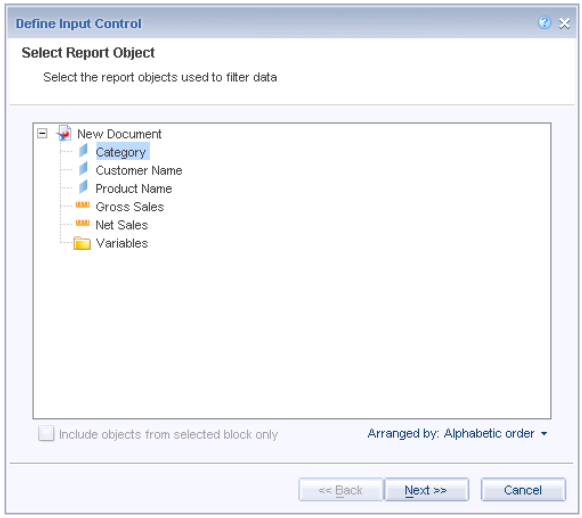
10. Click the Input Control button on the left sidebar .



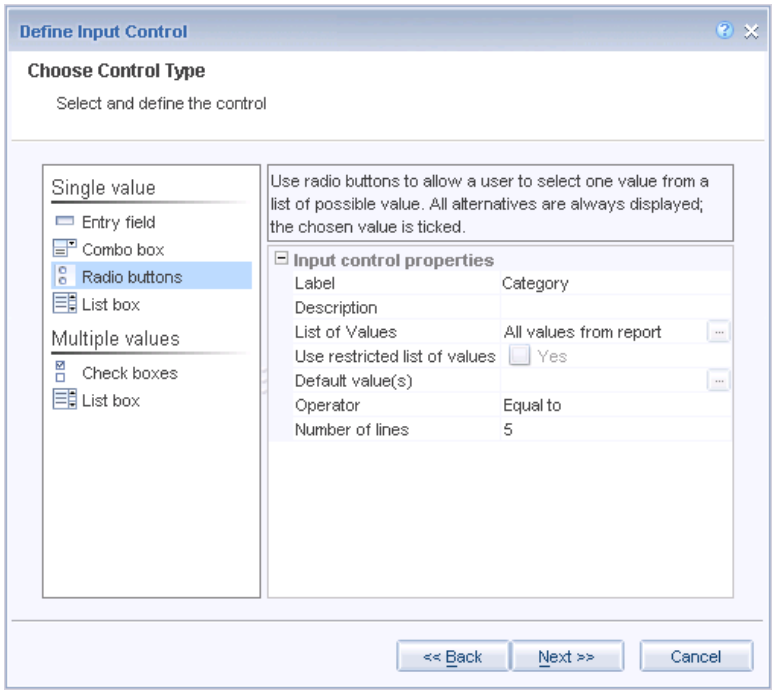
11. Click New.



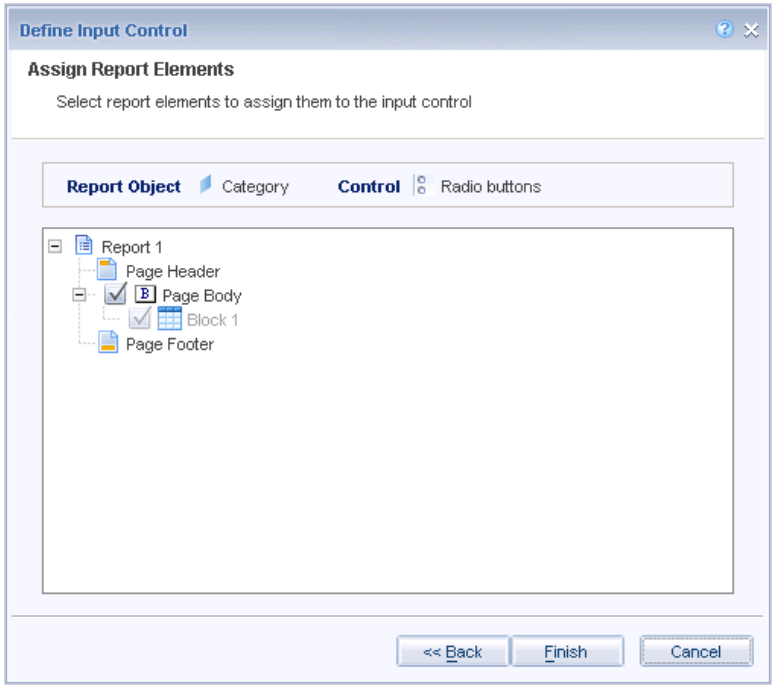
12. Click Category and click Next.



13. Click Radio buttons and click Next.

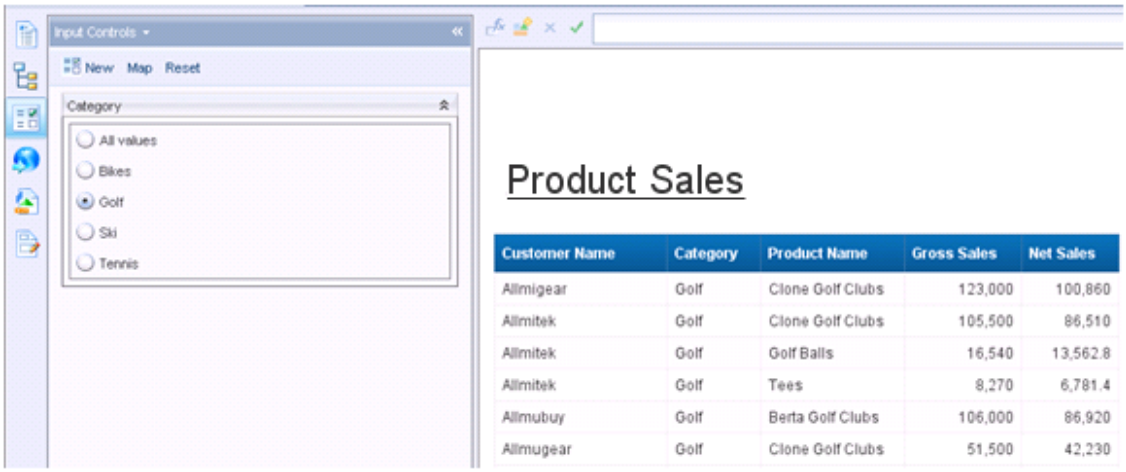


14. Click Next.



15. Click Finish.

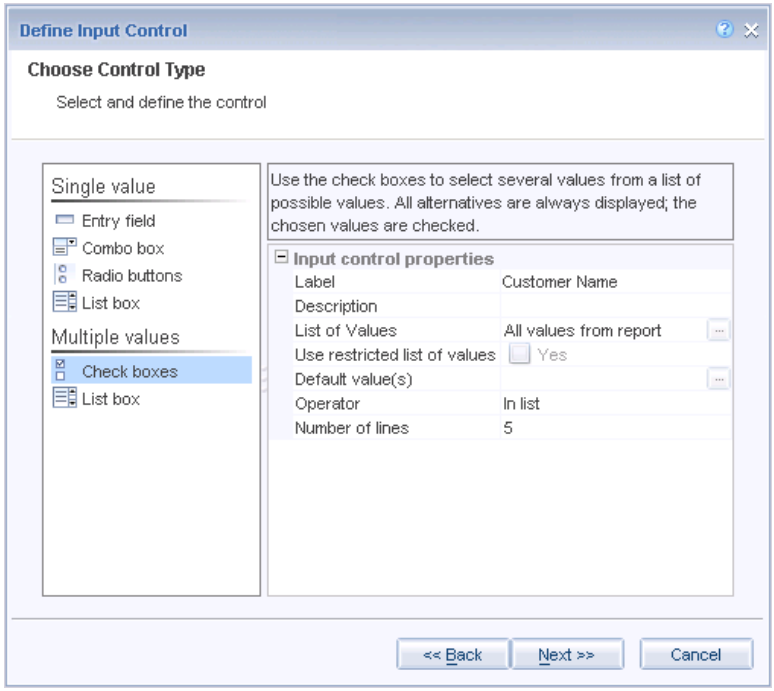
16. Click Golf.



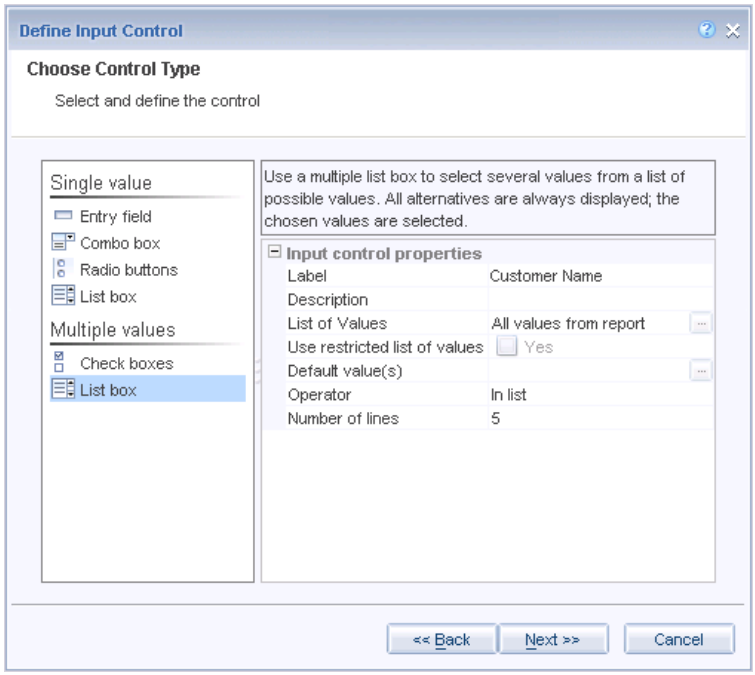
Notice that only sales of Golf products are displayed in the report.

17. Click New.
18. Click Product Name and click Next.

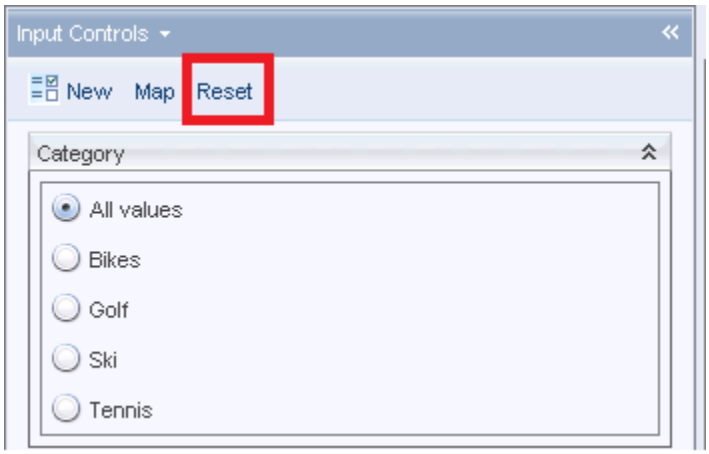
19. Click Check boxes and click Next.



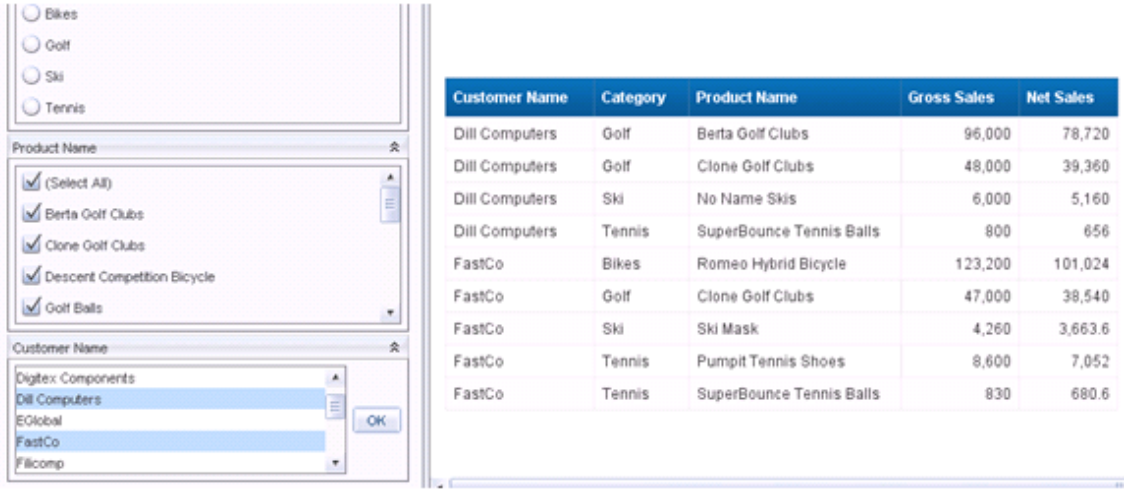
20. Click Finish.
21. Filter the report by experimenting with both the Category and Product name input controls.
22. Click New.
23. Click Customer Name and click Next.
24. Click List box and click Next.



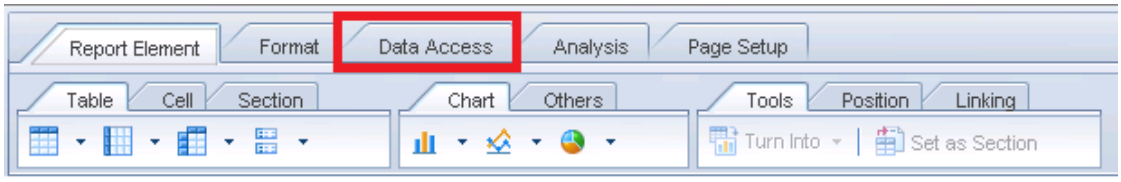
25. Click the Reset button.



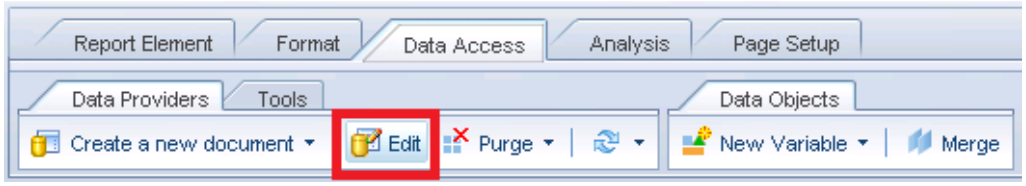
26. Use CTRL+click to select two or more customers and click OK.



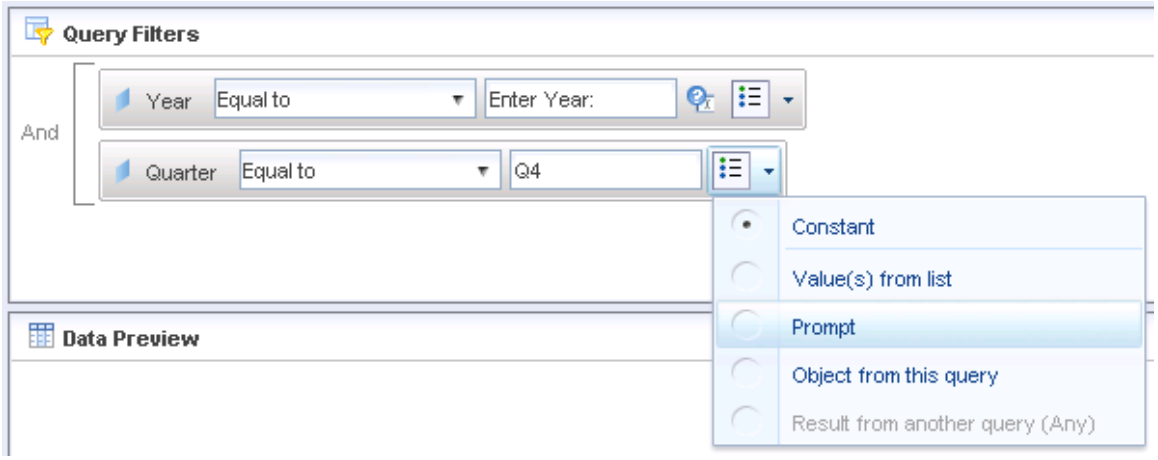
27. Click the Data Access tab.



28. Click Edit.



29. Modify the query filters to prompt for the Year and Quarter.

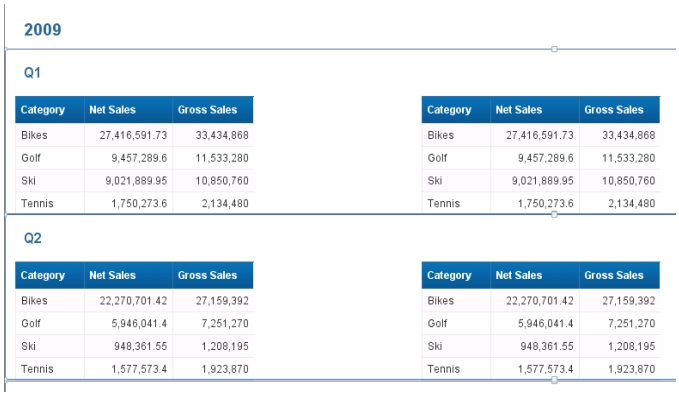


30. Click Run Query.
31. Select Q1, 2009
32. Save the document as Product Sales.

Solution 30 – Add a Chart to a Web Intelligence Document

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add the Category, Year, Quarter, Gross Sales and Net Sales to the report.
5. Run the query.
6. Resize the columns as required.
7. Right-click Year and choose Set as Section.
8. Right-click Quarter and choose Set as Section.
9. Click the border of the top table to select it.
10. Right-click and choose Copy.
11. Right-click to the right of the table and choose Paste.

    Your report should now include a duplicate table for each section.



2009

Q1

Category	Net Sales	Gross Sales
Bikes	27,416,591.73	33,434,868
Golf	9,457,289.6	11,533,280
Ski	9,021,889.95	10,850,760
Tennis	1,750,273.6	2,134,480

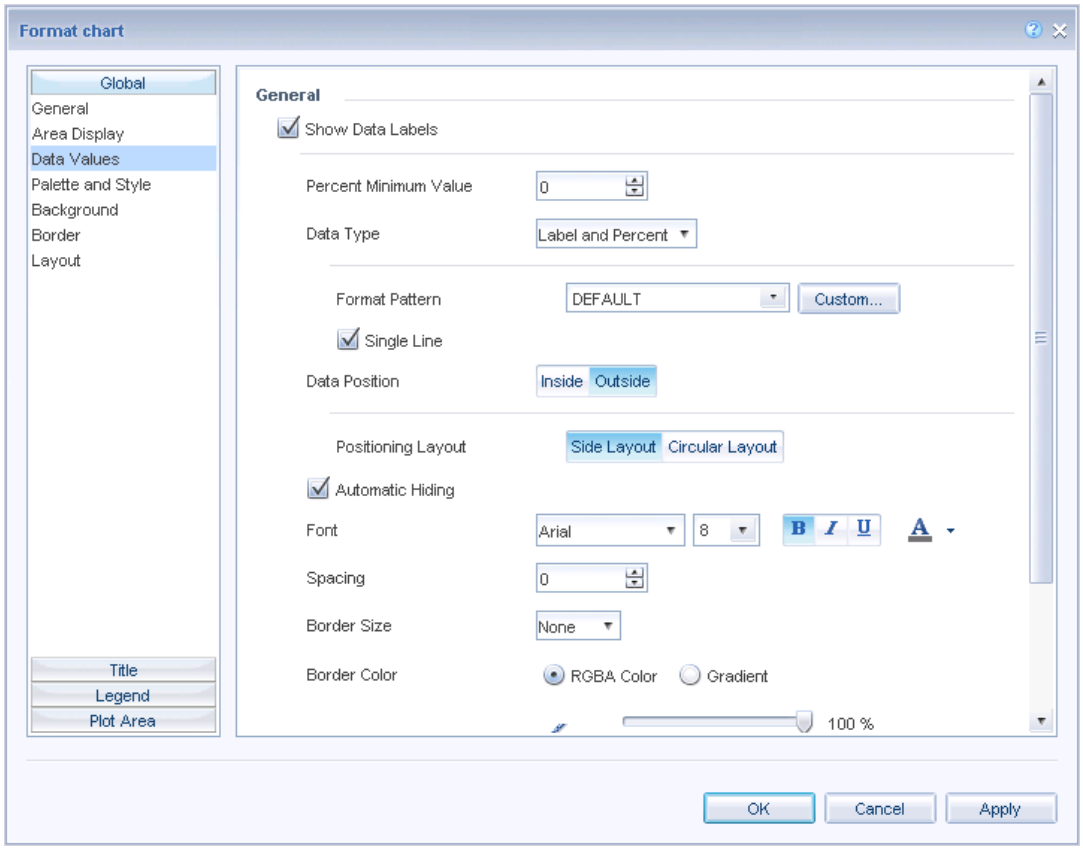
Category	Net Sales	Gross Sales
Bikes	27,416,591.73	33,434,868
Golf	9,457,289.6	11,533,280
Ski	9,021,889.95	10,850,760
Tennis	1,750,273.6	2,134,480

Q2

Category	Net Sales	Gross Sales
Bikes	22,270,701.42	27,159,392
Golf	5,946,041.4	7,251,270
Ski	948,361.55	1,208,195
Tennis	1,577,573.4	1,923,870

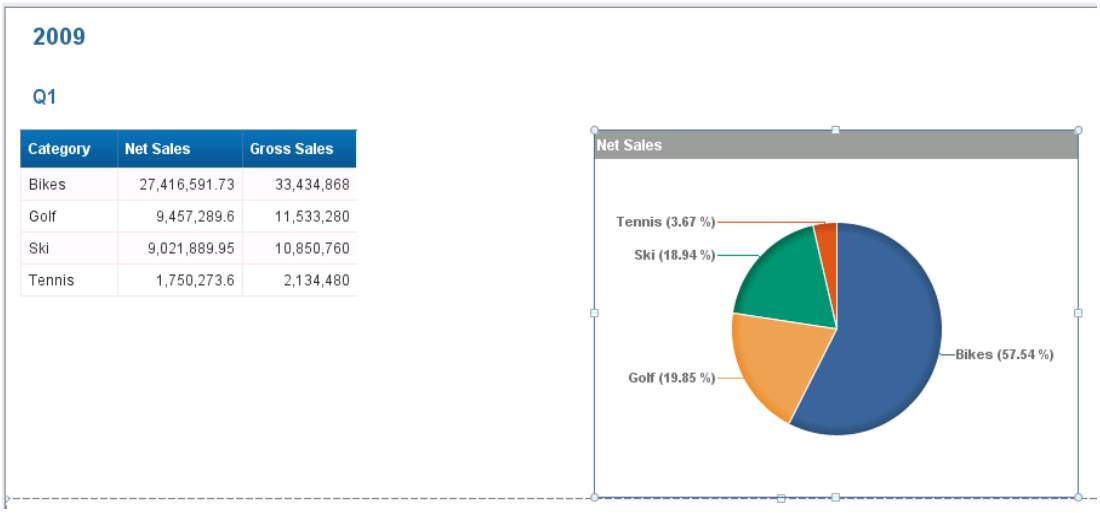
Category	Net Sales	Gross Sales
Bikes	22,270,701.42	27,159,392
Golf	5,946,041.4	7,251,270
Ski	948,361.55	1,208,195
Tennis	1,577,573.4	1,923,870

12. Right-click the table on the right and choose Turn Into > Pie.
13. Right-click the Pie chart and choose Format Chart…
14. Click the Data Values tab on the left.
15. Select the Show Data Labels Option.
16. Choose Label and Percent in the Data Type list.

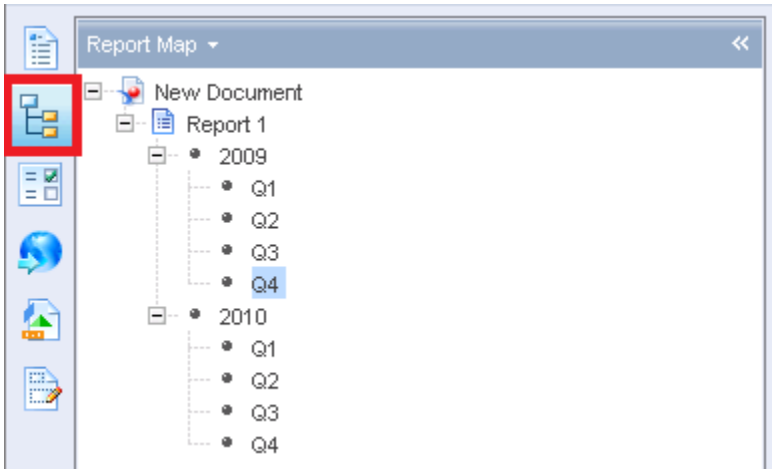


17. Click the Title Tab.
18. Select the Visible option.
19. Type the title Net Sales.
20. Click the Legend tab.
21. Deselect the Visible option.

22. Click OK.



23. Click the Report Map button and navigate the report using the tree.



24. Save the report as Sales by Category.

Solution 31 – Drill into a Web Intelligence Document using Default Navigation Paths

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add Category ID, Date, Gross Sales and Net Sales to the report.
5. Click Run Query.
6. Click Analysis.

7. Click Drill.

Report 1

Category Id	Date	Net Sales	Gross Sales
1	1/5/09	20,434.4	24,920
1	1/6/09	70,192	85,600
1	1/7/09	75,604	92,200
1	1/8/09	22,476.2	27,410
1	1/9/09	1,271	1,550

Because Category Id and Date are both included in a navigation path, the values in these columns are now hyperlinks. Users can click the hyperlinks to "drill" into the data following the navigation path.

8. Click a value in the Category Id column.

Report 1

Category	Date	Net Sales	Gross Sales
Tennis	1/5/09	20,434.4	24,920
Tennis	1/6/09	70,192	85,600
Tennis	1/7/09	75,604	92,200
Tennis	1/8/09	22,476.2	27,410
Tennis	1/9/09	1,271	1,550

The report now shows the name for the selected category (Category Id=1). Category is the second object in the Category navigation path, and includes the category name.

9. Click the first date in the Date column (1/5/09).

Report 1

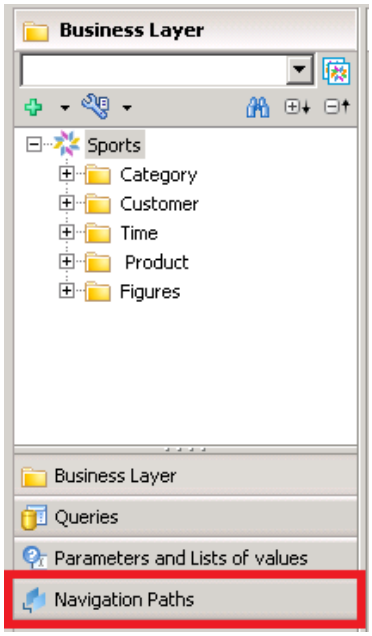
Category	Year	Net Sales	Gross Sales
Tennis	2009	20,434.4	24,920

The report now shows the total Net Sales and Gross Sales for the year 2009. Year is the second object in the Fact Navigation path.

10. Click 2009.

Solution 32 – Create a Custom Navigation Path in the Universe

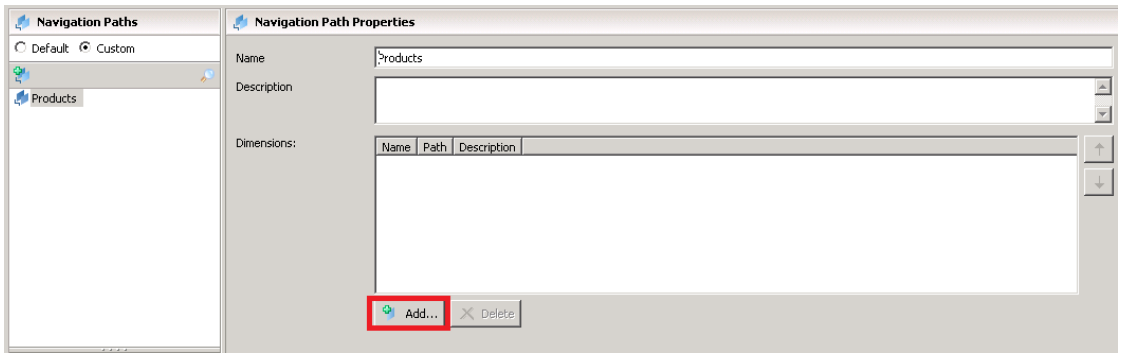
1. Open the information design tool.
2. Open the Sports project and double-click the Sports.blx business layer.
3. Click the Navigation Paths tab.



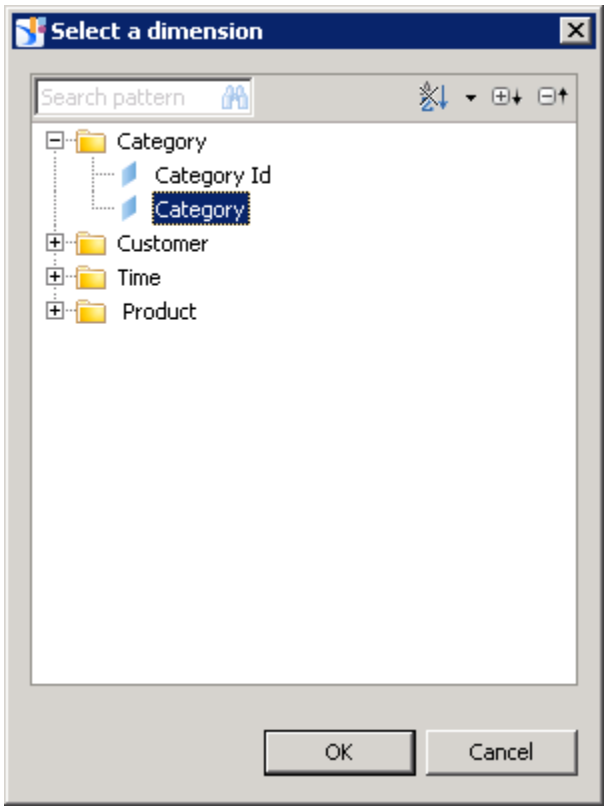
4. Click Custom.
5. Click the Insert Navigation Path button.

6. Type the name Products.

7. Click Add…



8. Click Category and click OK.



9. Click Add…
10. Click Product Name and click OK.
11. Click Add…
12. Click Customer Name and click OK.

13. Click the Insert Navigation Path button.

14. Type the name Time.
15. Add Year, Quarter, Month, and then Date.

16. Click file and choose Save All…
17. Right click Sports.unx and choose Publish > To a Repository…

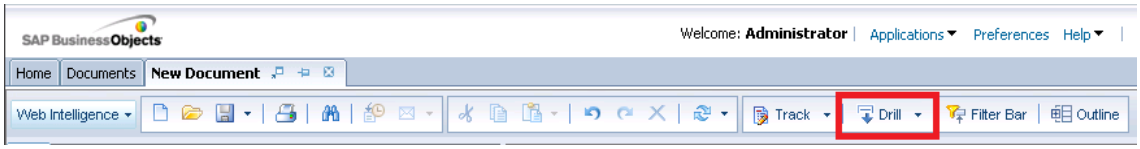
Solution 33 – Creating Drillable Web Intelligence Documents

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add the Category, Year, Gross Sales and Net Sales to the report.
5. Run the query.
6. Resize the columns as required.

Category	Year	Net Sales	Gross Sales
Bikes	2009	97,063,540.99	118,370,172
Bikes	2010	128,695,555.98	157,631,949
Golf	2009	24,785,254.41	30,225,920
Golf	2010	35,644,267.8	43,704,220
Ski	2009	36,567,906.35	43,072,640
Ski	2010	52,053,293.1	61,607,425
Tennis	2009	6,089,877.6	7,426,680
Tennis	2010	9,185,207.5	11,234,750

7. Click Reading.

8. Click the Drill button.



The data in the table is converted into hyperlinks.

Category	Year	Net Sales	Gross Sales
Bikes	2009	97,063,540.99	118,370,172
Bikes	2010	128,695,555.98	157,631,949
Golf	2009	24,785,254.41	30,225,920
Golf	2010	35,644,267.8	43,704,220
Ski	2009	36,567,906.35	43,072,640
Ski	2010	52,053,293.1	61,607,425
Tennis	2009	6,089,877.6	7,426,680
Tennis	2010	9,185,207.5	11,234,750

9. Click Bikes.

   The data is filtered. Only Bike sales are displayed in the table.

10. Click Design.

11. Resize the product name column so that the complete names are displayed.

Product Name	Year	Net Sales	Gross Sales
Crochet Cycling Gloves	2009	347,794.8	424,140
Crochet Cycling Gloves	2010	45,497.7	55,485
Descent Competition Bicycle	2009	60,694,760	74,018,000
Descent Competition Bicycle	2010	79,163,960	97,012,000
Rappel Mountain Bicycle	2009	13,244,639.97	16,152,000

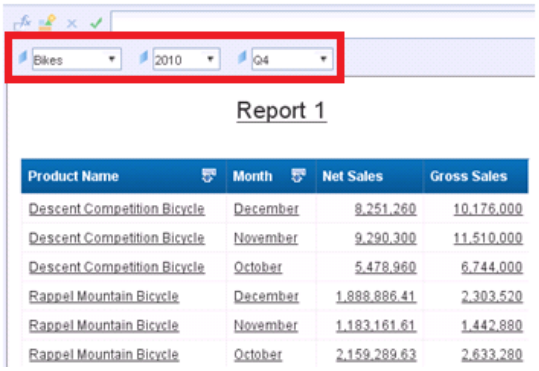
12. Click 2010.

    Only bike sales from 2010 are displayed.

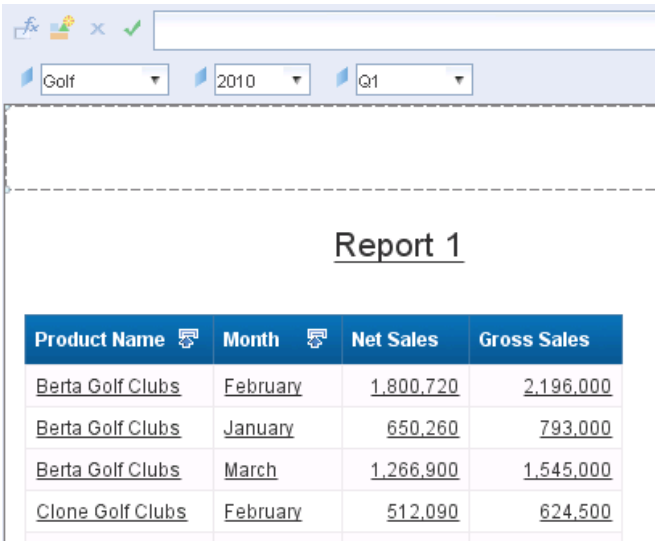
Product Name	Quarter	Net Sales	Gross Sales
Crochet Cycling Gloves	Q1	39,261.6	47,880
Crochet Cycling Gloves	Q2	6,236.1	7,605
Descent Competition Bicycle	Q1	18,192,520	22,186,000
Descent Competition Bicycle	Q2	20,235,960	24,678,000
Descent Competition Bicycle	Q3	17,714,960	21,718,000
Descent Competition Bicycle	Q4	23,020,520	28,430,000

13. Click Q4.

    The filters applied to the table are displayed in the toolbar above the document.



Users can drill across the data by selecting different values in the toolbar. For example, try changing the category filter from Bikes to Golf. Try changing the Quarter filter to a different quarter.

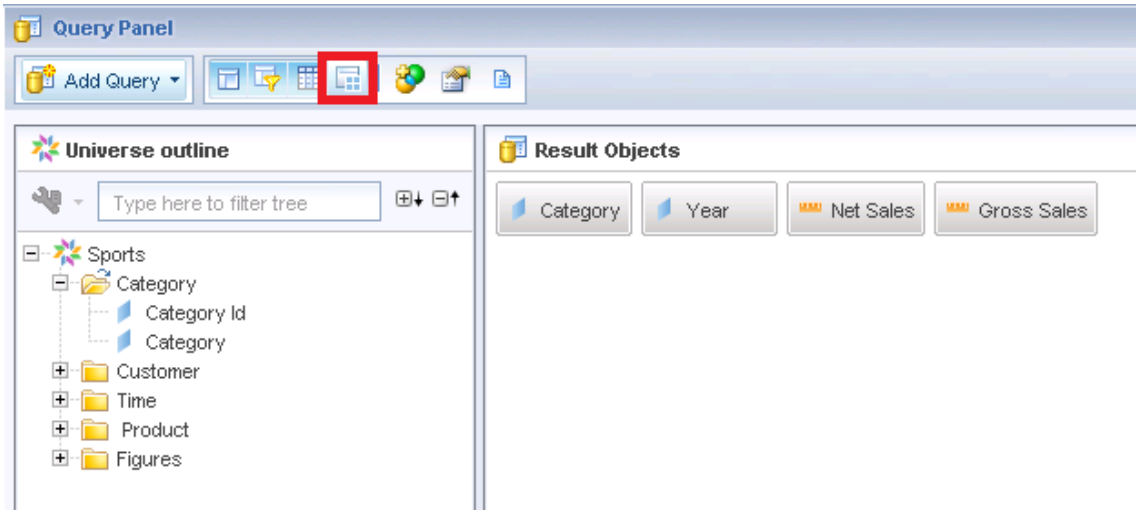


Users can also drill up to a higher level by clicking the drill up buttons in the column headers. For example you could drill up from Month to Quarter.

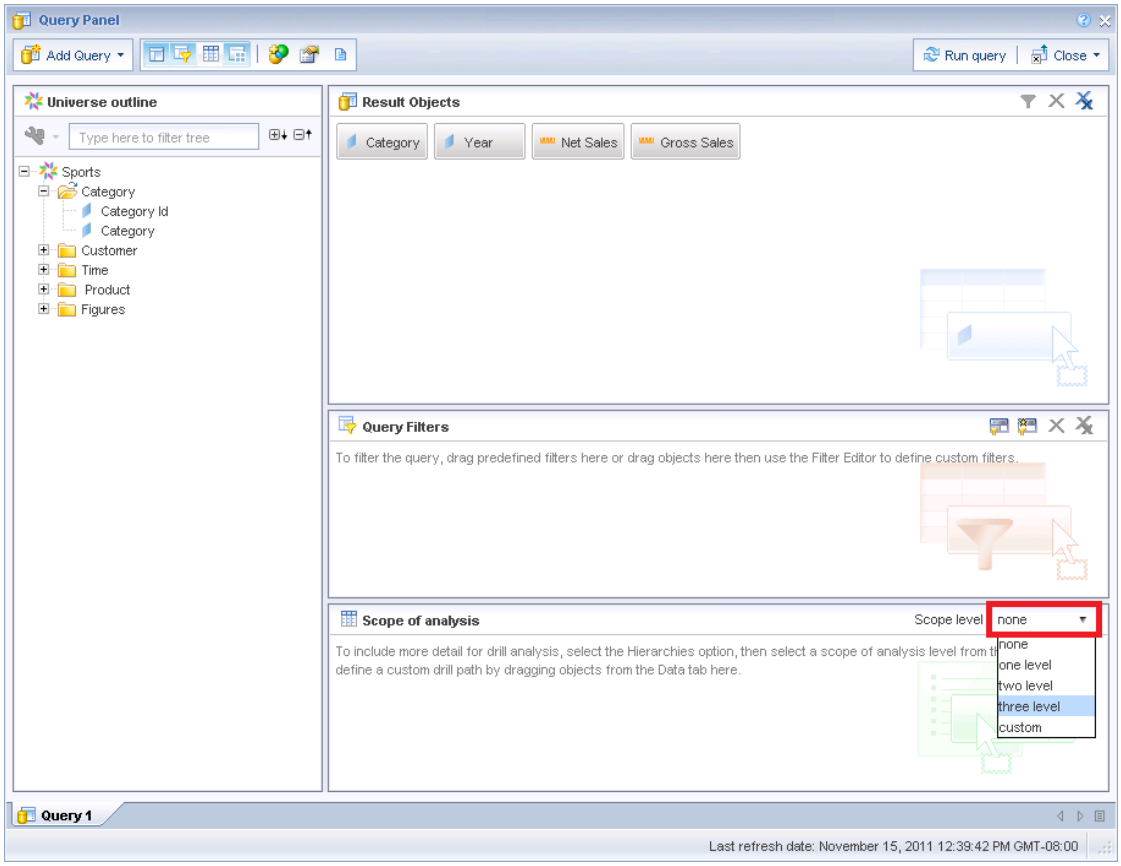
14. Click the Design.

15. Click Edit.

16. Click Scope of Analysis panel



17. Click the Scope level list in the bottom right corner of the Query Panel and choose three levels.

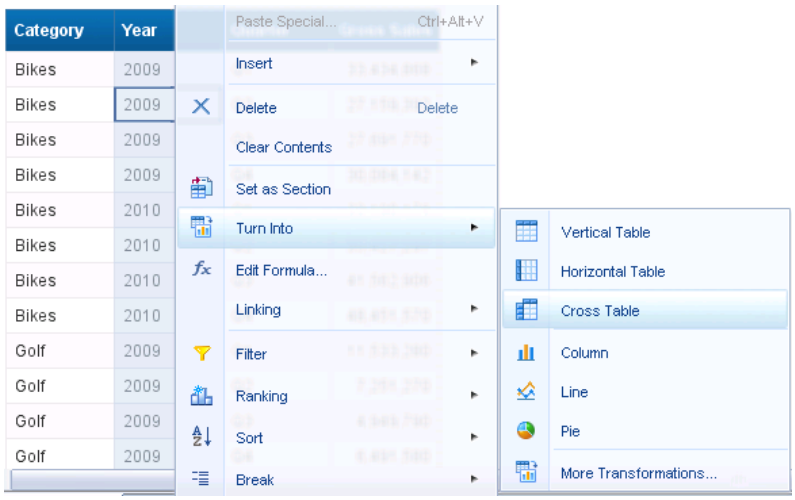


Solution 34 – Create a Web Intelligence Document with a Crosstab.

1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Create a new Web Intelligence document using the Sports universe.
4. Add the Category, Year, Quarter, and Gross Sales to the report.
5. Run the query.

Category	Year	Quarter	Gross Sales
Bikes	2009	Q1	33,434,868
Bikes	2009	Q2	27,159,392
Bikes	2009	Q3	27,691,770
Bikes	2009	Q4	30,084,142
Bikes	2010	Q1	32,190,176
Bikes	2010	Q2	35,427,297
Bikes	2010	Q3	41,562,906
Bikes	2010	Q4	48,451,570
Golf	2009	Q1	11,533,280
Golf	2009	Q2	7,251,270

6. Right-click anywhere in the table and choose Turn Into > Crosstab.



7. The table in converted into a crosstab, which displays the Gross Sales for each quarter.

	Bikes	Bikes	Golf	Golf	Ski	Ski	Tennis	Tennis
	2009	2010	2009	2010	2009	2010	2009	2010
Q1	33,434,868	32,190,176	11,533,280	8,394,800	10,850,760	5,855,770	2,134,480	1,923,640
Q2	27,159,392	35,427,297	7,251,270	10,358,930	1,208,195	1,697,220	1,923,870	3,569,570
Q3	27,691,770	41,562,906	4,949,790	11,953,170	11,112,485	20,402,805	2,090,300	3,141,280
Q4	30,084,142	48,451,570	6,491,580	12,997,320	19,901,200	33,651,630	1,278,030	2,600,260

8. Click and drag the category column heading to the left of the quarter heading.

	Bikes	Bikes	Golf	Golf	Ski	Ski	Tennis	Tennis
	2009	2010	2009	2010	2009	2010	2009	2010
Q1	33,434,868	32,190,176	11,533,280	8,394,800	10,850,760	5,855,770	2,134,480	1,923,640
Q2	27,159,392	35,427,297	7,251,270	10,358,930	1,208,195	1,697,220	1,923,870	3,569,570
Q3	27,691,770	41,562,906	4,949,790	11,953,170	11,112,485	20,402,805	2,090,300	3,141,280
Q4	30,084,142	48,451,570	6,491,580	12,997,320	19,901,200	33,651,630	1,278,030	2,600,260

9. Right-click one of the category headings and choose Set as Section

		2009	2010
Bikes	Q1	33,434,868	32,190,176
Bikes	Q2	27,159,392	35,427,297
Bikes	Q3	27,691,770	41,562,906
Bikes	Q4	30,084,142	48,451,570
Golf	Q1	11,533,280	8,394,800
Golf	Q2	7,251,270	10,358,930
Golf	Q3	4,949,790	11,953,170
Golf	Q4	6,491,580	12,997,320

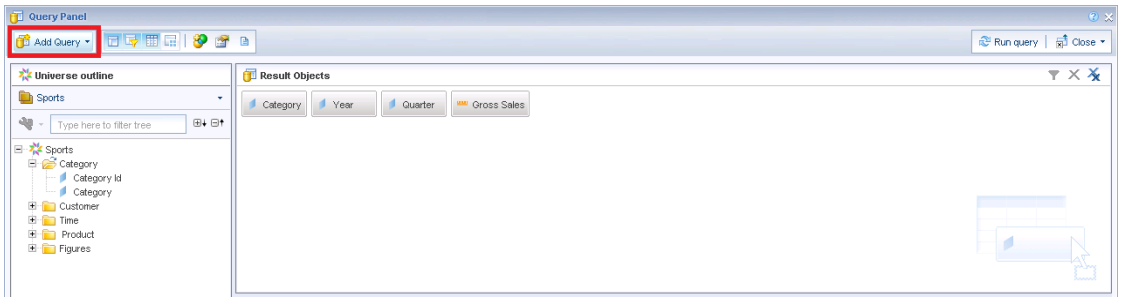
10. Change the report title to Gross Sales.
11. Save the report as Gross Sales Crosstab.

Solution 35 – Add another query to a Web Intelligence Document.

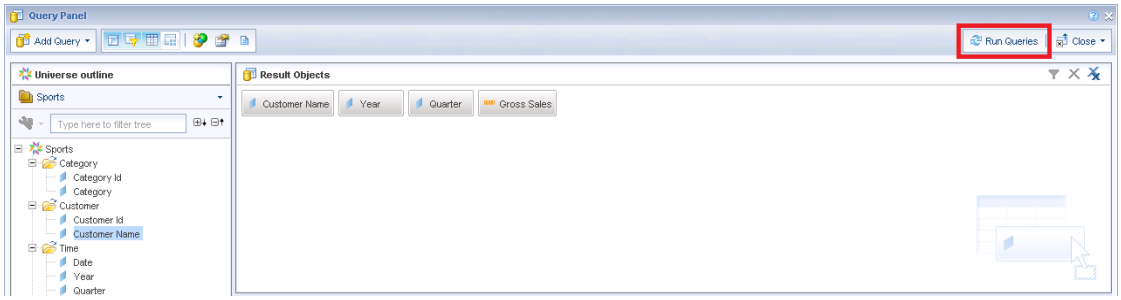
1. Open the BI launch pad.
2. Open Web Intelligence from My Applications.
3. Open the Gross Sales Crosstab document that you created in the previous activity.
4. Click Design in the top right corner.

5. Click Data Access.
6. Click Edit.

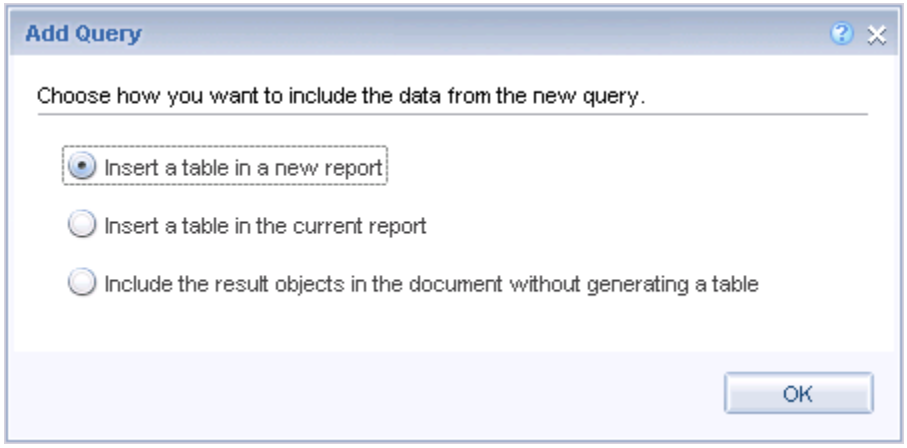
7. Click Add Query.



8. Double-click Sports.unx.
9. Add Customer Name, Year, Quarter, and Gross Sales.
10. Click Run Queries.

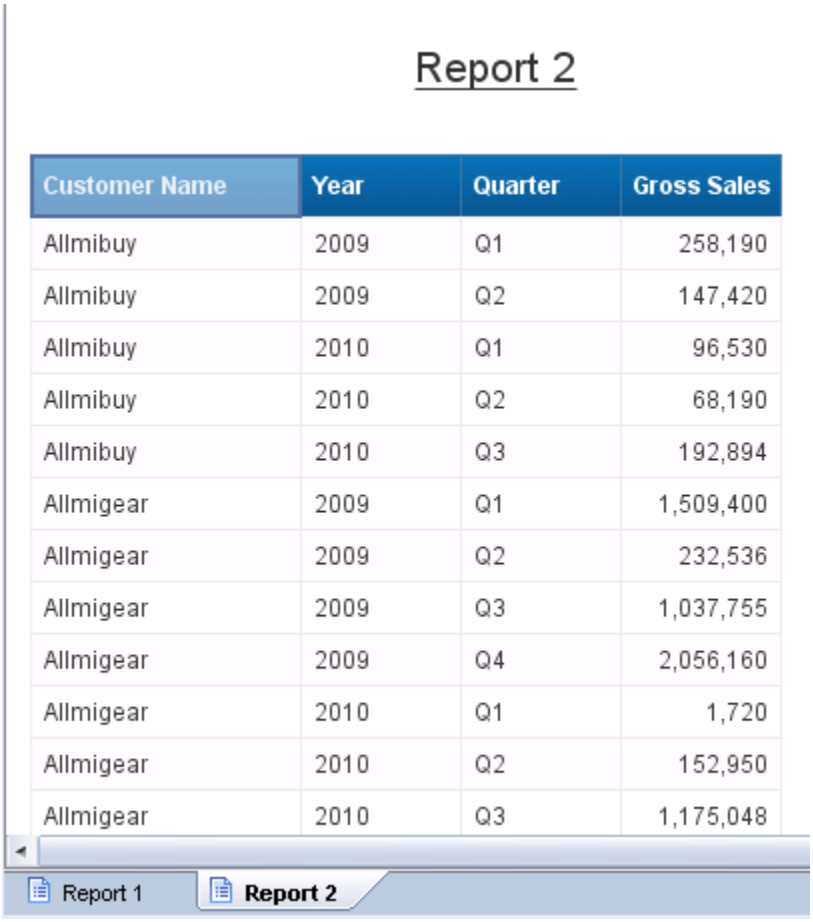


11. Click OK.



12. Click the Report 2.

13. Resize the Customer Name column.



Report 2

Customer Name	Year	Quarter	Gross Sales
Allmibuy	2009	Q1	258,190
Allmibuy	2009	Q2	147,420
Allmibuy	2010	Q1	96,530
Allmibuy	2010	Q2	68,190
Allmibuy	2010	Q3	192,894
Allmigear	2009	Q1	1,509,400
Allmigear	2009	Q2	232,536
Allmigear	2009	Q3	1,037,755
Allmigear	2009	Q4	2,056,160
Allmigear	2010	Q1	1,720
Allmigear	2010	Q2	152,950
Allmigear	2010	Q3	1,175,048

Report 1 | Report 2

14. Right-click the Report 1 tab and choose Rename. Chang e the name to Gross Sales by Category.
15. Right-click the Report 2 tab and choose Rename. Change the name to Gross Sales by Customer.

Golf

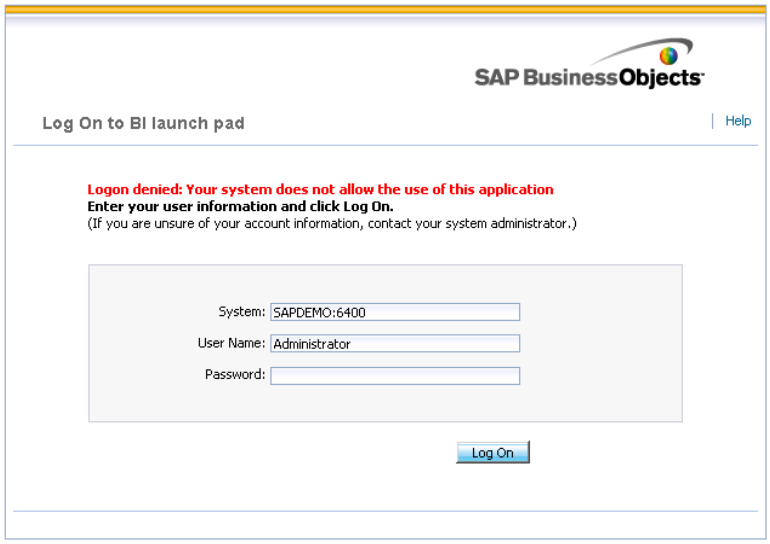
	2009	2010
Q1	11,533,280	8,394,800
Q2	7,251,270	10,358,930

Gross Sales by Category | Gross Sales by Customer

16. Save the document.

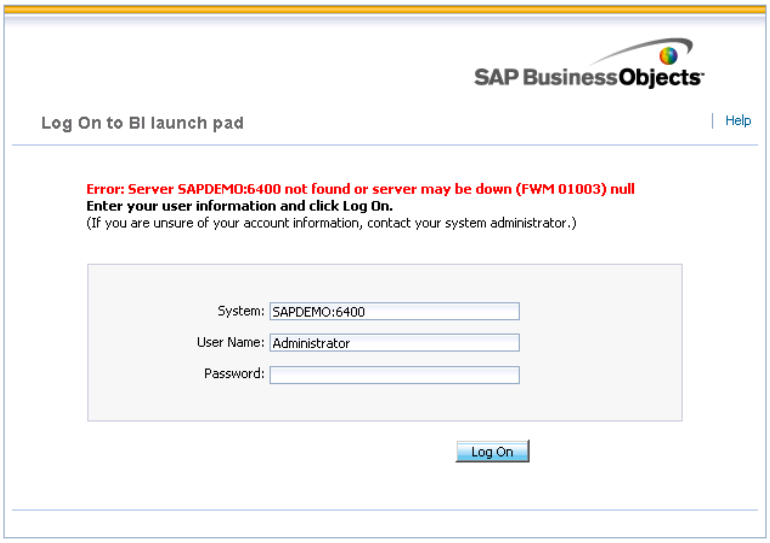
Troubleshooting

Logon denied: Your system does not allow the use of this application

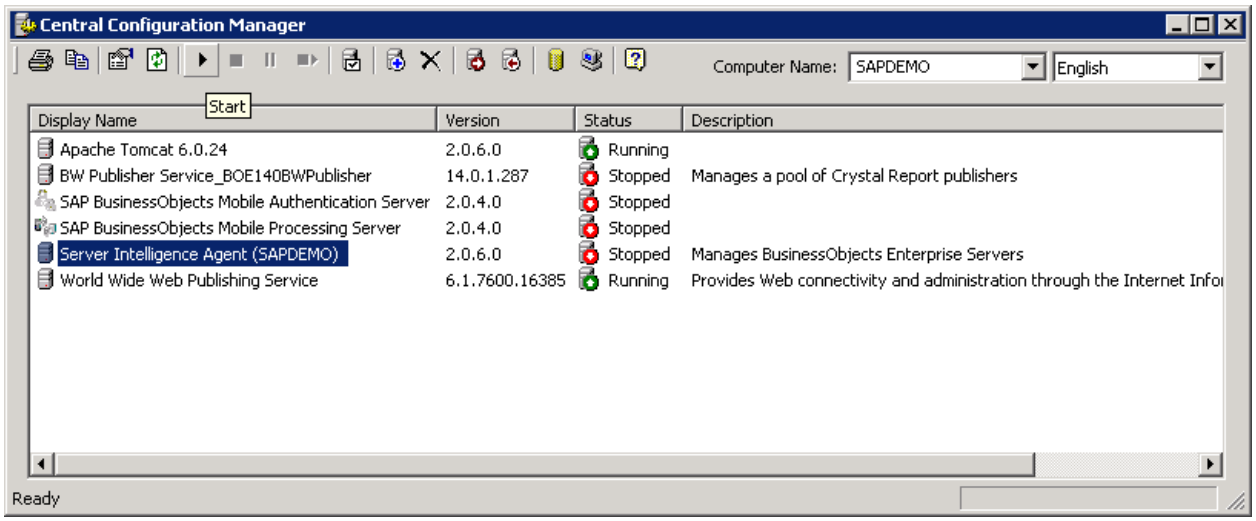


This error occurs when the license keys for the BI platform have expired. Log into the Central Management Console and update the license keys.

Error: Server SAPDEMO:6400 not found or server may be down (FWM 01003) null



This error occurs when the server is no longer running. To restart the servers open the Central Configuration Manager (Start > All Programs > SAP BusinessObjects Enterprise XI 4.0 > SAP BusinessObjects Enterprise > Central Configuration Manager) and restart the Server Intelligence Agent (SAP Demo)


Central Configuration Manager
Computer Name:
SAPDEMO
English
Start
Display Name
Version
Status
Description
Apache Tomcat 6.0.24
2.0.6.0
Running
BW Publisher Service_BOE140BWPublisher
14.0.1.287
Stopped
Manages a pool of Crystal Report publishers
SAP BusinessObjects Mobile Authentication Server
2.0.4.0
Stopped
SAP BusinessObjects Mobile Processing Server
2.0.4.0
Stopped
Server Intelligence Agent (SAPDEMO)
2.0.6.0
Stopped
Manages BusinessObjects Enterprise Servers
World Wide Web Publishing Service
6.1.7600.16385
Running
Provides Web connectivity and administration through the Internet Infor
Ready