

SAP BusinessObjects Business Intelligence Workbook 1 Solution Guide

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Introduction

This solution guide is a companion to the "<u>SAP BusinessObjects Business Intelligence Workbook 1</u>: <u>The Sports Warehouse</u>". 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 "<u>SAP BusinessObjects B1 4.x Installation</u> Job Aid".

Solution 1: Create the Sports_Warehouse Database

- 1. Download and extract the following workbook resources.
 - a. Sports: <u>http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/4026d3cc-ca4a-2f10-fa85-</u> <u>ecc740f6a085</u>
 - b. Spreadsheets: <u>http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/00f8b958-cb4a-2f10-a2b3-e18c0ef13574</u>
- Open SQL Server Management Studio (Start > All Programs > Microsoft SQL Server 2008 > SQL Server Management Studio.
- 3. Login as shown in the dialog below.

Connect to Server		×
SQL S	Server 2008	E H
Server type:	Database Engine	•
Server name:	(local)	•
Authentication:	Windows Authentication	•
User name:	SAPDEMO\Administrator	~
Password:		
	Remember password	
Connect	Cancel Help Options	»>

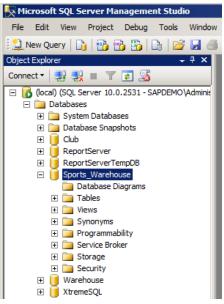
Note: You may need to switch server types to view the (local) server name.

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

5. Type Sports_Warehouse in the Database Name field.

New Database					
Selecta page	🔄 Script 👻 📑 H	elp			
Options Filegroups	Database name:		Sports_War	rehouse	
	Owner:		<default></default>		
	Use full-text in				
		nananan ng			
	Database files:				
	Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth
	Sports_War Sports War	Rows Log	PRIMARY Not Applicable	2	By 1 MB, unrestricted growth By 10 percent, unrestricted growth
	Sports_vvar	Log	Not Applicable	1	by 10 percent, unrestricted growth
Connection					
Server: (local)					
Connection: SAPDEMO\Administrator					
Wew connection properties					
Progress					
Ready	•				Þ
				Add	Remove
L					
					OK Cancel

- 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.

🔜 SQL Server In	nport and Export Wizard			
Choose a D Select the so	ata Source ource from which to copy data.			
Data source:	Flat File Select a file and specify the File name: Locale: Code page: Format: Text qualifier: Header row delimiter: Header rows to skip: Column names in the	file properties and the [rts_Warehouse\Di English (United Sta 1252 (ANSI - Latir Delimited	m_Category.csv	Browse Unicode
Help	<	Back Next >	Finish >>	Cancel

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

sQ	L Server Import	and Export Wiza	ırd				_	. 🗆
. 5	view Data Ty Select a table to re now the wizard ha	pe Mapping eview how its data t ndles conversion is	types map to ssues.	thos	e in the destinati	on. Also, sele	ect	
Tab	le:							
	Source				Destination			
	C:_Kits\Sample_	Databases\Sports_	Wareho	1	[dbo].[Dim_Categ	jory]		
•								•
Data	a type mapping:							
	Source Column	Source Type	Destination	Co	Destination Ty	Convert	On Error	
0	Category_ID	single-byte sig	Category_I	D	smallint	- -	Use Globa	
0	Category	string [DT_ST	Category		varchar			
•								Þ
To	view conversion o	letails, double-click	k the row that	it con	tains the column	source type	to be conver	ted.
	Error (global) Truncation (globa	l)	Fa Fa			▼ ▼		
	Help		< Back		Next >	Finish >>	Cance	əl

- 21. Click Next.
- 22. Click Next.

- 23. Click Finish.
- 24. Click Close.

V	Success	11 Total 11 Success	0 Error 0 Warning
)eta	ils:		
	Action	Status	Message
0	Initializing Data Flow Task	Success	
0	Initializing Connections	Success	
0	Setting SQL Command	Success	
0	Setting Source Connection	Success	
0	Setting Destination Connection	Success	
0	Validating	Success	
0	Prepare for Execute	Success	
i	Pre-execute	Success	
1	Executing	Success	
•	Copying to [dbo].[Dim_Category]	Success	4 rows transferred
1	Post-execute	Success	

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.

-	Success	11 Total 11 Success	0 Error 0 Warning
eta	ils:		
	Action	Status	Message
9	Initializing Data Row Task	Success	
0	Initializing Connections	Success	
0	Setting SQL Command	Success	
0	Setting Source Connection	Success	
0	Setting Destination Connection	Success	
0	Validating	Success	
0	Prepare for Execute	Success	
٢	Pre-execute	Success	
D	Executing	Success	
۲	Copying to [dbo].[Dim_Customer]	Success	113 rows transferrer
۲	Post-execute	Success	

V	Success	11 Total 11 Success	0 Error 0 Warning
leta	ils:		
	Action	Status	Message
0	Initializing Data Flow Task	Success	
0	Initializing Connections	Success	
9	Setting SQL Command	Success	
0	Setting Source Connection	Success	
9	Setting Destination Connection	Success	
0	Validating	Success	
0	Prepare for Execute	Success	
D	Pre-execute	Success	
Ð	Executing	Success	
1	Copying to [dbo].[Dim_Product]	Success	17 rows transferred
1	Post-execute	Success	

- 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.

🔜 SQL Server In	port and Export Wize	ard			<u>- 🗆 ×</u>
Choose a Da Select the so	ata Source urce from which to copy	r data.		C	
Data source:	Date Year_Quarter Category_ID Customer_ID Product_ID Sales_Count Net_Sales Gross_Sales	at File Source ies of each colur	nn. Misc Name ColumnDelim ColumnType InputColumn DataPrecisio DataScale DataType OutputColum TextQualified Name	Delimited Width 0 n 0 0 0 four-byte signed inWid 0	integ
	New 🗸	Delete	Si	uggest Types	
Help		< Back	Next >	Finish >> Can	cel

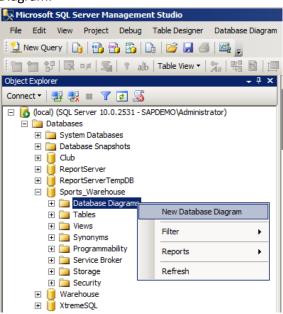
- iii. Click Next .
- iv. Click Next.
- v. Review the Data Mappings.

able: Source C:_Kits\Sample	e_Databases\Sports		Destination dbo].[Dim_Fact]			
ata type mapping: Source Column	Source Type	Destination Co	Destination Ty	Convert	On Error	On Truncati
Date	date [DT_DA	Date Date	datetime		Use Global	Use Global
Year	two-byte sign	Year	smallint			
Year Quarter	string [DT_ST	Year Quarter	varchar			
Category ID	single-byte sig	Category ID	smallint	2	Use Global	Use Global
Customer ID	single-byte sig	Customer ID	smallint	V	Use Global	Use Global
Product ID	single-byte sig	Product ID	smallint		Use Global	Use Global
Sales_Count	single-byte sig	Sales Count	smallint	V	Use Global	Use Global
Net Sales	float [DT_R4]	Net Sales	real			
Gross_Sales	four-byte sign	Gross Sales	int			
o view conversion	details, double-clic	k the row that cont	ains the column so	ource type t	to be converted	d.

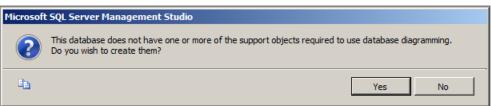
- vi. Click Next.
- vii. Click Next.
- viii. Click Finish.

Č	Success		11 Total 11 Success	0 Error 0 Warning
)eta	ils:			
	Action	Status		Message
0	Initializing Data Row Task	Success		
	Initializing Connections	Success		
0	Setting SQL Command	Success		
0	Setting Source Connection	Success		
0	Setting Destination Connection	Success		
	Validating	Success		
	Prepare for Execute	Success		
()	Pre-execute	Success		
()	Executing	Success		
()	Copying to [dbo].[Dim_Fact]	Success		3882 rows transferred
()	Post-execute	Success		

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



28. Click Yes.

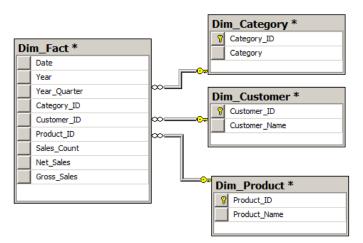


29. Select all four tables and click Add.

Add Table		?×
Tables		
Dim_Category		
Dim_Customer Dim_Fact		
Dim_Product		
	Refresh Add Clos	e

- 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...

Name	Driver	Add
BusinessObjects Audit Server 14	D SQL Server	Remove
BusinessObjects CMS 140	SQL Server	Hemove
club	Microsoft Access Driver (*.m	Configure
club-webi	Microsoft Access Driver (*.m	
efashion	Microsoft Access Driver (*.m	
efashion-webi	Microsoft Access Driver (*.m	

5. Select SQL Server Native Client 10.0.

Select a driver for which you wan	t to set up a data sou Version	rce.
SQL Server	6.01.7601.17514	Mic
SQL Server Native Client 10.0	2007.100.2531.00	Mic
•		F
 < Back	Finish Can	

6. Click Finish.

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

Freate a New Data Sour	rce to SQL Server 🔀
SQL Server 2008	This wizard will help you create an ODBC data source that you can use to connect to SQL Server. What name do you want to use to refer to the data source?
	Name: Sports
	How do you want to describe the data source? Description:
	Which SQL Server do you want to connect to?
	Server: SAPDEMO
	Finish Next > Cancel Help

8. Click Next.

Create a New Data So	urce to SQL Server	×
	How should SQL Server verify the authenticity of the login ID? With Windows NT authentication using the network login ID. With SQL Server authentication using a login ID and password entered by the user. To change the network library used to communicate with SQL Server, click Client Configuration.	
	Client Configuration Connect to SQL Server to obtain default settings for the additional configuration options. Login ID: Administrator Password:	
	< Back Next > Cancel Help	

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

Create a New Data Source	to SQL Server	×
	Change the default database to:	
	Sports_Warehouse Attach database filename:	
	Create temporary stored procedures for prepared SQL statements and drop the stored procedures:	
	 Only when you disconnect. When you disconnect and as appropriate while you are connected. 	
	Use ANSI quoted identifiers.	
	Use ANSI nulls, paddings and warnings.	
Ē	 Use the failover SQL Server if the primary SQL Server is not available. 	
	< Back Next > Cancel Help	

- 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.

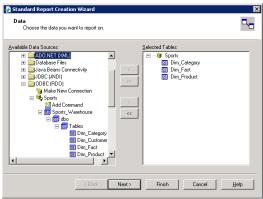
👰 Standard Report Creation Wizard		×
Data Choose the data you want to report on.	C	-
Available Data Sources: Image:	Selected Tables:	
< Back	Next > Finish Cancel Help	

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

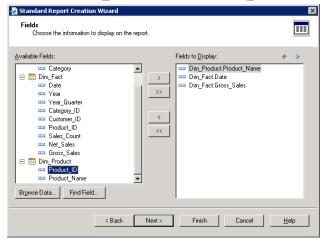
Select Data Source:	
<u>o</u> ete Para Source. Data Source Name:	club club-webi dBASE Files efashion-webi efashion-webi-new Excel Files MS Access Database Sports
<u>F</u> ind File DSN:	0
File DSN:	
Enter Connection String:	0
Connection String:	

- 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.

Grouping (Optional) Group the information on the repor		(8
wallable Fields: Im Dim Category.Category Im Dim Fact.Date Im Fact.Date Im Fact.Year Im Fact.Year Im Fact.Year Im Fact.Sales.Count Im Fact.Net_Sales Im Category.ID Im Category Im Category Im Fact.Net_Sales Im Dim Lategory Im Category Im Category	<u>G</u> roup By: ⇒ Dim_Category.Category - A ⇒ → → → → → → → → → → → → → → → → → → →	÷ +
Browse Data	in ascending order.	•
< Back	Next > Finish Cancel	<u>H</u> elp

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

Chart (Optional) In	clude a chart on the repor	t.		1
What kind of cha	art would you like to see?			
O No Chart	il. 💿 Bar Chart	🛃 🔿 Line Chart	nt C 🕒 🕒 🕒 🕒	
Chart title:	of Gross_Sales / Category			
On <u>c</u> hange of:				
E D	im_Category.Category			•
Sho <u>w</u> summary:				
Σ S	um of Dim_Fact.Gross_Sa	iles		•

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

Standard Report Creation Wizard Record Selection	×
(Optional) Select a subset of inform	nation to display.
Available Fields: Dim_Fact.Gross_Sales	Filter Fields:
 Dim_Category Category Dim_Category Category Category Dim_Fact Date Tota Category Year Category 	
Category_D Customer_D Product_ID Sales_Count Ret_Sales Gross_Sales	is equal to 👻
Re III Dim Product	∑ ck Next> Finish Cancel <u>H</u> elp

24. Click Next.

25. Click Corporate (Blue).

vailable Templates		Preview	
No Template Block (Blue) Corporate - Rage Sections Only Corporate (Blue) Corporate (Blue) Double-Sided Page Headers/Foc Executive Summary or Title Page Form (Marcon) Gray Scale High Contrast Contrast Index Table Grid Template	ters		
Gray Scale High Contrast Contrast Index			

26. Click Finish.

				SA
Printed Date: 10/18/201	1 Last modifie	ed: 10/18/2011		
Report Description:				
50000000	Sum of	Gross_Sales /	Category	
8 40000000 - 8 30000000 - 9 20000000 - 9 10000000 -				
8 3000000 -				
20000000 - E				
ਯੋ 10000000	_			
0	Bikes	Golf	Ski	Tennis
	Direct	Categ		. 511115

The first page of your report should look like this.

27. Click the Show Next Page button.

Eile Edit	<u>V</u> iew <u>I</u> nsert For	rm <u>a</u> t <u>D</u> atabase <u>R</u> eport <u>W</u> indow	w <u>H</u> elp
i 🗅 🧀	- 🗄 📇 🗅 🗔	🕹 🐇 🐚 🛅 🛷 🔊 - 🕫	× + 🗖 🖀 🖗 😥 🗣 🐻 1 Mil
			।≣≣≣≣ Д.•⊞•∞ 🛱 🚔 । \$ १% ७ ७
Aa (B	Σ 🖽 🐺 🐴 🔨	🗆 🖾 🖬 🥎 🚫 🗄 🖯 🖂	😤 🛃 🍸 + 🔁 🏂 🏷 🖽 🖽 🍓 🕎 🤅 🏖 🔕 K ∢ 🛛 1 of 16 🛛 🕨 א

The second page of your report should look like this.

Printed Date: 10/18/2011	Last modified: 10/18/2011		
Bikes			
C ategory	Product_Name Da	te	Gross_Sales
Bikes	Descent Competitior9/1	0/2011 12:00:00AM	852,000
Bikes	Romeo Hybrid Bicyc9/1	0/2011 12:00:00AM	141,600
Bikes	Triump Pro Cycling 19/1	0/2011 12:00:00AM	25,620
Bikes	Triump Pro Cycling H9/1	0/2011 12:00:00AM	34,020
Bikes	Triump Pro Cycling 19/1	0/2011 12:00:00AM	21,042
Bikes	Romeo Hybrid Bicyc9/1	0/2011 12:00:00AM	120,800
Bikes	Romeo Hybrid Bicyc9/1	0/2011 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			
C ategory	Product_Name	D ate	Gross_Sales
Golf	Golf Balls	12/10/2011 12:00:00AM	16,540
Golf	Tees	12/10/2011 12:00:00A M	8,270
Golf	Tees	12/10/2011 12:00:00A M	6,900
Golf	Golf Balls	12/10/2011 12:00:00A M	8,700
Golf	Berta Golf Clubs	12/10/2011 12:00:00A M	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 12:00:00A M	264,000

29. Click Show Previous Page.

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

Bikes Bikes Bikes	Romeo Hybrid Bicyc12/10/2011 Descent Competitior12/10/2011 Romeo Hybrid Bicyc12/10/2011	12:00:00AM	700,000 516,000 206,400
			· · · ·
Bikes	Romeo Hypria Bicyc (2) (0/2011	12.00.00AW	700,00
	Democra Historial Discust 2/4 0/2014	40-00-004 M	700.00
Bikes	Rappel Mountain Bic12/10/2011	12:00:00AM	420,00
Bikes	Romeo Hybrid Bicyc12/10/2011	12:00:00AM	373,60
Bikes	Rappel Mountain Bic12/10/2011	12:00:00AM	240,48

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

Bikes	Triump Pro Cycling H11002011 12:00:00AM	32,046
Bikes	Rappel Mountain Bic 11/1 0/2014 12:00/00AM	125.760
Bikes	Romeo Hybrid Bicy 1/10/2011 12:00:00AM	209,600
Bikes	Triump Pro Cycling Mit a Field: Dim_Fact.Date	21,294
Bikes	Romeo Hybrid Bicyc 11/100 Find in Field Explorer	454,400
Bikes	Romeo Hybrid Bicyc 11/100 Find in Formulas	499,200
Bikes	Descent Competition 11/11/10	680,000
Bikes	Triump Pro Cycling H11110 📧 Format Field	27,342
Bikes	Rappel Mountain Bich 🕅 🗹 Format Painter	184,320
Bikes	Descent Competition 🕄 🗰 Highlighting Expert	480,000
Bikes	Rappel Mountain Bic	- 89,280
Bikes	Romeo Hybrid Bicyc 11/100 🖗 Browse Field Data	319,200
Bikes	Triump Pro Cycling H11110 Select Expert Record	36,456
Bikes	Descent Competition 12/10 Select Expert Group	1,046,000
Bikes	Descent Competition 2010 Select Expert Saved Data	0
Bikes	Triump Pro Cycling H2000 Insert	61,236
Bikes	Triump Pro Cycling 12/10/ Move	73,920
Bikes	Descent Competition	1,778,000
Bikes	Rappel Mountain Bic 2210	102,240
Bikes	Triump Pro Cycling H2200 😽 Cut	36,960
Bikes	Descent Competition 🕼 🗈 Copy	31 2,000
Bikes	Triump Pro Cycling H 2010 👔 Paste	13,482
Bikes	Rappel Mountain Bic 2010 Delete	302,400
Bikes	Descent Competition 12/100 Copy Smart Tag	2,056,000
Bikes	Rappel Mountain Bic 2010	493,440

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

ormat Editor		×
Sormat Editor Common Border Font Style 1:23 pm 1:23:45 pm 1:3:3:45 13:23:45 3/1 3/1 3/1 3/0 3/1/199 03/0/1999 0.1/1999 1-Mar 1-Mar-1999 01-Mar-1999 01-March 1/1999 March 01, 1999 March 01, 1999 Monday, 1 March 1, 1999 Monday, 1 March, 1999 3-99	Date and Time Hyperlink	
1-Mar-1999		
	OK Cancel H	Įelp

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.

Format Editor			×
Common Border Font Number	typerlink		
Style System Default Number Format -1,123.00	Curren	cy symbol (syste	m default):
-1123 -1,123 -1123,000 -1123,0000 -1,123,0000 (1123) (1,123) (1,123,001) (1,123,000) (1,123,0000) (1,123,0000) Custom Style	C	play Currency Sy Fixed Floating	mbol
<u>C</u> ustomize			
		\$	-5,555,555
	ОК	Cancel	Help

- 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.

Bikes			
Category	Product Name	D ate	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.

E Dim_Product E systalagrams E I Stored Procedures E INFORMATION_SCHEMA E I Syst Create New Connection	 Standard Report Creation Wizard Data Choose the data you want to report on. Available Data Sources: My Connections Sports Add Command Sports, Warehouse Softs, Warehouse Standard Data Sports, Warehouse Spin Tables Sim_Category Sim_Fact 	> >> <<	Selected Tables: ☐ -	
	sysdiagrams m			

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

Standard Report Creation Wizard	×
Link Link together the tables you added to the report.	
Dim_Fact Dim_Customer Year_Quarter Customer_ID Customer_ID Customer_Name Product_ID Product_ID Product_Name Image: Customer_Name	Auto-Anange Auto-Link G By Name G By Key Link Ojder Links Ojder Links Delete Link Link Options Index Legend
< Back Next > Finish	Cancel <u>H</u> elp

6. Click Enforce Both and click OK.

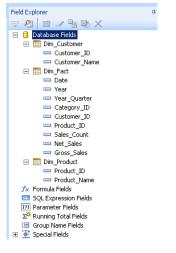
擾 Link Options		×
Dim_Fact.Customer_ID> Dim_Custor	ner.Customer_ID	Þ
Join Type Inner Join Left Outer Join Right Outer Join Full Outer Join	Enforce Join Not Enforced Enforced From Enforced To Enforced Both	Link Type © = © > © >= © < © <= © !=
	OK Cancel <u>H</u> elp	

- 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.

9	SAP Crystal Reports - [Report6]	
Eile Edit View Insert	Form <u>a</u> t <u>D</u> atabase <u>R</u> eport <u>Wi</u> ndow <u>H</u> elp	
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	▼ _ A* A* B I U ⋿ ⋿ च ≡ <u>A</u> - ⊞ - ∞ ፼ _ \$ * % 않 않	
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Start Page Report6	x	
Design Preview		
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Report Header		
Page Header	D Print Date]	
Datala		
Details Report Footer	<u>.</u>	
Page Footer		
age rooter	: Die Numbei	

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.

Design Preview			
	√····	4	· · · 7 · · · I · · · 8 ·
Report Header			
Page Header	D Print Date]		
	Customer Name] Product Name] Date] [Net Sales
Details	_ Customer_Name _ Product_Name] [Date	Net_Sales
Report Footer			
Page Footer	· · Dje Numbej		

- 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.

*		
Eile Edit View Insert	Format Database Report Window Help	
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	▼ A [*] A [*] B <i>I</i> <u>U</u> ≡ ≡	≡ ■ <u>A</u> • ⊞ • ∞
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Start Page Report6	×	Record
Design Preview		Group
	5	Saved Data
Report Header		

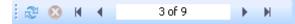
23. Select Year_Quarter and click OK.

Choose Field	×
Fields:	
🚥 Dim_Fact.Date	🔺 ок
🚥 Dim_Fact.Net_Sales	
🖃 🏮 Sports (ODBC (RDO))	Cancel
	Help
🖃 🧰 Dim_Fact	
🚥 Date	Browse
📼 Year	
🚥 Year_Quarter	
🚥 Category_ID	
🚥 Customer_ID	
Product_ID	
🚥 Sales_Count	
🚥 Net_Sales	
🚥 Gross_Sales	-

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

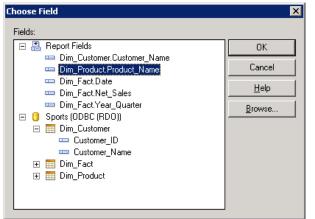
Select Expert	Record					×
Dim_Fact.Ye	ar_Quarter					
is equal to	1	2010 - 04			•	New Delete Browse
ОК	Cancel <u>E</u>	ielp]	Formula <u>E</u> ditor		Hide Eormula <<<
						×
Ŧ						

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

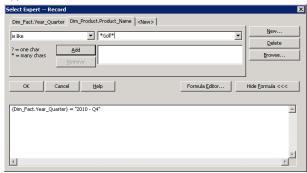


- 29. Click the Design tab.
- 30. Click Select Expert and choose Record.
- 31. Click New...

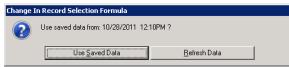
32. Click Dim_Product.Product_Name and click OK.



- 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.

Γ

Customer Name	Product Name	Data	Net Sales
		Date	
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
Zerq 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.

💀 Record Sort Expert		×
A <u>v</u> ailable Fields:	Sort Fields:	
Report Fields Dim_Customer.Custome Dim_Product.Product_f Dim_Fact.Date Dim_Fact.Net_Sales Dim_Fact.Year_Quarter Sports (0DBC (RD0)) Dim_Customer	A - Dim_Customer.Custor A - Dim_Fact.Date A - Dim_Product.Product	_
Customer_ID Customer_Name	Sort Direction: C Ascending Descending OK Cancel	Help

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

11/3/2011			
11/3/2011			
<u>Customer Name</u>	Product Name	Date	<u>Net Sales</u>
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

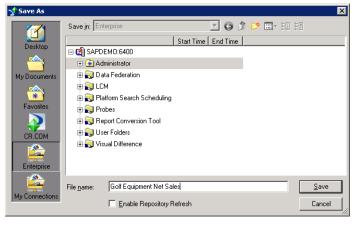
- 39. Save the File > Save As...
- 40. Click Enterprise.

🦅 Save As		×
	Save jn: Enterprise 💽 🌀 🏂 📂 🎫 🗐	
Desktop	Start Time End Time	
Desktop		- 1
	🕀 🛞 Administrator	
My Documents	🖶 🖶 🔂 Data Federation	- 1
	🕀 🔂 LCM	
*	🕀 😥 Platform Search Scheduling	- 1
Favorites	🕀 🔂 Probes	- 1
	Eport Conversion Tool	- 1
CD COM	🕀 🙀 User Folders	- 1
CR.COM	🕀 🔜 Visual Difference	- 1
🖄 🖄		
Enterprise		
		-
	File <u>n</u> ame: Save	
My Connections	Enable Repository Refresh Cancel	

41. Type the password Welcome1 and click OK.

😂 Log O	😤 Log On to BusinessObjects Enterprise 🛛 🗙							
2	Enter the name of your system (Central Management Server). You also need to specify your user name and password.							
	<u>S</u> ystem:	SAPDEMO						
	User name:	Administrator						
	Password:	•••••						
	<u>Authentication:</u>	Enterprise						
		OK Cancel						

- 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.

YP BI launch pad				🟠 • 🗟 - 🖻 🌧 • F	'age • Safety • Tools • 🔞 • 👌
SAP Business Objects			Welcome: Administrator Applications -	Preferences Help - Log Off	P
Home Documents					
View • New • Organize • Send • More Actions • Details					
My Documents		Title 🔺	Туре	Last Run	Instances
🕀 📨 My Favorites		~WebIntelligence	Folder		
🦾 🚞 ~WebIntelligence		Golf Equipment Net Sales	Crystal Reports		0
🔤 Inbox	-	Net Sales By Category	Web Intelligence		0
My Alerts	24	Net Sales By Category	Microsoft Excel		
	S	Sales By Category 2010	Dashboard Design		
Subscribed Alerts	*	Sports	Explorer Information Space		
🌇 Personal Categories					

- 47. Double-click the Golf Equipment Net Sales Crystal report.
- 48. The report will open and display the data saved with the report.

SAP Busine	SAP baninesedbette Welkome Administrator Applications * Preferences Help * Log Off								
	Home Documents Golf Equipment Net S., P + D								
Fie v 6	🖼 📚 🔜 🛛 Find	/₩ 🕞 🐑 1 of 1+ 🔍 100%					UŞ.		
E Gro	kup Tree «	Main Report							
			11/22011 Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Altindik Bog Borthers Bom Di Computers Edobal Filicomp Filicomp	Description of the second of t	Diffuser 00, 2010 Neisenber 20, 2010 Describer 24, 2010 October 60, 2010 Neisenber 24, 2010 Neisenber 23, 2010 Neisenber 31, 2010 Neisenber 31, 2010 Describer 11, 2010 Describer 10, 2010 Describer 10, 2010 Describer 10, 2010 Describer 10, 2010	Mit Gamma 000 000 000			

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.

🧟 Standard Report Creation Wizard	×
Data Choose the data you want to report on.	۵.
Available Data Sources:	Selected Tables:
,	
< Back	Next > Finish Cancel Help

- 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.

Design Preview	
Report Header	
Page Header	DPrint Date]
Details	. Customer_Name . Product_Name . Date . Gross Sales
Report Footer	
Page Footer	· · "Die Numbei

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.

Dim_Fact.Gross_Sales Dim_Fact.Date Is between 12/1/2010 12:00:00AM Image: Comparison of the comparis	ielect Expert Record	×
Is between I 12/1/2010 12:00:00AM and 12/27/2010 12:00:00AM Delete Browse OK Cancel Help Formula Editor	Dim_Fact.Gross_Sales Dim_Fact.Date <new></new>	
and Delete 12/27/2010 12:00:00AM Image: Constant of the second s	is hetween	<u>N</u> ew
OK Cancel Help Formula Editor Hide Eormula <<	, _, _	Delete
	12/27/2010 12:00:00AM	Browse
[Dim_Fact.Date} in DateTime (2010, 12, 01, 00, 00, 00) to DateTime (2010, 12, 27, 00, 00, 00)	OK Cancel Help Formula Editor	Hide <u>F</u> ormula <<<
{{Dim_Fact.Date} in DateTime (2010, 12, 01, 00, 00, 00) to DateTime (2010, 12, 27, 00, 00, 00)		
	[Dim_Fact.Date] in DateTime (2010, 12, 01, 00, 00, 00) to DateTime (2010, 12, 27, 00, 00, 00)	<u>_</u>
	x.	

- 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	<u>Product Name</u>	<u>Date</u>	<u>Gross Sales</u>
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
Alimubuy			
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
Alitabuy			
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
1			

- 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	<u>Gross Sales</u>
Allmigear	SuperBounce Tennis Balls	December 24, 2010	2,200
		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			
AIIIIIUCEK	Descent Competition Bicycle	December 23, 2010	516,000
	Romeo Hybrid Bicycle	December 23, 2010	206,400
Alitabuy			
нисский	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.

📌 Save As		×
1	Save jn: Enterprise 🗾 🗿 🍺 📂 🖽 🕫 🔡	I
	Start Time End Time	
Desktop	🕀 😥 Administrator	
	🕀 🜄 Data Federation	
My Documents	🗄 🖶 🜄 LCM	
	🕀 🗊 Platform Search Scheduling	
*	🕀 🗊 🕄 Probes	
Favorites	🕀 🗊 🕞 Report Conversion Tool	
	🛱 🔂 User Folders	
CR.COM	🕀 🛞 Administrator	
	🕀 🗊 ~WebIntelligence	
	🗄 🚽 Golf Equipment Net Sales	
Enterprise	🕀 🚯 Guest	-
i 🏠		
Mu Connections	File <u>n</u> ame: Product sales by customer	<u>S</u> ave
My Connections	Enable Repository Refresh	Cancel

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



21. Check the Add to all group levels option.

Insert Summary	×
⊆hoose the field to summarize:	
📟 Dim_Fact.Gross_Sales	•
C <u>a</u> lculate this summary:	
Sum	•
Summary location	
Grand Total (Report Footer)	_
Add to all group levels	Insert <u>G</u> roup
Options Thome as a percentage of	
☐ Symmarize across hierarchy	Y
ОК	Cancel <u>H</u> elp

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

Calculate this summary:
Sum 🔽
Sum
Average
Sample variance
Sample standard deviation
Maximum
Minimum
Count
Distinct count
Correlation with
Covariance with
Median
Mode
Nth largest, N is:
Nth smallest, N is:
Nth most frequent, N is:
Pth percentile, P is:
Population variance
Population standard deviation
Weighted average with

22. Click OK.

23. Click the Design tab.

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

Design Preview				
			+ 4 + + + I⊖ + + 5 + + + I	6 1
Report Header				
Page Header	Print Date		L	
	1	Product Name	Date	<u>Gross Sales</u>
Group Header #1:	Group #1 Name			
Details		Product_Name	Date	Gross_Sales
Group Footer #1:				act.Gross_Sales
Report Footer				[act.Gross_Sales]
Page Footer	: Die Numbei			

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.

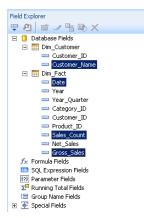
A subtotal is added below each customer group. A grand total is added to the end of the report.

1/3/2011			
	Product Name	<u>Date</u>	<u>Gross Sales</u>
Allmigear	SuperBounce Tennis Balls	December 24, 2010	2,200 2,200.00
Allmitek			
	Descent Competition Bicycle Golf Balls	December 23, 2010 December 24, 2010	426,000 16,540
	Tees	December 24, 2010	8,270 450,810.00
Allmubuy			
	No Name Skis	December 23, 2010	7,000 7,000.00
Allmutek			1,000.00
	Descent Competition Bicycle Romeo Hybrid Bicycle	December 23, 2010 December 23, 2010	516,000 206,400
			722,400.00
Alitabuy	Barra I Marra I in Birra Ia	B	400.000
	Rappel Mountain Bicycle Pumpit Tennis Shoes	December 24, 2010	420,000 94,400
	SuperBounce Tennis Balls	December 27, 2010 December 27, 2010	94,400 4,640
	Romeo Hybrid Bicycle	December 27, 2010	700,000
	reance riyond Dicycle	December 27, 2010	1,219,040.00

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.

Or Create a new parameter and list of Values: Nage: Type: Customer Name String Value Field Description Field Customer, Name (None) Wate Actions Append all database values Cick here to add Rem Clear Import Export Explore Setting Show on (Yewer) Panel Editable Prongt Text Enter Customer Name: Prongt Text Enter Customer Name: Prongt Text Pale Option String Pale Option Yalue Pale	Create New Parameter	×
Customer Name String Static Value Field Description Field Customer Atame (None) Value Acpoint all database values Clear Import Export Export Show on (Vewer) Panel Editable Prompt With Description City False Optional Prompt Palse Optional Prompt Palse	Oreate a new parameter and list of values.	
Value Field		
	Customer Name	String Static 💌
Wake Actions Vake Append all database values Description Click here to add Rem Clear Import Export Stating Show on (Vewer) Panel Forter to add Rem Prompt With Description Only Palse Optional Prompt Palse	Value Field	Description Field
Value Append all database values Description Clickhere to add Rem Clear Import. Import Export Export Value Options: Setting Option Setting Show on (Newer) Panel Editable Prompt Text Enter Customer Name: Optional Prompt Palse Optional Prompt Palse	📟 Customer_Name	(None)
Click here to add Rem Clear Import Export Export Value Options: Option Setting Automatic Setting Prompt With Description Orly False Optional Fradse Optional Frads	🖄 🗙 🛧 🔸 Actions 🔹	
Value Options:	Value Append all database values	Description
Value Options: Option Setting Solver of Newer Panel Frompt Text Prompt With Description Only False Optional Prompt Palse Pa	Click here to add item Clear	
Value Options: Option Setting Show on (Viewer) Panel Frompt With Description Only False Optional Prompt False Default Value	Import	
Option Setting Show on (Weer) Panel Editable Prompt Text Enter Customer Name: Prompt With Description Only False Optional Prompt False Default Value	Export	
Option Setting Show on (Weer) Panel Editable Prompt Text Enter Customer Name: Prompt With Description Only False Optional Prompt False Default Value		·
Option Setting Show on (Weer) Panel Editable Prompt Text Enter Customer Name: Prompt With Description Only False Optional Prompt False Default Value		
Option Setting Show on (Weer) Panel Editable Prompt Text Enter Customer Name: Prompt With Description Only False Optional Prompt False Default Value	 Value Options:	
Prompt Wh Description Only Fale Optional Prompt Wh Description Only Fale Optional Prompt Wh Description Only Fale Default Value		Setting
Prompt With Description Only False Optional Prompt Default Value	Show on (Viewer) Panel	Editable
Optional Prompt False	Prompt Text	Enter Customer Name:
Default Value		
OK Cancel Help	Default Value	×
OK Cancel Help		
		OK Cancel Help

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

value Options:	
Option	Setting
Prompt Text	Enter Customer Name:
Prompt With Description Only	False
Optional Prompt	False
Default Value	
Allow custom values	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.

: <mark>0</mark> ⊟ &= &↓	🌱 🚽 fx 🏷	🗉 🗉 🔍 🕅 🧵
Product sales by cu	Record	Sales by Customer I
	Group	
· · I · · · 2 0 ·	Saved Data	· · · 4 · · ·

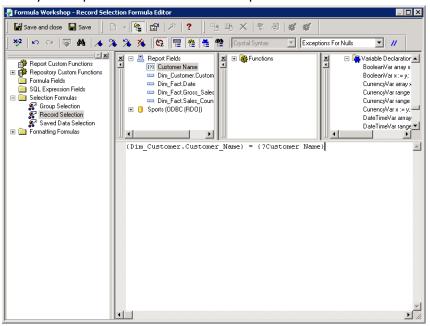
12. Click Customer_Name and click OK.

Choose Field	×
Fields: □ 🖹 Report Fields	
📼 Dim_Customer.Customer_Name	OK Cancel
 Dim_Fact.Date Dim_Fact.Sales_Count Dim_Fact.Gross_Sales 	
Sports (DBBC (RDC)) Dim_Customer Customer_ID Customer_Name Dim_Fact	Browse

13. Choose the is equal to operator.

Select Expert Record	×.
Dim_Customer_Customer_Name <pre> <new> </new></pre>	
is any value.	New
is any value.	Delete
is equal to	
is not equal to	Browse
is one of	
is not one of	
is less than	
is less than or equal to is greater than lelp	Formula Editor Hide Formula <<<
is greater than or equal to	Formula Eultor Hide Formula <<<
is between	
is not between	
starts with	*
does not start with	
is like is not like	
formula:	
Liomidia:	
	-
Id	

- 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.

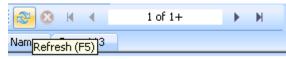
Select Expert Record	×
Dim_Customer.Customer_Name <a>New>	
s equal to	New Delete Browse
OK Cancel Help Formula Editor	Hide <u>F</u> ormula <<<
{Dim_Customer.Customer_Name} = {?Customer Name}	A
4	V V

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

-	Enter Values	×
Ш	Enter Customer Name: Customer Name	
Ш	Baquette SA	
L L		
1-		
	OK Cancel	

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

18. Click the Refresh button.



19. Choose Prompt for new parameter values.

Refresh Report Data
O Use current parameter values
Prompt for new parameter values
OK Cancel <u>H</u> elp

- 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.

Value Options:		
Option	Setting	▲
Default Value		
Allow custom values	False	
Allow multiple values	True	
Allow discrete values	True	
Allow range values	False	-

- 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.

Select Expert Record		×
Dim_Customer.Customer_Name Dim_Fact.Year_Quarter <a> <new> </new>		
is equal to		<u>N</u> ew
		Delete
		Browse
]
OK Cancel <u>H</u> elp	Formula <u>E</u> ditor	Hide <u>F</u> ormula <<<
{Dim_Fact.Year_Quarter} = {?Year and Quarter} and		A
{Dim_Customer.Customer_Name} = {?Customer Name}		
		-
4		Þ

- 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		
1/3/2011 2009 - Q1		
<u>Date</u>	<u>Sales Count</u>	<u>Gross Sales</u>
llmi 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.		ŕ
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.

													T
	🚽 🖉 🗸	(°″ -) ∓											
	Home	Insert	Page Lay	out Fo	rmulas	Data Re	view Vie	ew Live	Office				0
	A1	•	(•	f _x									
	A	В	С	D	E	F	G	Н	1	J	К	L	M
1													
2													
3													

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

4. Click the import Spreadsheet button.

😵 Untitled - Dashboard Design
<u>File SAP Edit View Format D</u> ata <u>Help</u>
i 🗋 😂 🔚 🦂 🐰 🖎 🛍 🧉 🗠 🔯 + 📴 😳 🤁 🖳 🖸 🚍 Quick Views 🗸 🎽 Preview 🗄 🦕 🐼 🥪
i 🔣 Themes 👻 🌄 Colors 👻 📴 🏣 📄 🌲 🗐 [Import Spreadsheet (Ctrl+Shift+1)] 🐁 🔩 🖳 🔂 i 🧲 Start Page

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

6		Crochet Cycling Gloves	SuperBounce Tennis Balls		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								
11											

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

	A	В	С	D	E	F	G	н	1	J	К
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.

Components	ųΧ	
Category Tree List		Label 1
Favorites		
Charts		Label 2
Containers		Label 3
Selectors		•
List Builder Radio Button		

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.

Title		
Category		N
Labels		
		N Z
Data Insertion		💦 Spreadsheet
		ਗ਼ Query Data
Series1	Name:	🗙 Clear Binding
	Series1	

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.

Da	ta Insertion			
	Series1		Name:	
		[Series1	
			Insertion Type:	
			Position 🖌	\bigcirc
			Position	
		1	Label	
			Value	
			Row	
			Column	
			Status List	
			Filtered Rows	

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.

Radio Button 1	д	x
General Behavior Appearan	nce	^
Title Category		_
Labels Sheet1'!\$A\$7:\$A\$10 Data Insertion		
Series1	Name: Series1 Insertion Type: Row	100
+ -		

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.

Radio Button	1			д
General	Behavior	Appearance		
Common	Animatio	ns and Effects		
Selected It	em			
Type:			Label	✓ Ø
Item:			Label 1	✓ S
Insert S	elected Item:			

22. Add a column chart to the canvas.

Components	ųΧ							
Category Tree List					-			
Favorites				Colum				
Charts				Sample	e Sub Titl	е		
No. 100		120						
a-a-la		100						
Column Chart Stacked Column		• 80			_			
Chart		60						
		40						
Containers		20						
Selectors		0						
Single Value			1	2	3	4	5	
Maps		-			-			-

23. Click the column chart and configure the titles.

Column	ihart 1				1	1 X
Gener	Insertion	X Behavior	Appearance	Alerts		^
Titles						
Ch	art:					
Pro	duct Gross Sales					
Su	ititle:					
'Sh	eet1'!\$A\$2					
Ca	egory (X) Axis:					
Pro	duct					
Val	ue (Y) Axis:					
\$						
Se	ondary Value (Y) /	Axis:				
					N	
						Ξ

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

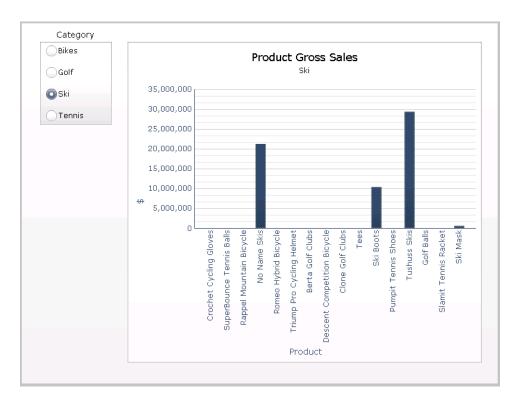
Data			
	By Range		
	'Sheet1'!\$A\$1:\$Q\$2		N
	💿 Data in Rows	🔘 Data in Columns	

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

Column Chart	1				1
General	Insertion	Behavior	Appearance	Alerts	
Common	Scale	Animatio	ons and Effects		
Ignore Blan Ignore d	ik Cells :ells at End-of-	-Range only.			
🗹 In Se 🔽 In Va					

- 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.



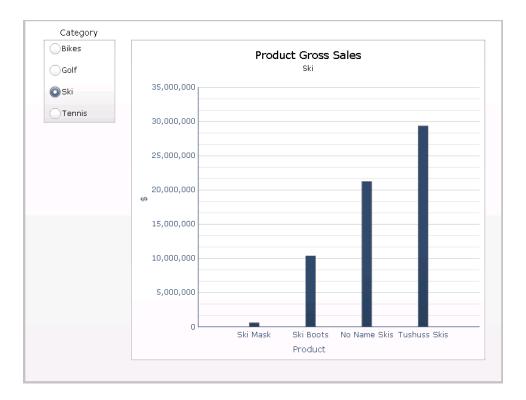
You can remove these blank columns by sorting the data.

30. Check the Enable Sorting By Data option.

Enable Sorting		
💿 By Data		
Series:	France	~
Order:	Ascending	~
By Category Labels	-	
Reverse Order		

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.

Enable Run-Time Tools

- 🔽 Show Focus Button
- 🗹 Show Reset Scale Button
- Show Scale Behavior Options

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.

🕲 Untitled - Dashboard Design	
Eile SAP Edit View Format Data Help	
🗄 🗋 📂 🛃 🦂 👗 🗈 🖭 🦘 🗠 😓 🛨 🥸 🔁 🦉 😨 🖼 🖾 🗐 🖬 Quick Views 🔹	🔄 Preview 🛛 🧊 🐼 😴
: Themes 👻 🔄 Colors 🔹 評話 暗 臣 속 릐 亦 한 坦 👓 중 믅 I Show My Worl	kspace e
Show Canvas	Only
Show Spreads	heet Only
Home Insert Page Layout Formulas Data Review Show Canvas	and Spreadsheet

3. Enter the table of data into the spreadsheet.

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

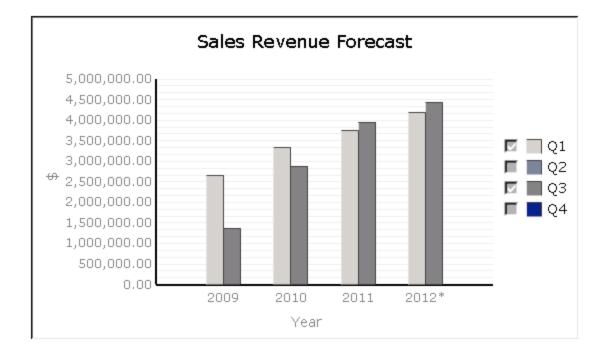
	2009	2010	2011	2012*
Q1	2,660,699.50	3,326,172.20	3,742,988.90	4,192,147.57
Q2	2,279,003.00	2,840,650.80	4,006,717.50	4,487,523.60
Q3	1,367,840.70	2,879,303.00	3,953,395.30	4,427,802.74
Q4	1,788,580.40	3,186,120.00	3,356,041.10	3,758,766.03

- 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.

Column Char	t 1				д
General	Insertion	X Behavior	Appearance	Alerts	
Titles					
Chart:					
	evenue Foreca	act			
		350			
Subtitle);				
Catego	ry (X) Axis:				
Year					8
Value ('	Y) Axis:				
\$					×
Second	lary Value (Y) A	Axis:			
					×
Data —					
💿 By F	Range				
Shee	et1!\$B\$6:\$F\$1	0			N
	Data in Row	s	0 [Data in Columns	

- 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.

Horizontal Sli	der 1				ά×
General	X Behavior	Appearance	Alerts		
Title Data					
Sheet1	!\$C\$4				N 🔎
💿 Mar	nual mum Limit:			Sheet1!\$C\$2	
Max	imum Limit:			Sheet1!\$C\$3	
	ue Based	~			

С
-50%
250%
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.

Horizontal Slic	der 1			1
General	Behavior	Appearance	Alerts	
Common	Animatio	ns and Effects		
🔘 Maj	ement rement or ticks or and Minor t	icks	.01	
Minimun	n Limit:		Adjustable	~
Maximum Limit:			Adjustable	~
🗹 Enable	Interaction			

18. Delete the 2012 Sales Revenue values and enter the formula =E7*(1+C\$4).

	F	lome Ins	ert Page La	iyout Form	ulas Data	Review	View
SUM ▼ (× ✓ f =E7*(1+\$C\$4)							
	А	В	С	D	E	F	G
1	Grow	th Rate					
2		Minimum	-50%				
3		Maximum	250%				
4		Forecast	12%				
5							
6			2009	2010	2011	2012*	
7		Q1	2,660,699.50	3,326,172.20	3,742,988.90	⊨E7 *(1+	
8		Q2	2,279,003.00	2,840,650.80	4,006,717.50	\$C\$4)	
9		Q3	1,367,840.70	2,879,303.00	3,953,395.30		
10		Q4	1,788,580.40	4,186,120.00	3,356,041.10		

- 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.

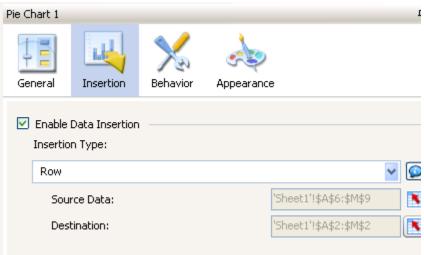
	А	В	С	D	E	F	G	н	1	J	К	L	M	N
1		January	February	March	April	May	June	July	August	September	October	November	December	
2	Bikes	11,054,628	9,949,510	11,186,038	11,129,951	12,356,636	11,940,710	11,377,422	15,458,974	13,628,910	13,775,610	18,522,778	17,250,782	
3														
4		1	2	3	4	5	6	7	8	9	10	11	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.

Pie Chart 1				τ×
General	Insertion	X Behavior	Appearance	
Titles —				
Chart:				
Catego	ry			
Subtitle	:			
Gross S	ales 2010			
Data				
Values:				
'Sheet1	'!\$N\$6:\$N\$9			
	ata in Rows		💿 Data in Columns	
Labels:				
'Sheet1	'!\$A\$6:\$A\$9			

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.

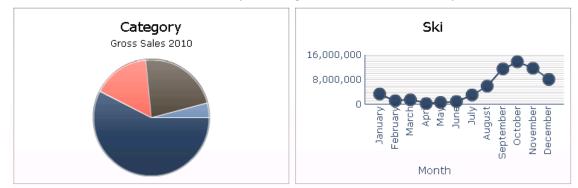


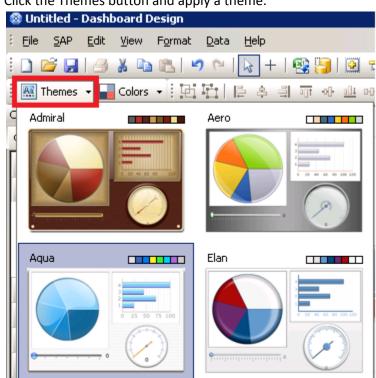
2. Add a Line Chart to the canvas.

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

Line Chart 1					1
General	Insertion	Behavior	Appearance	Alerts	
Titles					
Chart:					
Sheet1	94640				
Sheeti	. !\$#\$2				
Subtitle	1				
					N
Catego	ry (X) Axis:				
Month					×
Value (1	Y) Axis:				
	,				ĸ
Second	ary Value (Y) A	vie)			
Jecona	ary value (1) A	1/15.			
Data —					
💿 By F	Range				
	- et1'!\$B\$1:\$M\$;	2			×
) Data in Row	s		ata in Columns	

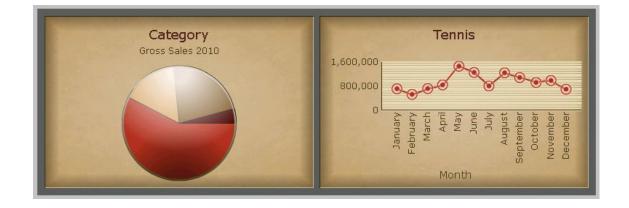
4. Click Preview and test the dashboard by selecting different sections of the pie chart.





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.

<table-of-contents> New Project</table-of-contents>		<u>_ 🗆 ×</u>
New Project		
Enter the name of	of the project.	
Project Name	Sports_Warehouse	
Project Location	C:/Users/Administrator/.businessobjects/bimodeler_14/workspace	
Project Location		
0	Finish	Cancel

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

Sew Relation	al Connection	_ 🗆 🗵
Resource Na	ıme	
Enter a name for	the resource.	
Resource N	ame Sports_Warehouse	
🥒 Description		<u>^</u>
		-
0	< <u>B</u> ack <u>N</u> ext > Einish	Cancel

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

Database Middleware Driver Selection Select the driver for your database middleware. Image: Select the driver for your database middleware.
 C Hierarchical list C Flat list Search pattern A A A A A A B B
Search pattern An ⊕-⊡ HSQLDB ⊕-⊡ IBM ⊕-⊡ Ingres
Search pattern An ⊕-⊡ HSQLDB ⊕-⊡ IBM ⊕-⊡ Ingres
Search pattern An ⊕-⊡ HSQLDB ⊕-⊡ IBM ⊕-⊡ Ingres
H→D HSQLDB H→D IBM H→D IBM
E → IBM → IBM ingres
E Ingres
E ^{III} MICrosoπ
⊞
⊞… 📒 MS Access 2002
⊞ 🕛 MS Access 2003
E I MS Access 2007
E MS SQL Server 2005
E MS SQL Server 2008
JDBC Drivers
OLE DB Providers
The selected driver is: MS SOL Server 2008 (ODBC Drivers)
The selected driver is, his sign server 2000 (Obbe brivers)

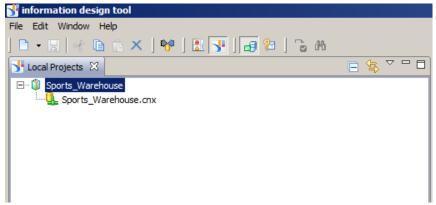
7. Choose the Sports data source name and click Test Connection.

📑 New Relational Co	nnection	
Parameters for M	IS SQL Server 2008 Connection (1/3)	
Authentication Mode	Use specified username and password	•
User name:	, <u>, , , , , , , , , , , , , , , , , , </u>	
Password:		
Data source name:	Sports_Warehouse	•
		👆 Test Connection
0	< Back Next > F	inish Cancel

8. Click Next>.

<table-of-contents> New Relational Con</table-of-contents>	nection	
Parameters for M	S SQL Server 2008 Connection (2/3)	
Connection Pool Mode Pool timeout: Array fetch size: Array bind size: Login timeout:	Keep the connection active for 10 In 10 In 5 In 600 In Minutes	Y
0	< Back Next > Finish	Cancel

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

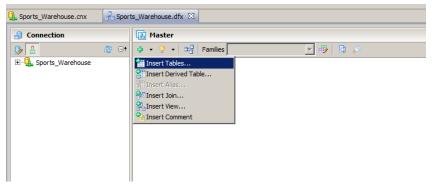


Part 2 - Create a Sports_Warehouse Data Foundation

- 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.

<table-of-contents> New Data Foundatio</table-of-contents>	n		
Select Connection			
			۵
Name 🔻	Тур	e Location	
		al /Sports_Warehouse	/Sports_Warehou:
•			
	K Back N	ext > Finish	Cancel
	19		Cuncer

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

<mark>5 Insert Tables</mark>	_ 🗆 🗙
Select Tables to Insert	
Select the tables you want to insert and the detection options to use.	
8	⊖† 😵
Sports_Warehouse Cub Cub Government Govevernment Government Government Government Governm	
🗄 - 🔲 🔋 XtremeSQL	Uncheck all
Tables Detect keys Detect row counts Joins Detect joins Detect cardinalities	
() Finish	Cancel

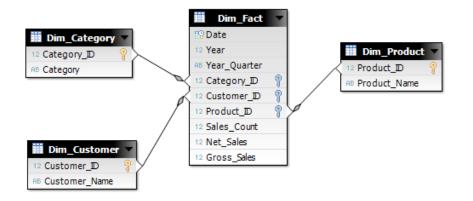
7. Click Finish.

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.

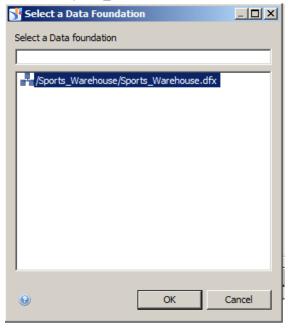
Your data foundation should look like this.



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.



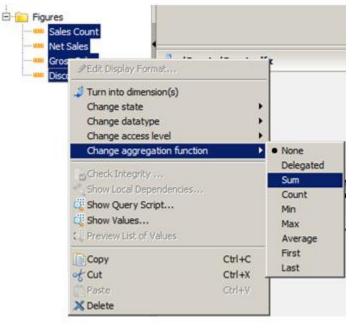
6. Click Finish.

<table-of-contents> New Business L</table-of-contents>	ayer				
Data Foundati	on selecti	on			
Select a Data foun	dation				
Data foundation:	\Sports_War	ehouse\Sports		fx	
	·		-		
Automatically of	reate classes	and objects			
0		< Back	Next >	Finish	Cancel
e			Next >	Finish	Cancer

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

💁 Sports_Warehouse.cnx	ports	_Wa	arehouse.dfx	🔆 Spor	ts_Warehouse.blx	×	
🔁 Business Layer		챴	Universe P	arameters			
- 6	a						
		Na	me) Sp	orts_Warehouse		
E Sports_Warehouse		Ľ	👌 Properties	Query option	ns 🖻 Comments	Cust	tom Properties
🖃 💼 Dim Category			Description:				
💋 Category Id							
Category							
🗄 👘 💼 Dim Customer							
🖳 📁 🖉 Customer Id							
📃 💋 Customer Name							
🚊 💼 Dim Fact							
📁 Date							
🖳 🗾 Year							
🦳 📁 Year Quarter							
🖳 🗾 Category Id							
🖳 📁 🖉 Customer Id							
···· 💋 Product Id							
🖳 📁 🖉 Sales Count							
🖳 📁 🖊 Net Sales							
📕 🖉 🖉 Gross Sales							
🖻 💼 Dim Product							
····· 💋 Product Id							
Product Name							
			I				

- 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.
- 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)

🚞 Business Layer	🔰 Dimension Propert	ies	
	Name Description	Quarter	Active 💌
🗄 💼 Category 🖻 💼 Customer			
Time Date Year	Data type:	String Keys 😳 Advanced Source information Custom Properties	Show Script
Quarter Month Product	Select:	Right(Dim_Fact.Year_Quarter,2)	SQL assistant
Quantity Wet Sales	of Where:		SQL assistant
Discount	Extra tables:	Dim_Fact	

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

L Sports_Warehouse.cnx	Sports_Warehous	e.dfx 🛛 🔆 *Sports_	_Warehouse.blx 🛛	
📄 Business Layer	💥 Unive	rse Parameters		
↓ ↓ • • ≪ 9 • • • • •	▼ 🦗 Name	Sports	_Warehouse	
Sports_Warehous	· · · · · · · · · · · · · · · · · · ·	erties Overviontions		om Properties
Dim Category	Check Integrity		Folder Dimension	
Category	Show Local Dependenci	es	Measure Filter	
Customer	Сору	Ctrl+C		
	Cut Paste	Ctrl+X Ctrl+V		
Date Vear	Delete			

- 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						
<table-of-contents> Publish Connec</table-of-contents>	tion _ 🗌 🗙						
Publish Connection to a Repository							
Open a session on the CMS where the connection is published.							
Sessions 📑 S	APDEMO:6400 (Administrator)						
System:	SAPDEMO:6400						
User Name	Administrator						
Password	•••••						
Authentication	Enterprise						
	Connect						
0	< Back Next > Finish Cancel						

3. Click Finish.

S Publish Connection	
Publish Connection to a Repository	
Define the repository folder where connection should be published.	
Connections	
Name Description	
CommonConnections	
	Þ
Sack Next > Finish C	Cancel

4. Click Yes.



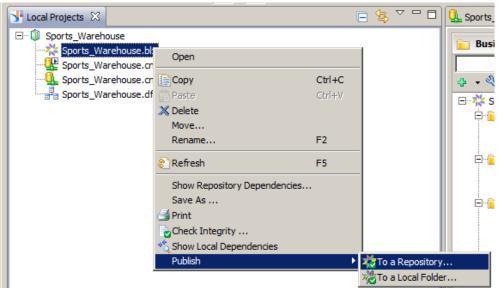
- 5. Click Close.
- 6. Double-click the data foundation (Sports_Warehouse.dfx).
- 7. Click Change Connection.



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

5	Change Connection		×				
5	Gelect Connection						
	Select a new connection for the data for	oundation.					
			<u>^</u>				
	Name -	Туре	Location				
	Sports_Warehouse.cns	Secured [SAPDEMO:6400]	/Sports_Wareh				
	Sports_Warehouse.cnx	Local	/Sports_Wareh				
	•		F				
	0	ОК	Cancel				
	۲	UK					

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.

<table-of-contents> Publish Universe</table-of-contents>					
Publish a Univer	rse to a F	Repository			
Check Universe Integ	rity				
Click Run Check Integrit	ty to start th	ne check integrity.			
Connection	ns ar 📥 🛛 🛛	escription 🔻	Resource	Object	
Broker					
Check	Con				
⊡	Alia				
Check					
Check	Deri				
Check	_				
1 Charle					
Check all / Uncheck all				🔁 Ched	k Integrity
			-		
•	< Back	Next >	Finish		Cancel
_					

12. Click Check Integrity.

🚰 Publish Universe	
Publish a Universe to a Repository Check Universe Integrity	
Click Run Check Integrity to start the check integrity.	
□ ✓ Connections ar □ ✓ Broken der □ ✓ Check Con □ ✓ Check Con □ ✓ Check Con □ ✓ Check Calc □ ✓ Check Calc □ ✓ Check Table □ ✓ Check Table	Resourc /Sports_
Check all / Uncheck all	
 	ancel

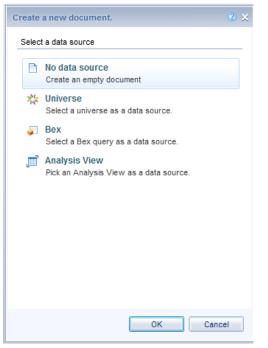
- 13. Click Next>.
- 14. Click Finish.
- 15. Click Close.

Part 5- Test the universe

- 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.

SAP Business Objects						
Home Documents	Interactive Analysis 🕫 😐 😫					
Interactive Analysis	- 🗅 📚 🛛 - 🖧 🏔 🌮 🖂 -					

5. Select Universe and click OK.



6. Select Sports_Warehouse.unx and click Select.

Univers	e			3 ×
Select a	universe for the query.			
<u>A</u> vailabl	e Universes:			🍣 Refresh universe list
State	Name	Revision	Folder	
٢	Sports_Warehouse.unx	1	@SAPDEMO_6400\	
Help on	selected universe:			
				Select Close

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

- b. Year
- c. Product Name
- d. Gross Sales

🔁 Query Panel		© ×
😚 Add Query 🔻 🖬 🐺 😵 😭		Run query 📩 Close 🔻
Viverse outline	📴 Result Objects	$\mathbf{\overline{\mathbf{x}}} \times \mathbf{X}$
Sports_Warehouse	Category Year Product Name Gross Sales	
Vear Quarter Category Id Customer Id Product Id Product Id Product Id Product Name Figures Wei Sales Count Vear Sales	To filter the query, drag predefined filters here or drag objects here then use the Filter Editor to defi	₩ × ×
	Data Preview	∂ Refresh
1 Query 1	C Type a text to hiter the values	4 Þ E

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.

Error	3	×	
8	Database error: [Microsoft][ODBC Driver Manager] Data source name not found and no default driver specified. (IES 10901) (WIS 10901)		- h
	Close Details>>		

9. Check "Don't notify me again." and click OK.

You should see a report similar to the image below.

SAP Business Objects	Welcome: Administrator Applications
ome Documents New Document 🖉 😐 😣	
File Properties Report E	nt Format Data Access Analysis Page Setup
🗅 🗁 🔄 - 遇 🏔 🌮 🖂 - 🛛 🖊 Table 🖉	I Section Chart Others Tools Position Linking
k 🗈 🖄 - ာ ဇ X æ -	🗄 🔹 🛗 🔹 🏨 🔹 🥸 🔹 📑 Turn Into 👻 👘 Set as Section
Available Objects +	« 🖻 📽 × 🖌
Type here to filter tree	
E 🚽 New Document	
Category	
Year	Report 1
Gross Sales	
Variables	
-	Category Year Product Nam Gross Sales
	Bikes 2,009 Crochet Cycli 424,140
	Bikes 2,009 Descent Corr 74,018,000
	Bikes 2,009 Rappel Moun 16,152,000
	Bikes 2,009 Romeo Hybri 25,000,000
	Bikes 2,009 Triump Pro C 2,776,032
	Bikes 2,010 Crochet Cycli 55,485

10. Click the Data Button on the toolbar.

Report Element Format	Data Access Analysis	Page Setup	Reading Design	Data	Q • 0 • ×
Table Cell Section	Chart Others	Tools Position Linking			2
	iù • s2 • @ •	🐨 Turn Into - 🎒 Set as Section			

11. Click Edit

Report Element Format Data Access Adabas	a Page Setter	Reading Design • Data 🔘 • 🗇 • 🕁
	Data Objects	
😰 Create a new document * 😢 Edit 🕈 Purge * 😂 •	🛃 New Variable = 💋 Merge	

12. Add the Net Sales measure.

🔟 Query Panel		3 ×
🞁 Add Query 🕶 🖬 🖙 📰 📰 🛛 🍪 🚰		🔁 Run query 📔 🗂 Close 👻
🔆 Universe outline	🗊 Result Objects	T × X
Sports	Category Product Name Year Gross Sales Wet Sales	
Bring Time Bring Product Bring Figures ↓ W Quantity		

13. Click Run Query.

14. Click Design

Report Exerved Ferred Data Access Aurigues Page Setue Reading Da			• 5#5 🔘 • 🗇 • 😒
Data Providers Tools	Data Objects		
😰 Create a new document • 😰 Edt 🛛 IX Purge • 😂 •	🚽 New Variable • 🏘 Merge		

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

Available Objects - Type here to filter tree Category Froduct Name Year Gross Sales Categories	f* - - 2 × - √	Report 1			
Variables	Category	Product Name	Year	Gross Sales	Net Sales
	Bikes	Crochet Cycling Gloves	2,009	424,140	347,794.8
	Bikes	Crochet Cycling Gloves	2,010	55,485	45,497.7
	Bikes	Descent Competition Bicycle	2,009	74,018,000	60,694,760
	Bikes	Descent Competition Bicycle	2,010	97,012,000	79,163,960
	Bikes	Rappel Mountain Bicycle	2,009	16,152,000	13,244,639.97
	Bikes	Rappel Mountain Bicycle	2,010	19,610,880	16,059,201.64

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

les	Net Sales					=
40	347,794					
-85	45,497	æ	Cut	Ctrl+X		
00	60,694,7	D	Сору	Ctrl+C		
00	79,163,9	L _B	Paste	Ctrl+V		
00	13,244,639.		Paste Special	Ctrl+Alt+V		
80	16,059,201.		Insert	٠	È	Insert row above
00	20,500,0	х	Delete	Delete	Ę	Insert row below
			Clear Contents		ŦШ	Insert column on left
200	29,994,7	a	Set as Section		m∓	Insert column on right
32	2,276,346.		Turn Into			
84	3,432,152.			-	Σ	Sum
00	14,791,9	fx	Edit Formula		n	Count

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].

Variable Editor	r				
Variable Defir	nition				
Name:	Discount				
Qualification:	🚥 Measure				٣
Type:	Number				
Formula:					
=[Gross Sa	les]-[Net Sal	es]			1
					×
Available obje	ects	Functions	Operators		
🖃 😼 New D		Aggregate	<u>^</u> = < <:		> .
Gro	ss Sales	E 💼 Character	+ - /	*;	()
Net		Data Provider Date & Time	≡ : After		
E 🗁 Var		Document	AII		
L 🚥 (Discount	🗄 间 Logical	And		
		🖲 📔 Misc.	* Before		Ψ.
Description					
FunctionNam	e(parameters ty	pe)			
			0	К	Cancel

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

Product Name	Year	Gross Sales	Net Sales	Discount
Crochet Cycling Gloves	2,009	424,140	347,794.8	76,345.2
Crochet Cycling Gloves	2,010	55,485	45,497.7	9,987.3
Descent Competition Bicycle	2,009	74,018,000	60,694,760	13,323,240
Descent Competition Bicycle	2,010	97,012,000	79,163,960	17,848,040
Rappel Mountain Bicycle	2,009	16,152,000	13,244,639.97	2,907,360.03
	Crochet Cycling Gloves Crochet Cycling Gloves Descent Competition Bicycle Descent Competition Bicycle	Crochet Cycling Gloves2,009Crochet Cycling Gloves2,010Descent Competition Bicycle2,009Descent Competition Bicycle2,010	Crochet Cycling Gloves2,009424,140Crochet Cycling Gloves2,01055,485Descent Competition Bicycle2,00974,018,000Descent Competition Bicycle2,01097,012,000	Crochet Cycling Gloves 2,009 424,140 347,794.8 Crochet Cycling Gloves 2,010 55,485 45,497.7 Descent Competition Bicycle 2,009 74,018,000 60,694,760 Descent Competition Bicycle 2,010 97,012,000 79,163,960

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:

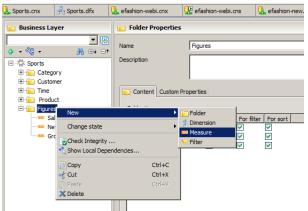
DATENAME(month, Dim	_Fact.Date).
---------------------	--------------

Dimension Propert	es	
Name	Month	Active
Description		<u> </u>
		v
Data type:	String	Show Script
SQL definition 💡	Keys 🛅 Advanced Source information Custom Properties	
🚮 Select:	DATENAME(month, Dim_Fact.Date)	SQL assistant
🚮 Where:		SQL assistant
Extra tables:	Dim_Fact	

- 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.

🔺 Attribute Propertie	5				
Name	Month number			Active	•
Description	Used to sort by month				4
Dimension:	[None]	Data Type	Numeric		•
🚮 SQL definition 🛅 A	Advanced Source information Custom Properties				
🚮 Select:	Month(Dim_Fact.Date)		_ ▼ _	SQL assistant.	
📷 Where:				SQL assistant.	
III Extra tables:	Dim_Fact				

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.

🖳 Sports.cnx 🛛 🦂 Sports.dfx 🛛 🌡	efashion-webi.cnx	🖞 efashion-webi.cns	💁 efashion-new.cnx	🛃 eFashion.dfx	2 ** Sports.blx	
📔 Business Layer	Measure Propertie	25				
	Name Description	Discount Gross Sales - Net Sales	1			Active 💌
 Eustomer Time Product Engures 	Data type:	Numeric Advanced Source inform	ation Custom Properties			Aggregation function: Sum 💌
Sales Count Net Sales Gross Sales Discount	Select:					≍ ⊽I SQL assistant
	of Where:					≍ ✓ SQL assistant
	🛄 Extra tables:					<u></u>

- 13. Click the SQL assistant... button to the right of the Select text box.
- 14. Expand the Dim_Fact table.

🐔 SQL expression					
🤈 陀 🖉 Velidate					∰ fx 😵
					<u></u>
					-
Tables		fx Functions		😵 Business Layer	
lter pattern 🛛 😣	⊕∔ ⊝†	Filter pattern 😣	⊕∔ ⊝†	23	🔎 🕀 🖯
Dim_Category		E Dperators		E Category	
Dim_Customer		🗄 📄 Database Functions		🕀 🚞 Customer	
Dim_Fact Dim_Product				E Product	
E. III DIN Product		E. eruncuons		E Figures	
				OK	Cancel

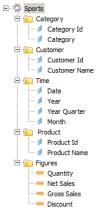
- 15. Double click Gross_Sales.
- 16. Click in the SQL Expression box and type "-".

🔏 SQL e	expression					
<u>יי</u>) רש	Validate					🗊 fx 😵
1 "Dim_Fa	act", "Gross_Sales"-"D	im_Fact"."Net_	Sales"			×
			****			¥
🚺 Table	es		fx Functions		😵 Business Layer	
	m_Fact Date Year		Prer pattern S ⊕- © Operators ⊕- © Datases Functions ⊕- © System Variables ⊕- © €Functions	⊕ + ⊖ †	Category Customer Cu	<i>"</i> ₽ ⊕+ ⊖1
					OK	Cancel

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.

🕈 Add Query • 🛛 🔽 🐨 📰 📰 🥸 😭		🖓 Run query 🗭 Close
Vniverse outline	😰 Result Objects	Ξ × 3
Sorta S	Cetagory Category Category Teters Second Sales Tete Sales Category Filters Second Sales Sales Category Filters Second Sales Sales Category Filters Second Sales	
	Qr Type a text to filter the values	

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 ...

5	🖞 SQL definition 🗌	💡 Keys 🛅 Advanced Source information Custom F	roperties		
	Кеу Туре	Select	Where	DataType	Active
	📍 Primary Key	(LLL)		12 Numeric	Yes
	[10 1			
	💠 Add key	Market Contract Contr			

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

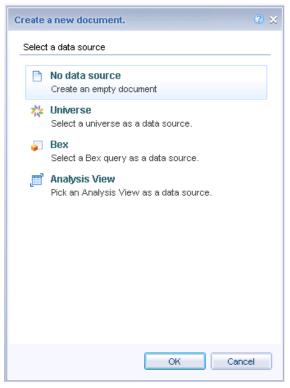
3. Save and publish the universe.

Solution 13 – Testing the Universe in Web Intelligence.

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

· · · · · ·	
Home Documents Interactive Analysis 🖓 🕂 🕫	3
Interactive Analysis 🗸 🛅 📚 🔚 🔹 📇 🏤	1 🗐 🖂 🔸

3. Click Universe.



4. Double-click Sports.unx

nivers	3				
Select a universe for the query.					
<u>A</u> vailable Universes:			🍣 Refresh universe list		
tate	Name	Revision	Folder		
	eFashion.unx	3	@SAPDEMO_6400\		
٢	Sports.unx	13	@SAPDEMO_6400\		
eln on	selerted universe:				
elp on	selected universe:				
elp on	selected universe:				
elp on	selected universe:				
elp on	selected universe:				
elp on	selected universe:				
elp on	selected universe:				
alp on	selected universe:				

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

ji Query Panel 📀 🗴				
📑 Add Query 🔹 🔚 🐺 📰 📰 🛛 🍪 😭	D	🔁 Run query 📔 🖬 Close 🔻		
🔆 Universe outline	🗊 Result Objects	$\mathbf{\overline{\tau}} \times \mathbf{X}$		
Sports Type here to filter tree Type here to filter tree Sports Category Category	Category Year Gross Sales			
	Data Preview	🔁 Refresh		
	Q- Type a text to filter the values			
C Query 1		4 Þ E		
Last refresh date: (this document has never been refreshed)				

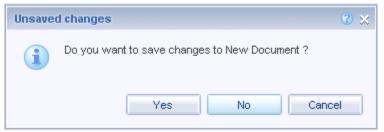
- 8. Click Run Query in the top right corner.
- 9. Double-click the right border of the Gross Sales column to resize it.

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.

🚺 Query Panel 📀 🗴					
📅 Add Query 🔹 🛅 🐺 🔛 🥸 😭 🗅 🌚 🖓 Characteria and the second secon					
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Viverse outline	Customer Name Year Gross Sales				
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1 Query 1		4.5.0			
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Last refresh date: (this document has never been refreshed.)					

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

20. Click Ranking.

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21. Change the Top value to 5.

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You can display the	top/bottom values for the section/block based on the measure you select	
Ranking prope	erties	
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Bottom	3 🔺	
Based on	Gross Sales Ranked by	Ψ
Calculation mode	Count (Keep the top/bottom n values)	
	OK Cano	el

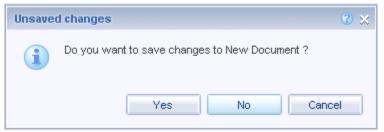
- 22. Click OK.
- 23. Double-click the right border of the Customer Name column to resize it.

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.

🔁 Query Panel 📀 🗴				
🞁 Add Query 🔹 🔲 🖙 🖽 🛛 🍄 😭		🍣 Run query 📔 📩 Close 🝷		
🔆 Universe outline	🗊 Result Objects	▼ × ¾		
Sports Type here to filter tree Category Category Id Category Id Category Category Id Category Customer Id Customer Id Customer Id Date Year Ouarter Outrin Product Id Pro	Customer Name Product Name We Quantity Customer Name Ve Quantity Query Filters Year Equal to 2010 Data Preview Q Type a text to filter the values	Refresh		
🔁 Query 1		4 ▷ 🗉		
Last refresh date: (this document has never been refreshed.)				

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

Report Element Format	Data Access Analysis Page Setup	Reading Design - Data	() • 3 • ×
Data Providers Tools	Data Objects		
💼 New data provider 🝷 📝 Edit	🍄 Purge 🔹 😂 🔹 🚅 New Variable 🔹 🥬 Merge		

33. Drag Product Name to the Query Filters pane.

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

🔆 Universe outline	[Result Objects		₹ X ¥
Sports Type here to filter tree Type here to filter tree Category Category Category Category Category Product Product Id Product Id Product Id Figures Figures	Product Name Customer Name Guantity Query Filters And Fequal to Fooduct Name In Ist F	E Constant Value(s) from	
	T Data Preview	Object from t	

- 35. Click Run query.
- 36. Type golf and click the Search 🖁 button.

Prompts Summary	Inter values for Product Name:
Enter values for Product Name:	Type a value: Selected Value(s) Product Name Pumpit Tennis Shoes Stamit Tennis Racket SuperBounce Tennis Balls Tennis cap Berta Golf Clubs Clone Golf Clubs Clone Golf Clubs Tees Golf Balls Tushuss Skis No Name Skis Sti Mask Last Refreshed: 11/19/2011 12:34:04 AM golf

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

Prompts Summary	🕑 Enter values for Product Name:	
Enter values for Product Name: Berta Golf Club	Type a value:	

- 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.

Report Element Format Data Access	Analysis	Page Setup	Reading Design - Data) • 🕐 • 🖄
Data Providers Tools	Da	ta Objects		
💼 New data provider 🔹 📴 Edit 📑 Purge 🔹 📔	🔊 🔹 🚅 Ne	w Variable 🝷 📔 🃁 Merge		

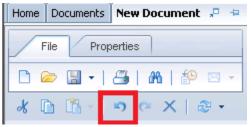
41. Click anywhere in the Product Name column.

42. Click the Break button.

Report Element Format Data Acces	s Analysis	Page Setup	Reading	Design		() • ()	2 • ×
Fitters Data Tracking	Display	Conditional	Interact	Functions]		_
🍸 Filter 👻 📇 Ranking 👻 📲 Controls 🔻	📲 Break 👻	A⊈↓ Sort 👻	😨 Drill 👻 🌾 Filter Bar 🗐 Outline 🛛 🗵	Sum 👻	n Count Mo	re 👻	

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.

=[Product Name]	Report 1	
Froduct 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

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?

U Query Panel		
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	Last refresh date: October 12,	

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?

Guery Panel		
📴 Add Query -	Di contra cont	😵 Run query 🛒 Close 🔹
🔆 Universe outline	3 Result Objects	$\mathbf{v} \times \mathbf{X}$
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👋 - Type here to filter tree 🛛 🖽 🖶		
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Based on	Gross Sales	• Ranked by	Ŧ
Calculation mode	Count	 (Keep the top/bottom n values) 	

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?

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Allmibuy Berta Golf Clubs	1
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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.

Dashboard Design	×
Live Office is installed on your system. To use Live Office features in Dashboard Design you must enable "Live Office Compatibility Mode". "Live Office Compatibility Mode" may block other instances of Microsoft Excel. Enable this mode only when you are working with Live Office in Dashboard Design.	
Do you want to enable "Live Office Compatibility Mode" now?	
Yes No	
Don't ask me again	

3. Click New.

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🕴 🌆 Themes 👻 🚽	Colors - 🗄 🔁 📄 🖶 속 🗐 🞹 애					
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Category Tree Li	ist					

4. Click Add Query...

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Query Browser	ąх	14
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Ready		

5. Type the password Welcome1 and click OK.



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

Add Query						
Select a Universe	⇒	Build Query	⇒	Preview Query Result	⇒	Usage Options
SAPDEMO (Ad	on.unx	tor)				
- 🖓 Sports.	Sports Last P Date P	ublisher: Admi		ir 2011 02:49:07 PM		
						<back next=""> OK Cancel</back>

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

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

Edit Query							×
Select a Universe 🔿 Build Query	⇒ P	Preview Query Res	sult 🔿 Usage	Options			
T							
😵 Universe		👌 Result Objec	ts				
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- 🚥 Gross Sales							
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	1						
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		Max rows: 200	*			👋 🗸 👌 Refre	esh
		Year	Category	Quantity	Net Sales	Gross Sales	۲
		2010	Bikes	1	0.0	0	C
		2010	Bikes	1	135.300003051	165	2
		2010	Bikes	1	147.600006103	180	-
		<		1111			>
				<back nex<="" th=""><th>4</th><th>OK Canc</th><th></th></back>	4	OK Canc	
				<pre>Nex</pre>		OK Canc	

9. Click Next.

elect a Universe	e 🔿 Build Qu	ery 🔿 Previe	w Query Result	➡ Usage Opt	tions	
ax rows: 200	(200 rows	- 1069 ms)				💐 🗸 👌 Refresh
'ear	Category	Quantity	Net Sales	Gross Sales	Discount	
2010	Bikes	1	0.0	0	0.0	
2010	Bikes	1	135.300003051	165	29.699996948242188	
010	Bikes	1	147.600006103	180	32.399993896484375	
2010	Bikes	1	184.5	225	40.5	
2010	Bikes	1	209.100006103	255	45.899993896484375	
010	Bikes	1	295.200012207	360	64.79998779296875	
2010	Bikes	1	369.0	450	81.0	
2010	Bikes	1	381.299987792	465	83.70001220703125	
2010	Bikes	1	393.600006103	480	86.39999389648438	
2010	Bikes	1	442.799987792	540	97.20001220703125	
2010	Bikes	1	467.399993896	570	102.60000610351562	
2010	Bikes	1	479.700012207	585	105.29998779296875	
2010	Bikes	1	528.900024414	645	116.0999755859375	
2010	Bikes	1	602.700012207	735	132.29998779296875	
2010	Bikes	1	639.599975585	780	140.4000244140625	
2010	Bikes	1	787.200012207	960	172.79998779296875	
2010	Bikes	1	799.5	975	175.5	
2010	Bikes	1	811.799987792	990	178.20001220703125	
2010	Bikes	1	824.099975585	1005	180.9000244140625	
2010	Bikes	1	848.700012207	1035	186.29998779296875	
20.10	Riker	1	861.0	1050	189.0	

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)

📄 Business Layer	🚥 Measure Propertie	25	
· · · · · · · · · · · · · · · · · · ·	Name	Quantity	Active 💌
🖃 🔆 Sports	Description		<u></u>
🗄 💼 Category			-
🗄 💼 Customer			
🖻 💼 Time	Data type:	Numeric Aggregation function:	Sum 💌
Date Year	🚮 SQL definition 🛅	Advanced Source information Custom Properties	
	🚮 Select:		L assistant
🖻 👝 Figures		×	
Wet Sales	💦 Where:		QL assistant
Siscount	Extra tables:	Dim_Fact	

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.

Dashboard Design	×
Live Office is installed on your system. To use Live Office features in Dashboard Design you must enable "Live Office Compatibility Mode". "Live Office Compatibility Mode" may block other instances of Microsoft Excel. Enable this mode only when you are working with Live Office in Dashboard Design.	
Do you want to enable "Live Office Compatibility Mode" now?	
Yes No	

3. Click New.

🛞 Untitled - Dashboard Design						
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Category Tree List						

4. Click Add Query...

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Query Browser	ąх	14
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Ready		,

5. Type the password Welcome1 and click OK.



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

Add Query		×
Select a Universe	e 🗢 Build Query 🔿 Preview Query Result 🔿 Usage Options	
E- SAPDEMO (A		
- Cuniverses		
- Sports		
	Sports.unx Last Publisher: Administrator Date Published: Wed Oct 12 2011 02:49:07 PM Description:	
a =		
1		
1		
5		
-		
-	<back next=""> C</back>	K Cancel
-	 	Cancel

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

elect a Universe 🛛 🔿	Build Query 🔿	Preview Query Re	sult 🔿 Usa	ge Options			
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👔 Universe		👌 Result Objec	ts				
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		Year	Category	Quantity	Net Sales	Gross Sales	ſ
		2010	Bikes	1	0.0	0	C
		2010	Bikes	1	135.300003051	165	1
		2010	Bikes	1	147.600006103	180	1
		<					>

9. Click Next.

lax rows: 200	💲 (4 rows - 5	71 ms)				👋 🗸 휞 Refresh
'ear	Category	Quantity	Net Sales	Gross Sales	Discount	
010	Bikes	612	1.28695552E8	157631949	2.8936394E7	
010	Golf	490	3.5644268E7	43704220	8059952.0	
010	Ski	547	5.2053292E7	61607425	9554132.0	
010	Tennis	423	9185208.0	11234750	2049542.5	

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.

Select à Universe → Build Query → Preview Query Result → Usage Options - Refresh Options - Refresh Before Components Are Loaded - Refresh Every 5	
Refresh Defore Components Are Loaded Refresh Every Seconds Refresh on Trigger Trigger Cell: When Value Changes When Value Becomes Load Status Load Status Ide Message: Ide Message: Enable Load Cursor Disable Mouse Input on Load	
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Disable Mouse Input on Load	
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Hide Error Message Window	
Insert In:	N

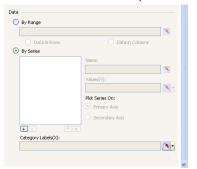
11. Click OK.

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 By Series Data in Columns + + X Query Browser **a** > Query 1 - Sports.unx Refreshed: Oct 18, 2011 11:32:3.. 8 leady.
- 12. Drag a Column Chart onto the Canvas.

13. Enter the titles shown below.

Column Char	t 1					q :	×
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	ly Category						
Subtitle 2010	9:						
Catego Catego	rry (X) Axis: ary						
	Y) Axis:						
Dollars Second	l lary Value (Y) A	Axis:					
					X		

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.

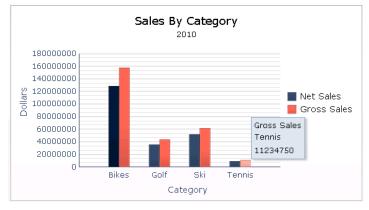
By Series		
Net Sales	Name:	
	Net Sales	
	Values(Y):	
	Plot Series On:	💦 Spreadsheet
	Primary Axis	🧊 Query Data
	Secondary Axis	🗙 Clear Binding
+• ^	V	
Category Labels(X):		

- 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.

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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.

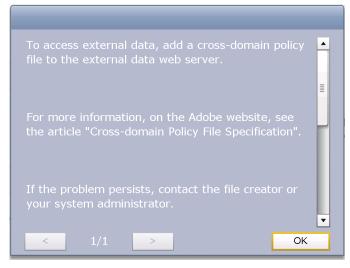
😵 Save to Platfo	form As	×
Enterprise	Save jr: Enterprise	
		<u>S</u> ave Cancel

- 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.

SAP Business Objects Home Documents						
View New Organize Send More Actions Details						
My Documents		Title 🔺	Туре			
My Favorites		~WebIntelligence	Folder			
🔁 ~WebIntelligence	-	Net Sales By Category	Web Intelligence			
🖂 Inbox	2	Net Sales By Category	Microsoft Excel			
Museum Marts	1	Sales By Category 2010	Dashboard Design			
[™]		Sports	Explorer Information Space			
🔤 Personal Categories						

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.

```
< ? x ml version = "1.0" ?>
<! D O C T Y PE cross-domain-policy SYSTE M
"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.

ℽ Filters			
×ж			
🥖 Year	Equal to	🖌 🗹 Enter Year	
			Constant
			List of Values
			ø Object
			• 🙀 Prompt

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



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

ee value			Selected member(s)	
		>		
2 member(s) retrieved	æ 🤏 v ≵i v ⊟t	<		
- / 2010				
- 🖸 2009				
	o m n, m m			

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

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

Add Query	8
Select a Universe 👄 Build Query	⇒ Preview Query Result ⇒ Usage Options
7 🗐 😭	
😪 Universe	3 Result Objects
🔎 🖽	Bt 🔆 X \$1
Category	/ Category / Your / Quarter = Net Sales = Gross Sales = Discoret
- 🖉 Date	=
- 🖉 Year	Y Filters
/ Month	× ×
Product Product Quantity Net Sales Gross Sales	Image: Second Construction Image: Second Construction <td< td=""></td<>
- Discount	-
	Data Preview
	Max rosse: 200 🙎 🖓 v 🔊 Refneth
	diack Next> OK Cancel

15. Click Next.

Prompt Summary	Specify Values for Prompts	Actions 👻
* Enter Year: 2010	▼* Enter Year	
* Enter Quarter: Q4	2010	•
	▼* Enter Quarter	
	Q4	•

16. Click Run.

kid Query 🗶 Select a Universe 🗢 Buld Query 🌩 Preview Query Result 🗢 Usage Options							
Max rows: 200	(4 rows - 887	' ms)				≪ ∨	a Refresh
Category	Year	Quarter	Net Sales	Gross Sales	Discount		
Bikes	2010	Q4	3.9333364E7	48451570	9118208.0		
Golf	2010	Q4	1.0537273E7	12997320	2460046.8		
Ski	2010	Q4	2.867158E7	33651630	4980049.5		
Tennis	2010	Q4	2121558.0	2600260	478701.9		
<back next=""> OK Cancel</back>							

17. Click Next.

fresh Options							
Refresh Before Components Ar	e Loaded						
] Refresh Every	5	A V	Seconds		~		
efresh on Trigger							
Trigger Cell:						×	
When Value Changes							
O When Value Becomes						×	
ad Status							
ading Message:						N	
le Message:						N	
sert In:						N	
] Enable Load Cursor							
] Disable Mouse Input on Load							
] Hide Error Message Window							
Insert In:						×	

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.

😵 Untitled - Dashboard Design	
Eile SAP Edit View Format Data Help	
i 🗋 💕 🛃 🦪 👗 🗈 🛍 🖊 🔊 (* 🔖 + 🧃	😫 📴 🖻 🖻 🔝 📔 🖃 Quick Views 🔹 🎽 Preview 🎚 🗐 🦃 🥪 📚 👘
: 🔜 Themes 👻 🞴 Colors 🔹 📴 🎼 📙 🐥 🗐 1	〒 00 単 000 😤 🚍]]] Ц 👊 🔩 🖳 🔩 🤅 🕐 Start Page
Components	·
Category Tree List	Enter Value: (Equal)
Favorites	Apply
Charts	· · · · ·
Containers	
Selectors	
Single Value	
Maps	
Text	
Other	
Art and Backgrounds	
Web Connectivity	
Universe Connectivity	
Parfresh Query	
Query Refresh Query Prompt Button Selector	

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

Quer	y Promp	t Selector 1			1	
Ge	neral	X Behavior	Appearance			
So	urce Pro	mpt				
	(None S	Selected)		•	-	
🔻 Query 1						
De Enter Year: (Equal)						
	Ent	er Quarter: (B	iqual)			

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

Selection	
Insert Selected Items:	ĸ
Refresh Queries	

- 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.
- Select Enter Quarter: (Equal) in the Source Prompt drop down list.
 Source Prompt

Query 1: Enter Quarter:

- 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.

🔞 Untitled - Dashboard Design			
Eile SAP Edit View Format Data	a <u>H</u> elp		
i 🗋 😂 📕 i 🖉 🐰 🖻 🛍 i 🌱 🥲	🛃 + 🗟 🍃	🙆 🔁 🖳 🚺 🚍 Quick Views 👻 🖢 Preview	i 🔄 🛜 🥪 🖘
🗄 🎆 Themes 👻 📕 Colors 👻 📴 🛅	臣 후 릐 可 애	표 🗠 중 🛱 🗓 🛄 🖫 🖫 🖷 🗄 💽 s	tart Page
Components	τ×		
Category Tree List		Enter Year: (Equal)	Enter Quarter: (Equal)
Favorites			· · · · · · · · · · · · · · · · · · ·
Charts			
Containers		Tab 1	
Panel Container2 Tab Set			
Selectors			
Single Value			
Maps			
Text			
Other			
Art and Backgrounds			
Web Connectivity			
Universe Connectivity	•		

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

5. Type Net Sales and click OK.

Insert	_	
Label	Net Sales	
	Ok	Cancel

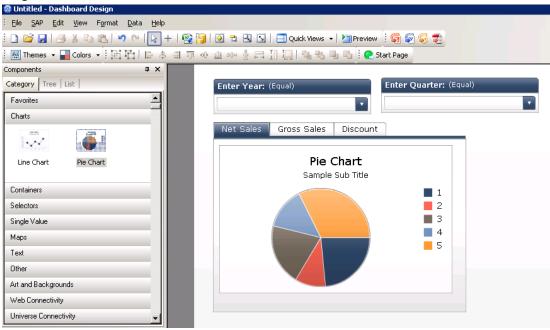
- 6. Click the + button.
- 7. Type Gross Sales and click OK.
- 8. Click the + button again and add a Discount tab.
- 9. Click Tab 1.
- 10. Click the button.

Enter Year:	(Equal)		Enter Quarter: ((Equal)
		•		•
Net Sales	Gross Sales	Discount		_

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.

Pie Chart 1				д ;
General	Insertion	K	Appearance	
Titles Chart:				
Net Sal	es			
Subtitle	:			
Sheet1	!\$B\$3			

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

Data		
Values:		
🔘 Data in Rows	Data in Columns	💦 Spreadsheet
Labels:	•	<u> (</u> Query Data
		🗙 Clear Binding

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

🚰 Select from Query	K	×
Query 1 - Sports.unx	Result Objects	
-	/ Category	
	💋 Year	
	🥖 Quarter	
	we Net Sales	
	🚥 Gross Sales	
	🚥 Discount	
		l
	OK Cancel	I

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

Data		
Values:		
Query 1: Net Sales		T
🔘 Data in Rows	🔵 Data in Columns	
Labels:		
		💦 Spreadsheet
		可 Query Data
		🗙 Clear Binding

- 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.

Enter Year: (Equal)		Enter Quarter: (Equa	il)
	*		•
Net Sales Gross Sales	Discount		
-		-	
	-		

- 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.

General Insertion Insertion Sehavior Appearance Alerts Alerts Alerts Chart: Subtitle: Subtitle: Sheet1!\$B\$3 Category (X) Axis: Stategory Category Stategory Value (Y) Axis: Stategory	Column Chart	: 1				џ
Chart: Discount Subtitle: Sheet1!\$B\$3 Category (X) Axis: Category Value (Y) Axis:	General	Insertion	K Behavior	Appearance	Alerts	
Discount Subtitle: Sheet1!\$B\$3 Category (X) Axis: Category Value (Y) Axis:	Titles					
Subtitle: Sheet1!\$B\$3 Category (X) Axis: Category Value (Y) Axis:	Chart:					
Sheet1!\$B\$3 Image: Sheet1!\$B\$3 Category (X) Axis: Image: Sheet1!\$Category Value (Y) Axis: Image: Sheet1!\$Sheet1!\$Category	Discour	ıt				
Category (X) Axis: Category Value (Y) Axis:	Subtitle	:				
Category Value (Y) Axis:	Sheet1	!\$B\$3				
Value (Y) Axis:	Catego	ry (X) Axis:				
	Catego	ry				
d I	Value ()	/) Axis:				
PI	\$					
Secondary Value (Y) Axis:	Second	ary Value (Y) A	xis:			

- 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.

Data			
0	By Range		
			N
	🔵 Data in Rows	🔘 Data in Columns	
۲	By Series		
	Category	Name:	
		Category	N
		Values(Y):	
		Query 1: Discount	
		Plot Series On:	
		Primary Axis	
		Secondary Axis	
	+ - ^v		
	Category Labels(X):		
	Query 1: Category		

- 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.



- Click the Fit Canvas to Components button.
- Click the Increase Canvas button to add a border.
- 5. Click Format > Theme.
- 6. Select a Theme and click OK.

Themes	×
Admiral Aero Aqua	Preview:
Elan Graphite Halo iTheme Nova Phase Wijndows Classic	
	OK Cancel

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.

New Data Source Connection			
Browse SAP BusinessObjects Ente Choose a data source for your report .	rprise Server SAPDEMO:6400		
Logged on as: Administrator Data Source Type: Universe	X		8
Folders	Name	Date Created	
E 🔲 Universes	🔆 eFashion.unx	10/11/11 2:26:49 PM PDT	
Report Conversion Tool Univers		10/12/11 11:38:57 AM PDT	
	<u>1.1</u>		
		< <u>B</u> ack Next > Einish	Cancel

- 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.

New Data Source Connection	
Edit Query Edit the query used to retrieve your data.	
Image: Second	C Result Objects for Query #1
Generate report	
	<back next=""> Einish Cancel</back>

8. Select the year 2010 and click OK.

🔶 Change Current Data Set	X
▼ *Enter Year	
2010	
2009 2010	
2010	

9. Your report should look like the image below.

1/1/11			11/
Category			
Ski	533.00	60,481,700.00	
Tennis	413.00	11,078,250.00	
Golf	47300		
	11 0.00		
df	473.00	43,068,420.00	
11	473.00		
Bikes	595.00	155,110,814.00	
-		43,068,420.00	
		oss Sales	

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.

File Down	load 🗙					
Do you	want to open or save this file?					
Name: LaunchCRDesigner3564587173295308941.bclp Type: Crystal Reports, 384 bytes From: localhost						
	<u>O</u> pen <u>S</u> ave <u>Cancel</u>					
0	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <u>What's the risk?</u>					

4. Click Sports.unx and click Next.

New Data Source Connection				
Browse SAP BusinessObjects Ente	prise Server SAPDEMO:640)0		
Choose a data source for your report .				
Logged on as: Administrator				
Data Source Type: Universe	Y			2
Folders	Name		Date Created	
E 🛄 Universes	🔆 eFashion.unx		10/11/11 2:26:49 PM PDT	
Report Conversion Tool Univers	🊧 Sports.unx		10/12/11 11:38:57 AM PDT	
	•			
		< <u>B</u> ack	lext > Einish	Cancel

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

New Data Source Connection	
Edit Query Edit the query used to retrieve your data.	
🕎 🌐 🔗 📇 🖻 View script 🗎 👔	3
😵 Universe : Sports	🗊 Result Objects for Query #1
 √g + □+ 	X × ≜↓
Category Id Category Id Category Category Customer Customer Date Vear Vear Quarter Month	Category Year Quarter Wet Sales
Month Product	Y Query Filters for Query #1
Figures	🔆 🗙 🖓 🚰
- We Quantity We Sales We Gross Sales We Discount	Drop your filters here
Generate report	
	<back next=""> Einish Cancel</back>

- 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.

· · · · · 1	1 1 1 2 1	<u>а с 3 с с с</u>	4 · · · 5 · · · 6

0/6/11			
Category	Year	Quarter	Net Sales
Golf	2009	Q3	4,058,827.75
Tennis	2009	Q1	1,750,273.63
Bikes	2009 0	Q1	27,416,592.00
Tennis	2009	Q4	1,047,984.63
-	2009	Q2	1,577,573.38
Tennis			
Tennis Bikes	2009	Q4	
			24,668,996.00
Bikes	2009	Q4	

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...

1/6/11					
í ear		Category		Quarter	Net Sales
2009		Golf		Q3	4,058,827.7
2009		Tennis		Q1	1,750,273.6
2009		Bikes		Q1	27,416,592.0
2009		Tennis		Ω4	1,047,984.6
2001	≪ Cu t		Ctrl+X	0.2	1,577,573.3
200!	Сору		Ctrl+C	Q.4	24,668,996.0
2011	Paste		Ctrl+V	Q3	2,560,516.2
2011 —				– <mark>Q1</mark>	4,750,207.0
2011	XDelete		Delete	Q4	39,333,364.0
2011	Format Result C	Neight Flomont		Q2	29,050,384.0
200!		Diject Element		Q3	1,714,046.0
200!	Format Painter			Q3	22,707,252.0
2011	Conditional Forr	matting		Q2	1,345,109.5
2011	Σ Total Year			Q4	28,671,580.0
2011	Group on Year.			Q1	26,395,944.0
2011	Sort on Year	••		Q3	17,286,396.0
2011	Sort on Year			_ ຸລ2	8,494,323.0
2011	arride			Q.4	10,537,273.0
2011 —				– <mark>Q</mark> 3	33,915,864.0
200!	Move		1	• 🛛 3	9,482,623.0
2011	Isolate Informa	Hop		Q1	6,883,736.0
200!		uun		Q.4	17,115,032.0
200!	된 Browse Data			Q2	948,361.5

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

	and the second	1		4 5 6 .	7 8
Report Header					
3					
Page Header					
:					Page 1 of
	10/6/11				10/6/
1		Category	Quarter	Net Sales	
Group Header 1	2009	Category	Qualter	Net Sales	
50 ST	2000				
Body		Golf	Q3	4,058,827.75	
Body		Tennis	Q1	1,750,273.63	
Body		Bikes	Q1	27,416,592.00	
Body I		Tennis Tennis	Q4 Q2	1,047,984.63	
				1,577,573.38	

12. Click Cross-tab.

Insert Format Data	
🗛 Text 🔨 Line 🗆 Box 🖾 Group 🗸 🖨 Section Σ Total 🗸 ಿ Sort Control 🗸 👖 Chart 🕤	🛗 Cross-tab 🔹 🔀 Picture 🔥 Flash 👔 Subreport 🔋 Page Number 👻

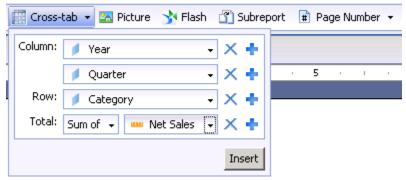
13. Click the Column drop-down and choose Year.

Į	🔛 Cross-t	ab 👻 🌇 Picture 🤺 Flash 🛛 Subr	eport 🛱 Page Number 👻
	Column:		- · × +
l	Row: Total:	Search for object by name Category Net Sales	• × +
		Vear Sports.Time\Year	Insert

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

	Cross-	tab 🔻 🜇 Picture 🔥 Flash	🛱 Page N	umber 👻
	Column:	🔰 Year 🗸	× +	
1	Row:	🦸 Category 🗸	X +	$(1,\ldots,n)$
	Total:	Distinct count of 👻	× +	_
			Insert	

- 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.

Structure	Page								
	(i) (i) (i) (i) (1) (i) (i)	e 2 e	1 · · · 3 · · · ·	· 4 ·	6 6 5 6	· · 6	1.11	7 -	8
Report Header									
Page Header	ReportTitle				۰ ب			-	PageNofM
	ModificationDate								PrintDate
	1	Çategory) Quarter	N	et Sales				
Group Header 1 Body	GroupName (Yea	Category	Quarter		Net S:	ales			
Group Footer 1	1								
Report Footer	3	L			Sum of Net Sa	ales,			
Page Footer	*								

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

· · · · 1	· · · 2 ·	1 · 3 · 1	· 4 · ·	· 5 · · · ·	6	7 • • •	8	
						Page	e1 of 2	
10641								
10,0,11								
	Category	Quarter	Net S	ales				
2009	Golf	03		405992775				
	Tennis	Q1		1,750,273.63				
	Bikes	Q1		27,416,592.00				
	Bikes							
	Tennis	Q3		1,714,046.00				
	Ski	Q2		948,361.56				
	Golf	Q4		5,323,095.50				
	Golf							
	Bikes	Q2		2227070200				
		Total	2009					2009
			Total	Q1	Q2	Q3		Q4
	Total	164,506,580.94	164,506,580.94	47,646,045.63	30,742,678.44	37,962,7	48.75	48,155,108.13
	Bikes	97,063,542.00	97,063,542.00	27,416,592.00	22,270,702.00	22,707,2	52.00	24,668,996.00
	Golf	24,785,254.75	24,785,254.75	9,457,290.00	5,946,041.50	4,058,8	27.75	5,323,095.50
	Ski	36,567,906.56	36,567,906.56	9,021,890.00	948,361.56	9,482,6	23.00	17,115,032.00
	Tennis	6,089,877.63	6,089,877.63	1,750,273.63	1,577,573.38	1,714,0	46.00	1,047,984.63
2010	Tennis Ski	Q3 Q1		2,560,516.25 4750,207,00				
	10/6/11 2009 2010	2009 Golf Tennis Bilves Tennis Bilves Tennis Bilves Ski Ski Ski Golf Bilves Ski Golf Bilves Colf Ski Total Bilves Colf Ski Tennis Ski Ski Ski Tennis Ski Ski Total Bilves Ski Ski Total Bilves Colf Ski Tennis Ski Ski Ski Tennis Ski Ski Ski Ski Ski Ski Ski Ski	Category Quarter 2009 Golf 0.3 Golf 0.3 Tennis 0.1 Bikes 0.1 Bikes 0.1 Tennis 0.4 Tennis 0.2 Bikes 0.3 Tennis 0.4 Tennis 0.2 Bikes 0.3 Bikes 0.4 Tennis 0.2 Bikes 0.3 Ski 0.3 Ski 0.3 Ski 0.3 Ski 0.4 Ski 0.2 Golf 0.4 Ski 0.2 Golf 0.4 Ski 0.1 Ski 0.1 Ski 0.1 Ski 0.1 Ski 0.1 Ski 0.1 164,506,580.94 Bikes Bikes 97,063,542.00 Golf 24.785,254.75 Ski 36,567,906.56 Tennis 6,089,877.63 2010 Tennis 0.3 Ski 0.1	Category Quarter Net S Golf Q3 Tennis Q1 Bikes Q1 Bikes Q1 Bikes Q1 Bikes Q1 Bikes Q1 Bikes Q1 Bikes Q2 Bikes Q2 Bikes Q3 Tennis Q2 Bikes Q3 Ski Q3 Ski Q3 Ski Q3 Ski Q3 Ski Q4 Ski Q3 Ski Q4 Ski Q3 Ski Q3 Ski Q4 Ski Q1 Golf Q4 Ski Q2 Bikes Q2 Total Total Total 164,506,580,94 164,506,580,94 Bikes 97,063,542,00 97,063,542,00 Golf 24,785,254,75 24,785,254,75 Ski 36,567,906,56 36,567,906,56 Tennis 6,089,877,63 6,089,877,63	Category Ouarter Net Sales 2009 Golf 0.3 4.058,827.75 Tennis 0.1 1.760,273.63 Bikes 0.1 27416,582.07 Bikes 0.4 1.047,984.63 Tennis 0.4 1.047,984.63 Tennis 0.2 1.577,573.38 Bikes 0.3 22007,252.00 Ski 0.3 9.482,623.00 Ski 0.4 2.4668,996.00 Ski 0.4 9.482,623.00 Ski 0.2 948,361.66 Golf 0.4 5.323,095.50 Golf 0.4 9.492,623.00 Ski 0.2 948,361.66 Golf 0.4 5.323,095.50 Golf 0.4 9.492,720.00 Ski 0.1 9.492,720.00 Ski 0.1 9.021,890.00 Golf 1.64,506,580.94 164,506,580.94 Bikes 97,063,542.00 97,063,542.00 27,416,592.00 Golf <td>Category Quarter Net Scies 2009 Golf Q3 4,058,827,75 Tennis Q1 1,750,273,63 Bikes Q1 27,416,692,00 Tennis Q2 1,677,57,33 Bikes Q2 1,677,57,33 Bikes Q3 2,470,252,00 Bikes Q3 2,2707,252,00 Ski Q3 2,470,252,00 Ski Q3 2,4707,252,00 Ski Q3 2,4707,252,00 Ski Q4 1,714,048,00 Bikes Q3 2,4707,252,00 Ski Q4 1,715,03,200 Ski Q1 9,483,61,56 Golf Q4 5,323,095,50 Golf Q4 5,323,095,50 Golf Q2 2,948,361,56 Golf Q2 2,946,041,50 Bikes Q2 2,2270,702,00 Ski Q1 164,506,580,94 47,646,045,63 30,742,678,44 Golf</td> <td>Category Quarter Net Sales 2009 Golf Q3 4,058,827,75 Tennis Q1 1,750,273.83 Bikes Q1 2,7416,592.00 Tennis Q4 1,047,984.63 Tennis Q2 1,577,573.83 Bikes Q3 2,4688,996.00 Tennis Q3 2,2707,252.00 Ski Q3 9,492,653.00 Ski Q2 9,492,653.00 Ski Q2 9,492,653.00 Ski Q2 9,492,652.00 Ski Q2 9,492,652.00 Ski Q1 9,021,890.00 Golf Q1 9,021,890.00 Golf Q2 5,946,041.50 Bikes Q2 5,946,041.50 Bikes 97,063,542.00 27,416,592.00 22,270,702.00 Golf 24,785,525.475 24,785,254.75 9,457,290.00 5,946,041.50 Bikes 97,063,542.00 97,063,542.00 27,416,592.00 22,70,702.00</td> <td>Category Quarter Net Sales 2009 Golf Q3 4,056,827.75 Tennis Q1 1,750,273.83 Bikes Q1 27,416,592.00 Tennis Q2 1,577,573.38 Bikes Q3 24,668,996.00 Tennis Q2 1,577,573.38 Bikes Q3 22,714,046.00 Bikes Q3 22,707,020.0 Ski Q3 9,482,62.30.0 Ski Q2 948,361.56 Golf Q4 5,323,095.0 Golf Q1 9,021,890.00 Golf Q2 22,270,702.00 Ski Q2 22,270,702.00 Ski Q1 9,045,520.0 Bikes 9,2 22,270,702.00 22,707,2 Golf Q2 5,946,041.50 30,742,678.44 37,962,748.75 Bikes 9,7063,542.00 27,416,592.00 22,707,02.00 22,707,2 2.00 Golf 24,785,254.75 9,457,290.00</td>	Category Quarter Net Scies 2009 Golf Q3 4,058,827,75 Tennis Q1 1,750,273,63 Bikes Q1 27,416,692,00 Tennis Q2 1,677,57,33 Bikes Q2 1,677,57,33 Bikes Q3 2,470,252,00 Bikes Q3 2,2707,252,00 Ski Q3 2,470,252,00 Ski Q3 2,4707,252,00 Ski Q3 2,4707,252,00 Ski Q4 1,714,048,00 Bikes Q3 2,4707,252,00 Ski Q4 1,715,03,200 Ski Q1 9,483,61,56 Golf Q4 5,323,095,50 Golf Q4 5,323,095,50 Golf Q2 2,948,361,56 Golf Q2 2,946,041,50 Bikes Q2 2,2270,702,00 Ski Q1 164,506,580,94 47,646,045,63 30,742,678,44 Golf	Category Quarter Net Sales 2009 Golf Q3 4,058,827,75 Tennis Q1 1,750,273.83 Bikes Q1 2,7416,592.00 Tennis Q4 1,047,984.63 Tennis Q2 1,577,573.83 Bikes Q3 2,4688,996.00 Tennis Q3 2,2707,252.00 Ski Q3 9,492,653.00 Ski Q2 9,492,653.00 Ski Q2 9,492,653.00 Ski Q2 9,492,652.00 Ski Q2 9,492,652.00 Ski Q1 9,021,890.00 Golf Q1 9,021,890.00 Golf Q2 5,946,041.50 Bikes Q2 5,946,041.50 Bikes 97,063,542.00 27,416,592.00 22,270,702.00 Golf 24,785,525.475 24,785,254.75 9,457,290.00 5,946,041.50 Bikes 97,063,542.00 97,063,542.00 27,416,592.00 22,70,702.00	Category Quarter Net Sales 2009 Golf Q3 4,056,827.75 Tennis Q1 1,750,273.83 Bikes Q1 27,416,592.00 Tennis Q2 1,577,573.38 Bikes Q3 24,668,996.00 Tennis Q2 1,577,573.38 Bikes Q3 22,714,046.00 Bikes Q3 22,707,020.0 Ski Q3 9,482,62.30.0 Ski Q2 948,361.56 Golf Q4 5,323,095.0 Golf Q1 9,021,890.00 Golf Q2 22,270,702.00 Ski Q2 22,270,702.00 Ski Q1 9,045,520.0 Bikes 9,2 22,270,702.00 22,707,2 Golf Q2 5,946,041.50 30,742,678.44 37,962,748.75 Bikes 9,7063,542.00 27,416,592.00 22,707,02.00 22,707,2 2.00 Golf 24,785,254.75 9,457,290.00

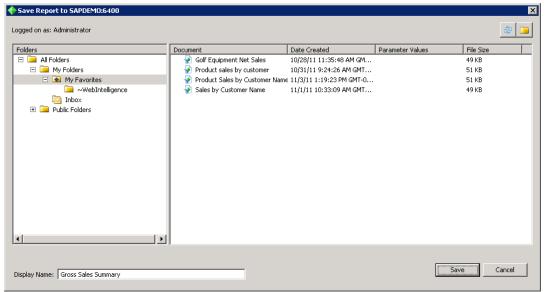
Notice that a gridline appears as you drag the crosstab to the left.

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	
10/6/11							
	Category	/ Qu:	arter	Net Sales			
2009	Golf Q3			4,058,82	27.75		
	Tennis	Q1		1,750,2			
	Bikes	Q1		27,416,59			
	Tennis	Q4		1,047,98			
	Tennis Bikes	Q2 Q4		1,577,53 24,668,99			
	Tennis	Q3		1,714,04			
	Bikes	Q3		22,707,2			
	Ski	Q3	9,482,623.00				
Ski		Q4					
Golf G Golf G Ski G Golf G		Q2 Q4		5,323,09			
		Q1		9,457,29			
		Q1					
		Q2		5,946,04			
	Bikes	Q2	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	
	36,567,906.56	36,567,906.56	9,021,890.00	948,361.56	9,482,623.00	17,115,032.00	
Ski							

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.

File Down	load 🗙				
Do you want to open or save this file?					
>	Name: LaunchCRDesigner3564587173295308941.bclp Type: Crystal Reports, 384 bytes From: localhost				
	DpenSaveCancel				
0	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <u>What's the risk?</u>				

4. Click Sports.unx and click Next.

New Data Source Connection					
Browse SAP BusinessObjects Enterprise Server SAPDEMO:6400					
Choose a data source for your report .					
Logged on as: Administrator					
Data Source Type: Universe					
Data Source Type. Universe	Y		8		
Folders	Name	Date Created			
E 🛄 Universes	🔆 eFashion.unx	10/11/11 2:26:49 PM PD1			
Report Conversion Tool Univers	🊧 Sports.unx	10/12/11 11:38:57 AM PE	т		
•	•		F		
		and Next Train	I could		
		< Back Next > Einish	Cancel		

- 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

🖶 Formatting: Object4	×
🕂 Add Condition 🗙 Delete 🏾 🕆 🐥	
Condition (applied in the order shown)	Sample
Σ Sum of Gross Sales Less Than or Equal to 15,000,000	abc123

15. Change the following properties:

Font Color (White)

Font Style (Bold)

Background Color (Red)

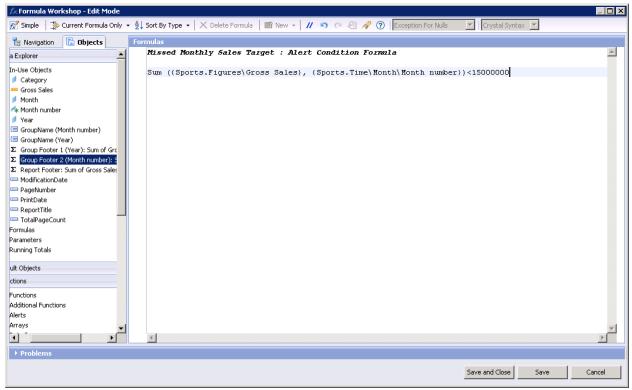
Property	Value			
Font Color	Color(r=255,g=255,b=255)			
Font Style	Bold			
Top Line Style	No Value			
Left Line Style	No Value			
Bottom Line Style	No Value			
Right Line Style	No Value			
Border Color	No Value			
Background Color	Color(r=255,g=0,b=0)			
Page Footer	Standard Colors			

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

Alerts X
🕂 New 🗙 Delete
Name
🔕 Missed Monthly Sales Target
Enabled
Name: Missed Monthly Sales Target
Condition: 🏂
Message: This alert is missing a condition formula
This alert is missing a condition formula.
OK Cancel

- 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".

♦ Alerts	×
🕂 New 🗙 Delete	
Name	1
Missed Monthly Sales Target	
Enabled]
Name: Missed Monthly Sales Target	
Condition: 😥	
Message: At least one monthly sales target has been missed	J
OK Cancel	

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

29. Click Triggered Alerts.

	inggered Alerts.		_				
Mol	nthly Gross Sales - SAP Crystal	Reports	for Enterprise X	KI 4.0			
File E	idit View Insert Format Data	Help					
	🗅 🥟 🔹 🔚 🔹 🔁 🔹 Insert Format Data						
5	≅ of 🗈 💼 X ≪ 🔤	A Text	🔪 Line 🗖 Bo	x 🔚 Group			
	Data Explorer	~	Structure	Page 🛛			
	New 👻 Options 👻						
$\mathbf{\mathbf{y}}$							
멶	Edit Query		Report Header	:			
Triggered Alerts							
	Select triggered alerts to filter rep	ort data.	Header				
2	Time			1			
	🖻 🗤 🥠 Month			1			
	⊡⊡ Figures 		Group Header 1 Year	:			
	 Formulas (0) 						
	 Parameters (0) 		Group Header 2 Month number	1			
	 Running Totals (0) 						
	Predefined Objects		Body	1			
	-,		Body	3			

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.

	Triggered Alerts
	Display Alert Pop-up
$\mathbf{\mathbf{y}}$	
Ŀ	Misse <mark>Deselect All</mark> les Target
0	
P	

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.

Monthly Gross Sales

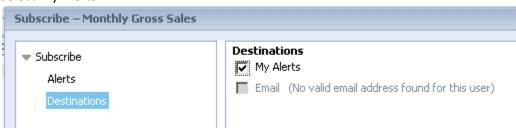
3. Right-click Monthly Gross Sales and choose Subscribe.

iew ▼ New ▼ Organize ▼ Send ▼ M	lore Actions 🔹 Del	tails			
y Documents		Title 🔺			Туре
🥯 My Favorites		~WebIntelligence			Folder
🛄 🔁 ~WebIntelligence	*	eFashion Store Sales			Explorer Information Space
🖾 Inbox		Golf Equipment Net Sales			Crystal Reports
2 My Alerts	-	Gross Sales Crosstab			Web Intelligence
		Gross Sales Summary		Crystal Reports	
Subscribed Alerts	8	Monthly Gross Sales			Crystal Reports
- 🗟 Personal Categories		Net Sales By Category	View		Web Intelligence
	34	Net Sales By Category	Properties		Microsoft Excel
	-	Product Gross Sales by Categ	Modify		Web Intelligence
		Product Gross Sales by Custo	Schedule		Web Intelligence
		Product Sales	History		Web Intelligence
	, 🔊 -	Product sales by customer	Alerts		Crystal Reports
		Product Sales by Customer N	Categories		Crystal Reports
	a	Sales By Category 2010	Document Link		Dashboard Design
		Sales by Customer Name	Subscribe		Crystal Reports
	*	Sports	Manage Subscribers		Explorer Information Space
			Manage Alerting Settings		
			New	>	
				>	
			Organize		
			Send	>	

4. Select Missed Monthly Sales Target (1).

Subscribe – Monthly Gross Sales				
 Subscribe Alerts Destinations 	Alerts Missed Monthly Sales Target (1)			

- 5. Click Destinations.
- 6. Select My Alerts.



7. Click Save and Close.

8. Click Subscribed Alerts.

SAP BusinessObjects					
View ▼ New ▼ Organize ▼ Send ▼ More Actions ▼ Details					
My Documents		Title 🔺			
🗄 📨 My Favorites	8	Missed Monthly Sales Target (1)			
🦾 💼 ~WebIntelligence		'			
🖾 Inbox					
📴 My Alerts					
🖴 Subscribed Alerts					
En Personal Categories					

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

Schedule – Monthly Gross Sales						
 Schedule Instance Title Recurrence Database Logon Formats 	Recurrence Run object: Now 💽 Object will run now.					

12. Click Schedule in the bottom left corner.

	Title 🔺	Туре	Last Run	Instances
	~WebIntelligence	Folder		
*	eFashion Store Sales	Explorer Information Space		
-	Golf Equipment Net Sales	Crystal Reports		0
9	Gross Sales Crosstab	Web Intelligence		0
-	Gross Sales Summary	Crystal Reports		0
8	Monthly Gross Sales	Crystal Reports	Oct 12, 2011 12:45 PM	1

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

13. Click My Alerts.

SAP Business Objects					
Home Documents					
View 🕆 New 👻 Organize 🕆 Send 🕆 More Actions 👻	De	tails			
My Documents		Title			
🕂 📴 My Favorites		Missed Monthly Sales Target (1)			
🦾 🚞 ~WebIntelligence					
🖾 Inbox					
•••• 💁 My Alerts					
🔒 Subscribed Alerts					
Personal Categories					

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

Alert Details – Missed Monthly Sales Target (1)				
Title:	Missed Monthly Sales Target (1)			
Message:	At least one monthly sales target has been missed			
Trigger Time:	Oct 12, 2011 12:45 PM			
Alert Source:	User Folders/Administrator/Monthly Gross Sales/Monthly Gross Sales			
Hyperlink:	View additional information about the alert			

- 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

Welcome: Administrator Manage Spaces	Help	Feedback	Demos		About
Search					
			5.4	lange l	ist 🞅

4. Expand Universes

SAP Busine	ssObjects Explorer - Windows Internet Explorer
Home	Manage Spaces 🖾
Sources	
Exce	el spreadsheets
+ 🛅 M	ly Favorites
= 🗐 Univ	erses
+ 🚞 R	eport Conversion Tool Universes
💥 e	Fashion.unx
📩 🕺	ports.unx

5. Click Sports.unx

6. Click New.

SAP BusinessObjects Explorer - Windows Internet Explorer	
Home Manage Spaces	
Sources	Information Spaces New
Excel spreadsheets	Title
🗑 🧰 My Favorites	
Iniverses	
🖲 🛅 Report Conversion Tool Universes	
🔆 eFashion.unx	
🔆 Sports.unx	

7. Type Sports in the Name field.

Create Informat	Create Information Space on: [Sports.unx]			
Properties	Objects	Scheduling	Personalization	
De	Name * escription	Sports		
	(eywords vailability	✔ Show on Hon	ie page	
	Folder Status	Favorites		•
Regional	Settings	English (United		
Univer Universe De	rse Name escription	[Sports.unx] [Sports.unx]		
				OK Cancel

8. Click the Objects tab.

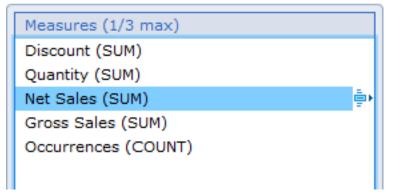
- Create Information Space on: [Sports.unx] Properties Objects Scheduling Personalization Universe Facets, Measures and Filters = 🎎 [Sports.unx] Measures ٠ = 🗁 Category Occurrences 1 Category Id Discount х = 🗁 Customer 🚥 Quantity Customer Id 🚥 Net Sales = 🗁 Time 🚥 Gross Sales € ≣ -🖊 Date Facets ÷ = 📂 Product 1 Category Ψ Product Id 1 🖊 Customer Name 🗁 Figures Product Name 1 🖲 📄 Predefined Objects 🖊 Year 1 Year Quarter 1 Month 🖉 1. → . Facet display Show facets in the defined order Validate OK Cancel
- 9. Add the objects and measures shown below.

- 10. Click Validate
- 11. Click OK.
- 12. Click OK.
- 13. Click the Build Index button.

	Welcome: Administrator Manage Spaces Help	Fe	edback	Demos	Abou
Home Manage Spaces					
Sources	Information Spaces New				
# 🕞 Excel spreadsheets	Title		Status	Action	
🕷 💼 My Favorites	 Scotts 				×) 🚯
H 🗐 Universes					
* 💼 Report Conversion Tool Universes					
2 eFashion.unx					
and Sports.unx					

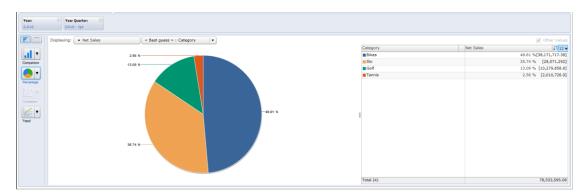
Solution 21– Explore the Sports Information Space

- 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.

Year: 2,010	×	Year Quarter: 🛛 🗙 2010 - Q4		
	Display	ving: 🔻 Net Sales	< Best guess > : Category	•

10. Click the displaying list and check Gross Sales.

	Displaying:	✓ Net Sales, Gross Sales
	100%-	Measures (2/3 max)
		Discount
Comparison	90%-	Quantity
	80%-	✓ Net Sales
Percentage		✔ Gross Sales
Percentage	70%-	Occurrences

11. Click Comparison and choose a column graph.

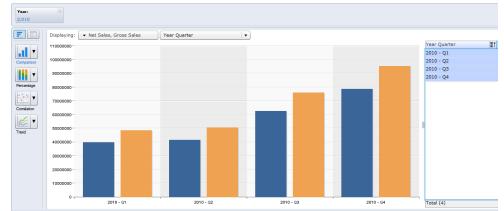
	Displaying:
	17000000 - 16000000 -
•	

- Year: 2,010 Displaying:

 Net Sales, Gross Sales Category • Customer Name 170000000 -160000000 -Month 150000000 -Product Name 140000000 -• Year 130000000 -Year Quarter Percentage 120000000 -110000000 -100000000 -90000000 -• 80000000 -70000000 -60000000 -50000000 -40000000 -30000000 -20000000 -10000000 -0 -Bikes Golf Tennis Ski
- 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.

Year Quarter	Net Sales	12 🗸 📕 Gross Sa	ales
2010 - Q4	≣† A to Z	78,533,595.08	95,137,050
2010 - Q3	≣↓ Z to A	62,408,058.95	75,753,883
2010 - Q2		41,370,422.14	50,508,465
2010 - Q1		39,585,801.36	48,339,786



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.

Upload a spreadsheet to explore	
Select a File (.xls, .xlsx)	
	Browse
Preview and Configure Explore Now	

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

Upload a spreadsheet to explore	
Select a File (.xls, .xlsx)	
eFashionStoreSales.xlsx	Browse
Preview and Configure Explore Now	

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

Year	Quarter	Month	Week	s
Label	▼ Label	▼ Label	▼ Label	•
2004.0	Q1	1.0	2.0	Cal
2004.0	Q1	1.0	2.0	Cal
2004.0	Q1	1.0	2.0	Col
2004.0	Q1	1.0	2.0	DC
2004.0	Q1	1.0	2.0	Flor
2004.0	Q1	1.0	2.0	Illir
2004.0	Q1	1.0	2.0	Ma
2004.0	Q1	1.0	2.0	Ne
2004.0	Q1	1.0	2.0	Net

8. Click OK.

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

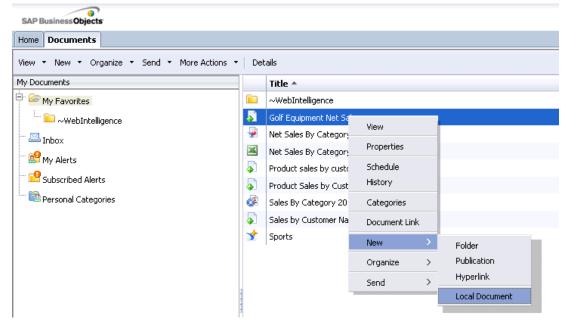
Home Ex				Welcome:	Administrator N	lanage Spaces	Help	Feedback	Demos	About
HUITIE	plore: eFashi	onStoreSales.x	lsx 🖾							
	👷 Bookma	rk 🖂 Email	📥 Export	Find		<u>_</u>	Refreshed or	: 2011/11/04 0	8:07 Records 1,	982 (0.004s)
leasures (1/3 r	max)	Year	↓¶	Quarter	Ļ	State	Ļ	City	Į≣	Month
ales revenue ((SUM) 🍺	2,006	15,059,142.80	Q1	9,729,860.60	Texas	10,117,664.30	New York	7,582,220.60	9
uantity sold (S	SUM)	2,005	13,232,246	Q4	9,330,741.50	New York	7,582,220.60	Houston	5,447,956.90	1
1argin (SUM)		2,004	8,095,814	Q2	9,126,061.70	California	7,479,569.30	Los Angeles	4,220,928.80	3
viscount (SUM)				Q3	8,200,539.00	Illinois	3,022,658.40	San Francisco	3,258,640.50	
ccurrences (C	COUNT)					DC	2,961,949.90	Chicago	3,022,658,40	
						Colorado	2,060,275.20	Washington	2,961,949,90	
						Florida	1,879,158.50	Austin Oslanda Osui	2,699,673.20	
						Massachusetts	1,283,706.60	Colorado Spri Dallas	2,060,275.20 1,970,034.20	11 7
								Dallas Miami	1,970,034.20	6
								Boston	1.283.706.60	2
								20200	1,200,100,00	8
edd oederdada										
Add Calculatio	on	L								
		✓ Sales reven			ing all data. Selec uess > : Year		ow it down.		V	1 Other Valu
	Displaying:	• Sales Teven								
	Displaying:	• Sales leveli					Year		Sales revenu	
		• Sales reven					2,006		_	15,059,142.8
1 nomparison	8000000-						2,006 2,005		_	15,059,142.8 13,232,24
1 omparison	18000000 -						2,006		_	15,059,142.8 13,232,24
1 omparison 1 1 1 1 1 1 1 1 1 1 1 1 1	1 8000000 - 1 6000000 - 1 4000000 - 1 2000000 -						2,006 2,005		_	15,059,142.8 13,232,24
1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 8000000 - 1 6000000 - 1 4000000 - 1 2000000 -						2,006 2,005		_	15,059,142.8 13,232,24
1 1 1 1 1 1 1 1 1 1 1 1 1 1	18000000 - 16000000 - 14000000 - 12000000 - 10000000 - 8000000 -						2,006 2,005		_	12 15,059,142.8 13,232,24 8,095,81
1 1 1 1 1 1 1 1 1 1 1 1 1 1	18000000 - 16000000 - 14000000 - 12000000 - 10000000 - 8000000 - 6000000 -						2,006 2,005		_	15,059,142.8 13,232,24
1 1 1 1 1 1 1 1 1 1 1 1 1 1	18000000 - 16000000 - 14000000 - 12000000 - 10000000 - 8000000 -						2,006 2,005		_	15,059,142.8 13,232,24
1 proparison 1 pretratage 1 pretation pretation	18000000 - 16000000 - 14000000 - 12000000 - 10000000 - 8000000 - 6000000 -						2,006 2,005		_	15,059,142.8 13,232,24

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

New Local Document i	in – Administrator	
Filename:	C:_Kits\Sample_Databases\eFashionStoreSales.xlsx Browse	
Title:	eFashionStoreSales	
Description:		
Keywords:		
File Type:	Microsoft Excel	

6. Click Add.

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

	Title 🔺			Туре
	~WebIntelligence			Folder
24	eFashionStoreSales			Microsoft Excel
-	Golf Equipment Net Sales	View		Crystal Reports
.	Net Sales By Category	Properties		Web Intelligence
×	Net Sales By Category	Categories Document Link		Microsoft Excel
5	Product sales by customer			Crystal Reports
-	Product Sales by Customer Name		>	Crystal Reports
۵	Sales By Category 2010	New		Dashboard Design
5	Sales by Customer Name	Organize	>	Create Shortcut In My Favorites ports
*	Sports	Send	>	Cut formation Space
	,			Сору
				Copy Shortcut
				Paste
				Delete

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

Home Documents				
View - New - Organize - Send - More Actions -	Det	ails		
My Documents		Title 🔺		
Folders		Data Federation		
		LCM		
🛅 Data Federation		Platform Search Scheduling		
E.CM		Probes		
Platform Search Scheduling Probes Report Conversion Tool In Proceeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee		Report Conversion Tool		
		Visual Difference		
		Properties New > Folder Organize		

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

13. Right-click and choose Organize > Paste.

Home Documents		
View - New - Organize - Send - More Actions -	Details	
My Documents	Title 🔺	
Folders		
🗄 🛄 Public Folders	Properties	
🔁 Data Federation	New >	
🗄 💼 lcm	Organize >	Cut
📁 Platform Search Scheduling		Сору
The Probes		Paste
		Delete
🖿 🖻 Report Conversion Tool		
🥟 Spreadsheets		
🗄 💼 Visual Difference		

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

0	SAP BusinessObjects Explorer - Windows Internet Explorer	
	Home Manage Spaces 🖾	
	Sources	Information Spaces New
	Excel spreadsheets	Title
	🔹 🧰 My Favorites	
	= 📄 Public Folders	
	= 🛅 Spreadsheets	
	🔟 eFashionStoreSales	
	• 🗊 Universes	

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

Create Information Space on:	eFashionStoreSales	
Properties Configure E	xcel File Scheduling Personalization	
Name a	eFashion Store Sales	
Keywords		
Availability	✓ Show on Home page	
Folder Status	Favorites	T
Spreadsheet name Spreadsheet description	eFashionStoreSales eFashionStoreSales	
	ок	Cancel

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.

Create Information Space on: eFashionStoreSales				
Properties Configure I	Excel File Scheduling	Personalization		
Worksheet Sheet1 This preview shows the first		s are provided by the first	row	
Year	Quarter	Month	Week	State
Label 🗸 🔻	Label 🛛 🗸 🔻	Label 🗸 🔻	Label 🛛 🗸 🔻	Label
2004.0	Q1	1.0	2.0	California

22. Click OK.

23. Click the Index Now button on the right.

Information Spaces New		
Title 🔺	Status	Action
<u>eFashion Store Sales</u>	0	
		Index Now

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

Refresh list 🞅

The new Information Space will appear in the list.

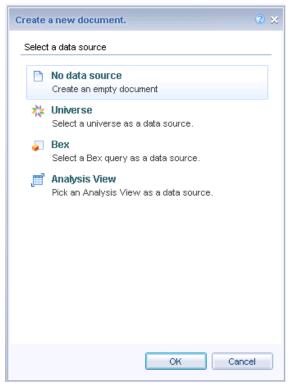
SAL DUSILE	ssObjects Explorer - Windows Internet Explorer
Home	Manage Spaces 🛛
7 - (
Information 2 Inform	on Spaces ation Spaces available.
	ation Spaces available.
2 Inform	ation Spaces available.

Solution 24 - Create a Web Intelligence Document

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

SAP Business Objects			
Home Documents I	nteractive Analysis 🔎 😐 🛛		
Interactive Analysis 👻	🗅 쳐 🖬 + 🖧 🗛 🜮 🖂 -		

4. Click Universe.



5. Double-click Sports.unix

-	e Universes:			Refresh universe lis
tate	Name	Revision	Folder	
	eFashion.unx	3	@SAPDEMO_6400\	
	Sports.unx	13	@SAPDEMO_6400\	
eln on i	selected universe:			
elp on :	selected universe;			
elp on :	selected universe:			

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.

👔 Query Panel 🔅 🖄				
📑 Add Query 🔹 🖬 🤯 📰 📰 🛛 🤣 😭	(a)	🍣 Run query 📔 🔂 Close 👻		
🔆 Universe outline	T Result Objects	▼ × ¾		
Sports Type here to filter tree Type here to filter tree Category Id Category Id Category Category Data Category Cate	Category Product Name Date Gross Sales			
George Figures Guantty Wat Sales Gross Sales Discount	Year Equalto ▼ 2010 IE ▼			
	I Data Preview	2 Refresh		
	Q• Type a text to filter the values			
Cuery 1		4 ▷ ⊞		
	Last refresh date: (this docume	ent has never been refreshed.)		

- 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.

Publish a documen			3 ×
	📄 Folders 🛛 🖹 Categories 🛛 🗡 💕 🗞	Search title 👻	P 2
Desktop	E- 🎲 Home	Title	Size
Documents Documents Computer	 Image: Provide a state of the state of the	Net Sales By Category	38 KB
		< III	
			•
1	Name Product Gross Sales by Category		Advanced 🕨
		Save	Cancel

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.

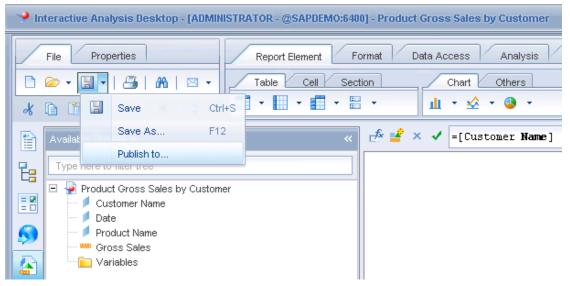
User Identification	3 ×
	SAP BusinessObjects WEB INTELLIGENCE
Enter your user information and cl	ick Log On.
System:	SAPDEMO:6400
<u>U</u> ser name:	Administrator
Password:	••••••
<u>A</u> uthentication:	Enterprise T
	Use in Offline mode
	Log On Cancel

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

5. Add the filter Year Equal to 2010.

🔁 Query Panel		3 ×
💕 Add Query 🔹 🖬 🐺 📰 📰 😵 😭		🍣 Run query 📔 🔂 Close 🔹
🔆 Universe outline	🗊 Result Objects	▼ × ¾
Sports Type here to filter tree Category Cate	Customer Name Product Name Date Gross Sales Vear Equal to 2010 E Vear Cqual to Cquar to Cqual to Cqual to Cqual to Cqual to Cquar to Cqual to Cqual to Cqu	
	Last refresh date: (this docur	nent has never been refreshed.)

- 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.

Publish a docume	ent to the server.	
	📔 Folders 🛛 🖹 Categories 🛛 🔀 Search title 🔹	چ ۾
Desktop My Analysis Documents Computer Computer Sapdemo:6400	Folders Categories Home My Favorites WebIntelligence Product Gross Sales by Product Gross Sales by It is a state of the	Size 38 KB Category 28 KB
	Name Product Gross Sales by Customer	Advanced
		Save Cancel

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.

SAP Business Objects Welcome: Administrator Applications • Preferences Help • Log C								Log Off	
Home Documents									
Vew + New + Organze + Send + More Actions + Details									
My Documents		Title *	Туре		Last Ru	in			:
🖻 🖙 My Favorites		~WebIntelligence	Folder						
	*	eFashion Store Sales	Explorer Information Space						
- Inbox	-	Golf Equipment Net Sales	Crystal Reports						1
My Alerts	÷	Net Sales By Category	Web Intelligence						1
Subscribed Alerts	1	Net Sales By Category	Microsoft Excel						
	-	Product Gross Sales by Category	Web Intelligence						
📴 Personal Categories	-	Product Gross Sales by Customer	Web Intelligence						1
	a	Product sales by customer	Crystal Reports						1

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

Docu	iment Autosave and Recovery	×
1	Documents are now saved automatically when the server times out. See the online help for more information. The Don't notify me again	n
	ОК	

5. Click Design in the top right corner.

Welcome: Administrator Ap	oplications 🔨 Prefer	rences Help 🔻	Log Off	
				Reading 🔹 Design 💌 🔇 👻

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

Rep	oort Elements	Formatting Data Access Anal	lysis Page Setup				
Tabl	es Cell Sect	ion Chart Other To	ools Position Linking	9	Table Layout B	lehaviors	
-		🔹 🏦 🔹 🍲 🔹 🖷 Tu	urn Into 🔻 🏥 Set as	section	🗄 Break 🔻 Inse	rt 🔻 🧮 Header	🕶 🧾 Footer 💌
*	fx 🚅 🗙 🗸	[Category]					
						0	
ıment		Report	<u>1</u>			0	
Jment 31 PM		<u>Report</u>	<u>1</u>				
	Category	Report *	<u>1</u> Date	Year	Gross Sales		
	Category Bikes		_	Year 2010	Gross Sales 22,125	0	
		Product Name	Date			0	

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

	Triump Pro Cycling Helmet	10/10/11	2010	391,776
	Triump Pro Cycling Helmet	11/10/11	2010	364,350
	Triump Pro Cycling Helmet	12/10/11	2010	499,758
Bikes				

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

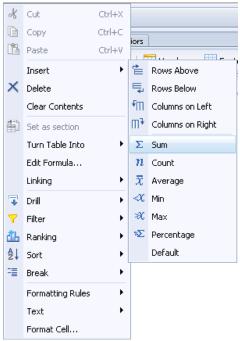
Report Elements Formatting Data Access Analysis Page Setup				
Tables Cell Section Chart Other Tools Positi	ion Linking Table Layout Behaviors			
📰 • 🔝 • 📰 • 🗄 • 🔟 • 😒 • 🔇 • 🛗 Turn Into •	🟥 Set as section 🗧 Break 🔹 Insert 🔹 🧮 Header 👻 Footer 🔹			

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.

	Document	: Summary 🔹 🤍
	🔄 Print 🛛 E	idit
Ŀ		roduct ross
	🚽 🖓 Sa	ales by ategor
(?)	🔻 General	
	Түре:	Interactive Analysis document
	Author:	Administrator
	Creation date:	November 4, 2011 1:35:31 PM GM 07:00
	Locale:	English (United States)
	Description;	
	Keywords:	
	 Statistics 	
	Last refresh date:	November 4, 2011 1:31:33 Pl 07:00
	Last modified	November 4, 2011 1:35:31 Pl 07:00

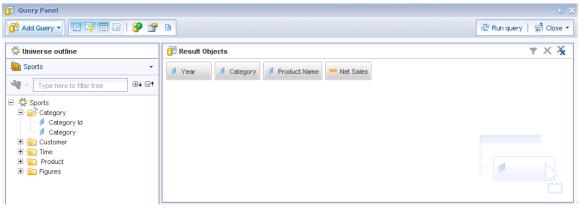
15. Expand Report 1 and click a category name to navigate to that section of the report.

SAF	BusinessObjects						
Home	Home Documents Product Gross Sales , P 💠 😣						
	File Properties	Re	port Elements Formatting Data Ac	cess Analysis	Page Setu	p	
	- <u> </u>	Tab	les Cell Section Chart Other			inking et as section	
	Navigation Map Product Gross Sales by Catego Report 1 Bikes Golf Ski	«	f _× ≝ × ✓ Ski Product Name	Date	Year	Gross Sales	
(?)	 Tennis 		No Name Skis	1/10/11	2010	1,014,500	
<u>}</u>			No Name Skis No Name Skis	2/10/11 3/10/11	2010 2010	391,000 225,500	
			No Name Skis	4/10/11	2010	151,000	

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.

~			
Year	Category	Product Name	Net Sales
2009	Bikes	Crochet Cycling Gloves	=NameQf((P(ear))
2009	Bikes	Descent Competition Bicycle	60,694,760

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.

Report Element Format Data Access	Analysis	Page Setup
Data Providers Tools	Dat	ta Objects
🛅 New data provider 🝷 🛛 📝 Edit 📑 Purge 🝷 🛛	🕲 🔹 📑 Ne	w Variable 🝷 📔 🂋 Merge

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

Report Element Format Data Access Analysis Page Setup				
Filters Data Tracking	Display Conditions	Interact	Functions	
🍸 Filter 👻 👬 Ranking 👻 🗮 Controls 🔻	F≣ Break 👻 🛔 Sort	🔹 🛛 🐺 Drill 👻 🌾 Filter B	Bar $ eilel = 0 $ Outline Σ Sum $ egreen n$ Count More $ egreen e$	

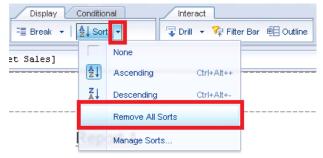
9. The records are now sorted in ascending order (lowest to highest) by Net Sales.

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.

Manage Sorts	3 ×
Block 1	Priority:
	Sort: Add Remove
	Custom Order: Values Reset
ок	Cancel Apply

Add Sort 🔹 😵
Block 1 Category Product Name Year Net Sales
OK Cancel

14. Click Add and choose Net Sales.

Manage Sorts	3 ×
Block 1 Product Name Net Sales	Priority:
	Order: ▲↓ Ascending ▼
	Sort: Add Remove
	Custom Order: Values Reset
ОК	Cancel Apply

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.

SAP B	usinessObje	cts	Welcome: Administrator
Home	Documents	Web Intelligence 🔎 ቱ 🙁	
VVeb In	telligence 👻	🗅 🗁 🖫 - 🖧 AA	ೋ⊠ - 🔏 🖻 🛱 - ୭ ୯ X ֎ -

4. Click Product Gross Sales by Category.

This is the document you created in the first Web Intelligence activity.

📄 Folders 🛛 📴 Categories	🗙 😭 🍣	Search title 🔻	"	æ
∃- 🎲 Home		Title	Size	Last Run O
🖹 🙀 My Favorites		Net Sales By Category	38 KB	10/13/11 5:5 A
🗄 💼 «WebIntelligence 🖂 Inbox		Product Gross Sales by Category	29 KB	11/4/11 7:39 /
Public Folders		Product Gross Sales by Customer	47 KB	11/4/11 7:07 /
_		Product Sales	36 KB	11/8/11 12:1 /
		▲		4

- 5. Click Open.
- 6. Click Design.

ه) SAP Business Objects	Welcome: Administrator Applications Preferences Help Log Off
Home Documents Product Gross Sales 🔎 🎂 😫	
Web Intelligence • 🗋 🔛 • 🎒 🆓 🍄 🖂 • 🤞 🖺 • 🤊 🖙 🗙	😂 • 🎯 Track • 😨 Drill • 🌾 Filter Bar Outline 🛛 Reading Design • Data 🔅 • ③ • 🗴

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

Report Element Format Data Access Analysis Page Setup				
Data Providers Too	Is	Data Objects		
📁 New data provider 🝷	📝 Edit 🎽 Purge 👻 🙈	🖗 🔹 🚅 New Variable 👻 🔰 Merge		

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

🗊 Result Objects		<mark>▼</mark> × ¾
Category Product Name D	ate 🔰 Year 🛛 🕬 Gross Sales	Quantity Net Sales
Vear Equal to T 20	10	1 in the second

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.

Available Objects - «	🛃 🛃 × 🖌			
Type here to filter tree Product Gross Sales by Category Category Product Name Veor Gross Sales Gross	<u>R</u> es	eport 1		
	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

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

Available Objects + 《	∄* 🖆 × 🖌				
Type here to filter tree Product Gross Sales by Category Category Date Product Name Product Name Giscount Giscount Gross Sales		Report 1			
	Bikes				
	Product Name	Date	Year	Gross Sales	
	Crochet Cycling Gloves	1/1/10	2010	4,095	🚥 =[Net Sales]
	Crochet Cycling Gloves	1/4/10	2010	3,150	

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

Available Objects 👻	«	_f× 📽 × 🖌				
Type here to filter tree	gory		<u>Report 1</u>			
Gross Sales Wet Sales Quantity Variables		Bikes				
Y BITCHUICS		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	
		Crachet Cycling Gloves	1/8/10	2010	1.500	

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.

	Report Map +	« 🛃 🖆 🗶 🖌 🔛							
Es	Product Gross Sales by Category Beport 1	Golf							
= 12	• Bikes • Golf	Product Name	Date	Year	Gross Sales	Product Name	Quantity	Net Sales	Gross Sales
6	Ski Tennis	Berta Golf Clubs	1/4/10	2010	100,000	Berta Golf Clubs	128	23,291,520	28,617,000
		Berta Golf Clubs	1/8/10	2010	149,000	Clone Golf Clubs	115	10,155,950	12,393,500
		Berta Golf Clubs	1/12/10	2010	172,000	Golf Balls	122	1,389,689.6	1,705,040
		Berta Golf Clubs	1/22/10	2010	218,000	Tees	125	807,108.2	988,680
		Berta Golf Clubs	1/29/10	2010	154,000				
		Berta Golf Clubs	2/3/10	2010	159,000				

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.

🗊 Query Panel	
🞁 Add Query 🔹 🔚 🐺 📰 🔚 🛛 🍪 😭	
🔆 Universe outline	🗊 Result Objects
Sports	Customer Name Category Product Name Gross Sales Met Sales
Year Quarter Month Product Id Product Id Product Name Figures Quantity Wet Sales Gross Sales Discount	And Query Filters

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 .

	Available Objects + 😽
Ŀ	Type here to filter tree
	 New Document Category Customer Name Product Name Gross Sales Net Sales Variables

11. Click New.



12. Click Category and click Next.

Define Input Control	3 X
Select Report Object	
Select the report objects used to filter data	
New Document Category Customer Name Product Name Gross Sales Net Sales Variables	
Include objects from selected block only	Arranged by: Alphabetic order 🝷
	<< Back Next >> Cancel

13. Click Radio buttons and click Next.

Define Input Control		3 ×
Choose Control Type Select and define the control)I	
Single value	Use radio buttons to allow a us list of possible value. All altern the chosen value is ticked.	
Combo box Radio buttons List box Multiple values List box List box List box	Input control properties Label Description List of Values Use restricted list of values Default value(s) Operator Number of lines	Category All values from report
	<< Back	Next >> Cancel

14. Click Next.

Define Input Control	? ×
Assign Report Elements	
Select report elements to assign them to the input control	
Report Object 🔎 Category Control 8 Radio buttons	
■ Image Header ■ ✓ Image Body Image Book 1 Image Block 1 Image Page Footer Image Footer	
<< Back Finish	Cancel

- 15. Click Finish.
- 16. Click Golf.

S New Map Reset					
Category	*				
O All values					
OBkes	Produc	Sales			
(Golf	<u> </u>				
⊖ ski	Customer Name	Category	Product Name	Gross Sales	Net Sales
			F I GAMES HUMING	Ol vaa Juliea	1101 30000
O Tennis	Alleriana	Co.K	Olana Gali Olaha	4.22,000	400.00
U Tennis	Allmigear	Golf	Clone Golf Clubs	123,000	100,86
	Allmigear Allmitek	Golf Golf	Clone Golf Clubs Clone Golf Clubs	123,000	
U Tennis					100,860 86,510 13,562.0
	Allmitek	Golf	Clone Golf Clubs	105,500	86,51
U Tennis	Allmitek Allmitek	Golf Golf	Clone Golf Clubs Golf Balls	105,500 16,540	86,51 13,562

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.

Single value		to select several values from a list of ternatives are always displayed; the ecked.
Combo box Radio buttons Radio buttons List box Multiple values Check boxes List box	 Input control pro Label Description List of Values Use restricted list of Default value(s) Operator Number of lines 	of values from report in the formation of values from rep

- 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.

Define Input Control			3 ×
Choose Control Type			
Select and define the cont	rol		
Single value		o select several values from a list (ernatives are always displayed; th	
Entry field	chosen values are sele		°
🖃 Combo box	Input control prop	perfies	
🗧 Radio buttons	Label	Customer Name	
E List box	Description		
Multiple values	List of Values	All values from report	
Check boxes	Use restricted list or	fvalues 📃 Yes	
	Default value(s)		
E List box	Operator	In list	
	Number of lines	5	
		Back Next >> Ca	ancel
		Dack Mext 22 Ca	incer

Net Sales 78,720

39,360

5,160

656 101,024

38,540 3,663.6

7,052

680.6

25. Click the Reset button.

Input Controls +	
≣⊠ New Map Reset	
Category	*
All values	
O Bikes	
Golf	
🔘 Ski	
C Tennis	

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

Bikes					
O Golf					
⊖ ski					
O Tennis		Customer Name	Category	Product Name	Gross Sales
Product Name	\$	Dill Computers	Golf	Berta Golf Clubs	96,000
-		Dill Computers	Golf	Clone Golf Clubs	48,000
(Select All)		Dill Computers	Ski	No Name Skis	6,000
Berta Golf Clubs		Dill Computers	Tennis	SuperBounce Tennis Balls	800
Clone Golf Clubs		FastCo	Bikes	Romeo Hybrid Bicycle	123,200
Descent Competition Bicycle		FastCo	Golf	Clone Golf Clubs	47,000
Golf Balls	•	FastCo	Ski	Ski Mask	4,260
Customer Name	\$	FastCo	Tennis	Pumpit Tennis Shoes	8,600
Digitex Components	•			-	
Dill Computers		FastCo	Tennis	SuperBounce Tennis Balls	830
EGlobal	OK				
FastCo					
Filcomp	•				

27. Click the Data Access tab.

Report Element Format	Data Access	Analysis	Page Setup
Table Cell Section	Chart	Others	Tools Position Linking

28. Click Edit.

Report Element Forma	t Data Access Analysis Page Setup
Data Providers Tools	Data Objects
實 Create a new document 🝷	📝 Edit 🕌 Purge 🔹 🍣 🔹 🚅 New Variable 🔹 🗯 Merg

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

📑 Qu	uery Filters	
And	✓ Year Equal to ▼ Enter Year:	Q: Ⅲ •
	📕 Quarter Equal to 🔻 Q4	
		Constant
		Value(s) from list
Da	ata Preview	O Prompt
<u> </u>		Object from this query
		Result from another query (Any)

- 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.

Q1					
Category	Net Sales	Gross Sales	Category	Net Sales	Gross Sales
Bikes	27,416,591.73	33,434,868	Bikes	27,416,591.73	33,434,868
Golf	9,457,289.6	11,533,280	Golf	9,457,289.6	11,533,280
Ski	9,021,889.95	10,850,760	Ski	9,021,889.95	10,850,760
Tennis	1,750,273.6	2,134,480	Tennis	1,750,273.6	2,134,480
Q2 Category	Net Sales	Gross Sales	Category	Net Sales	Gross Sales
Category	Net Sales 22,270,701.42	Gross Sales 27,159,392	Category Bikes	Net Sales 22,270,701.42	Gross Sales 27,159,392
Category Bikes					
Q2 Category Bikes Golf Ski	22,270,701.42	27,159,392	Bikes	22,270,701.42	27,159,392

- 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.

Format chart			3 ×
Global	General		*
General Area Display	🗹 Show Data Labels		
Data Values			-
Palette and Style	Percent Minimum Value	0	
Background Border	Data Type	Label and Percent T	
Layout	Format Pattern	DEFAULT Custom	=
	Data Position	Inside Outside	
	Positioning Layout	Side Layout Circular Layout	
	🗹 Automatic Hiding		
	Font	Arial • 8 • B I <u>U</u> <u>A</u> •	
	Spacing	0	
	Border Size	None 🔻	
Title Legend	Border Color	💿 RGBA Color 🛛 🔾 Gradient	
Plot Area		100 %	T
		OK Cancel Ap	oply

- 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.

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

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

	Report Map 👻	«
e.	□ - Provide the second sec	
= 2	• 2009 • • Q1 • • Q2	
S	• Q3 • Q4	
	E- ● 2010 ● Q1 ● Q2	
	• Q2 • Q3 • Q4	

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.

Report Element Format Data Access	Analysis	Page Setup	Reading Des	ign 👻 D	Data 🌼	• ? •	\times

7. Click Drill.

Report 1

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

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

Report 1

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 통	Year 🖓		ny蓉 Year		Net Sales	Gross Sales
Tennis	<u>2009</u>		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.

🛅 Business Layer
•
⇔ - 🧐 - 🔐 ⊕+ ⊝†
Sports Category Customer Time Product Figures
💼 Business Layer
🗊 Queries
💱 Parameters and Lists of values
🖆 Navigation Paths

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



- 6. Type the name Products.
- 7. Click Add...

🤌 Navigation Paths	🍠 Navigation Path Pro	perties
C Default 💿 Custom	Name	Products
প্রা 🔎	Description	
In Products	Description	
		y v
	Dimensions:	Name Path Description
		+
		Add X Delete

8. Click Category and click OK.

Select a dimension		×
Search pattern 🛛 👫	<u>∦</u> - ⊕+	⊡†
Category Id Category Id Category Catego		
	OK Cance	

- 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.

Report Element Format Data Access Analysis Page Setup	Reading Design - Data 🛛 💮 - 🕐 - 🗙
Data Providers Tools Data Objects	
🗊 New data provider 🔹 📝 Edit 🕌 Purge 🖛 🍣 👻 🔮 New Variable 🔹 🧳 Merge	

8. Click the Drill button.

SAP Business Objects	Welcome: Administrate	or Applications	s▼ Preferences Help▼
Home Documents New Document 🕫 ቱ 😂			
Web Intelligence 🗸 🗋 🕟 🔚 🔹 📇 🏦 🌮	🖂 🗸 🕼 🖺 - 🎝 🍽 🗙 🍣 - 🖗 Track -	🗣 Drill 🔹	🌾 Fitter Bar 🗐 Outline

The data in the table is converted into hyperlinks.

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

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	<u>2009</u>	<u>347,794.8</u>	<u>424,140</u>
Crochet Cycling Gloves	<u>2010</u>	<u>45,497.7</u>	<u>55,485</u>
Descent Competition Bicycle	2009	60,694,760	74,018,000
Descent Competition Bicycle	<u>2010</u>	<u>79,163,960</u>	97,012,000
Rappel Mountain Bicycle	2009	13,244,639.97	<u>16,152,000</u>

12. Click 2010.

Only bike sales from 2010 are displayed.

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

13. Click Q4.

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

Bikes ▼ ∮2010 ▼	Ø Q4	•						
Report 1								
Product Name 😽	Month 🐯	Net Sales	Gross Sales					
Descent Competition Bicycle	December	8,251,260	10,176,000					
Descent Competition Bicycle	November	9.290.300	11,510,000					
Descent Competition Bicycle	October	5.478.960	6,744,000					
Rappel Mountain Bicycle	December	1.888.886.41	2.303.520					
Rappel Mountain Bicycle	November	1,183,161.61	1,442,880					

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.

-	2010 🔻	Q1 T]					
<u>Report 1</u>								
Product Name 🖙	Month 👨	Net Sales	Gross Sales					
Berta Golf Clubs	<u>February</u>	<u>1,800,720</u>	<u>2,196,000</u>					
Berta Golf Clubs	January	650,260	<u>793,000</u>					
Berta Golf Clubs	March	1,266,900	<u>1,545,000</u>					
Clone Golf Clubs	February	<u>512,090</u>	<u>624,500</u>					

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.

Report Element Format	Data Access	Analysis Page Setup	Reading	Design - Data) • 🕐 • 🔅
Data Providers Tools	-	Data Objects			
💼 New data provider 🝷 📴 Edit	🗙 Purge 🔹 🕴	😂 👻 🚅 New Variable 🔹 🗍 🖊 Merge			

16. Click Scope of Analysis panel

📴 Query Panel	
🔆 Universe outline	🗊 Result Objects
Image: Sports Image: Sport Sports Image: Sport Spo	Category Year Wet Sales Gross Sales

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

🗊 Query Panel		3 × 3
📴 Add Query 🔹 🖬 🖬 🖬 😵 😭	B	🔊 Run query 📔 🖬 Close 🔻
🔆 Universe outline	📴 Result Objects	▼ × ¾
w - Type here to filter tree ⊕+ ⊖+	🔰 Category 🔰 Year 🛛 📟 Net Sales 📟 Gross Sales	
Category Id Category Id Category Category Category Customer Time Figures	Ouery Filters To filter the query, drag predefined filters here or drag objects here then use the Filter Editor to d	₽ ₽ × ×
	III Scope of analysis	Scope level none 🔻
	To include more detail for drill analysis, select the Hierarchies option, then select a scope of anal define a custom drill path by dragging objects from the Data tab here.	lysis level from the one level two level three level three level three level custom
📴 Query 1		4 ▷ 🗉
	Last refresh date: November 15,	2011 12:39:42 PM GMT-08:00

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.

Category	Year		Paste Special	Ctrl+A	t+∨		
Bikes	2009		Insert		۲		
Bikes	2009	X	Delete	Delete			
Bikes	2009		Clear Contents				
Bikes	2009	Image: A start of the start	Set as Section				
Bikes	2010		Turn Into		•		Vertical Table
Bikes	2010						venical rable
Bikes	2010	fx	Edit Formula				Horizontal Table
Bikes	2010		Linking		۲		Cross Table
Golf	2009	7	Filter		۲	ш	Column
Golf	2009	đЪ	Ranking		۲		Line
Golf	2009	₽↓	Sort				Pie
Golf	2009						More Transformations
		-	Break		•		wore transformations

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	Golf	Golf	Ski	Ski	Tennis	Tennis
	2009	2010	2009	2010	2009	2010	2009	2010
IC at a second	33,434,868	32,190,176	11,533,280	8,394,800	10,850,760	5,855,770	2,134,480	1,923,640
=[Category]	27,159,392	35,427,297	7,251,270	10,358,930	1,208,195	1,697,220	1,923,870	3,569,570
3	27,691,770	41,562,906	4,949,790	11,953,170	11,112,485	20,402,805	2,090,300	3,141,280
4	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.

Reading 🔻 De	esign 🔻	? •
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- 5. Click Data Access.
- 6. Click Edit.

Report Element	Format Data Access Analysis Page Setup
Data Providers To	Data Objects
🛅 New data provider 🝷	📝 Edit 🎽 Purge 🔹 😂 🔹 📑 New Variable 🔹 🥬 Merge

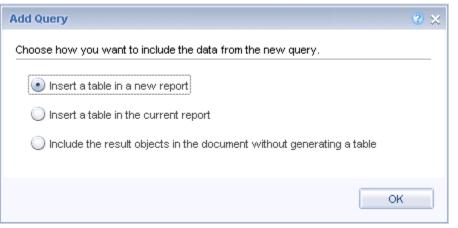
7. Click Add Query.

🔁 Query Panel		0 ×
💕 Add Query 👻 🖬 🐺 🔛 😵 😭	0	🍣 Run query 📔 🔂 Close 🔻
🔆 Universe outline	T Result Objects	▼ × ¾
Sports - ▼ Type here to filter tree B+ ⊕↑ ♥ Sports B+ ⊕↑ ♥ Category B ♥ Category B ♥ Category B ♥ Time B ♥ Product ♥ Figures	Category Year Guarter Cross Sales	

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

🚺 Query Panel				? ×
😚 Add Query 🔹 📰 🐺 🔛 🤣 😭		🖓 Run Queries	🚮 Close	e •
🔆 Universe outline	TResult Objects		T X	×
Sports - Type here to filter tree	Sustomer Name Svear Sales			
Sports Category				
Category Id Category				
E 🧭 Customer				
Customer Name		-		
Vear Quarter				3

11. Click OK.



12. Click the Report 2.

C	∱× 🚅 × 🗸		
	Bikes		
		2009	2010
	Q1	33,434,868	32,190,176
	Q2	27,159,392	35,427,297
	Q3	27,691,770	41,562,906
)	Q4	30,084,142	48,451,570
	Golf		
		2009	2010
	Q1	11,533,280	8,394,800
	Q2	7,251,270	10,358,930
-	_		
L	🗎 Report 1	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 📄 Re	port 2		

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



16. Save the document.

Troubleshooting

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

_og On to BI launci	n pad	
	ur system does not allow the use of this applica	ation
	nformation and click Log On. of your account information, contact your system admin	istrator.)
(- , , , ,,	
	System: SAPDEMO:6400	
	Jser Name: Administrator	
	Password:	

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

_og On to E	31 Iaunch pad			[]
Enter y	our user informatio	10 not found or server may t n and click Log On. unt information, contact your sy		13) null
		SAPDEMO:6400 Administrator		
		F	Log On	

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)

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	
a 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 Inf