Business Objects – Web Intelligence (Advanced)

Lab Book

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Document Revision History

Date	Revision No.	Author	Summary of Changes
11-Aug-2009		Mahesh Dubey	Content Creation
26-Aug-2009		CLS Team	Review
20-Apr-2011		Vandana	Review and Revamp
12-Aug-2011		CLS Team	Format Changes

Table of Contents

Getting Started

Overview

This lab book is a guided tour for learning Business Objects – Web Intelligence (Advanced). It comprises solved examples and 'To Do' assignments. Follow the steps provided in the solved examples and work out the given 'To Do' assignments.

Setup Checklist for Business Objects – Web Intelligence (Advanced)

Here is what is expected on your machine in order for the lab to work.

Minimum System Requirements

- Intel Pentium 90 or higher (P166 recommended)
- Microsoft Windows 95, 98, or NT 4.0, 2k, XP.
- Memory: 32MB of RAM (64MB or more recommended)
- Internet Explorer 6.0 or higher
- MS-Access/Connectivity to Oracle database
- Apache Tomcat Version 5.0.

Please ensure that the following is done:

- NA

Instructions

- Create a directory by your name in drive <drive>. In this directory, create a subdirectory WebI(Adv)_assgn. For each lab exercise create a directory as lab <lab number>.

Learning More (Bibliography if applicable)

- NA

Lab 1. Applying Combined Query Using Union

Goals	• Use Union for Combined Queries • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	45 Minutes

1.1: Applying Combined Query Using Union

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Click the **New** drop-down arrow 

. Select the **Web Intelligence Document** option to create a new Web Intelligence document.

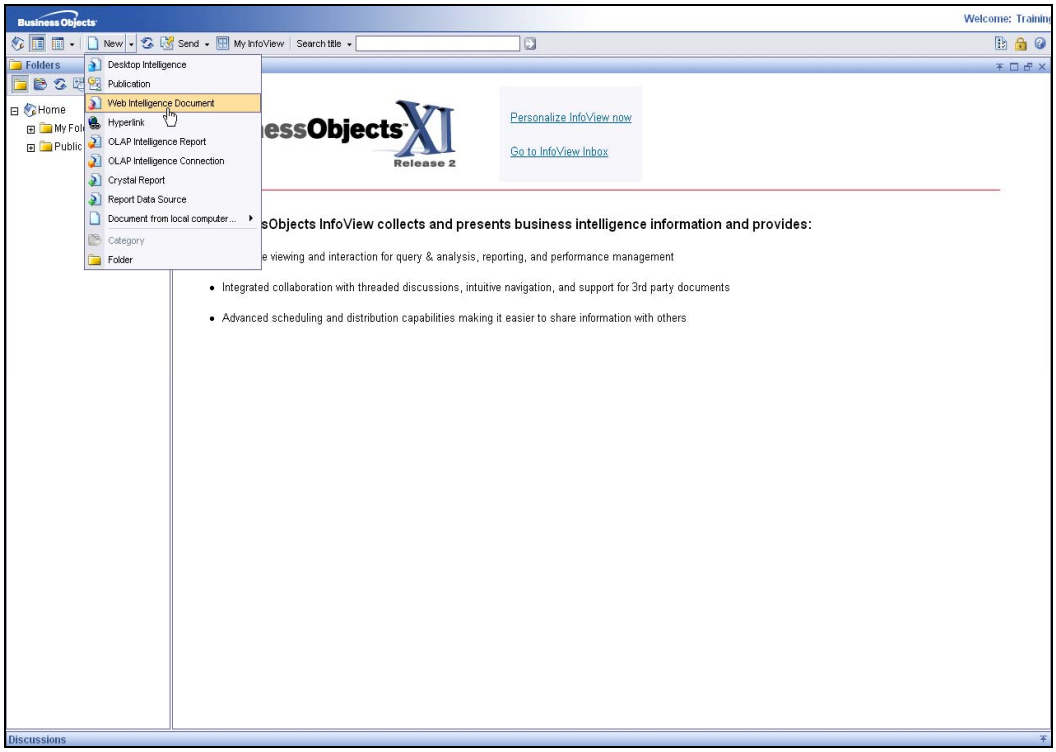


Figure 1: Welcome Screen

Step 3: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 4: Select the following objects from the universe:

Time period \ Year

Product \ Lines

Measures \ Sales revenue

Step 5: Click the **Add Combined Query** icon  on the toolbar. It adds a query to create a combined query.

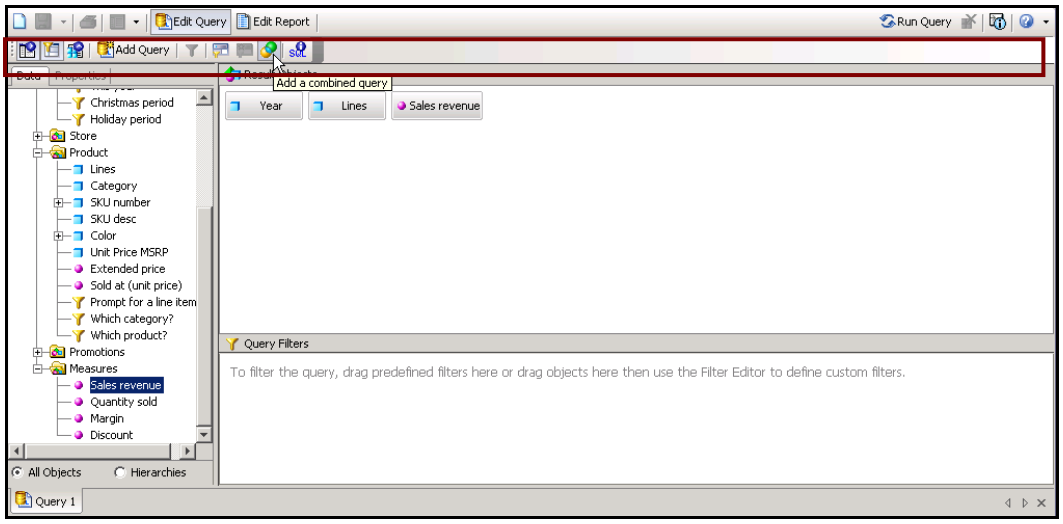


Figure 2: New Web Intelligence Document

Step 6: Click **Combined Query 1** and create the following Filters.

Time Period \ Year Equal to '2002'

Measures \ Sales revenue > 100, 000

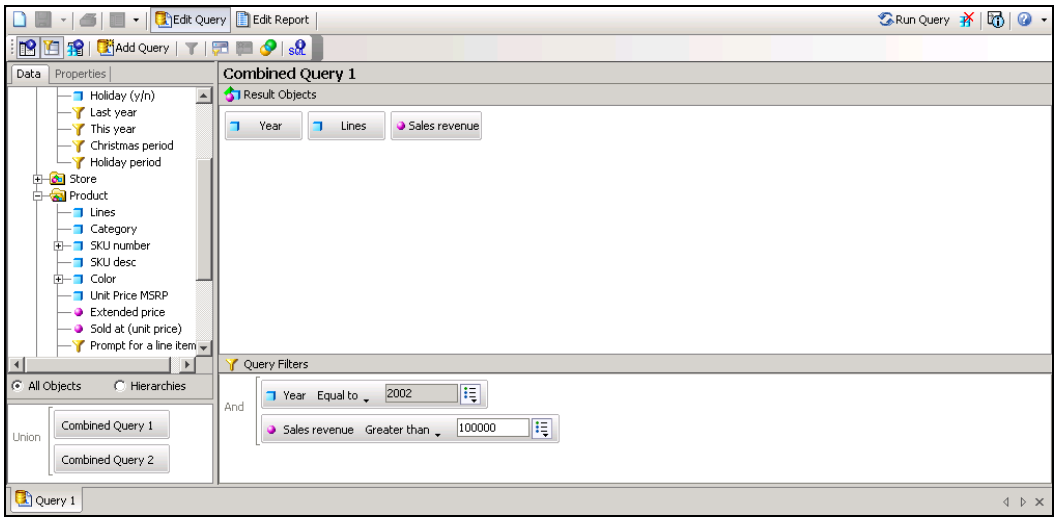


Figure 3: New Web Intelligence Document

Step 7: Click **Combined Query2**, add the following Filters:

Time period \ Year Equal to '2003'

Measure \ Sales revenue > 110, 000

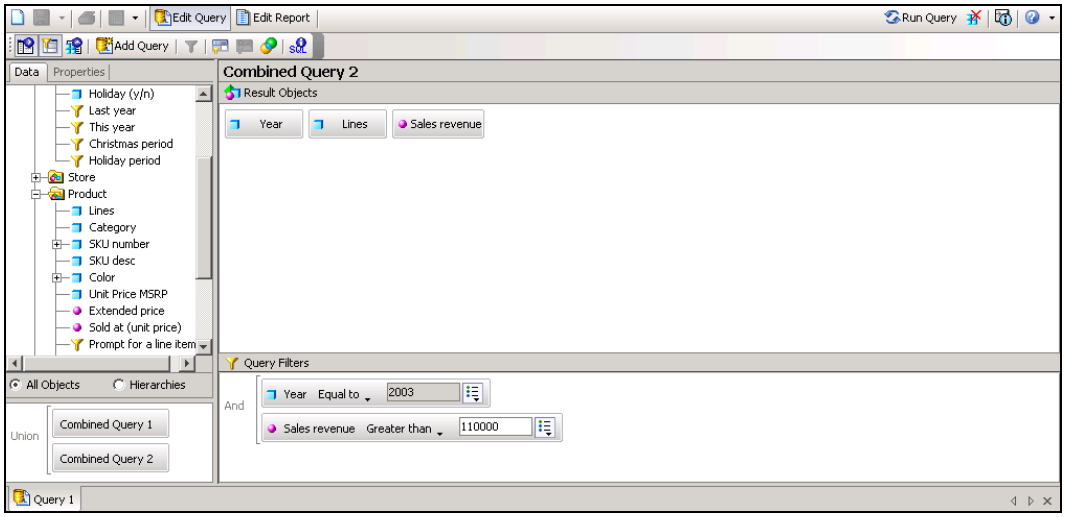


Figure 4: New Web Intelligence Document

Step 8: Click **Run Query** to view the report.

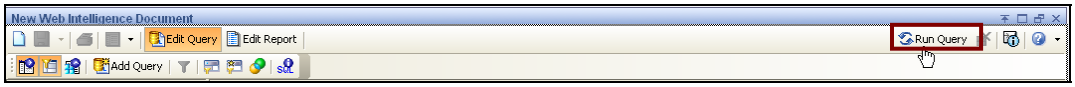
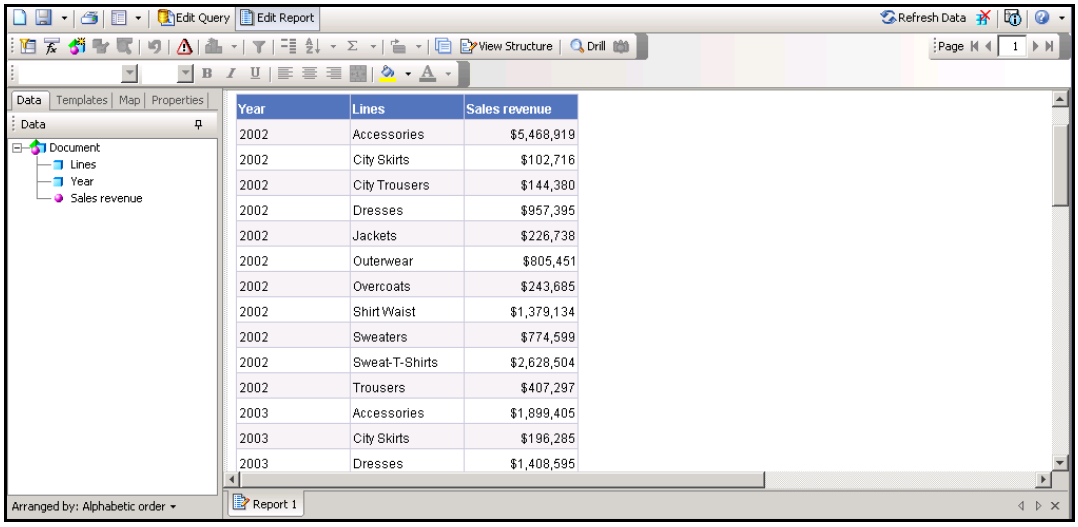


Figure 5: New Web Intelligence Document

Step 9: The **Workspace** pane displays the output in **Report View** as shown in the figure given below.



Year	Lines	Sales revenue
2002	Accessories	$5,468,919
2002	City Skirts	$102,716
2002	City Trousers	$144,380
2002	Dresses	$957,395
2002	Jackets	$226,738
2002	Outerwear	$805,451
2002	Overcoats	$243,685
2002	Shirt Waist	$1,379,134
2002	Sweaters	$774,599
2002	Sweat-T-Shirts	$2,628,504
2002	Trousers	$407,297
2003	Accessories	$1,899,405
2003	City Skirts	$196,285
2003	Dresses	$1,408,595

Figure 6: Report View

Step 10: Save the document with the name **Query Union Report** under **Public Folders\Batch Code\Emp code** and log off.

Lab 2. Using Sub-query

Goals	• Use Sub-query. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	45 Minutes

2.1: Using Sub-query

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe:

Time period \ Year

Product \ Lines

Measures \ Sales revenue

Step 4: In the **Web Intelligence Report Panel** window, create following filters:

Time period \ Year Equal to '2003'

Measure \ Sales revenue > 110, 000

Step 5: Select **Color** from the **Class and Objects** pane, and click the **Add Sub-query** icon on the toolbar.

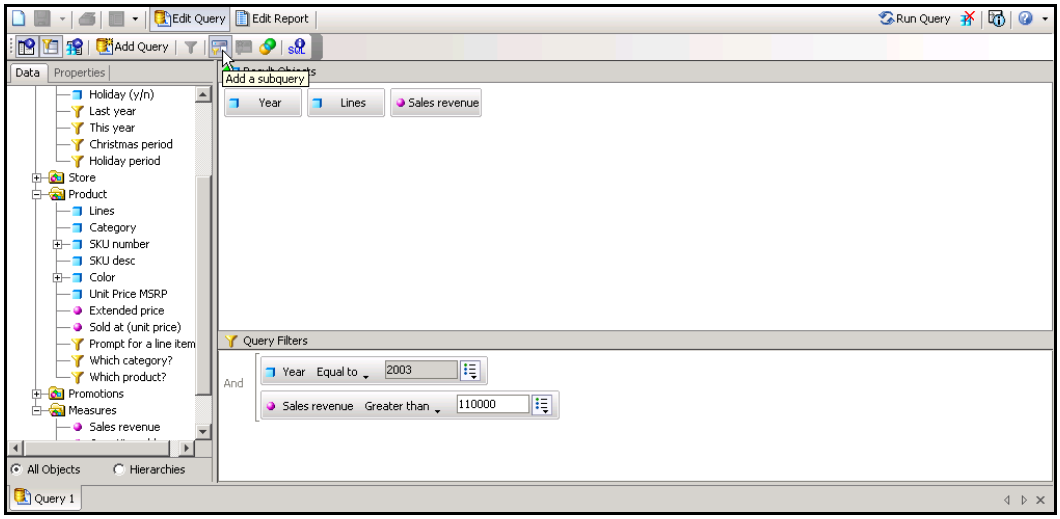


Figure 7: New Web Intelligence Document

Step 6: Drag the **Lines** object from the **Class and Objects** pane and build the **Sub-query** as shown in the figure given below.

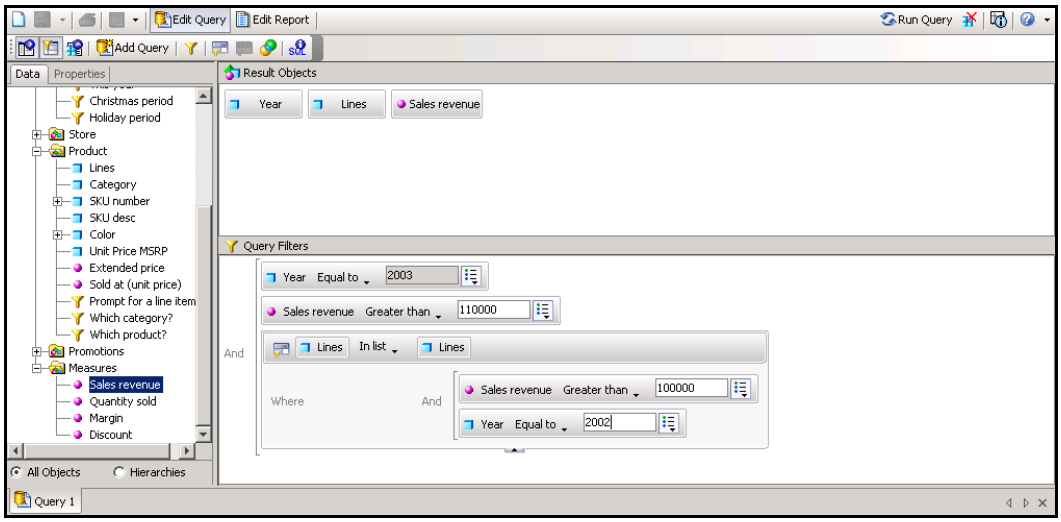


Figure 8: New Web Intelligence Document

Step 7: Click **Run Query** to view the report.

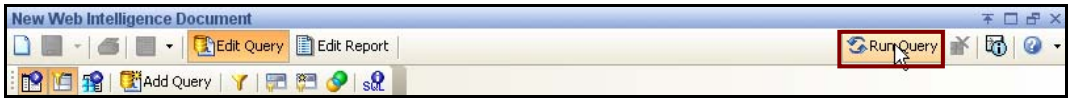


Figure 9: New Web Intelligence Document

The output of the report will be displayed as shown in the figure given below.

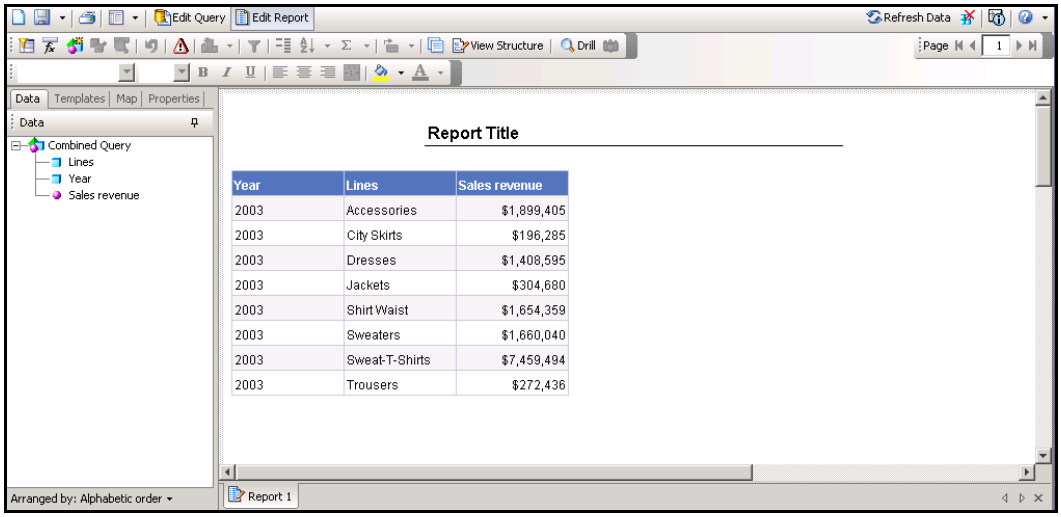


Figure 10: Output

Step 8: Save the document with the name as "**Sub-Query report**" under **Public Folders\Batch Code\Emp code** and log off.

Lab 3. Using String Handling Function

Goals	• Use String Handling Functions. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	15 Minutes

3.1: Using String Handling Function

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2 : Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe:

Product \ Lines

Product \ Category

Product \ SKU desc

Measure \ Sales revenue

Step 4: In the **Web Intelligence Java Report Panel** window, build the prompts as shown below:

Store \ State Equal to Prompt

Time Period \ Year Equal to Prompt

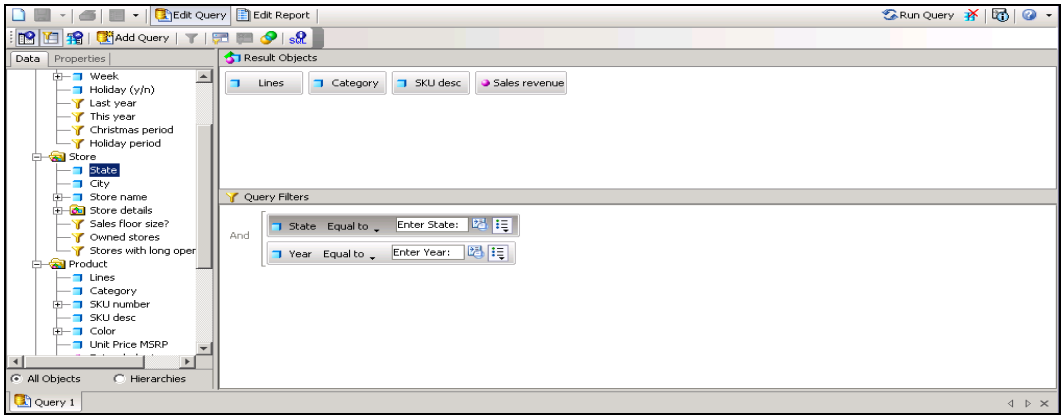


Figure 11: New Web Intelligence Document

Step 5: Click **Run Query** to view the document. The **Prompts** window will be displayed.

Step 6: In the **Prompts** window, key in the values for the prompts as shown in the figure given below.

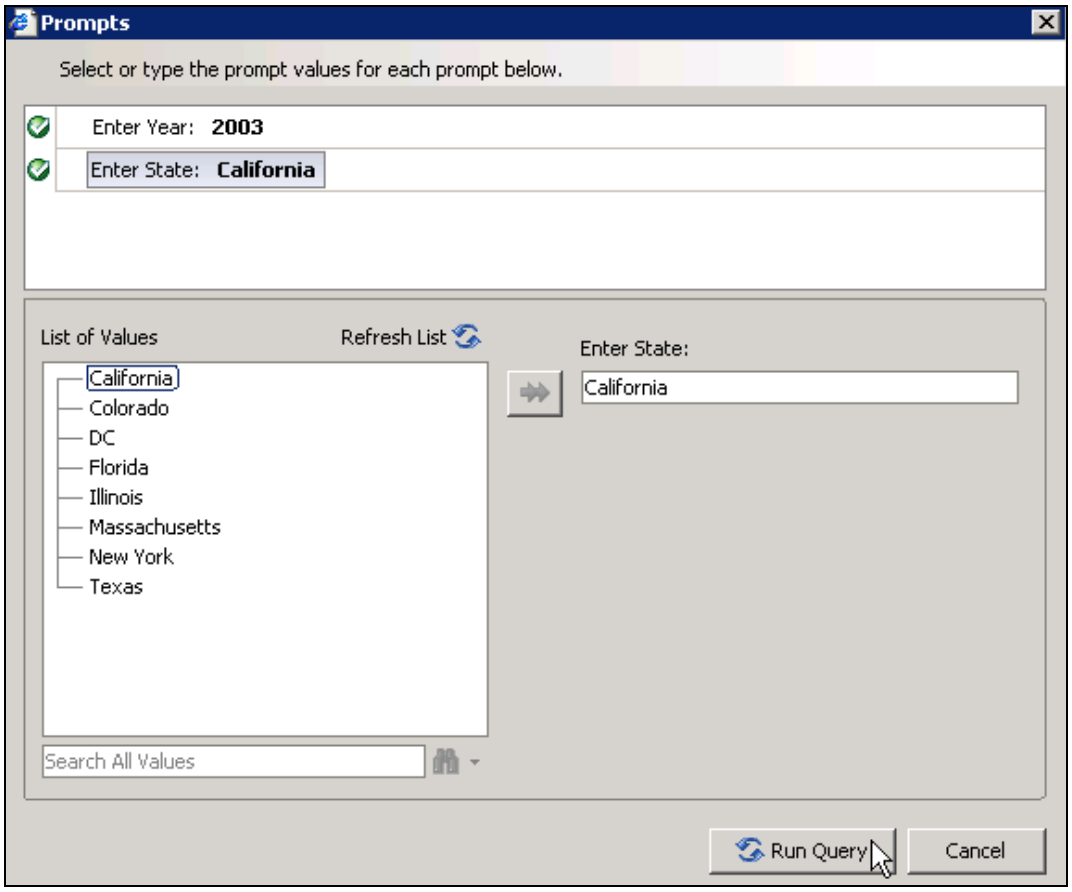


Figure 12: Prompts window

Step 7: The **Workspace** pane displays the output as shown in figure given below. This is the **Report View**.

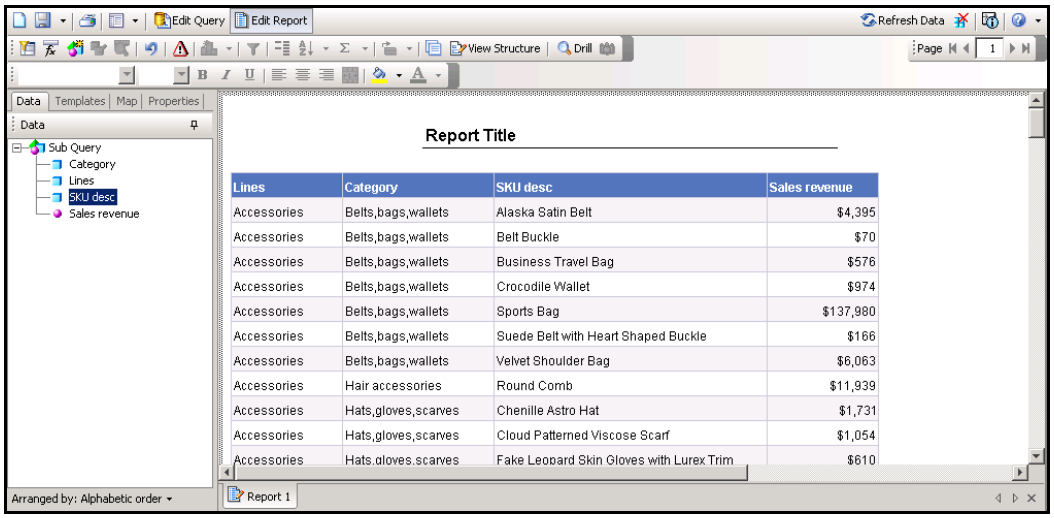


Figure 13: Report View

Step 8: Click the **Variable Editor** icon  on the Report Toolbar to open the **Variable Editor**.

Step 9: In the **Variable** pane, key in the **Variable Name** as "***Product Full Name***"; select the **Qualification** as "***Dimension***".

Step 10: Create the **Variable** by writing the following formula:

=Concatenation(Concatenation([Category]; " -> "); [SKU desc])

Validate the formula by clicking the **Validate** icon  .

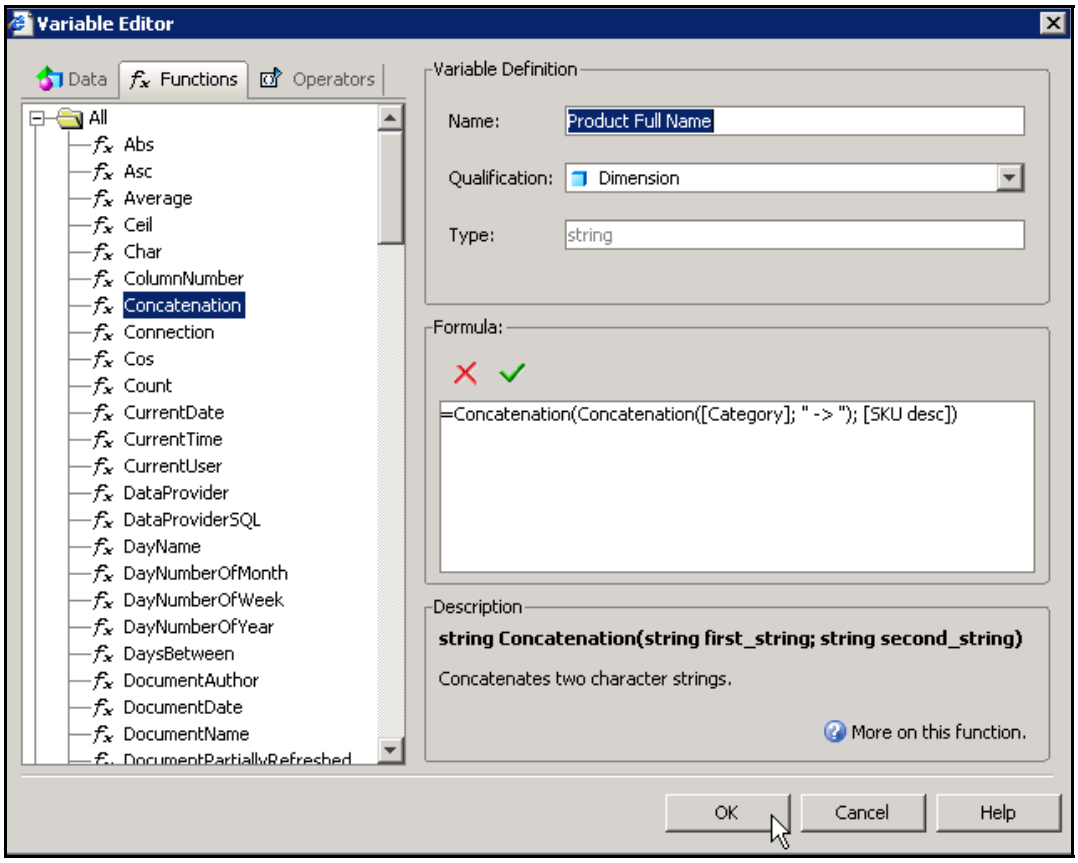


Figure 14: Variable Editor

Step 11: Click the **OK**. The variable is added to the **Variable** list in the **Data** tab. Click **Close** to exit the **Variable Editor**.

Step 12: Remove the **Category and SKU Desc** column from the report, and click the  icon available on the toolbar to insert a column after **Lines**. This will add a blank column.

Step 13: Drag the variable **Product Full Name** from the **Data** tab and drop it on the new blank column as shown in the figure given below.

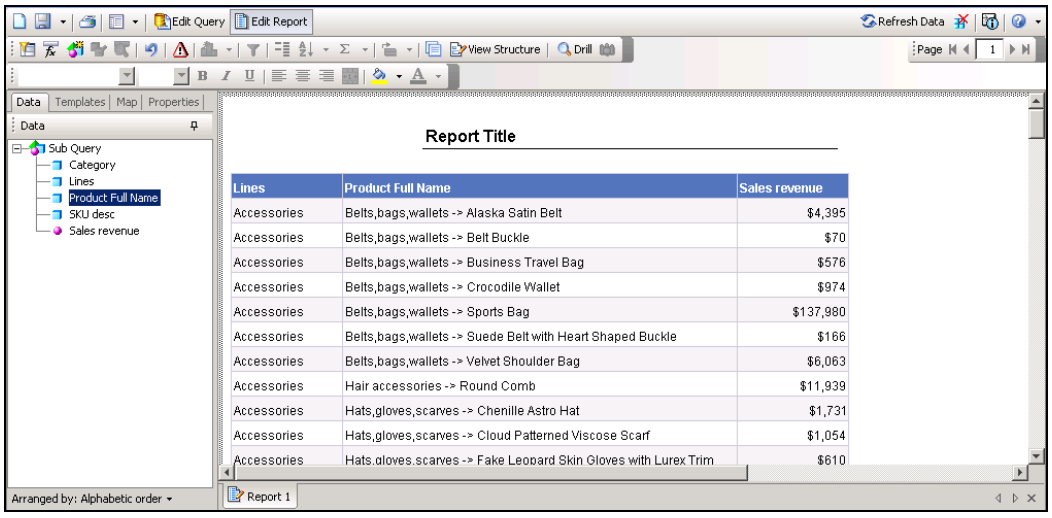


Figure 15: Report

Step 14: View the document. Save the document with the name **Concated Product Name Report** and logoff.

Lab 4. Performing Logical Grouping of Values Using IF Function

Goals	• Use IF Function to perform logical grouping. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	15 Minutes

4.1: Use IF Function to Perform Logical Grouping of Values

Solution:

Step 1: Logon to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Create a new Web Intelligence Document using the eFashion universe from the list of universes.

Step 3: Select the following objects from the universe:.

Product \ Lines

Store \ State

Measures \ Sales revenue

Step 4: Add a prompt **Time period \ Year** as shown in the figure given below.

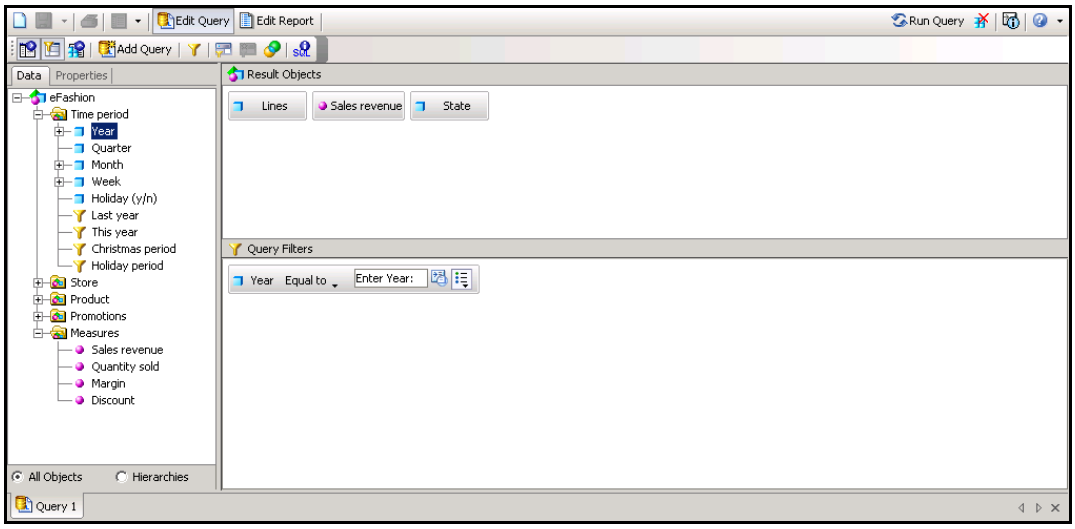


Figure 16: New Web Intelligence Document

Step 5: Click **Run Query** icon on the toolbar, the **Prompt** window will be displayed. Key in the value as shown in the figure given below.

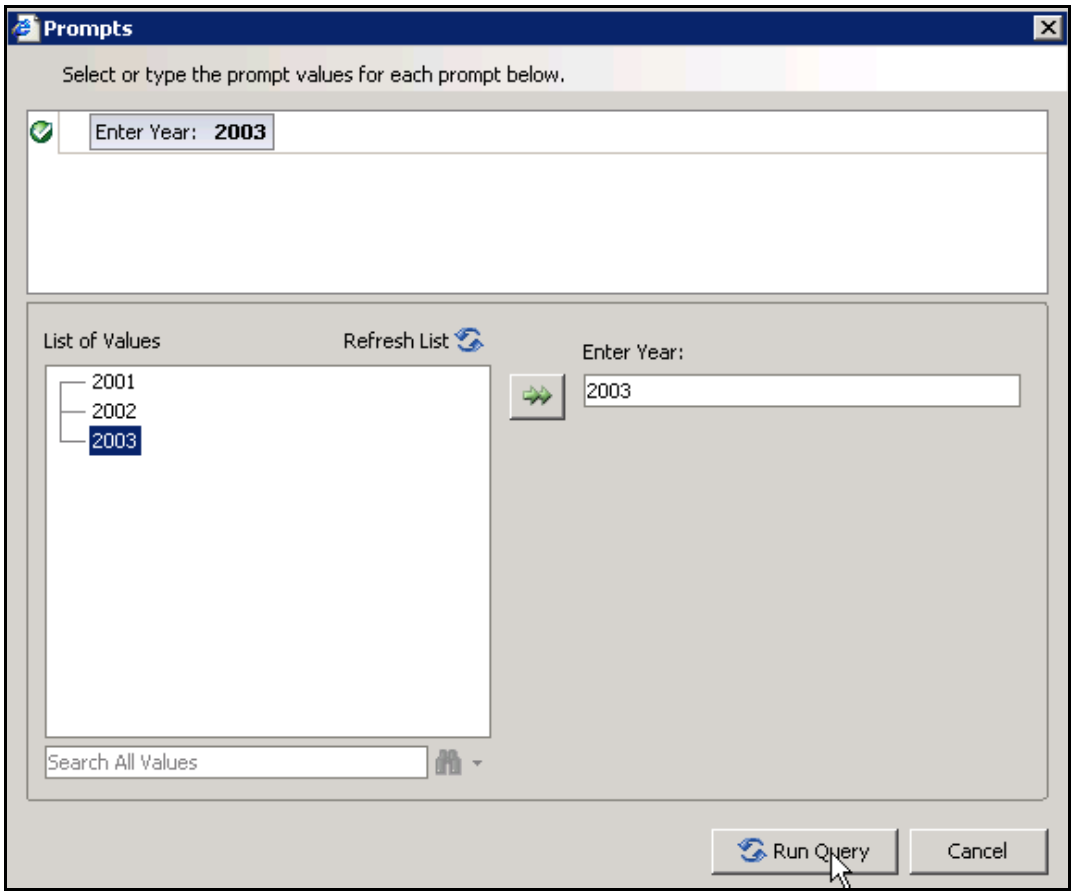


Figure 17: Prompts window

Step 6: Click the **Run Query** button.

Step 7: The output will be as displayed as shown in the figure given below.

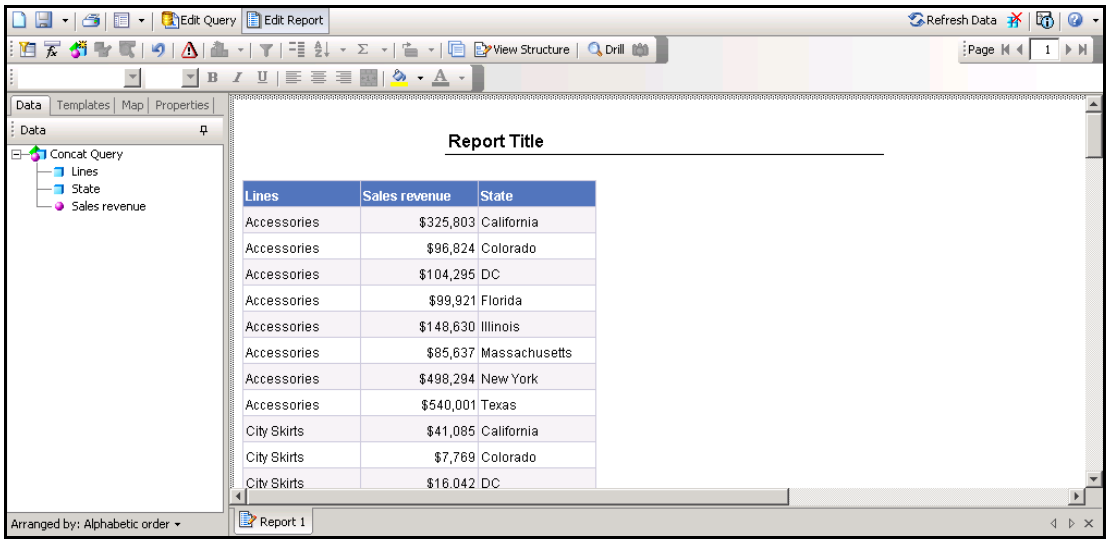


Figure 18: New Web Intelligence Document

Step 8: Click the **Variable Editor** icon  to open the **Variable Editor**.

Step 9: Create a new variable with **Name** as ***Region*** and **Qualification** as ***Dimension*** and having a formula as follows:

=If([State] InList("Illinios"; "Colorado"); "Mid-West"; If([State] InList("Texas"; "Florida"); "South"; If([State] InList("Massachusetts"; "New York";" DC"); "East"; "West")))

Click **Validate** icon to validate the formula.

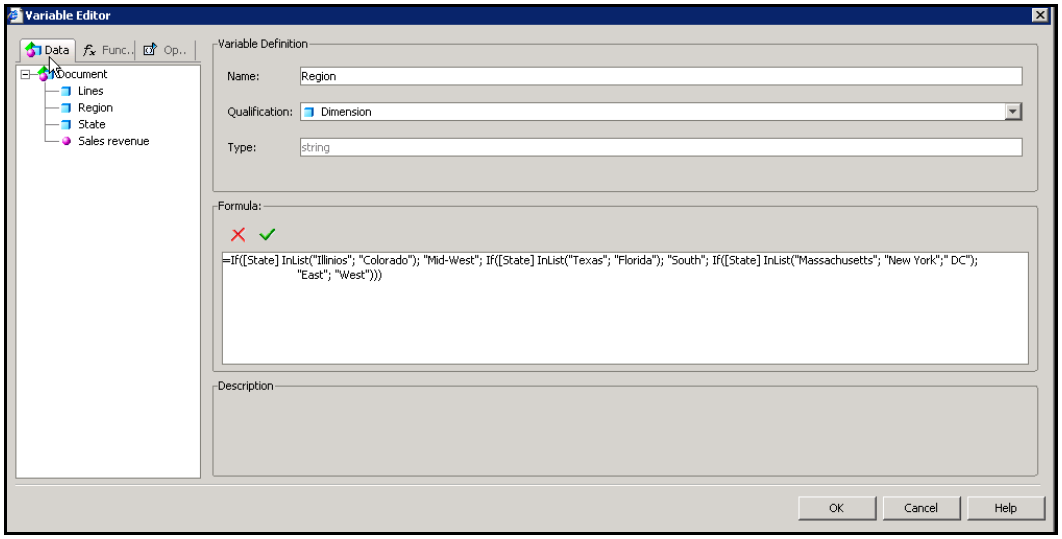
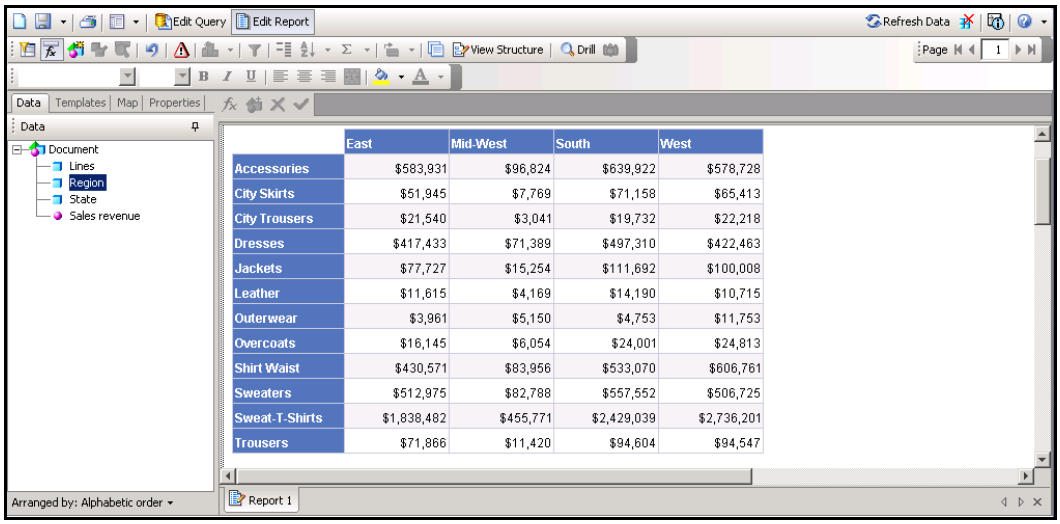


Figure 19: Variable Editor

Step 10: Click **OK** to close the **Variable Editor**.

Step 11: Replace the **State** column with **Region** object. Convert the report into crosstab as shown in the figure given below.



	East	Mid-West	South	West
Accessories	$583,931	$96,824	$639,922	$578,728
City Skirts	$51,945	$7,769	$71,158	$65,413
City Trousers	$21,540	$3,041	$19,732	$22,218
Dresses	$417,433	$71,389	$497,310	$422,463
Jackets	$77,727	$15,254	$111,692	$100,008
Leather	$11,615	$4,169	$14,190	$10,715
Outerwear	$3,961	$5,150	$4,753	$11,753
Overcoats	$16,145	$6,054	$24,001	$24,813
Shirt Waist	$430,571	$83,956	$533,070	$606,761
Sweaters	$512,975	$82,788	$557,552	$506,725
Sweat-T-Shirts	$1,838,482	$455,771	$2,429,039	$2,736,201
Trousers	$71,866	$11,420	$94,604	$94,547

Figure 20: New Web Intelligence Document

Step 12: Save the report with the name "**Analysis using IF function**" under **Favorites** and log off.

Lab 5. Applying Custom Sort

Goals	• Use Custom Sort. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	15 Minutes

5.1: Use Custom Sort

Step 1: Log on to **InfoView**.

Step 2: Click the **New** drop-down arrow 

. Select the **Web Intelligence Document** option to create a new Web Intelligence document.

Step 3: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe:

Time period \ Month Name

Measure \ Sales revenue

Step 4: Add two prompts in the **Filter** pane. The prompts that should be added are as follows:

Time period \ Year Equal to Prompt

Store \ State Equals to Prompt

Step 5: Click **Run Query** to view the document. A **Prompts** window will be displayed.

Step 6: Key in the value(s) for both prompts as shown in the figure given below. Now click the **Run Query** button to view the report.

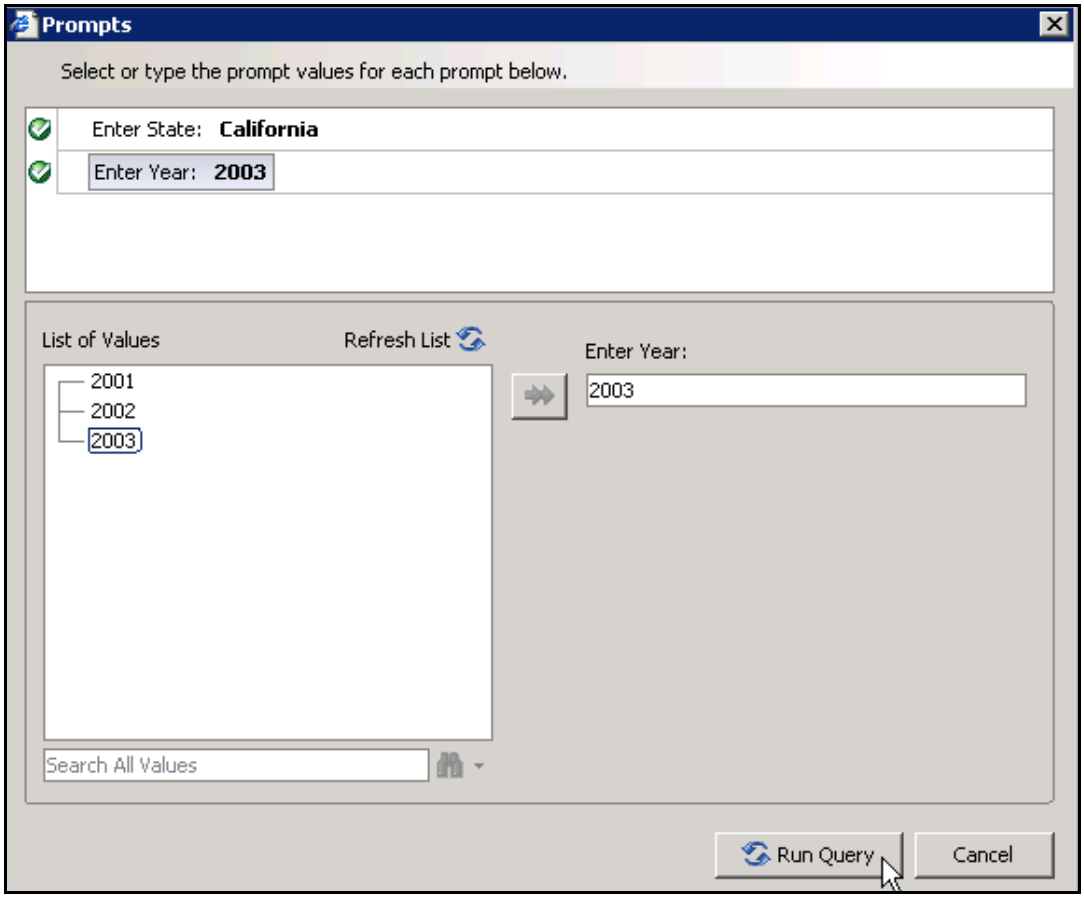


Figure 21: Prompts window

Step 7: The output will be displayed as shown in the figure given below.

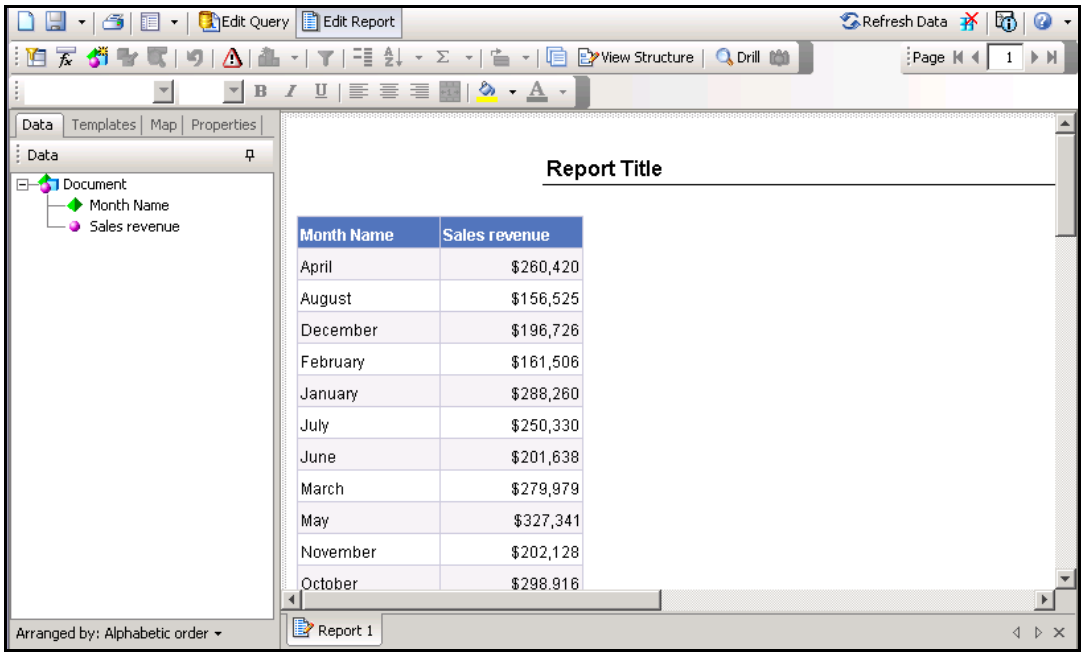


Figure 22: Output

Step 8: Right-click the **Month Name** column and from pop-up menu, point to **Sort** and select **Custom** sort. This will display the **Custom Sort** window as shown below.

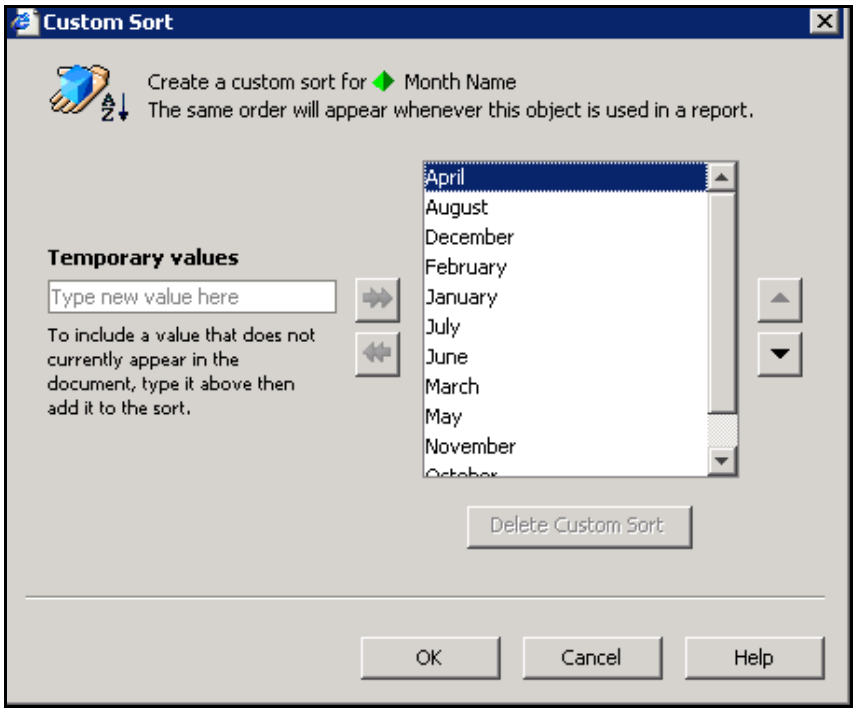


Figure 23: Custom Sort

Step 9: Change the order of Months by using the up and down arrows with respect to business requirement. Click **OK**.

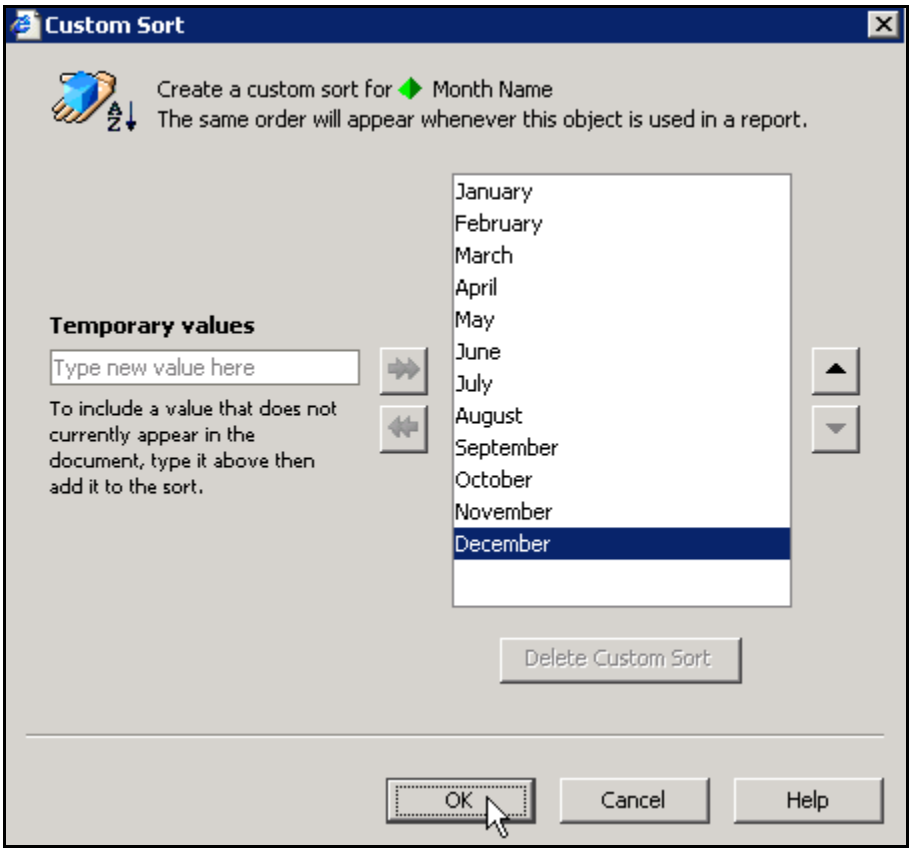


Figure 24: Custom Sort

Step 10: The output will be displayed as shown in the figure given below.

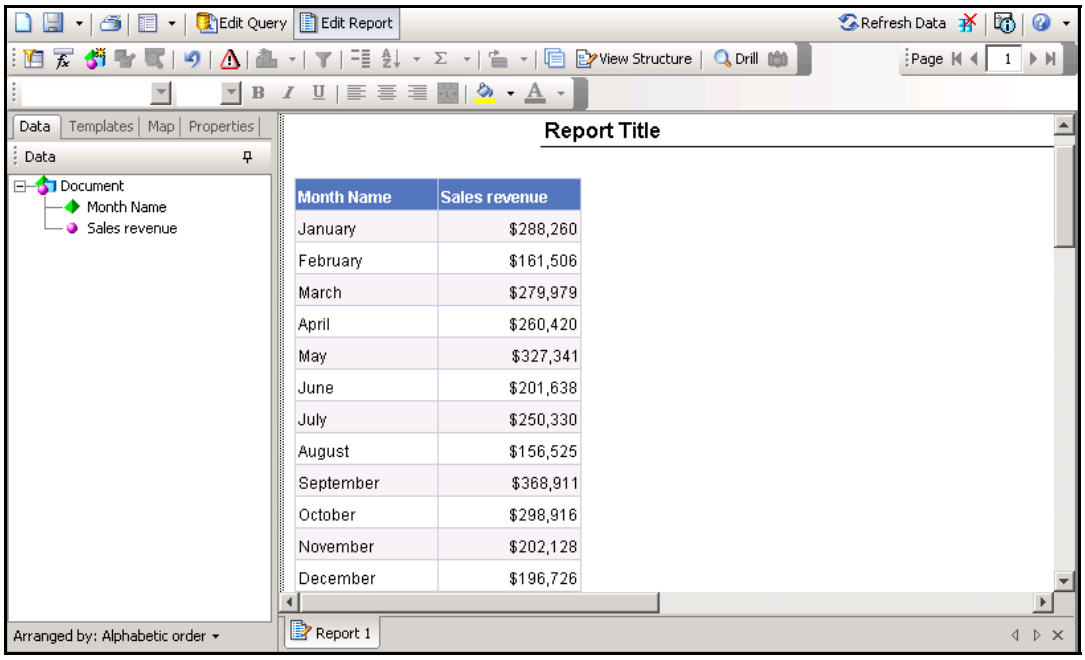


Figure 25: Caption

Step 11: Click the **Save as** button on the toolbar. Save the document with the name "**Report with Custom Sort**" under **Public Folders\Batch Code\Emp code** and logoff.

Lab 6. Use Ranking to View Top Values

Goals	• Use Ranking to View Top Values. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	30 Minutes

6.1: Use Ranking to View Top Values

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe

Product \ Lines

Time period \ Year

Measure \ Quantity Sold

Step 4: Add two prompt Filters in **Filter** pane. The Filters that should be added are as follows:

Time Period \ Year Equal to Prompt

Store \ State Equal to Prompt

A **Prompts** window will be displayed.

Step 5: From the **Prompts** window, select the values as shown in the figure given below. Now click the **Run Query** button to view the report.

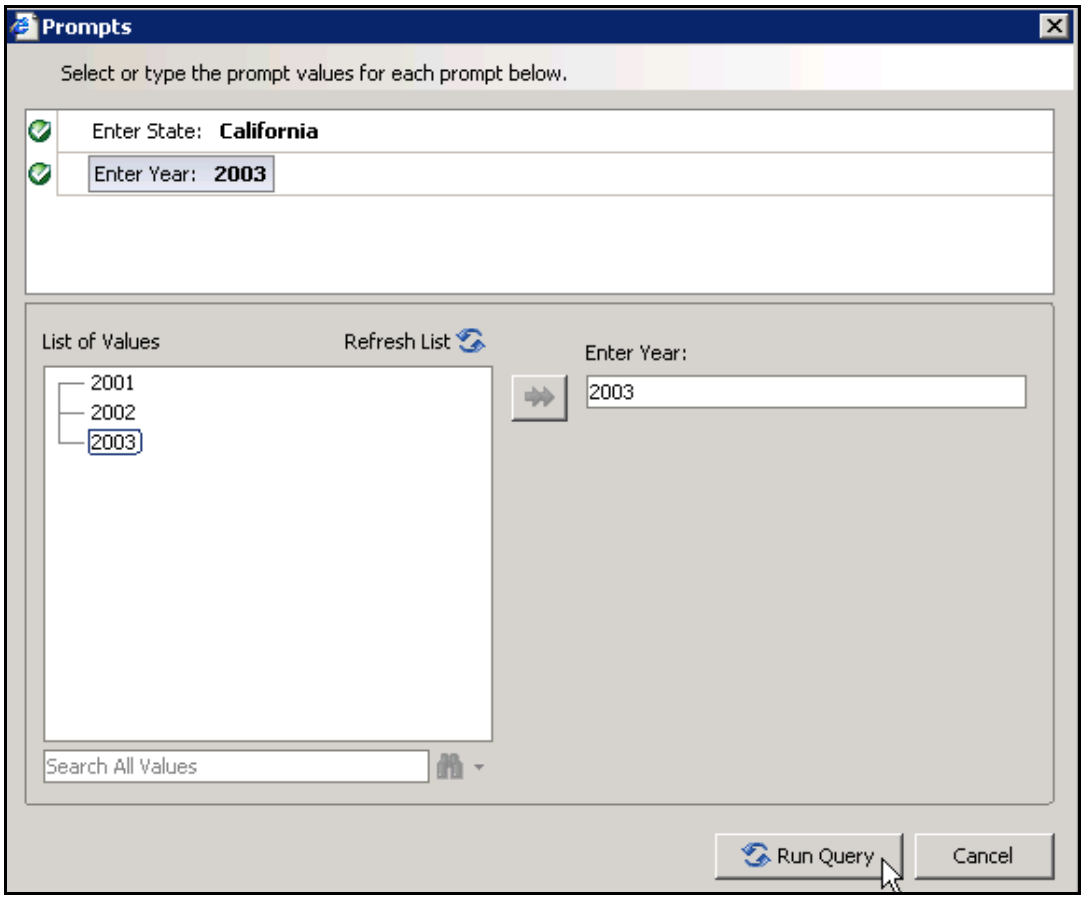


Figure 26: Prompts window

Step 6: In the output window set the **State** as "***Section***". The output will be displayed as shown in the figure given below.

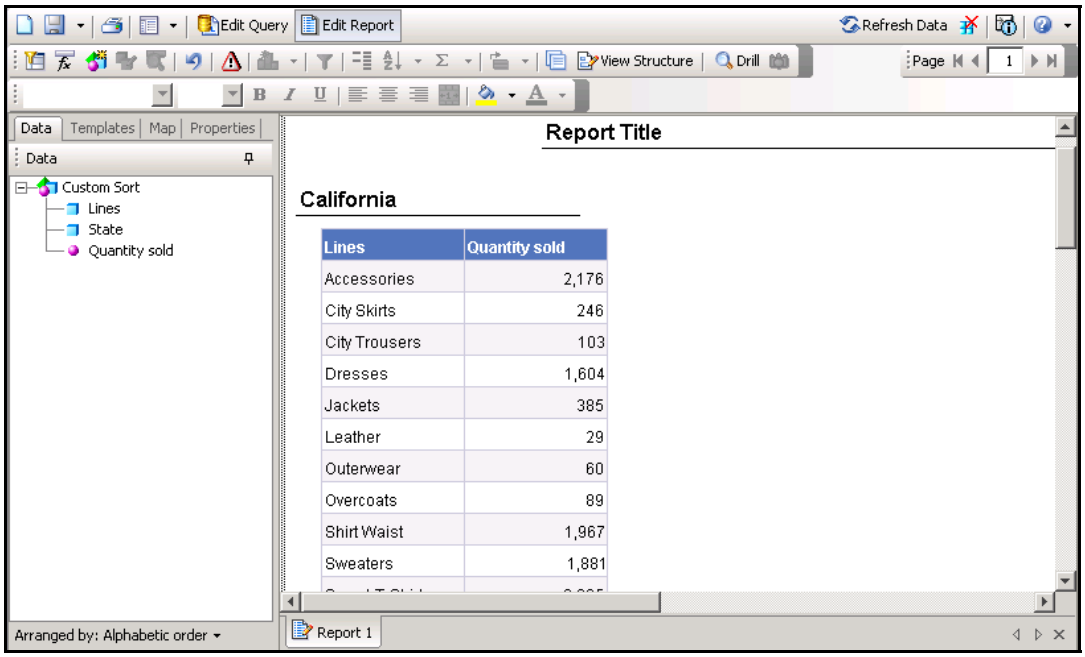


Figure 27: Output

Step 7: Select the **Lines** column.

Step 8: Click the **Apply Ranking** button  on the Report toolbar. The **Rank** dialog box will be displayed, as shown in the figure given below.

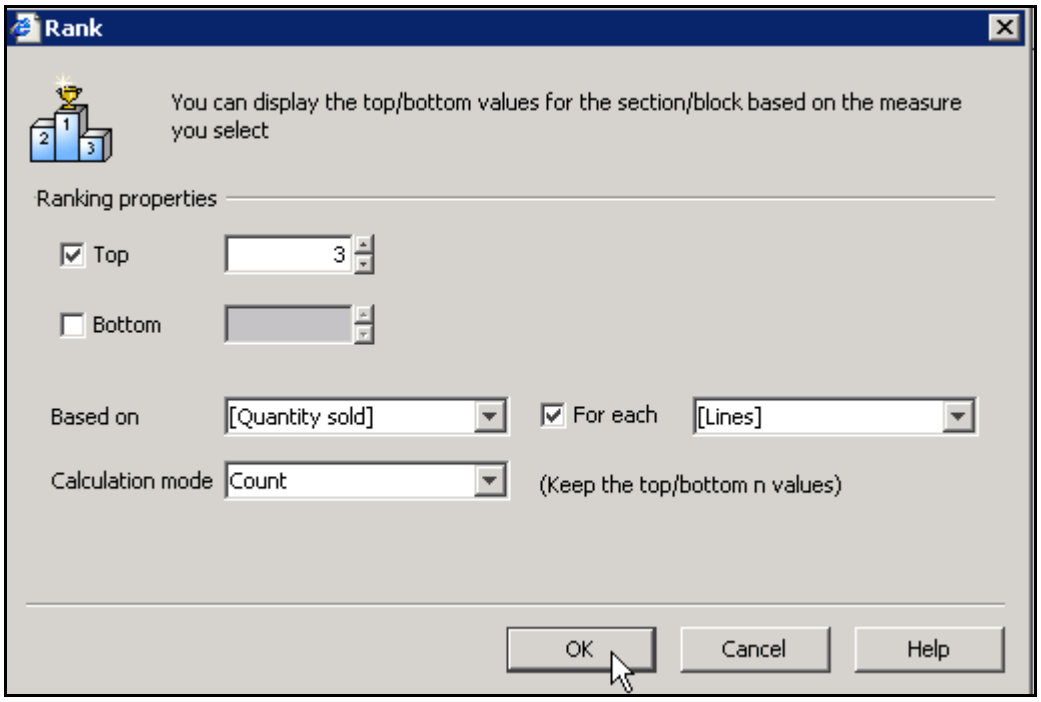


Figure 28: Rank

Step 9: Click **OK**. The output will be displayed as shown in the figure given below.

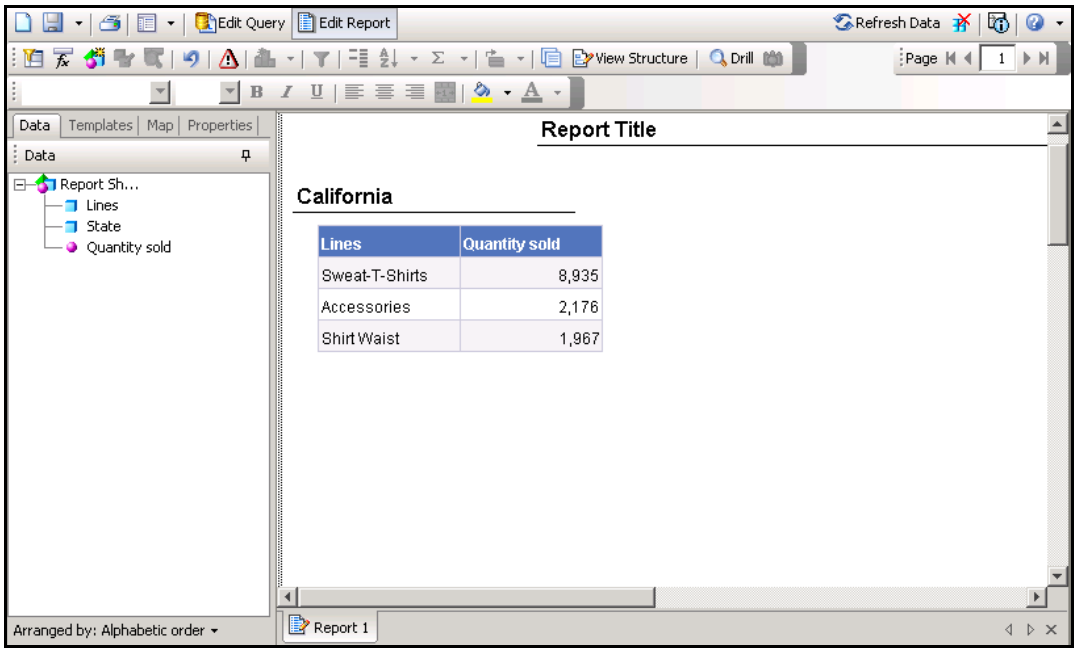


Figure 29: Output

Step 10: Save the document with the name "**Report Showing Top 3 Lines**" under the **Public Folders\Batch Code\Emp code** and log off.

Lab 7. Context Setting (Input/Output Context)

Goals	• Set the Input context. • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	45 Minutes

7.1: Default Setting of the Context

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe

Time period \ Year

Time period \ Quarter

Store \ State

Measures \ Sales revenue

Step 4: Click **Run Query** to view the output. Adjust the output to obtain the output as shown in the figure given below.

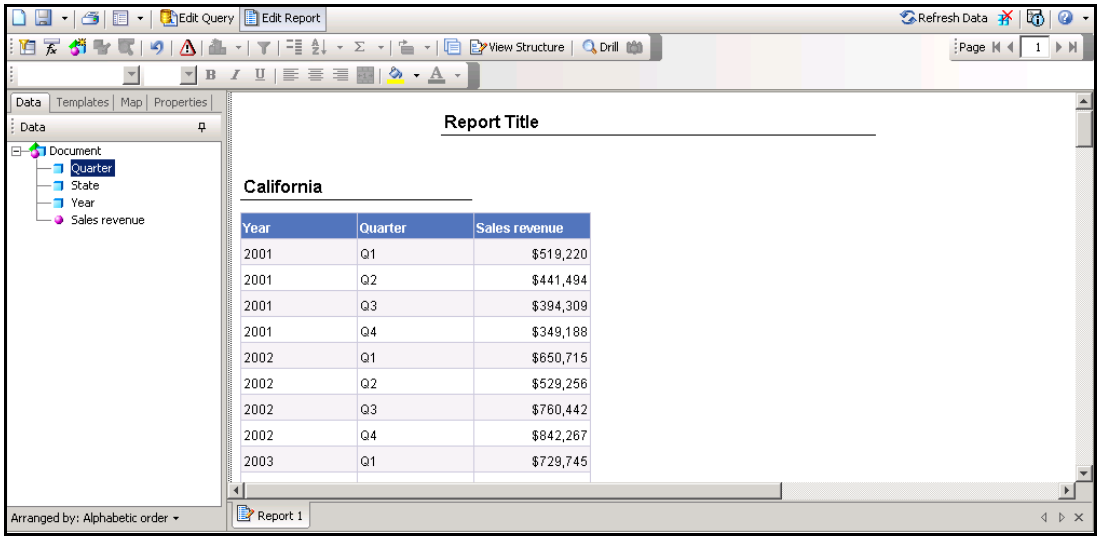


Figure 30: Output

Step 5: Click the **Variable editor**  icon. Create a new variable "**Year Wise Sales**" and key in the following formula:

=Sum([Sales revenue] ForAll([Quarter]))

Step 6: Insert newly created object as a new column to the right of the **Sales revenue** column.

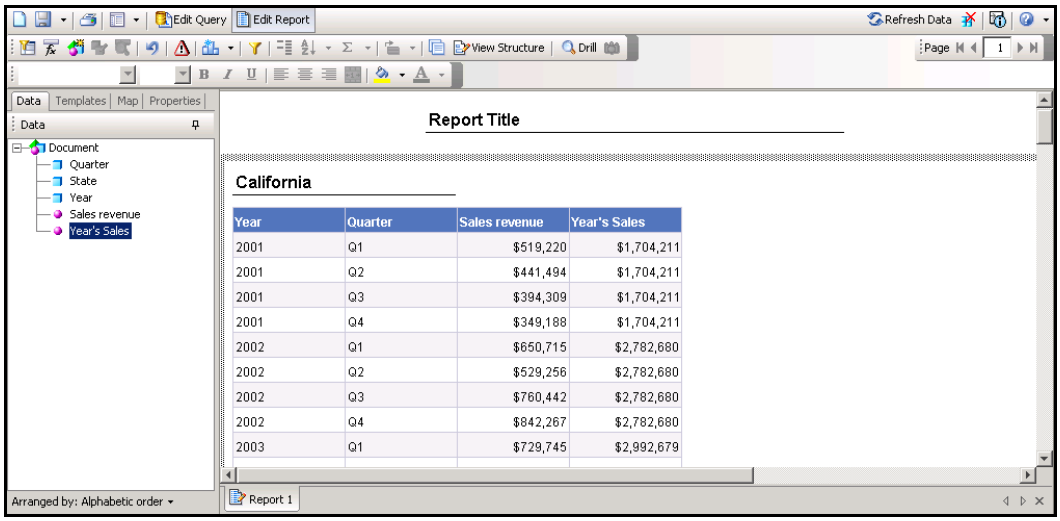


Figure 31: Report

Step 7: Insert a new column after **Year's Sales** variable. Add the formula to calculate **Sales Percentage** made in a Quarter. Set the format as shown in the figure given below.

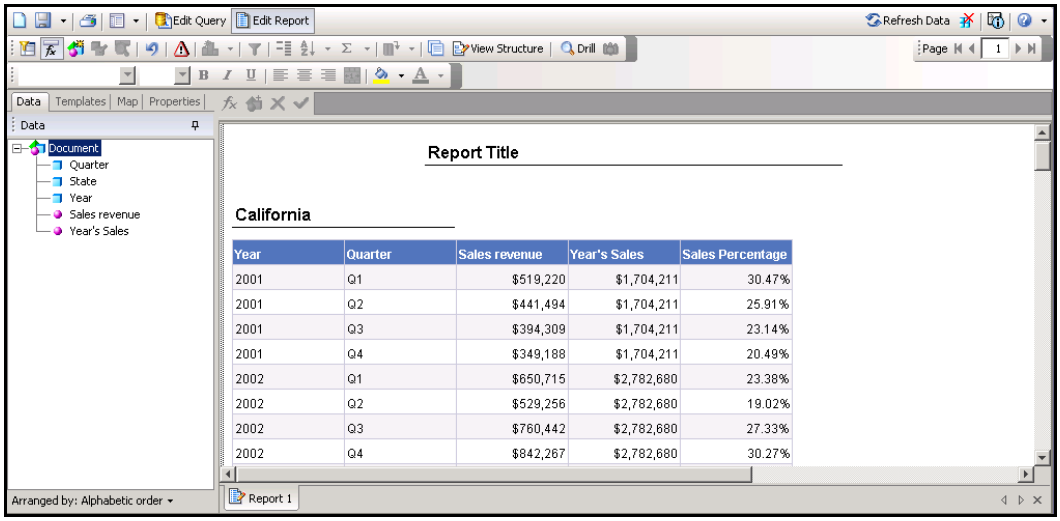


Figure 32: Report

Step 8: Save the report as at the **Public Folders\Batch Code\Emp code** location with the name **Using Input Contexts** and log off.

7.2: Use the Rank Function and set the context

Solution:

Step 1: Log on to **InfoView**. A **Welcome screen** will be displayed.

Step 2: Create a new Web Intelligence Document using the **eFashion** universe from the list of universes.

Step 3: Select the following objects from the universe

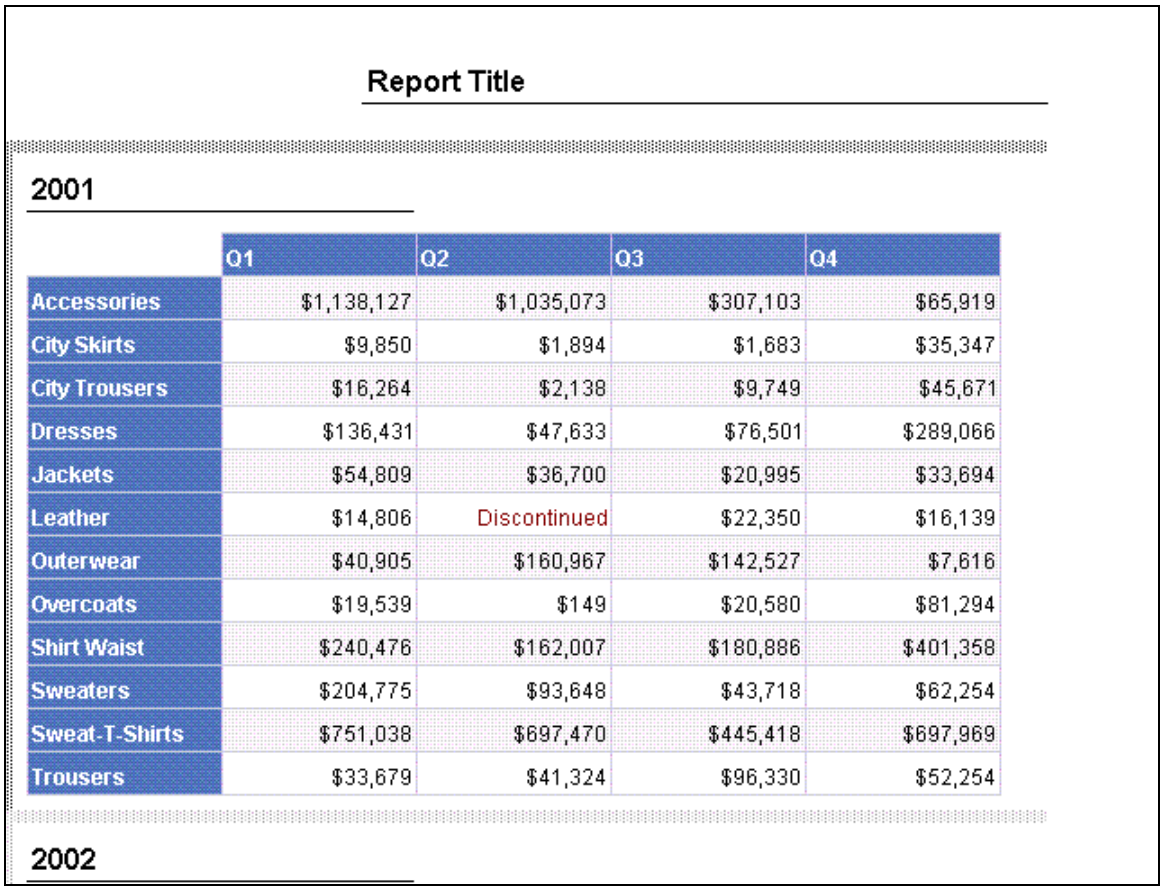
Time period \ Year

Time period \ Quarter

Product \ Lines

Measures \ Sales revenue

Step 4: Perform the necessary steps to create a crosstab report as shown below.



Report Title

2001

	Q1	Q2	Q3	Q4
Accessories	$1,138,127	$1,035,073	$307,103	$65,919
City Skirts	$9,850	$1,894	$1,683	$35,347
City Trousers	$16,264	$2,138	$9,749	$45,671
Dresses	$136,431	$47,633	$76,501	$289,066
Jackets	$54,809	$36,700	$20,995	$33,694
Leather	$14,806	Discontinued	$22,350	$16,139
Outerwear	$40,905	$160,967	$142,527	$7,616
Overcoats	$19,539	$149	$20,580	$81,294
Shirt Waist	$240,476	$162,007	$180,886	$401,358
Sweaters	$204,775	$93,648	$43,718	$62,254
Sweat-T-Shirts	$751,038	$697,470	$445,418	$697,969
Trousers	$33,679	$41,324	$96,330	$52,254

2002

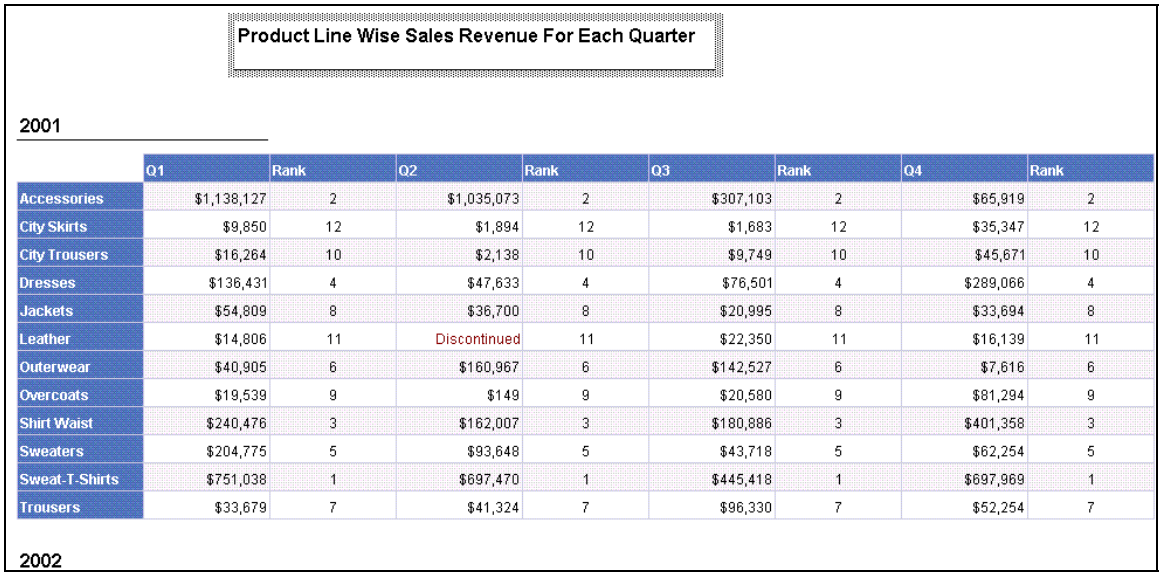
Step 5:Give the report title as 'Product Line Wise Sales Revenue For Each Quarter'

Step 6: Select the Quarterly Ranking report tab. Insert a new column to the right of Quarters column. Specify the heading of the column as Rank.

Step 7: Select the data cell of the Rank column and in the formula bar enter the following formula to Rank the Departments Code based on At Completion Total Cost.

=Rank([Sales revenue];[Lines])

Make the formatting of the cell to display only numbers with center alignment. The output will appear as shown in the figure below.



Product Line Wise Sales Revenue For Each Quarter

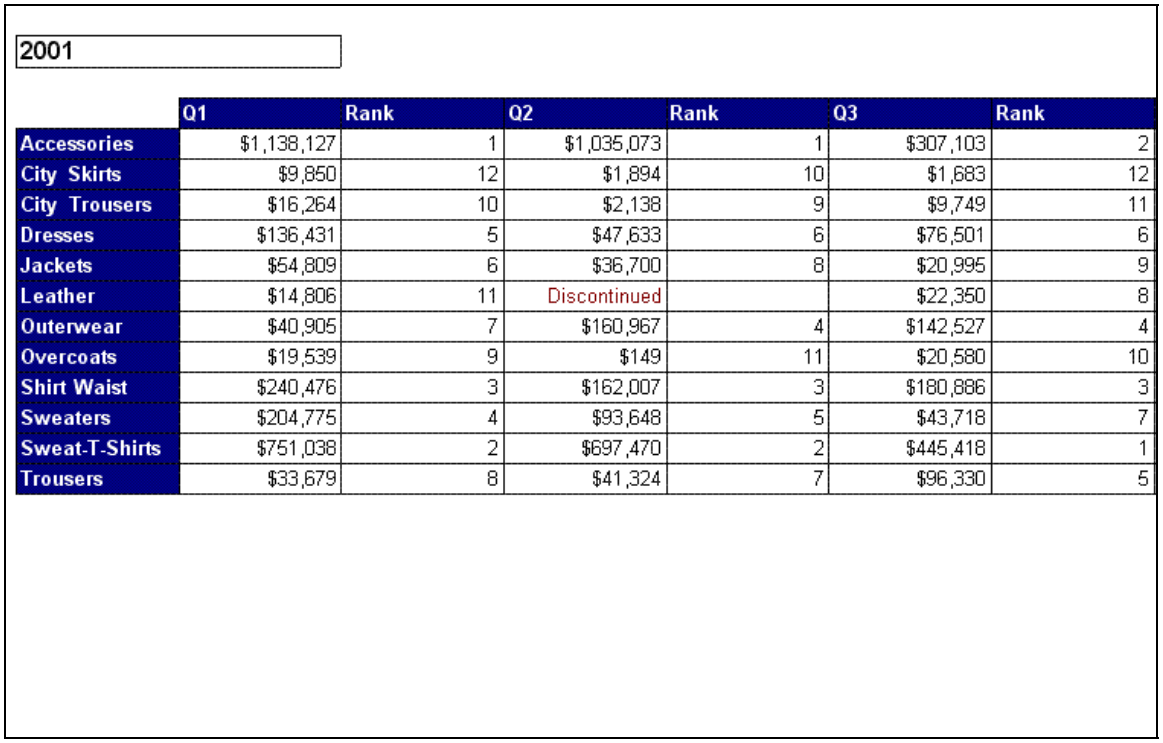
2001

	Q1	Rank	Q2	Rank	Q3	Rank	Q4	Rank
Accessories	$1,138,127	2	$1,035,073	2	$307,103	2	$65,919	2
City Skirts	$9,850	12	$1,894	12	$1,683	12	$35,347	12
City Trousers	$16,264	10	$2,138	10	$9,749	10	$45,671	10
Dresses	$136,431	4	$47,633	4	$76,501	4	$289,066	4
Jackets	$54,809	8	$36,700	8	$20,995	8	$33,694	8
Leather	$14,806	11	Discontinued	11	$22,350	11	$16,139	11
Outerwear	$40,905	6	$160,967	6	$142,527	6	$7,616	6
Overcoats	$19,539	9	$149	9	$20,580	9	$81,294	9
Shirt Waist	$240,476	3	$162,007	3	$180,886	3	$401,358	3
Sweaters	$204,775	5	$93,648	5	$43,718	5	$62,254	5
Sweat-T-Shirts	$751,038	1	$697,470	1	$445,418	1	$697,969	1
Trousers	$33,679	7	$41,324	7	$96,330	7	$52,254	7

2002

Observe the output. Is it correct output?

Step 7: Perform the necessary steps to get the correct output as shown below.



2001

	Q1	Rank	Q2	Rank	Q3	Rank
Accessories	$1,138,127	1	$1,035,073	1	$307,103	2
City Skirts	$9,850	12	$1,894	10	$1,683	12
City Trousers	$16,264	10	$2,138	9	$9,749	11
Dresses	$136,431	5	$47,633	6	$76,501	6
Jackets	$54,809	6	$36,700	8	$20,995	9
Leather	$14,806	11	Discontinued		$22,350	8
Outerwear	$40,905	7	$160,967	4	$142,527	4
Overcoats	$19,539	9	$149	11	$20,580	10
Shirt Waist	$240,476	3	$162,007	3	$180,886	3
Sweaters	$204,775	4	$93,648	5	$43,718	7
Sweat-T-Shirts	$751,038	2	$697,470	2	$445,418	1
Trousers	$33,679	8	$41,324	7	$96,330	5

Step 8: Save the report as at the **Public Folders\Batch Code\Emp code** location with the name **Year Wise Comparative Sales with Ranking** and log off.

Lab 8. Manage Data Providers

Goals	• Rename the existing Data Provider • Create a new data provider • Create a Report by combining objects from two data providers • Link the data providers to create a report taking the data from both the data providers • (Ensure the login details for connecting to Web Intelligence prior to starting the current lab.)
Time	30 Minutes

8.1: Create a Universe based on Oracle table

Solution:

Step1: Create a table as Budget in Oracle with the following structure and data.

Year	Quarter	Sales revenue
2001	Q1	$2,650,000.00
2001	Q2	$2,280,000.00
2001	Q3	$1,350,000.00
2001	Q4	$1,790,000.00
2002	Q1	$3,325,000.00
2002	Q2	$2,850,000.00
2002	Q3	$2,280,000.00
2002	Q4	$4,175,000.00
2003	Q1	$3,750,000.00
2003	Q2	$4,010,000.00
2003	Q3	$4,000,000.00
2003	Q4	$3,350,000.00

Step2: Create a universe in Designer based on the above table.

Step3: Create a new WEBI report based on the above Universe.

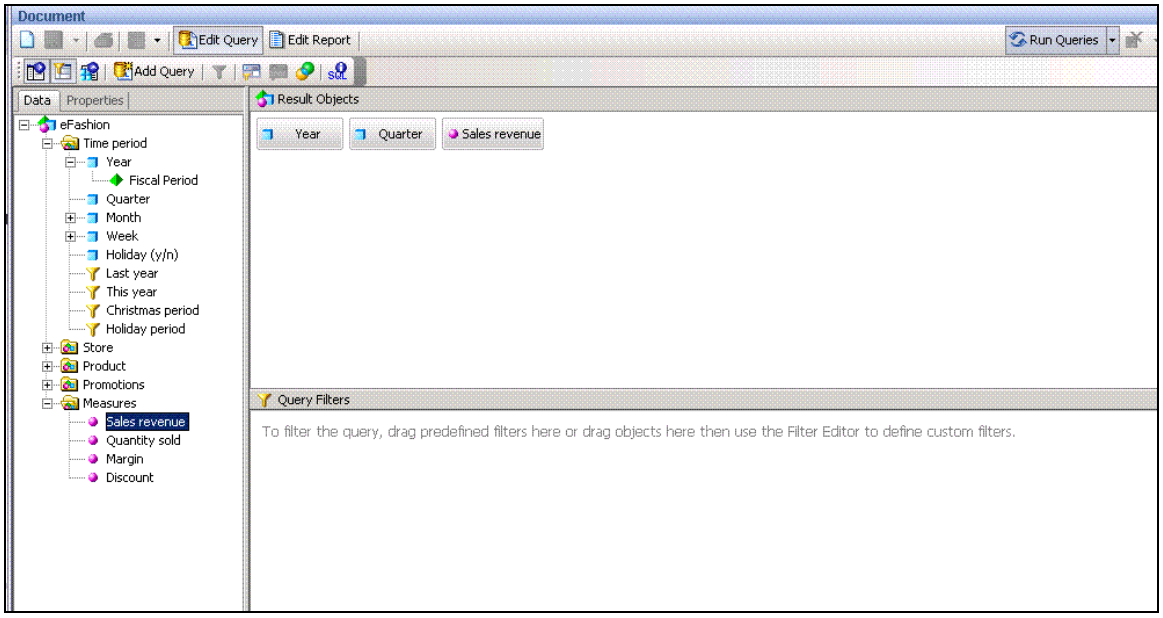
Step 4: Click on the properties Tab and in the Query Properties give the Name of the Query as Budget.

Step 5: Run the report.

Step 6: Select **Edit Query and** Click on **Add Query** icon on the toolbar. Select the eFashion universe and Select the fields Year, Quarter and Sales Revenue.

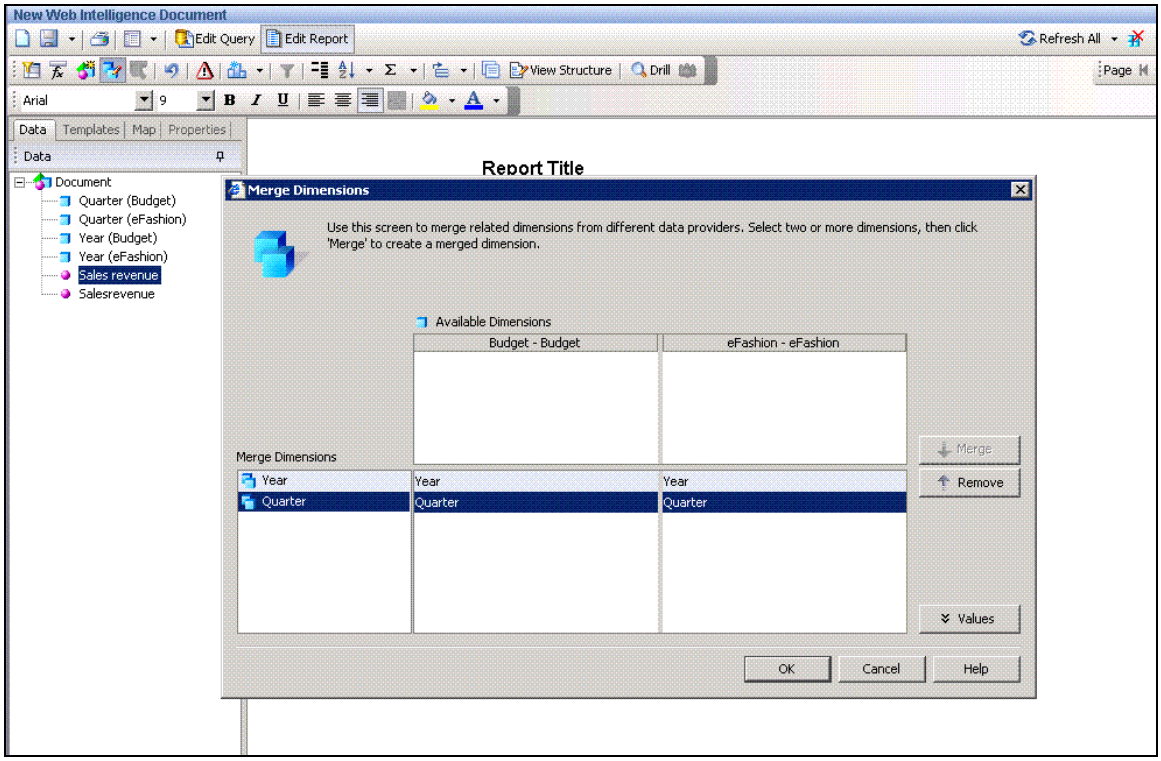
Step 7: Click on the properties Tab and in the Query Properties give the Name of the Query as eFashion

Step 7: Run the Query.



Step 8: In the New Query Dialog Box, select '**Include the result objects in the document without generating a table**'.

Step 9: Click on **Merge Dimensions** and Merge **Year** and **Quarter**.



Step 10: View the report and save it.

Year	Quarter	Salesrevenue	Sales revenue
2001	Q1	2,650,000	$2,660,700
2001	Q2	2,280,000	$2,279,003
2001	Q3	1,350,000	$1,367,841
2001	Q4	1,790,000	$1,788,580
2002	Q1	3,325,000	$3,326,172
2002	Q2	2,850,000	$2,840,651
2002	Q3	2,280,000	$2,879,303
2002	Q4	4,175,000	$4,186,120
2003	Q1	3,750,000	$3,742,989
2003	Q2	4,010,000	$4,006,718
2003	Q3	4,000,000	$3,953,395
2003	Q4	3,350,000	$3,356,041

Appendices

Appendix A: Table of Figures

