

IBM Inter-University Programming Contest 2012

Chapter 6: Cognos Business Intelligence

In this exercise, we will learn:

- Using Report Studio to create a Chart Report

Exercises

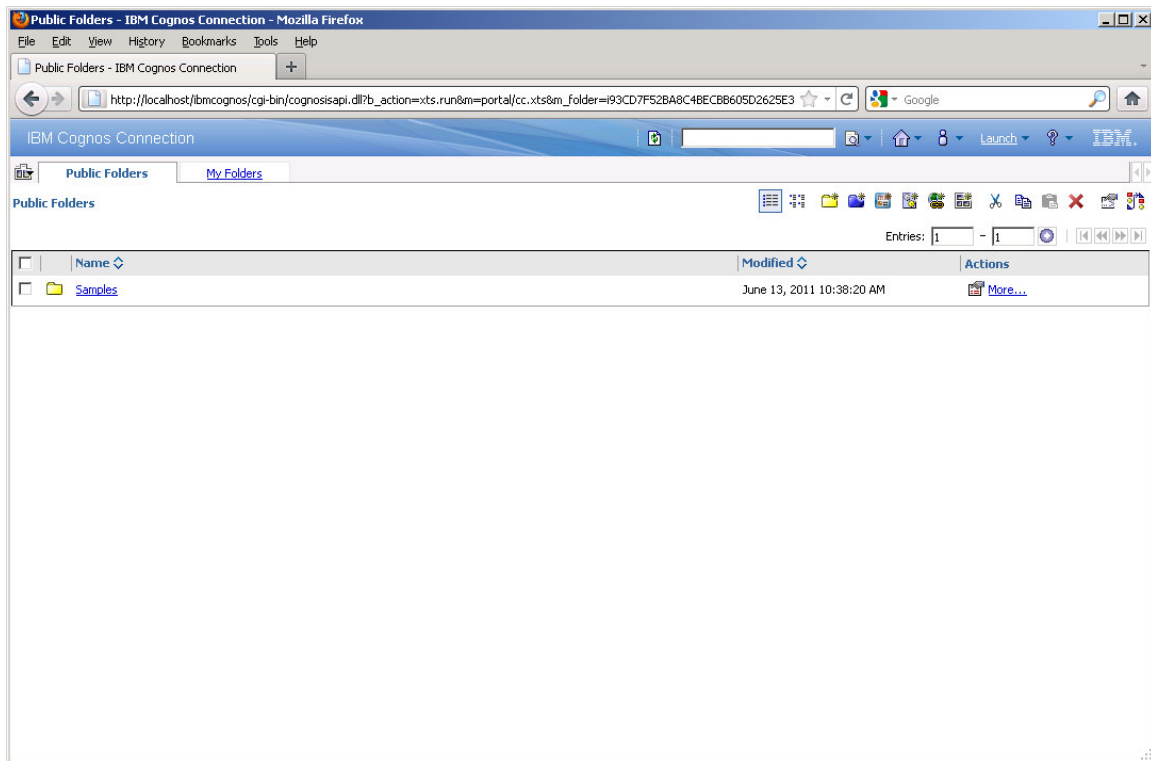
Purpose:

You want to create a report that shows revenue by product line and quantity by region. You want the report to focus on Camping Equipment, Mountaineering Equipment, and Personal Accessories sales for the three European sales regions. You will build a combination chart and a crosstab that report on the same information.

Task 1. Create a combination chart.

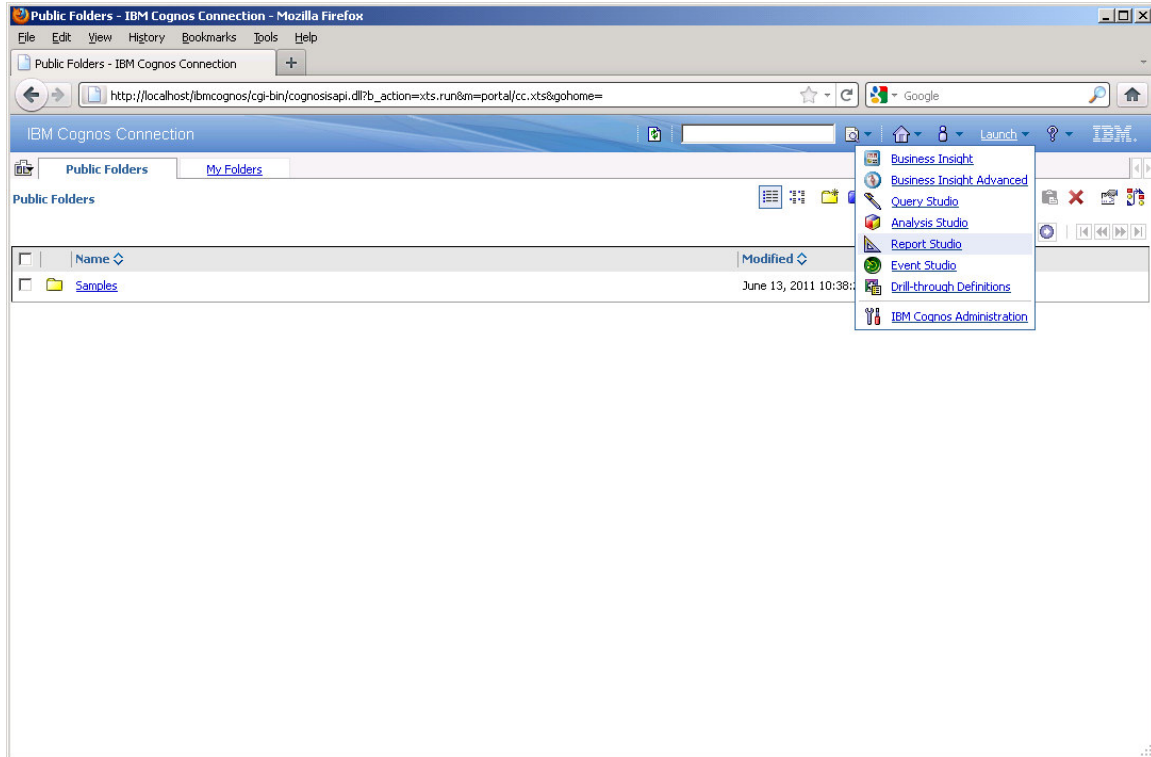
1. Log into the PC using the username and password provided by instructor.
2. Open an Firefox Browser and then go to the following link:

<http://IP to be assigned/ibmcognos/>



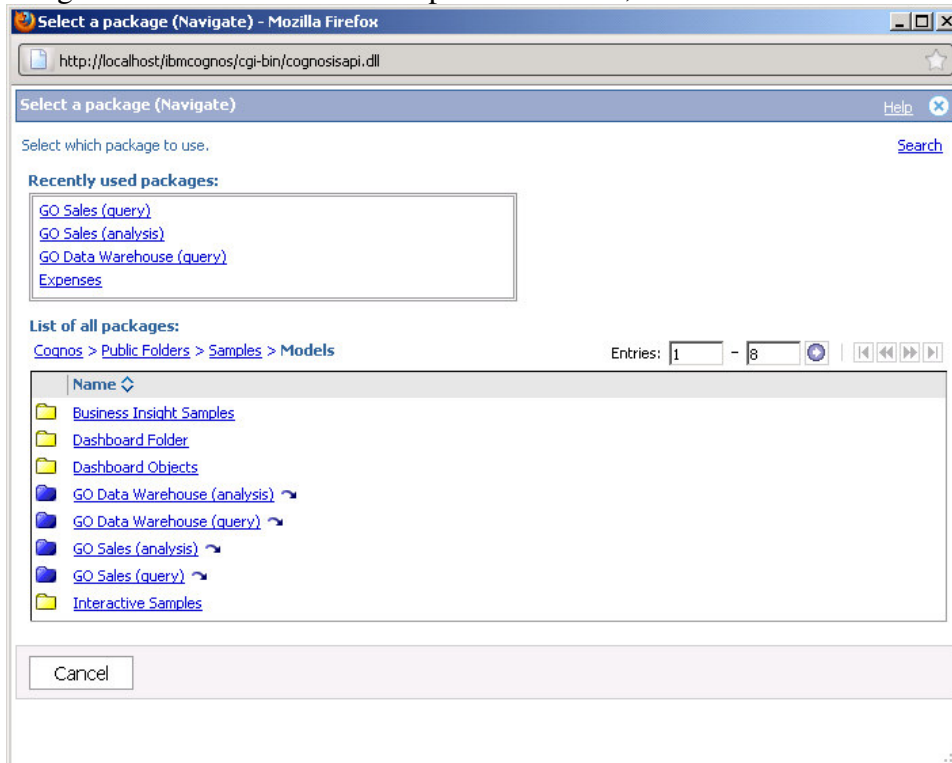
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3. Click on the Right Top “Launch” -> Report Studio:



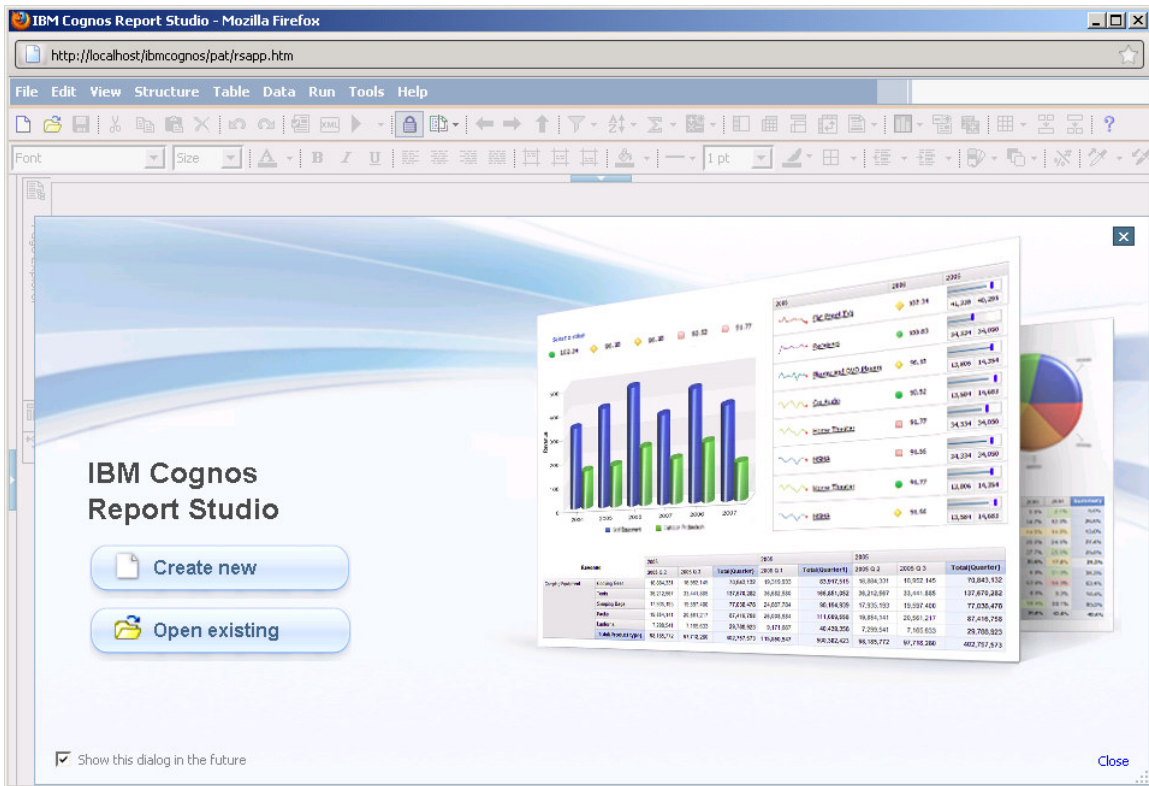
4. Click on the link and jump into the following path:

“Cognos > Public Folders > Samples > Models”, and click on the GO Sales (query) link:

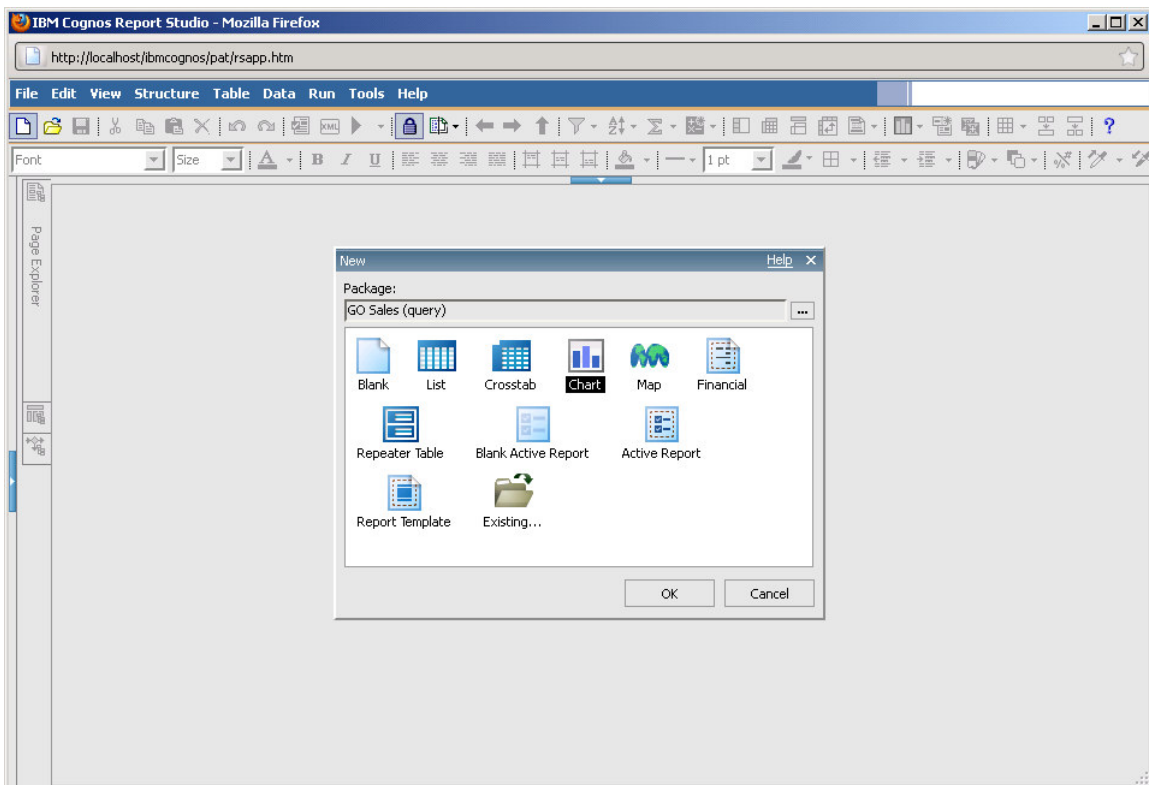


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5. Click on the Create new button:

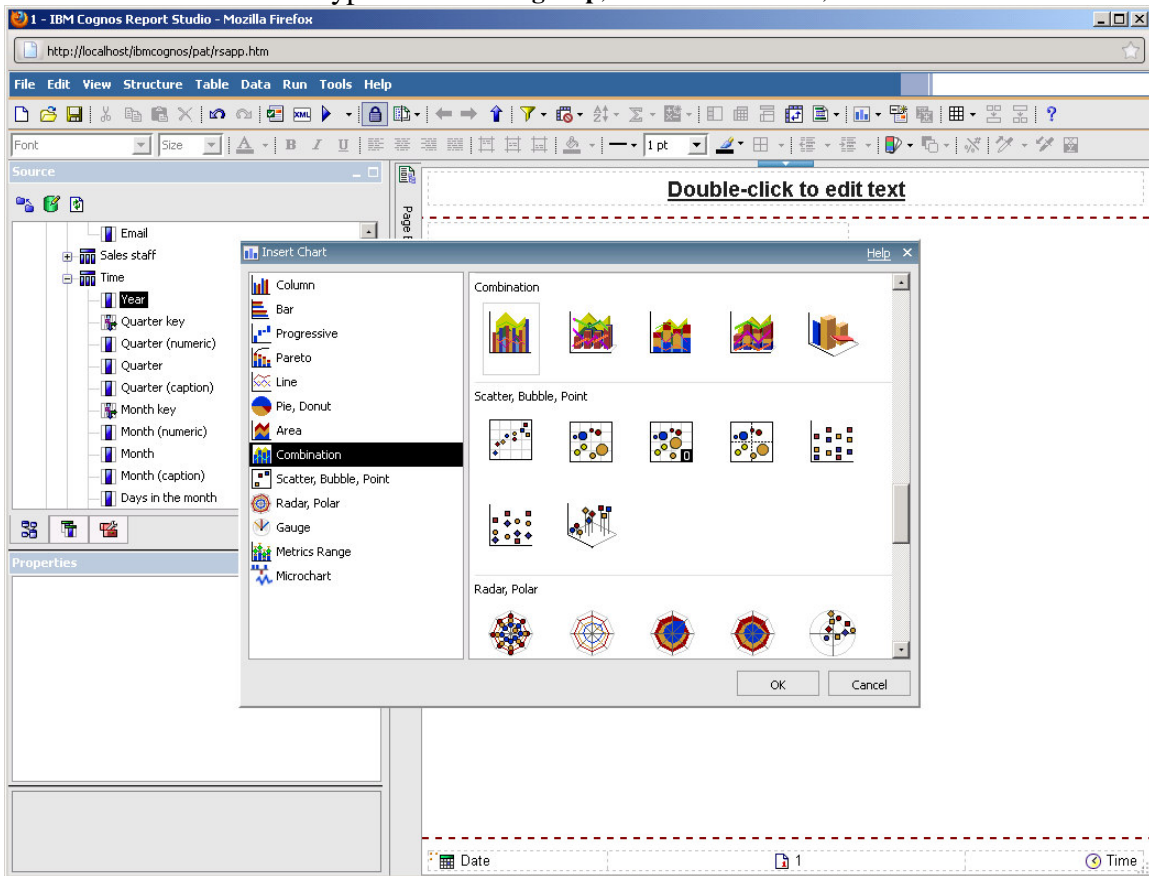


6. Select Chart:



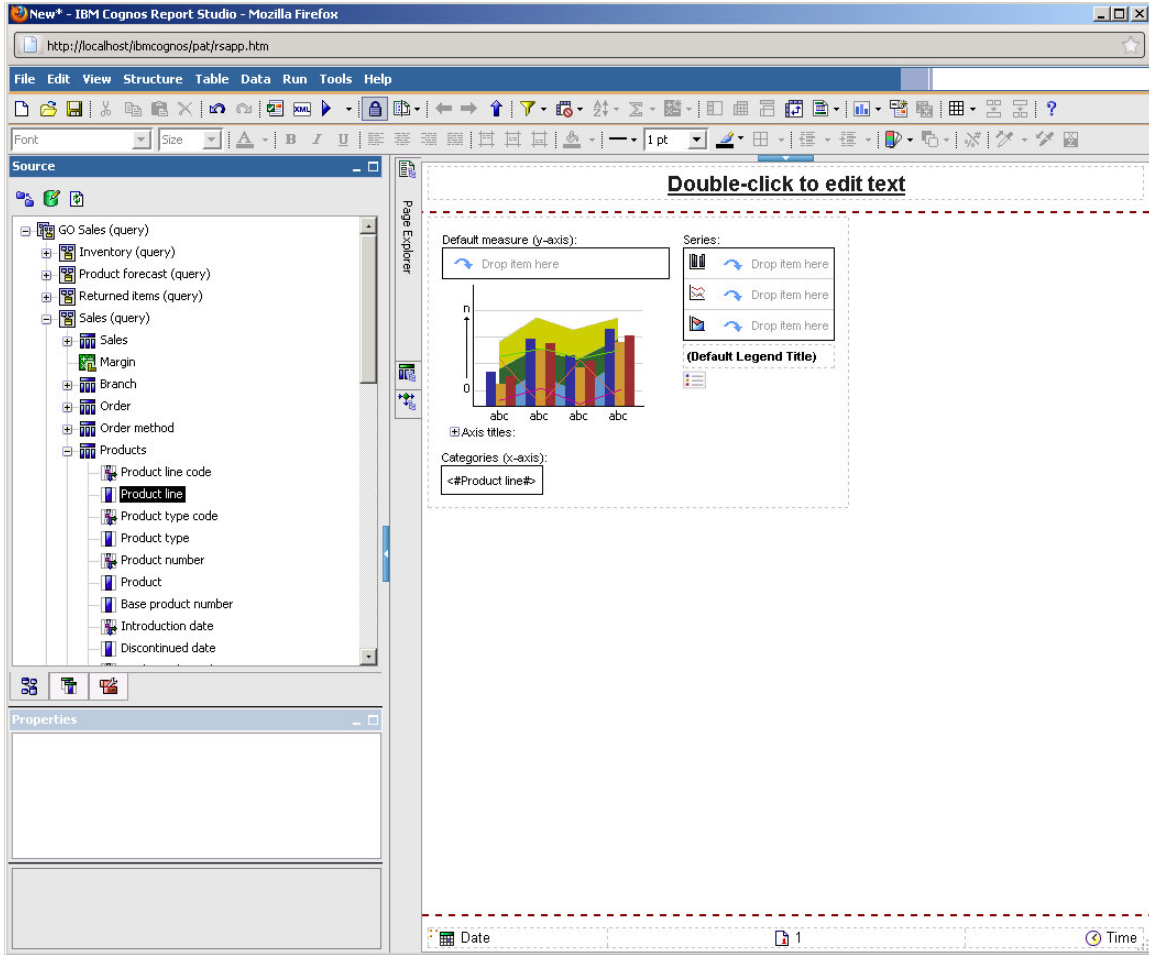
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7. Select a Column chart type Under **Chart group**, click **Combination**, and then click **OK**.

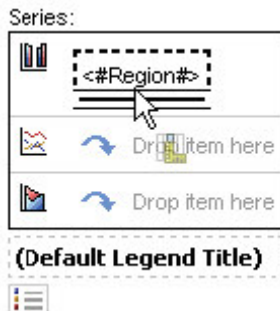


8. Click the **Source** tab, expand **Product**, and then drag the **Product line** query item to the **Category (x-axis)** drop zone.

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9. Expand **Retailer site**, and drag **Region** to the **Series** drop zone.
Expand **Sales**, and drag **Revenue** under **<#Region#>**, inside the same box.
The results appear as follows:



Task 2. Show two measures on different Y axes.

1. In the Source tab, on the **Data Items** tab, drag **Region** to the second **Series** box.
 2. From the **Source** tab, drag **Quantity** under **Region** inside the second **Series** box.
- The results appear as follows:

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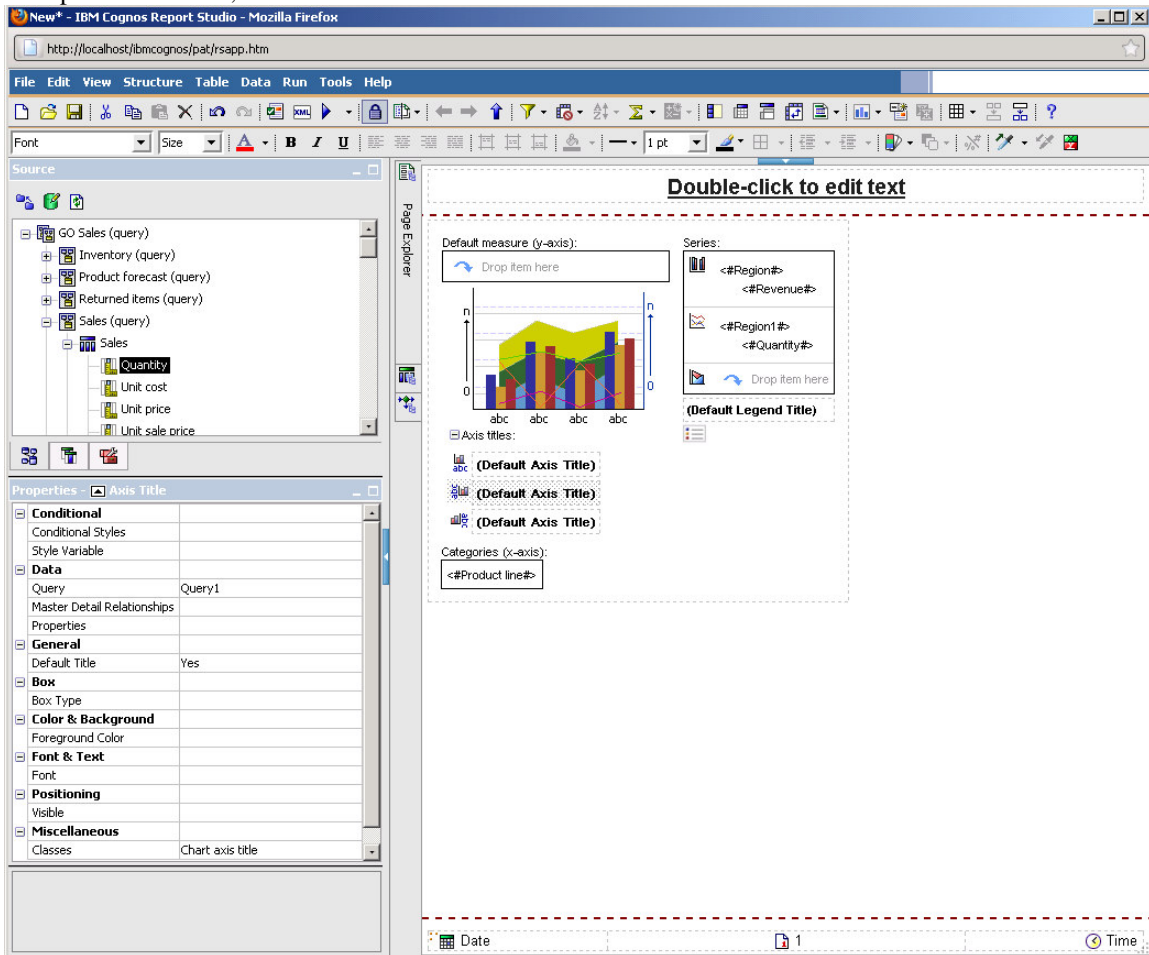
Series:

	<#Region#> <#Revenue#>
	<#Region#> <#Quantity#>
	Drop item here

(Default Legend Title)

3. Click on the chart icon in the second **Series** box to select it, and in the **Properties** pane, in the **Axis Assignment** list, click **Y2 Axis**.

4. Expand **Axis titles**, and click the left vertical axis box  **(Default Axis Title)**



The screenshot shows the IBM Cognos Report Studio interface in Mozilla Firefox. The browser address bar shows `http://localhost:ibmcognos/pat/rsapp.htm`. The application menu includes File, Edit, View, Structure, Table, Data, Run, Tools, and Help. The toolbar contains various icons for navigation and editing. The **Source** pane on the left shows a tree view of queries: GO Sales (query), Inventory (query), Product forecast (query), Returned items (query), Sales (query), and Sales (query) with sub-items: Quantity, Unit cost, Unit price, and Unit sale price. The **Properties - Axis Title** pane is open, showing sections for Conditional, Data, General, Box, Color & Background, Font & Text, Positioning, and Miscellaneous. The **Axis Assignment** list is expanded, showing three axis titles: (Default Axis Title), (Default Axis Title), and (Default Axis Title). The main report area displays a bar chart with a legend and a text box containing the text "Double-click to edit text". The chart has a y-axis labeled "n" and an x-axis labeled "abc". The legend is titled "(Default Legend Title)".

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5. In the **Properties** pane, under **General**, change **Default Title** property to **No**.

The screenshot shows the IBM Cognos Report Studio interface. The main window displays a 3D bar chart with a legend and axis titles. The Properties pane is open to the 'Axis Title' section, where the 'Default Title' property is set to 'No'. The chart area shows a 3D bar chart with a legend and axis titles.

Properties - Axis Title

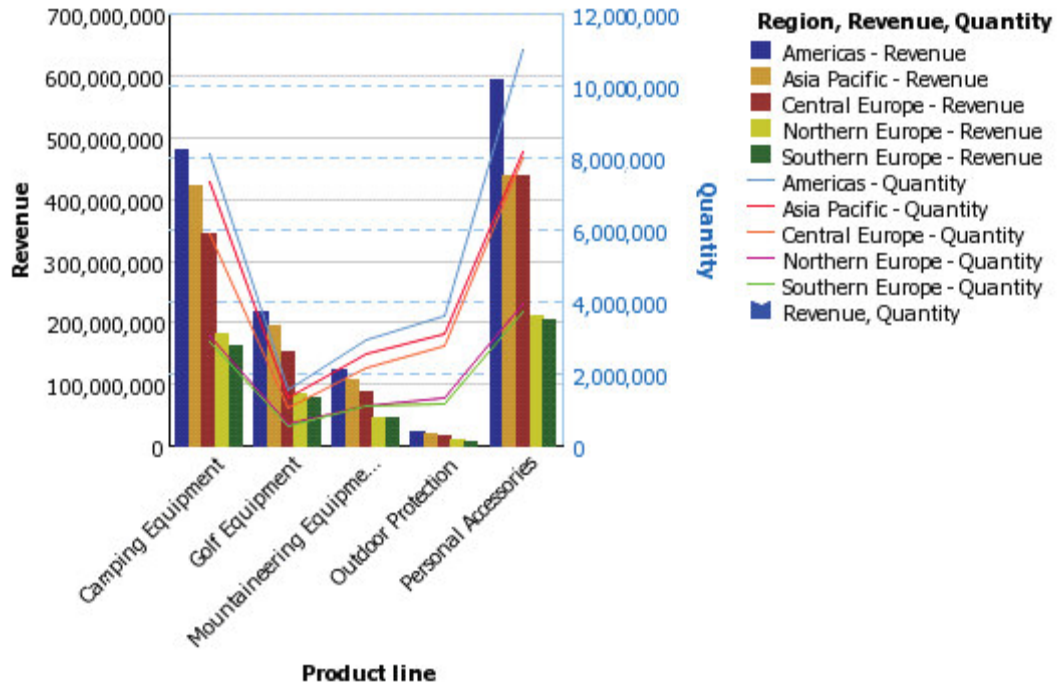
Conditional	
Conditional Styles	
Style Variable	
Data	
Query	Query1
Master Detail Relationships	
Properties	
General	
Default Title	No
Box	
Box Type	
Color & Background	
Foreground Color	
Font & Text	
Font	
Positioning	
Visible	
Miscellaneous	
Classes	Chart axis title

6. Double-click the left vertical axis box, type **Revenue** in the **Text** box, and then click **OK**.

7. On the toolbar, click **Run Report**.

The results appear as follows:

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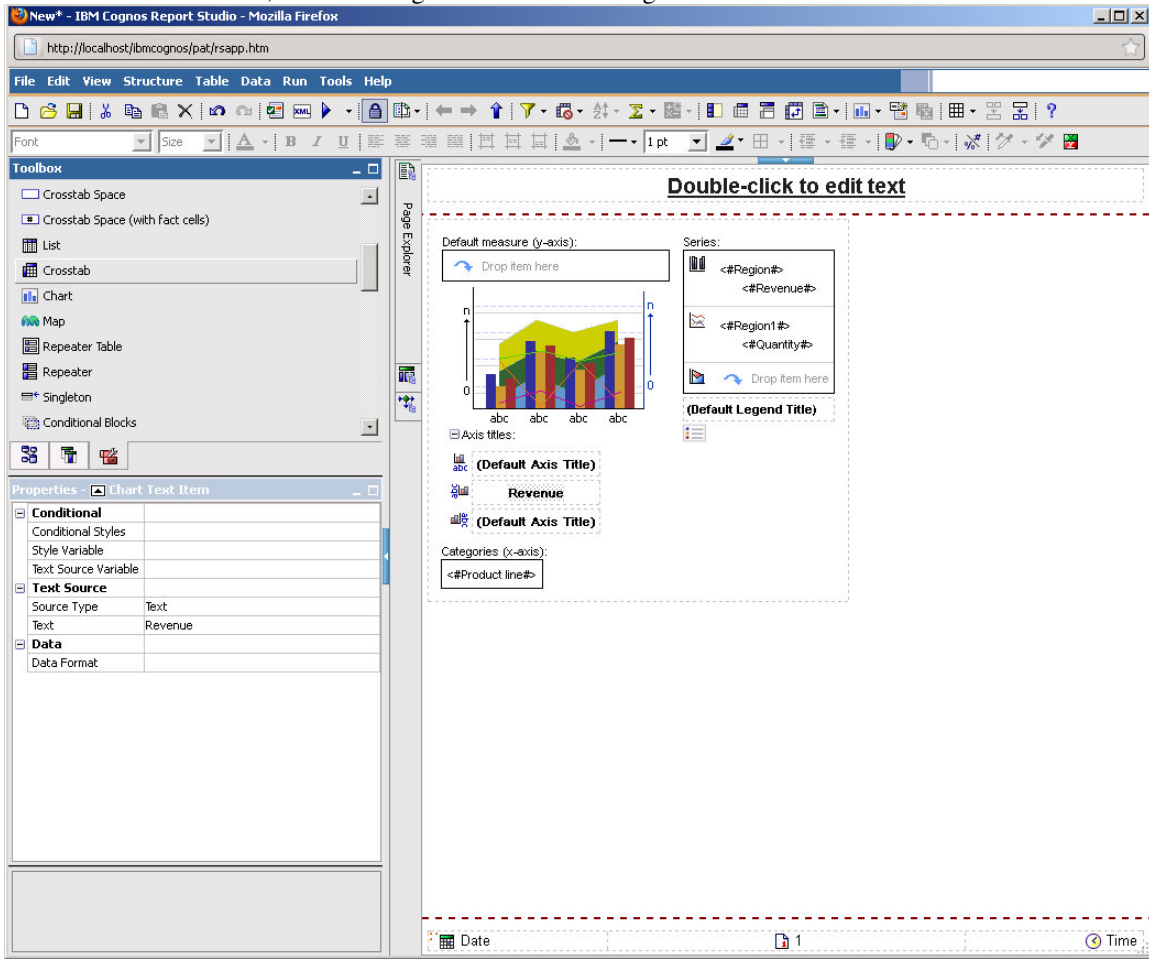


This chart is too complicated for your consumers to read clearly. In Task 4 you will add filters to report only on Camping Equipment, Mountaineering Equipment, and Personal Accessories in the three European regions.
8. Close **Cognos Viewer**.

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Task 3. Add a crosstab to the report.

1. Click the **Toolbox** tab, and then drag a **Crosstab** to the right of the chart.



2. Click the **Source** tab, and then from **Product** drag **Product line** to **Rows**.

3. From **Retailer site**, drag **Region** to **Columns**.

4. From **Sales fact**, drag **Revenue** under **Region** as a nested column.

5. Drag **Quantity** to the right of **Revenue** as another nested column under **Region**.

	<#Region#>		<#Region#>	
	<#Revenue#>	<#Revenue#>	<#Revenue#>	<#Revenue#>
<#Product line#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>

6. Run the report.

You can see in the combination chart that the top revenue generating region is Americas. The crosstab provides the exact numbers as in the chart. You want to filter the results to focus on sales in the European regions for Camping Equipment, Mountaineering Equipment, and Personal Accessories.

7. Close **Cognos Viewer**.

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Task 4. Add filters to focus the data.

1. Click the combination chart to select it.
2. From the toolbar, click edit **Filters**:

The screenshot shows the IBM Cognos Report Studio interface in Mozilla Firefox. The browser address bar shows `http://localhost/ibmcognos/pat/rsapp.htm`. The menu bar includes File, Edit, View, Structure, Table, Data, Run, Tools, and Help. The toolbar contains various icons for editing and viewing. A dropdown menu is open over the toolbar, showing "Remove All Filters" and "Edit Filters...".

The main workspace displays a combination chart with a yellow area and blue bars. The chart is titled "Double-click to edit text". The chart's properties are visible in the Properties pane on the left, which is titled "Combination Chart".

The Properties pane shows the following sections:

- Conditional**
 - Conditional Styles
 - Style Variable
 - Render Variable
 - No Data Contents
- Data**
 - Drill-Through Definitions
 - Query: Query1
 - Master Detail Relationships
 - Suppression
- General**
 - Chart Orientation: Vertical
 - Depth: 0
 - Visual Angle: 45
 - Pagination
 - Render Page when Empty: Yes
- Chart Titles**
 - Title: Hide
 - Subtitle: Hide

The chart's configuration is also visible in the Properties pane on the right:

- Default measure (y-axis):** Drop item here
- Series:**
 - <#Region#>
 - <#Revenue#>
 - <#Region1#>
 - <#Quantity#>
- (Default Legend Title)**
- Axis titles:**
 - (Default Axis Title)
 - Revenue
 - (Default Axis Title)
- Categories (x-axis):** <#Product line#>

The status bar at the bottom shows "Date" and "1".

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3. Click on the create button:

The screenshot displays the IBM Cognos Report Studio interface within a Mozilla Firefox browser window. The main workspace shows a chart with a yellow area series and a blue bar series. A dialog box titled "Filters - Query1" is open, showing the "Summary Filters" tab. The dialog includes a large empty text area, a "Usage" section with radio buttons for "Required", "Optional", and "Disabled", and an "Application" section with radio buttons for "Before auto aggregation" and "After auto aggregation". The "OK" and "Cancel" buttons are at the bottom right of the dialog. The background shows the "Properties" pane for a "Combination Chart" with sections for "Conditional", "Data", "General", and "Chart Titles".

Section	Property	Value
Conditional	Conditional Styles	
	Style Variable	
	Render Variable	
	No Data Contents	
Data	Drill-Through Definitions	
	Query	Query1
	Master Detail Relationships	
	Suppression	
General	Chart Orientation	Vertical
	Depth	0
	Visual Angle	45
	Pagination	
Chart Titles	Render Page when Empty	Yes
	Title	Hide
	Subtitle	Hide

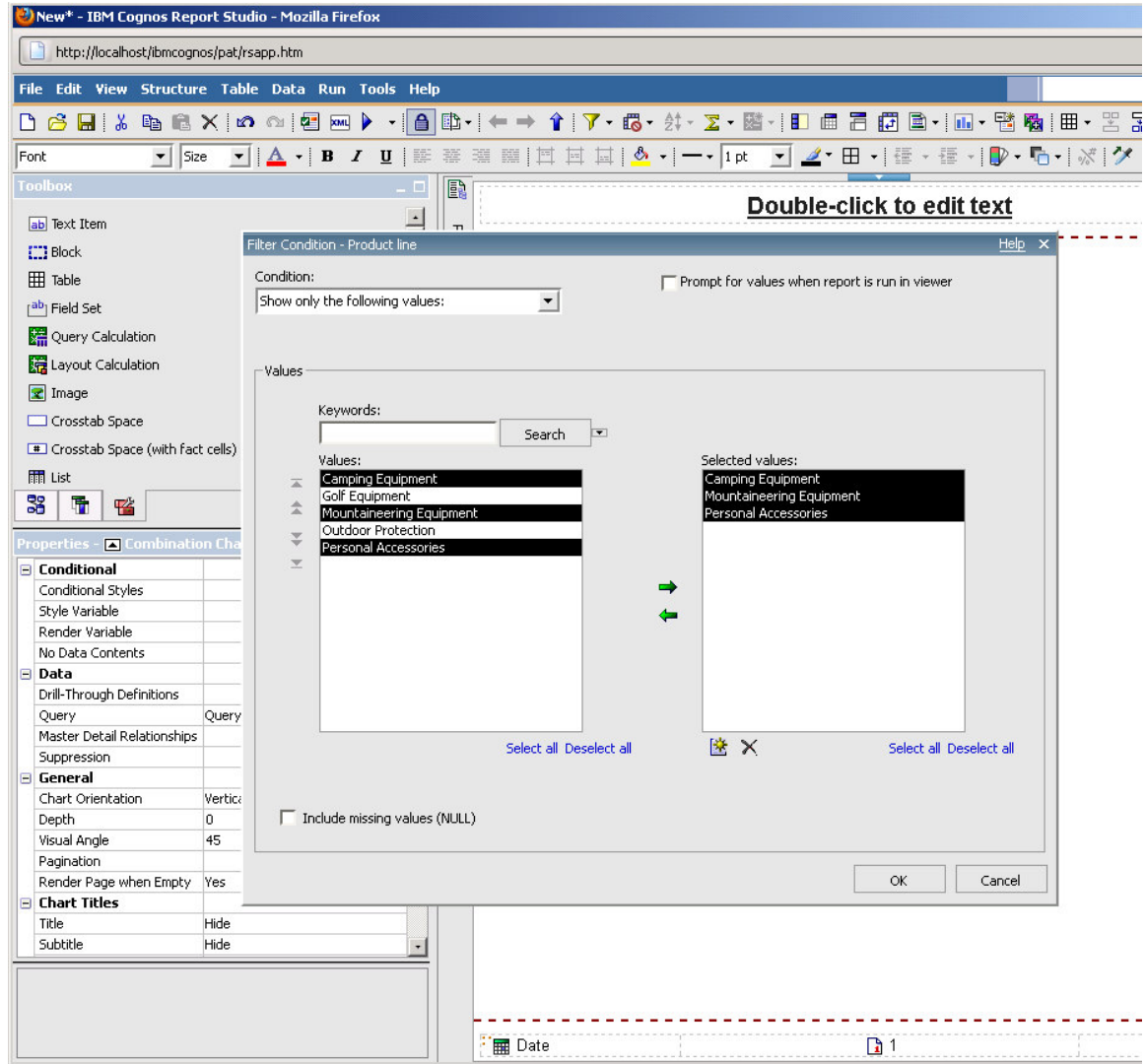
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4. Select Product Line

The screenshot displays the IBM Cognos Report Studio interface. The main window shows a report design area with a chart. A 'Filters - Query1' dialog box is open, with the 'Summary Filters' tab selected. Inside this dialog, a 'Create Filter' sub-dialog is also open, showing the 'Custom based on data item' option selected, with 'Product line' chosen from a dropdown menu. The background shows a chart with a yellow area and a blue bar. The 'Properties' pane on the left shows the 'Combination Chart' properties, including 'Conditional', 'Data', 'General', and 'Chart Titles' sections. The 'Page Explorer' on the right shows the report structure. The browser window at the top shows the URL 'http://localhost/ibmcognos/pat/rsapp.htm'.

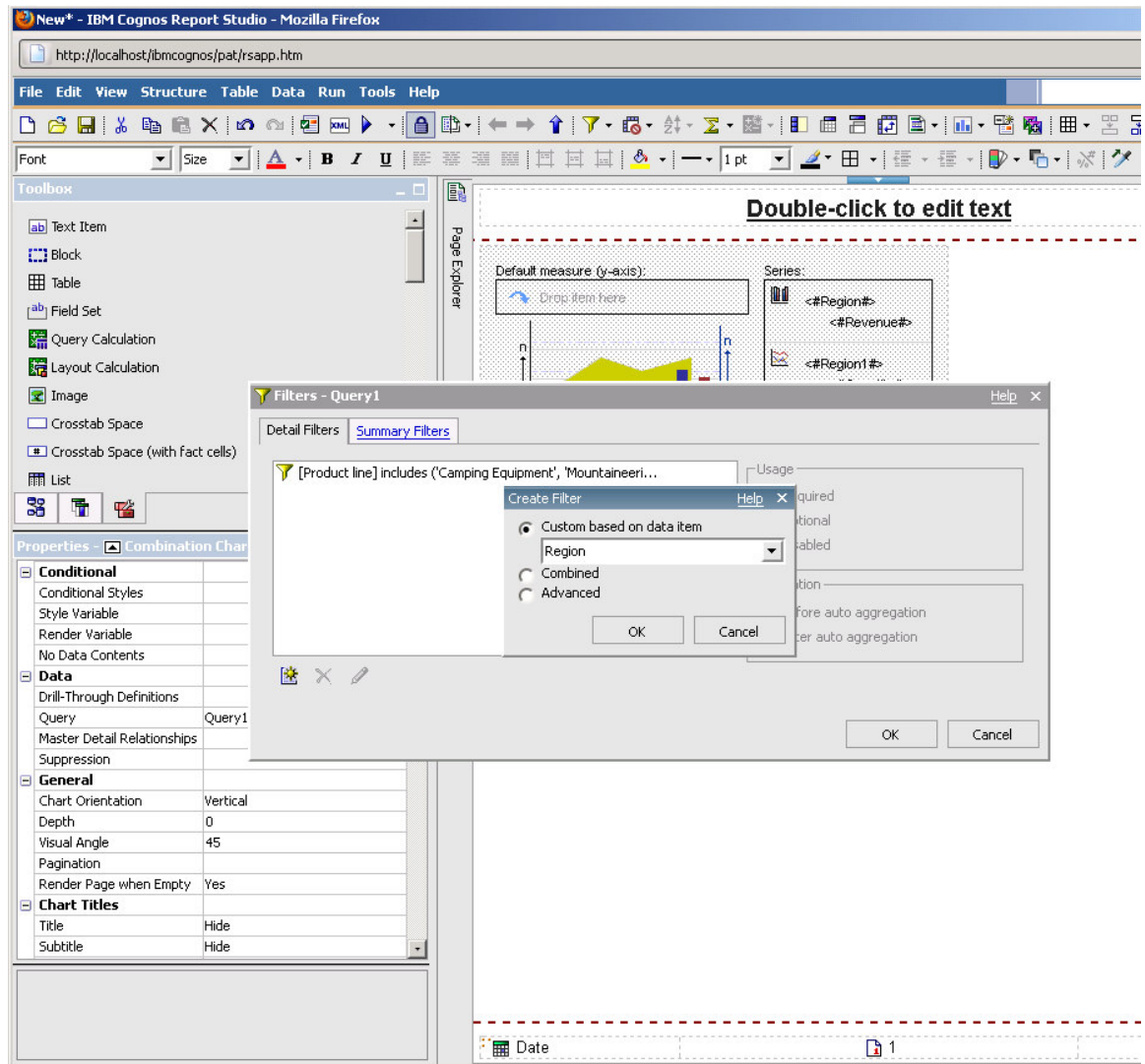
5. Select 'Camping Equipment', 'Mountaineering Equipment', 'Personal Accessories' and add to the right hand side

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6. Add another filter using **Region** as follows: 'Northern Europe', 'Southern Europe', 'Central Europe'

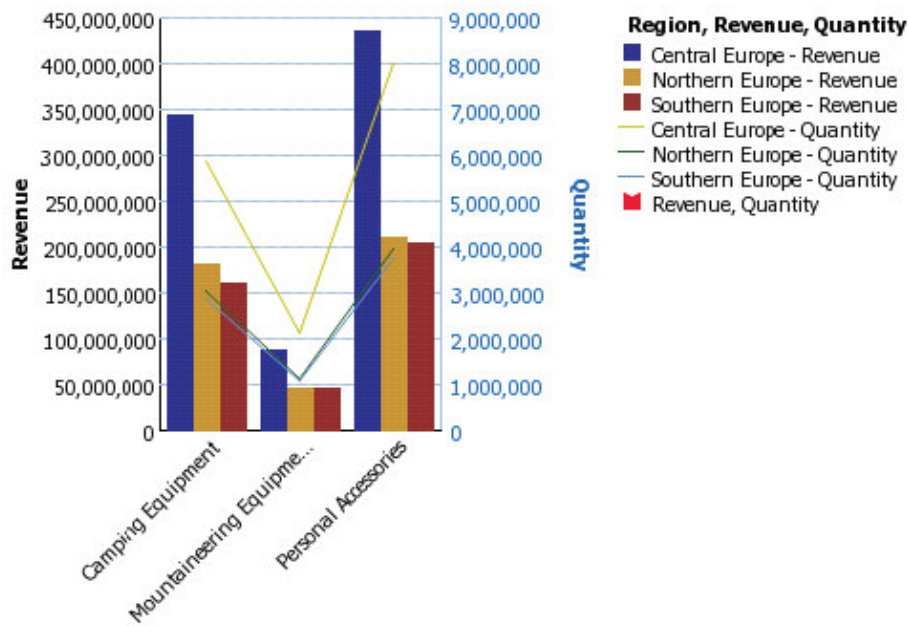
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7. Click **OK Twice** to close each dialog box.
 8. Repeat steps 4 - 6 to add the same filters (Region and Product line) to the crosstab.
- Run the report.

The result appears as shown below:

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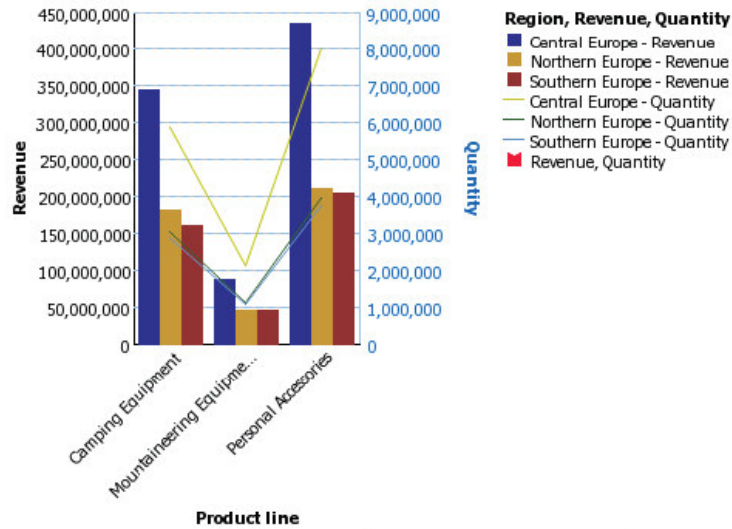
	Central Europe		Northern Europe		Southern Europe	
	Revenue	Quantity	Revenue	Quantity	Revenue	Quantity
Camping Equipment	343,645,848.36	5,904,428	180,851,396.88	3,046,563	161,454,246.13	2,882,345
Mountaineering Equipment	88,051,532.89	2,146,207	46,091,108.04	1,131,215	44,884,319.08	1,102,837
Personal Accessories	437,336,485.23	8,016,774	210,608,208.82	3,954,449	204,231,710	3,739,270

9. Close Cognos Viewer.

Results:

You created a combination chart with two measures on different Y axes and then added a crosstab to see product line sales revenue and quantity by region. You focused on Camping Equipment, Mountaineering Equipment, and Personal Accessories sales for the three European sales regions.

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Product line	Central Europe		Northern Europe		Southern Europe	
	Revenue	Quantity	Revenue	Quantity	Revenue	Quantity
Camping Equipment	343,645,848.36	5,904,428	180,851,396.88	3,046,563	161,454,246.13	2,882,345
Mountaineering Equipment	88,051,532.89	2,146,207	46,091,108.04	1,131,215	44,884,319.08	1,102,837
Personal Accessories	437,336,485.23	8,016,774	210,608,208.82	3,954,449	204,231,710	3,739,270

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