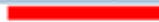






## History

This document was originally published in Cognos SupportLink. A multimedia version of this tip can be found on the IBM Cognos SupportLink website

[Click to view multimedia version of this article](#)

## Introduction

Product type	Product name	Actual quantity	Expected volume	Percentage of Expected Volume		
				0%	100%	200%
Eyewear	Polar Wave	118	79	149%		
	Polar Ice	32	24	133%		
	Polar Sports	44	35	126%		
	Polar Sun	508	483	105%		
	Polar Extreme	124	141	88%		

In a list report it is sometimes useful to include a visual indicator of a measure to improve readability and quick comprehension of presented values. When a 'chart' is added to individual lines or rows of a report, users can quickly compare rows, and then read the detail measure values from the list items.

## Code

In this example, the bars represent a percentage. The code can be easily modified to represent whole numbers.

You will use the following five lines of JavaScript to generate the chart without any graphics.

```
<script>
  barlength=100*(parseInt('xx%')/100)
  myBar='<div style="background-color:red; width:' +barLen+'
height:10"></div>'
  document.write(myBar)
</script>
```

The heart of the code is line 2 where the length of the bar is calculated. The first number in line 2, 100, indicates the number of pixels that represent 100%. The second number (xx%) indicates the percentage we want to display. This placeholder will be replaced by a data item

value in your report. The third number (100) is a constant number of pixels that represents the 100% threshold.

If you were to replace 'xx%' in the formula with '63%', the formula would return 63 as the number of pixels to use for the length of the bar. This formula gives you the flexibility to represent 100% by any number of pixels. If 100% were represented by 200 pixels, the formula would return 126, if it were represented by 75 pixels the formula would return 47.25.

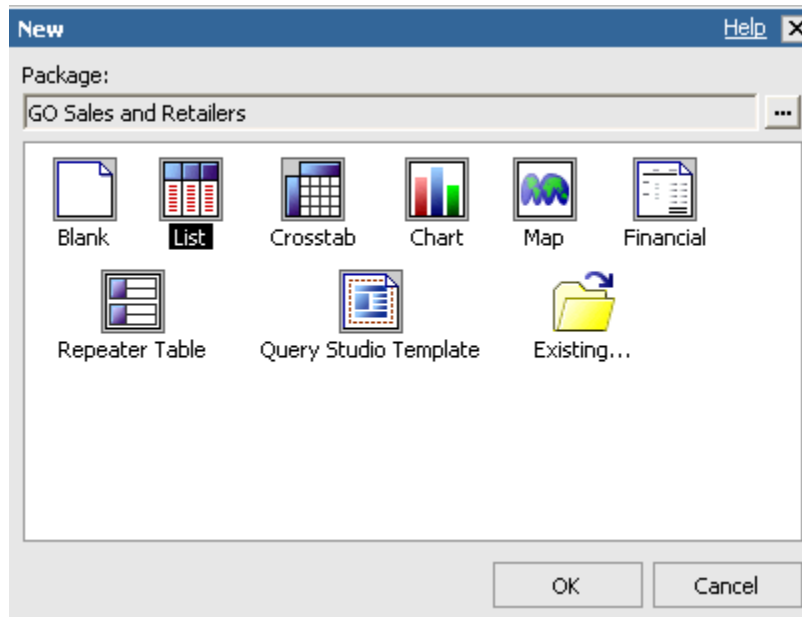
## Report

For this example you will use a simple report (based on the Go Sales and Retailers sample package) that compares Actual quantity to Expected volume in the Product Forecasts query subject.

1. Start Report Studio, and if you are prompted to select a package, click the Go Sales and Retailers package.



2. Click Create a new report or template, and when prompted for the report type, click List, and then click OK.



- From the Insertable Objects pane, drag the following data items to the list:

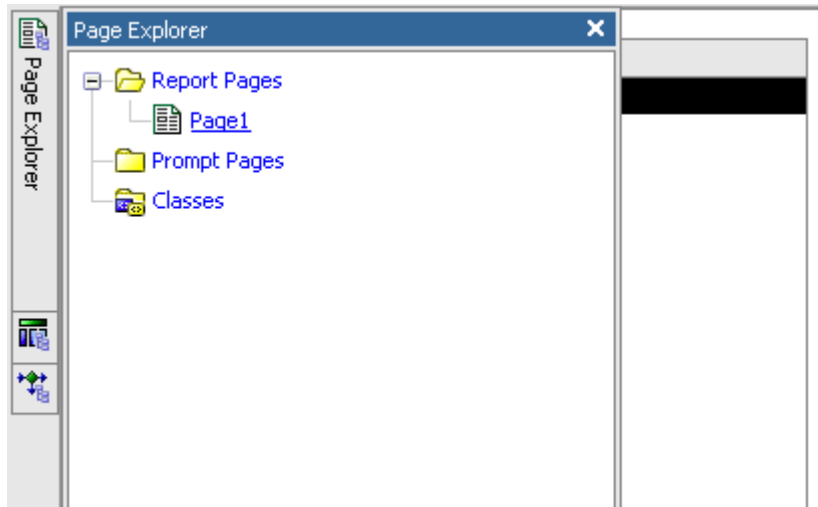
Expand Query Subject...	Data Item
Products	Product Type
Products	Product name
Product forecasts	Actual Quantity
Product forecasts	Expected Volume

- Click any of the <Product type> instances in the Product Type column, and then click the Group button on the toolbar. Your report should look like this:

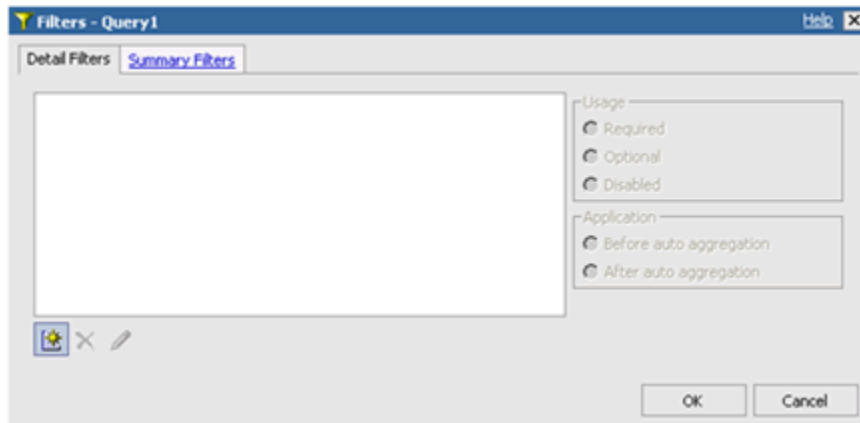
Product type	Product name	Actual quantity	Expected volume
<Product type>	<Product name>	<Actual quantity>	<Expected volume>
<Product type>	<Product name>	<Actual quantity>	<Expected volume>

For simplicity, you will next add a couple of simple filters to the report so you can focus on a subset of data. You will be filtering the report on data items that do not actually display in the report, so you must add the data items to the query the list report is based on.

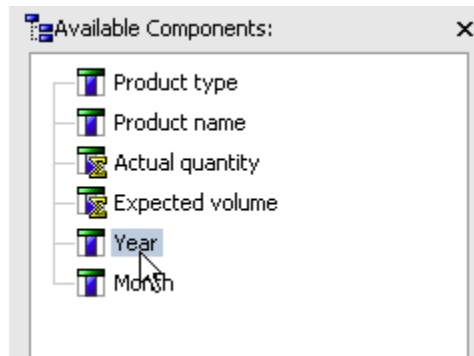
- In the View menu, click Queries, and then double-click the Query1 icon.
- In the Insertable Objects pane, expand the Product forecasts query subject.
- Drag the data items Year and Month to the Data Items section of the query.
- Hover the mouse button over the Page Explorer control, and then click Page1.



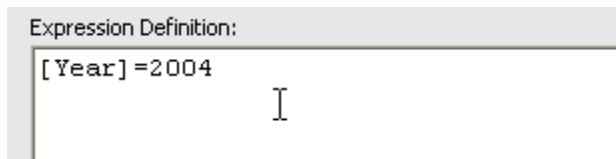
9. Click the Filter button on the toolbar, and then click the Add button to add a filter:



10. In the Detail Filter dialog box, in the Available Components pane, click the Data Items tab (near the bottom left) to display the items available in the query:



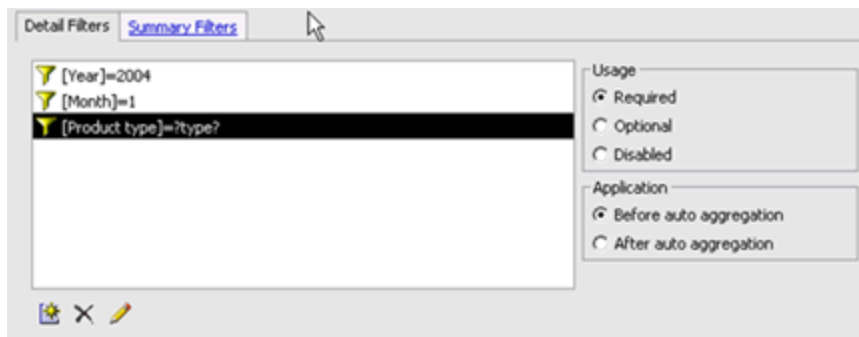
11. Double-click Year to add it to the expression, then type =2004 to the right of [Year] in the expression. Your filter definition should look like this:



12. Repeat the preceding steps to add the following additional filters:

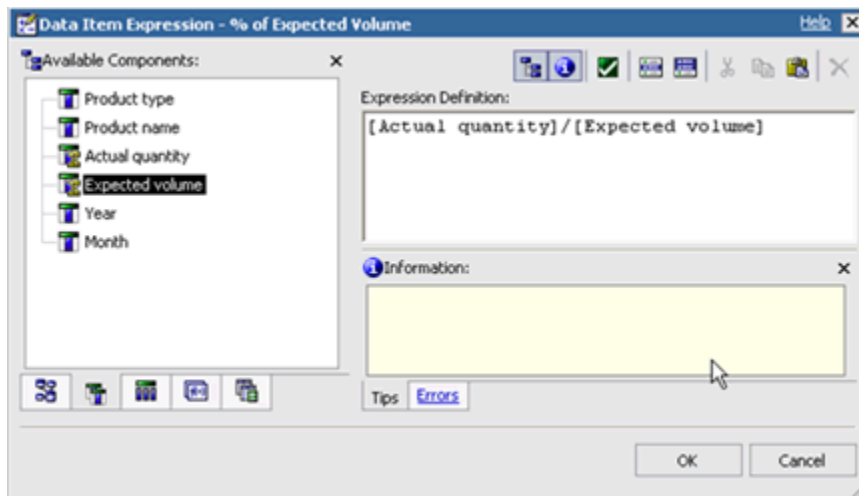
```
[Month] = 1  
[Product Type] = ?type?
```

Your filters should look like this:



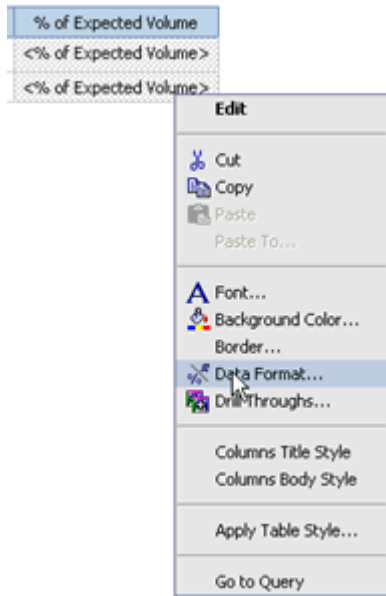
Next, you will create a calculation that displays Actual quantity as a percentage of the Expected volume.

13. In the Insertable Object pane, click the Toolbox tab, and drag a new Query Calculation to the right of the right-most column in the list.
14. Type % of Expected Volume in the Name box.
15. In the Data Item Expression dialog box, Available Components pane, click the Data Items tab and create the following expression:  
[Actual quantity]/[Expected volume]



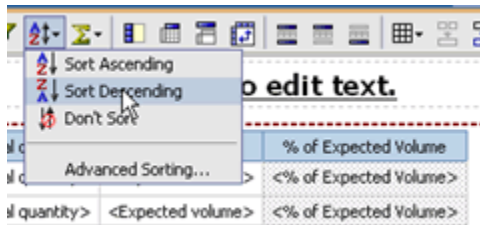
16. Click OK.

17. Right-click the new data item, and then click Data Format.



18. Format the item as a percent, and click OK.

19. With the % of Expected Volume calculation still selected, click the Sort button on the toolbar, and click Sort Descending:



20. Run your report. When prompted for a Product Type, select Eyewear. The results should look like this:

Product type	Product name	Actual quantity	Expected volume	% of Expected Volume
Eyewear	Polar Wave	118	79	149%
	Polar Ice	32	24	133%
	Polar Sports	44	35	126%
	Polar Sun	508	483	105%
	Polar Extreme	124	141	88%

Close the Report Viewer.

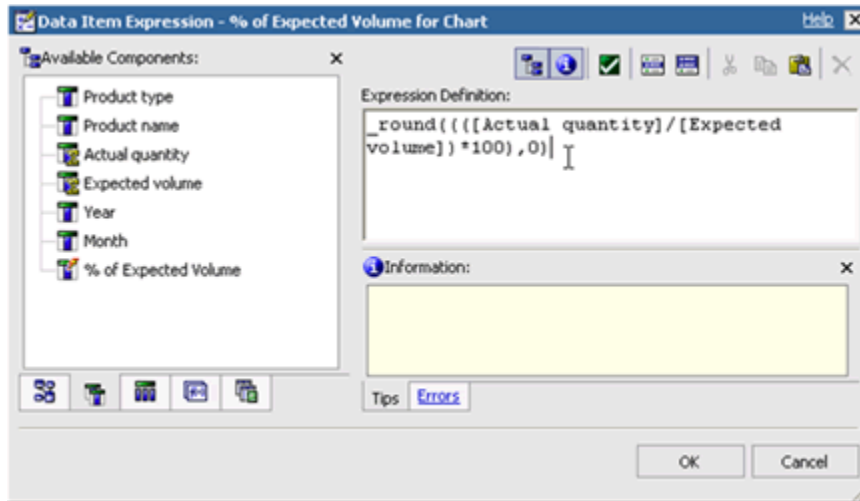
Next you will create a second % calculation to use in the creation of the inline chart.

21. Drag a second Query Calculation to your list report, to the right of the % of Expected Volume item:

Product type	Product name	Actual quantity	Expected volume	% of Expected Volume
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>

22. Type % of Expected Volume for Chart as the name, and create the following expression:

```
_round((( [Actual quantity] / [Expected volume] ) * 100), 0)
```



23. Click OK.

## Inserting the Code into the Report

Next, you will add the necessary HTML items to the report to incorporate the JavaScript that displays the bar chart.

1. Click the Lock button on the toolbar to unlock the report objects.



2. Select the data item only in the % of Expected Volume for Chart column. Ensure that the selected item looks like this:



And *not* like this:

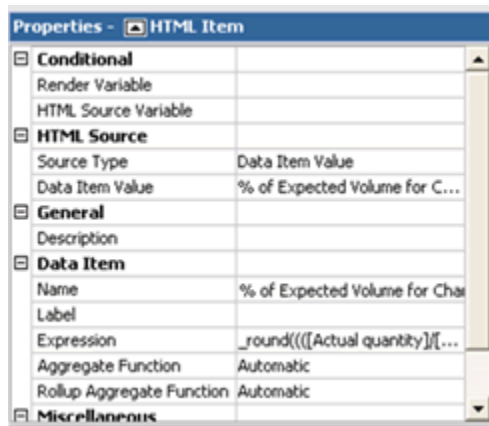


3. Press the Delete key to remove the data item.
4. From Insertable Objects pane, click the Toolbox tab, and drag an HTML Item to the % of Expected Volume for Chart column.
5. Double-click the HTML Item you just added, and type the following code:

```
<script>
  barLen=100*(parseInt(
```

6. Drag a second HTML Item to the column, directly to the right of first HTML item.
7. Click the item you just added, and in the Properties pane, set the following properties:

Source type property: Data Item Value  
Data Item value property to the final calculated data item (% of Expected Volume for Chart).



8. Drag a third HTML Item to the same column to the right of the second HTML Item, and assign it the remaining code:






```
)/100)
  myBar='<div style="background-color:red; width:'+barLen+';
height:10"></div>'
  document.write(myBar)
</script>
```

Your report should now look like this:

Product type	Product name	Actual quantity	Expected volume	% of Expected Volume	% of Expected Volume for Chart
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >
<Product type>	<Product name>	<Actual quantity>	<Expected volume>	<% of Expected Volume>	<HTML Item > <HTML Item > <HTML Item >

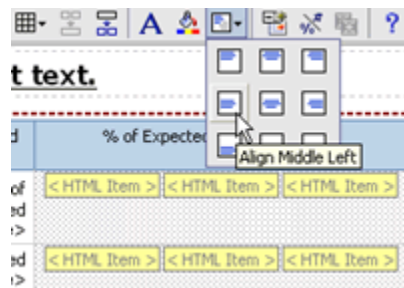
- Now run your report. When prompted for a Product Type, select Eyewear, and then click OK.

In the Report Viewer, you'll see the following:

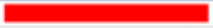



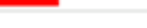
Product type	Product name	Actual quantity	Expected volume	% of Expected Volume	% of Expected Volume for Chart
Eyewear	Polar Wave	118	79	149%	
	Polar Ice	32	24	133%	
	Polar Sports	44	35	126%	
	Polar Sun	508	483	105%	
	Polar Extreme	124	141	88%	

Your report is nearly finished. You must make one minor change to it to left-align the bars in your chart.

- Close the Report Viewer.
- In Report Studio, select any cell in the % of Expected Volume for Chart column, and then click the Container Alignment button on the toolbar.



- Run your report again, and this time you will see the report with bars left aligned:

Product type	Product name	Actual quantity	Expected volume	% of Expected Volume	% of Expected Volume for Chart
Eyewear	Polar Wave	118	79	149%	
	Polar Ice	32	24	133%	
	Polar Sports	44	35	126%	
	Polar Sun	508	483	105%	
	Polar Extreme	124	141	88%	

- Close the report Viewer.

## Optional Measurement Scale

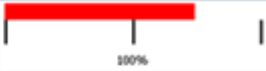
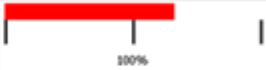
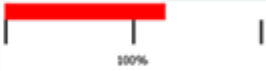
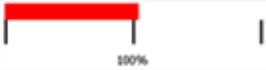

An optional piece of the chart is a measurement scale. For this example, you can use a simple table with certain cell borders displayed and others suppressed on to display "tick marks".

1. From the Toolbox, drag a Block to the right of the right-most HTML item.
2. Drag an HTML Item into the block, and assign it the following code:






```
<table width="200px" border="0" cellpadding="0" cellspacing="0">
  <tr>
    <td style="border-left:thin #000000 solid; border-right:thin #000000 solid;">
      
    </td>
    <td style="border-right:thin #000000 solid;" >
      
    </td>
  </tr>
  <tr>
    <td colspan="2" align="center">
      <font size="-2" >100%</font>
    </td>
  </tr>
</table>
```

You can modify this code to display additional markers and inserted either into the column head or in the column rows depending how you want the final display to look.





3. Run your report again, and it will look like this:

Product type	Product name	Actual quantity	Expected volume	% of Expected Volume	% of Expected Volume for Chart
Eyewear	Polar Wave	118	79	149%	
	Polar Ice	32	24	133%	
	Polar Sports	44	35	126%	
	Polar Sun	508	483	105%	
	Polar Extreme	124	141	88%	

The exact look of the report is up to you. If you modify the borders and headings for the final 2 columns in the report, you can achieve a look like this:

Product type	Product name	Actual quantity	Expected volume	Percentage of Expected Volume
Eyewear	Polar Wave	118	79	149% 
	Polar Ice	32	24	133% 
	Polar Sports	44	35	126% 
	Polar Sun	508	483	105% 
	Polar Extreme	124	141	88% 

Or...

Product type	Product name	Actual quantity	Expected volume	Percentage of Expected Volume
Eyewear	Polar Wave	118	79	149% 
	Polar Ice	32	24	133% 
	Polar Sports	44	35	126% 
	Polar Sun	508	483	105% 
	Polar Extreme	124	141	88% 