
Title: Db2 Web Query for i Education Series: Module 2 – Take a Test Drive

Assumptions: You have installed Db2 Web Query using our “EZ-Install” folder

Pre-Reqs: Module 1 – Enabling users to work with Db2 Web Query

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TEST DRIVE Db2 Web Query

This hands-on lab is based on having installed the latest version of Db2 Web Query with the “EZ-Install” package. This package includes all the Db2 Web Query software and pre-built sample reports and utilities, including:

- Db2 Web Query Auditing reports – for example, see who is running the longest or most reports
- Sample reports for the Systems Administrator – for example, track near real time utilization across multiple LPARs/Servers.
- Ready to run Tutorials – learn how to build reports with the InfoAssist authoring tool.
- Discover information about your current Query/400 environment with the included Query/400 Discovery tool and sample reports built over the output files that the tool creates.

For information on EZ-Install and how to request it, check out this blog entry at Ibm.biz/db2wqezinstall-info. Or you can always send an email to the IBM Db2 Web Query team at QU2@us.ibm.com

PRE REQS: You should have completed Module 1

1 Getting to Know the BI Portal

1.1 Signing into the BI Portal

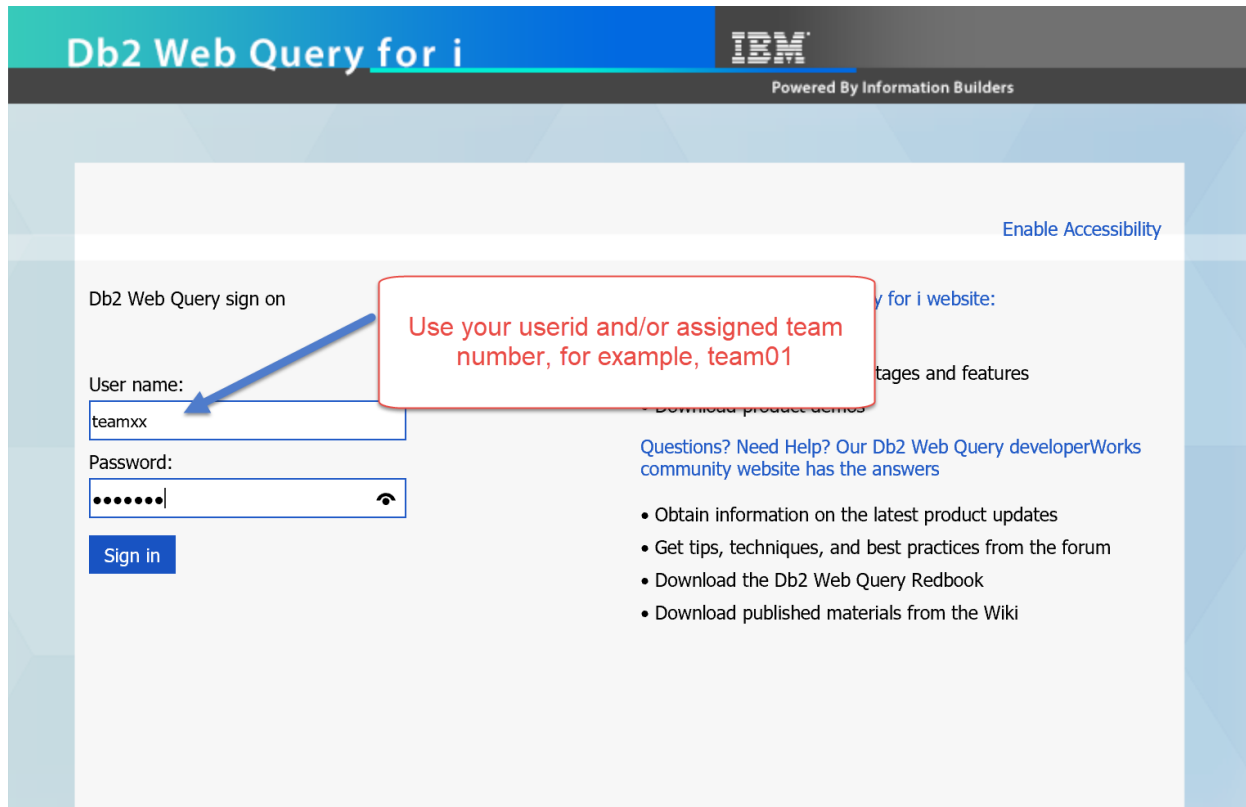
To work with Db2 Web Query all you need is a browser. The following screens and instructions depict starting from a browser window.

Bring up Internet Explorer (or whatever browser you’re using)

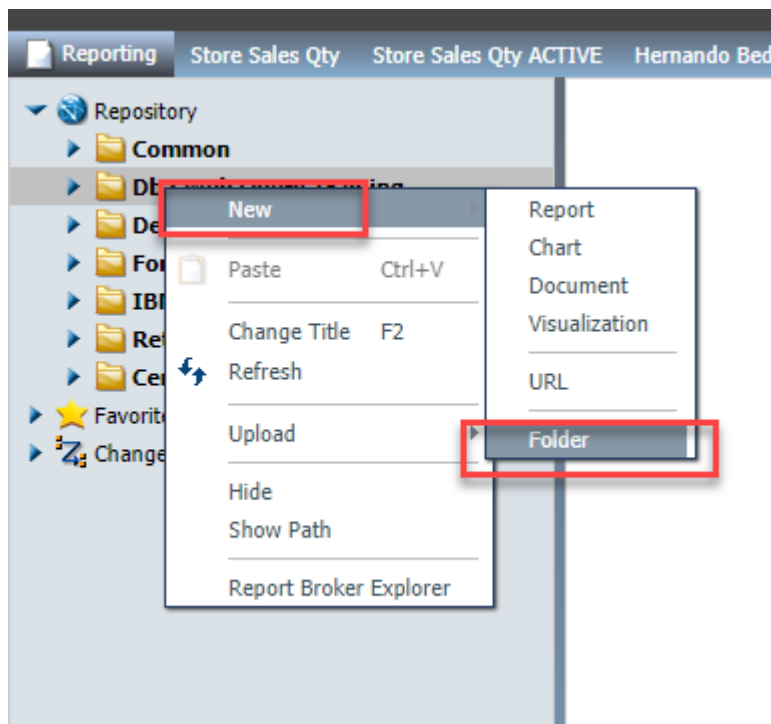
Go to <http://your.ip.address:12331/webquery>

Sign on as TEAMxx (or your own user id that was set up for you)

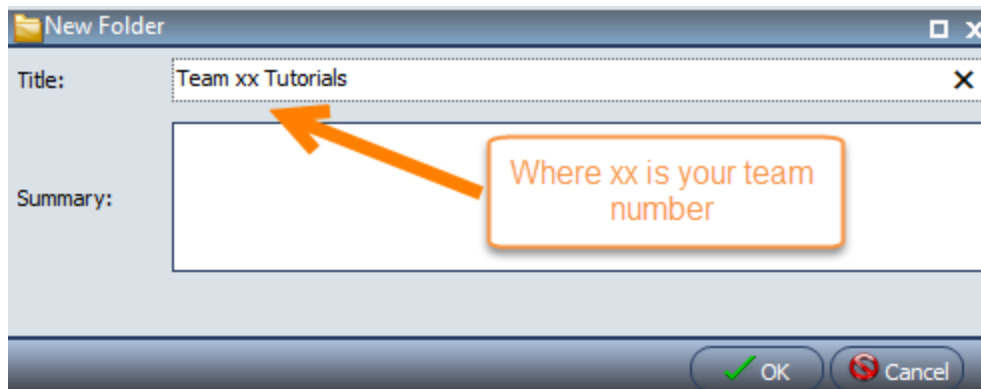
This IBM i user profile has already been registered as a licensed Db2 Web Query user and has development access to the top-level folder “Db2 Web Query Training.”



Right-click on the Db2 Web Query Training top-level folder and select **New→Folder**.



Name the new folder **Team xx Tutorials** where xx is your team number. This is where you will store your work. We'll get back to that later.

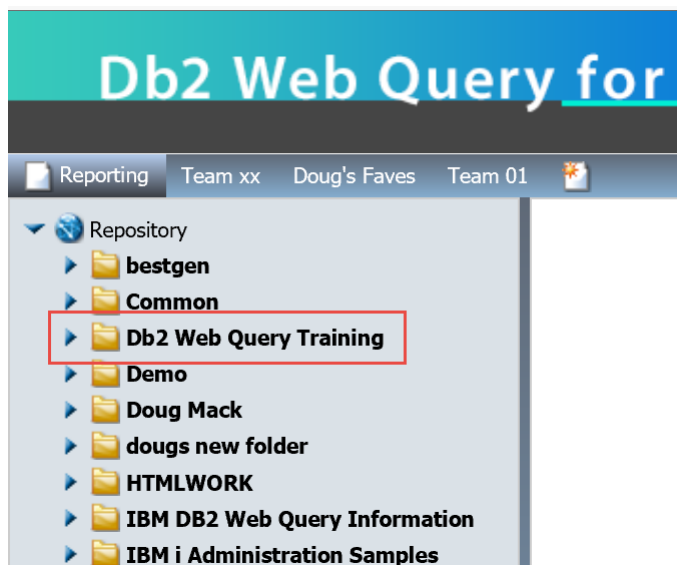


Click **OK** to create the folder you will work with during this lab.

1.2 Overview of the BI Portal

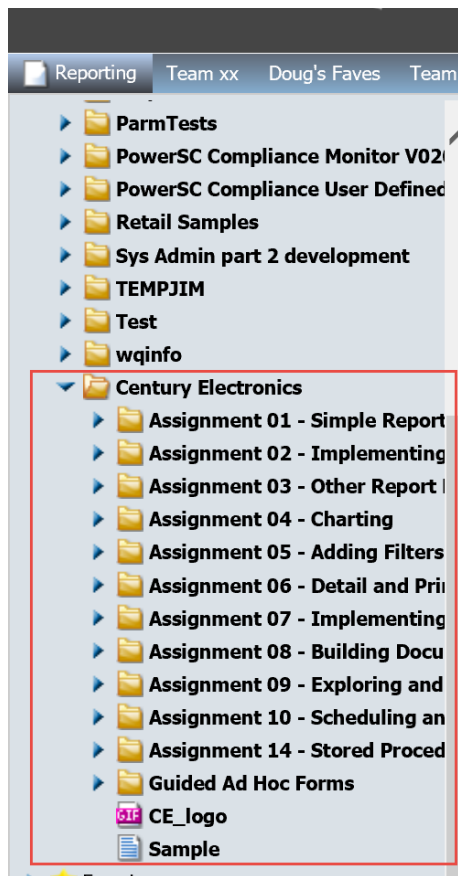
The BI Portal is a standard interface into Db2 Web Query. There are actually other interfaces – Excel, for instance, or you could build your own application and embed Db2 Web Query reports within those. There is also a mobile app that could be your sole interface into working with Db2 Web Query reports. For now, let's look at the BI Portal.

Note the tree structure on the left hand side. Under the "Repository" icon are several folders. These are call "Top-level Folders" and are where you store reporting objects.



1.2.1 Working with Reporting Objects

There are usually 2 or 3 ways to achieve the same action within Db2 Web Query. Either double click on "Century Electronics" or click on the arrow to the left of that top-level folder.

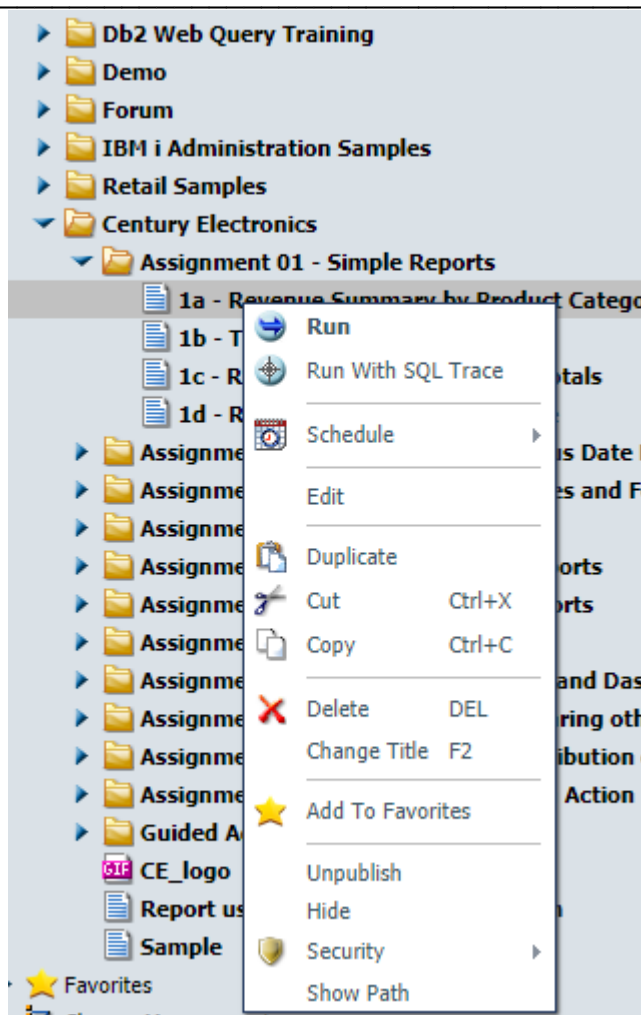


You should see all the completed tutorial report subfolders.

Db2 Web Query authorities can also be set at a top-level folder level. If you didn't have authorization to "Century Electronics" you would not have even see it in your tree structure. The instructor has already provided you with access to this folder.

To work with objects in the tree, you can often right click and select the operation of desire from the popup menu, or sometimes just double click.

Double Click on Assignment 01 sub-folder and then **right click on the 1d report**. Note the operations you can perform on that report, as well as the report icon .



A report object can be run, can be edited (if authorized), can be scheduled to run in the background (if authorized), can be sync'd with mobile devices by moving to the "add to Mobile Favorites" option, and there is also the concept of publishing a report so others with access to that top-level folder can operate on that report.

Report objects are represented by a specific icon and consist of Reports , Charts/graphs , "schedules" (that describes the scheduling attributes of a report) , dashboards , HTML front ends , distribution lists , and uploaded objects (e.g., images or SQL scripts) .

In this case, you have been provided with a lot of authority!

For now, either **double click on that 1d report** or **right click and select run**. The report runs in your current BI portal window. Note you can make your tree window or the report window larger or smaller by moving the dividing line that separates them by holding down the mouse on the line and dragging it to the left or right.

Reporting Team xx Doug's Faves

- wqinfo
 - Century Electronics
 - Assignment 01 - Simple Reports
 - 1a - Revenue Summary by Product Category
 - 1b - Top 10 Products by Margin
 - 1c - Revenue Summary with Subtotal
 - 1d - Revenue and Returns by Type
 - Assignment 02 - Implementing Various Filters
 - 2a - Monthly Orders by Country, Region
 - 2a - Weekly Orders by Country, Region
 - 2c - Seasonal Orders by Country, Region
 - Assignment 03 - Other Report Features and Options
 - Assignment 04 - Charting
 - 4a - Pie Chart : Revenue & Gross Profit
 - 4b - Bar Chart : OTD by Product Type
 - 4c - Vertical Stacked Area : Orders by Product Type

Product Type	Order Year			
	2017		2018	
	Returns	Revenue	Returns	Revenue
Audio	41,351	\$190,920,684.00	46,604	\$191,762,637.00
Camcorders	16,948	\$216,517,006.00	20,166	\$228,014,035.00
Cameras	18,624	\$90,761,413.00	20,356	\$93,342,254.00
Office	12,546	\$14,658,888.00	14,153	\$15,586,797.00
Video	19,701	\$253,444,717.00	22,189	\$266,915,488.00
TOTAL	109,170	\$766,302,708.00	123,468	\$795,621,211.00

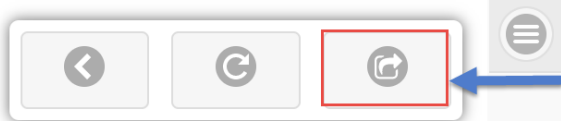
This simple report is a classic cross-tab report with data for multiple years, and totals. The background colors are set by a Stylesheet. There are many stylesheets that come with the product that you can choose from for different color schemes, and you can also edit a stylesheet to, for instance, add in a company logo to your reports, or change the color options.

For now, let's run a chart. Open up the "Assignment 04" folder and note that the icon is slightly different:  **4e - Products Bubble Chart : Quant**. Run the 4e -Products Bubble Chart report (**double click** or **right click and run**).

A prompt control is available to choose Product Type. This prompt screen was automatically built by Db2 Web Query when a parameter was specified as a filter in the report. The list box can be used to select that parameter (a.k.a., selection criteria).

You can also build your own user interface for reports and charts/graphs. Perhaps you wanted to use a radio button or free form text input control for selecting the parameter. You can do that by front ending the report with something called a guided ad-hoc form. That is covered in the self-guided tutorials available from ibm.biz/db2wqezinstall.

For now, leave "NO Selection" highlighted and **click on the RUN button**.



Filter Values

Product Type:

All Values

1. Specify values for all parameters.

2. Select the run button to submit the request.



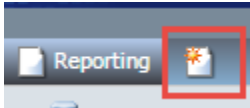
There are over 100 charts and graphs for you to choose from in Db2 Web Query to visualize data. This one is a bubble chart. As an aside, just about any report or chart/graph can be placed onto a dashboard, and there are several types of dashboards.

Scroll down within the chart window. You'll see that you have a chart represented for every product type. A bubble represents each product category for that product type. The location of the bubble reflects an intersection of quantity and revenue, and the size of the bubble reflects the value of the field "margin."

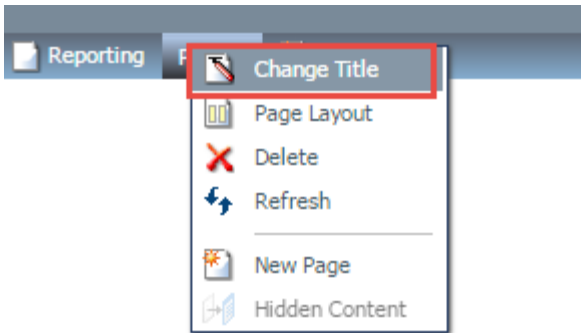
1.2.2 How to Create a Personal BI Portal Dashboard

The BI portal allows you to create a simple, personal dashboard (only the user signed on has that dashboard – although anyone with access to those reports could do the same for their own personal dashboard).

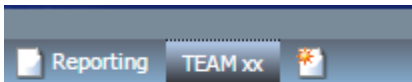
Click on the new page icon next to the reporting tab:



Right click on the page that now says Page 1:



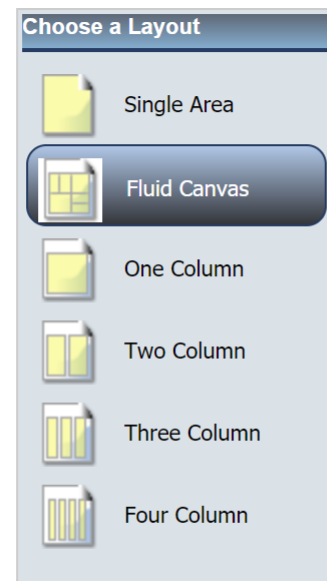
Select Change Title, type in "Teamxx" (where xx is your team number) and **hit enter**:



Right click on your Team xx tab and choose Page Layout and then click on FLUID CANVAS:

Now let's add a couple reports to your personal dashboard. A scenario for an end user to want to use a personal dashboard is just an easy way to have their "first thing in the morning I want to see..." reports pop up immediately.

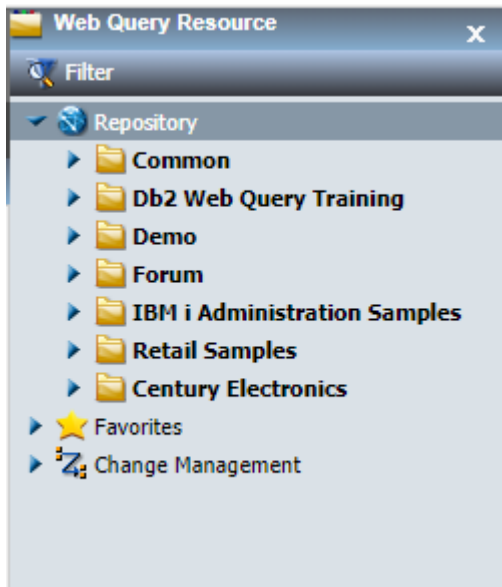
Note that a resource window has appeared on the right hand side. You'll use that to drag those two favorite reports onto your dashboard.



In the resource tree on the right hand side, expand the Century Electronics folder by **double clicking** on it (if not already expanded). Also **open up the "Assignment 01..." sub-folder**.

Select report 1d and **drag** it onto the left hand side of your BI Portal layout window. Subsequently, **select report 1b** and **drag** that to the right of the first report. Note how that part of the screen shows in blue. Fluid Canvas means you can place that report there, but move it around if you'd like to. Drop report 1B onto the canvas

Close the RESOURCE window on the far right by **clicking on the x** (BE SURE TO CLICK ON THE x that is on that RESOURCE window and not the x that would close your entire portal session)!



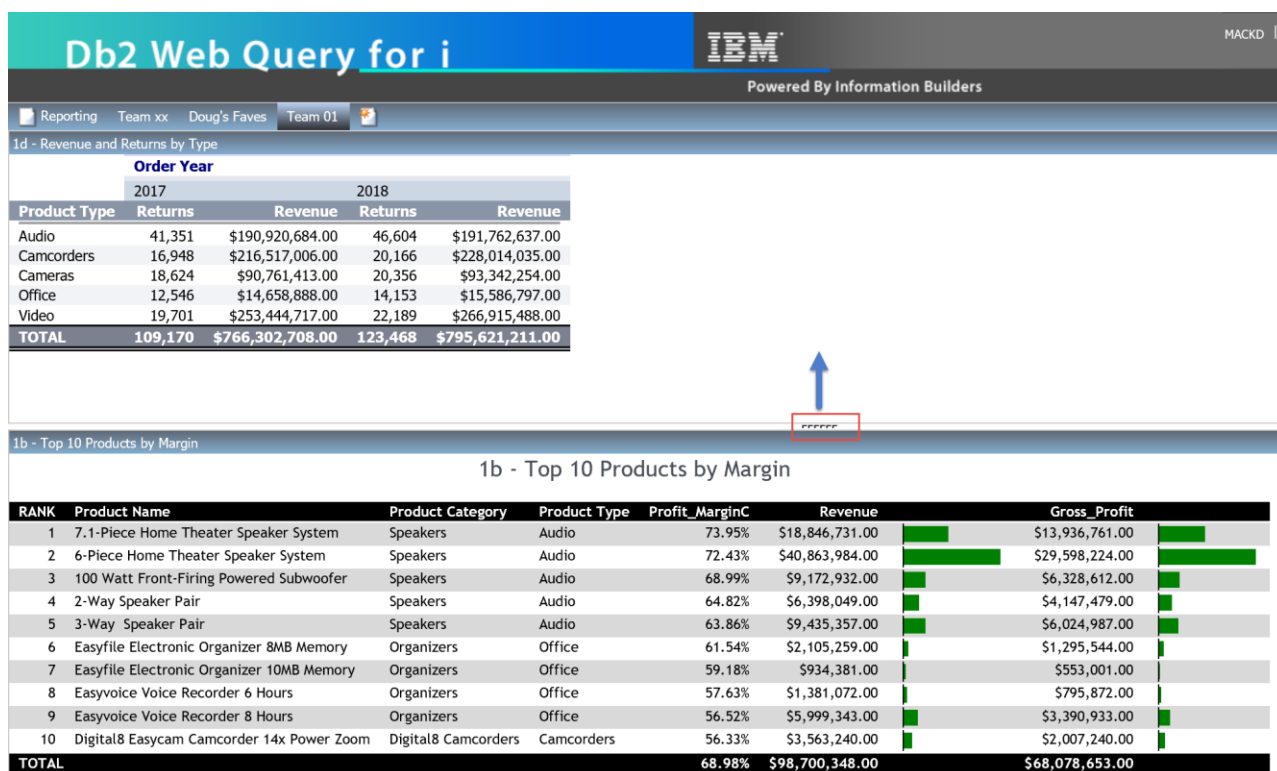
This opens up some more space to be able to view each report. Drag the Top 10 Products by Margin report to underneath the Revenue Summary report by grabbing the very top title line and dragging with mouse. Note areas that appear in blue to help you drop it where you want it.

The screenshot shows the IBM Db2 Web Query for i interface. The top bar includes the IBM logo and navigation links like 'MACKD | Sign Out | Resources | Administration | Tools | Help'. Below the header, there's a 'Reporting' tab and a 'Team xx' dropdown. The main area displays two reports. The left report, '1d - Revenue and Returns by Type', shows a table with columns for Product Type, Returns, and Revenue for the years 2017 and 2018. The right report, '1b - Top 10 Products by Margin', shows a table with columns for Rank, Product Name, Product Category, Product Type, Profit_MarginC, Revenue, and Gross. A red arrow points from the title '1b - Top 10 Products by Margin' to a blue area on the canvas, indicating where to drop the report.

2017		2018		
Product Type	Returns	Revenue	Returns	Revenue
Audio	41,351	\$190,920,684.00	46,604	\$191,762,637.00
Camcorders	16,948	\$216,517,006.00	20,166	\$228,014,035.00
Cameras	18,624	\$90,761,413.00	20,356	\$93,342,254.00
Office	12,546	\$14,658,888.00	14,153	\$15,586,797.00
Video	19,701	\$253,444,717.00	22,189	\$266,915,488.00
TOTAL	109,170	\$766,302,708.00	123,468	\$795,621,211.00

RANK	Product Name	Product Category	Product Type	Profit_MarginC	Revenue	Gross
1	7.1-Piece Home Theater Speaker System	Speakers	Audio	73.95%	\$18,846,731.00	\$13,936,
2	6-Piece Home Theater Speaker System	Speakers	Audio	72.43%	\$40,863,984.00	\$29,598,
3	100 Watt Front-Firing Powered Subwoofer	Speakers	Audio	68.99%	\$9,172,932.00	\$6,328,
4	2-Way Speaker Pair	Speakers	Audio	64.82%	\$6,398,049.00	\$4,147,
5	3-Way Speaker Pair	Speakers	Audio	63.86%	\$9,435,357.00	\$6,024,
6	Easyfile Electronic Organizer 8MB Memory	Organizers	Office	61.54%	\$2,105,259.00	\$1,295,
7	Easyfile Electronic Organizer 10MB	Organizers	Office	59.18%	\$934,381.00	\$553,

You can grab the bottom chart and move it up a bit if you'd like to eliminate the space between the reports.



Right click on the TEAM xx tab and select REFRESH and you'll see that the reports are re-run.

Db2 Web Query for i

Reporting Team xx Doug's Faves Team 01

1d - Revenue and Returns by Type

Order Year
2017

Product Type	Returns	Revenue	Product Type	Revenue
Audio	41,351	\$190,920,641.00	Audio	\$191,762,637.00
Camcorders	16,948	\$216,517,006.00	Camcorders	\$228,014,035.00
Cameras	18,624	\$90,761,413.00	Cameras	\$93,342,254.00
Office	12,546	\$14,658,888.00	Office	\$15,586,797.00
Video	19,701	\$253,444,717.00	Video	\$266,915,488.00
TOTAL	109,170	\$766,302,708.00	TOTAL	\$795,621,211.00

1b - Top 10 Products by Margin

RANK	Product Name	Product Category	Product Type	Product Margin
1	Audio	Audio	Audio	10.00%
2	Camcorders	Camcorders	Camcorders	10.00%
3	Cameras	Cameras	Cameras	10.00%
4	Office	Office	Office	10.00%
5	Video	Video	Video	10.00%
6	Audio	Audio	Audio	10.00%
7	Camcorders	Camcorders	Camcorders	10.00%
8	Cameras	Cameras	Cameras	10.00%
9	Office	Office	Office	10.00%
10	Video	Video	Video	10.00%

1b - Top 10 Products by Margin

Sign out by **clicking on the Sign Out link** in the upper right hand corner (while you're still on the BI Dashboard page):



Sign back in again and note how you come into the dashboard, and the reports are run at that time. You can create many pages in a similar fashion to what we just did.

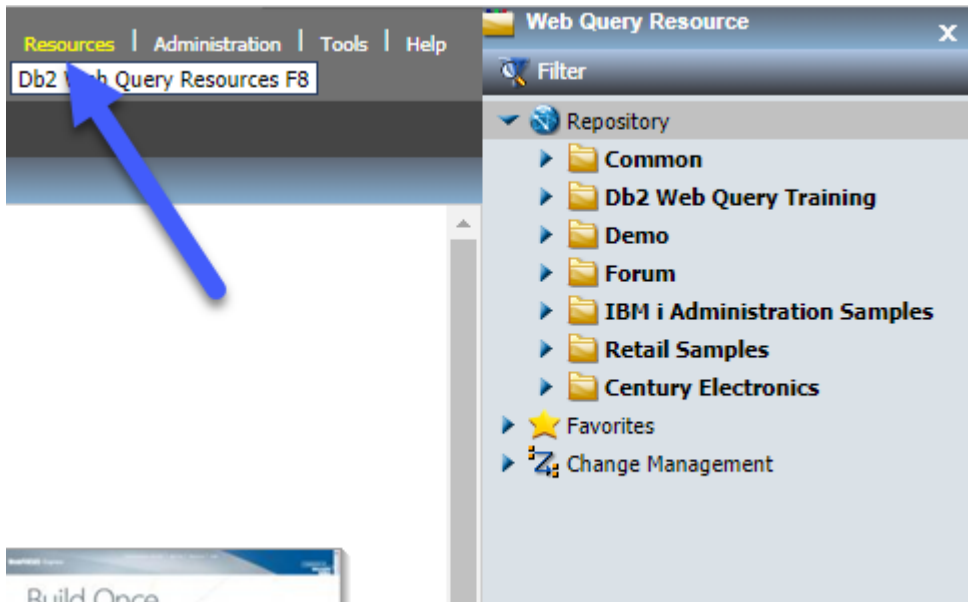
There are many different dashboard capabilities. This is really the simplest form of a dashboard and is really a set of favorite reports on a single view.

For now, let's go back to the REPORTING tab by clicking on that in the upper left hand corner of the BI portal.



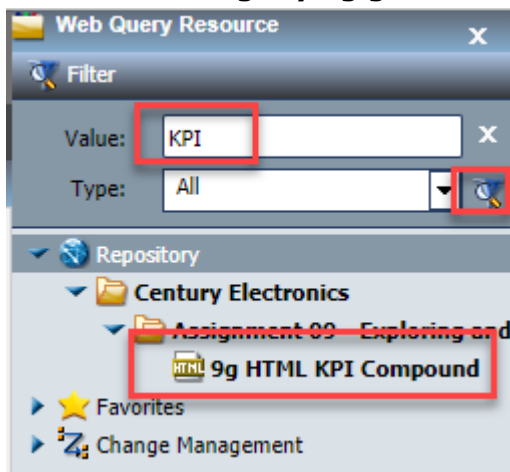
1.2.3 Using the Resources Window to Search for a Report

In the upper right hand corner of the BI Portal you'll see some hot links. **Click on the *RESOURCES*** link:



This opens up a similar tree structure on the right hand side of the BI portal. It might seem subtle, but two differences in running reports under RESOURCES vs the tree on the left hand side are (1) the ability to search for a report using that "Filter" area, and (2) when you run a report it (by default) opens in a new window.

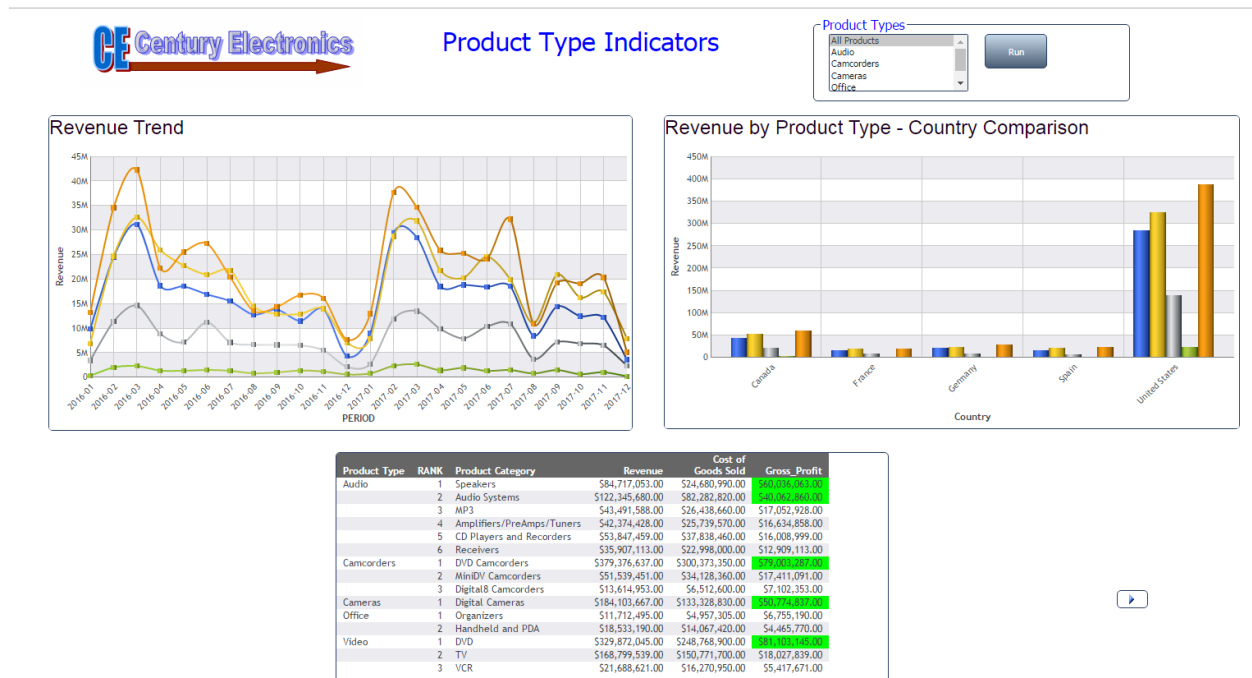
Click on the *Filter icon* button to open up the input box. **Enter *KPI*** in the Filter On text entry area (leave "All" in the drop down box but note you can search for certain types of documents). **Click on the magnifying glass icon** next to the Type drop down list box.



The search returned the "Century Electronics" and "Retail Samples" folders. **Double click** on "Century Electronics" and then the "Assignment 09..." folder you'll see a report with KPI in the title.

Double Click on that 9g report.

This dashboard will be seen in a new browser window. You may want to MAXIMIZE that window to see most of the dashboard.



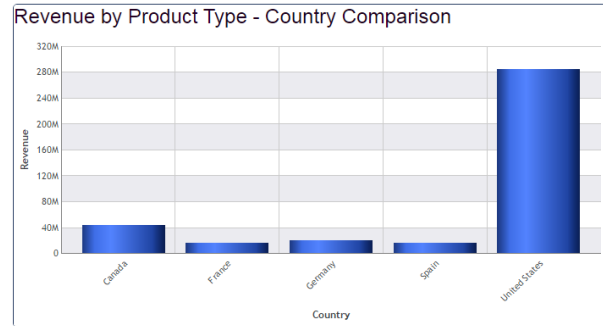
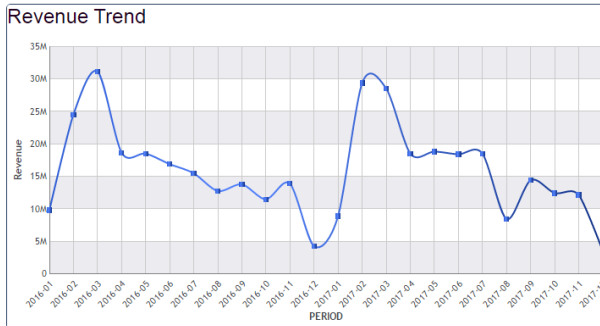
You'll learn more about building dashboards like this as you go, but just know that you can build highly customizable front ends and dashboards for your user community such as this, which combines a company logo, three reports that are all associated with a user specified parameter, shown here as a list box for the parameter "Product Type."

Try selecting a different Product Type, like "Audio", and hit the run button. See how all 3 charts are passed that parameter and altered to reflect that choice.

Product Types

All Products
Audio
Camcorders
Cameras
Office

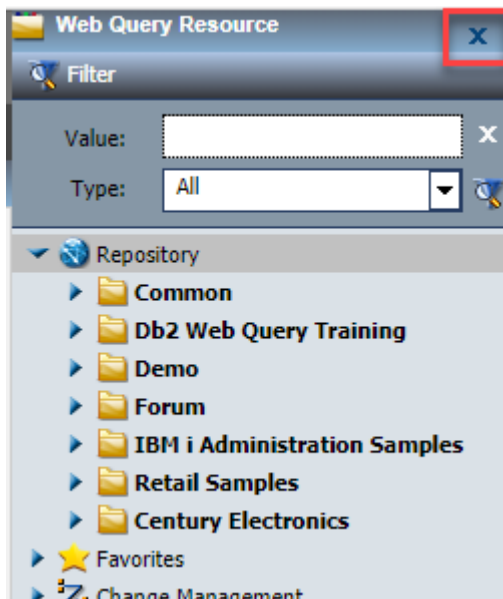
Run



Product Type	RANK	Product Category	Revenue	Cost of Goods Sold	Gross Profit
Audio	1	Speakers	\$84,717,053.00	\$24,680,990.00	\$60,036,063.00
	2	Audio Systems	\$122,345,680.00	\$82,262,820.00	\$40,082,860.00
	3	MP3	\$43,491,588.00	\$26,438,660.00	\$17,052,928.00
	4	Amplifiers/PreAmps/Tuners	\$42,374,428.00	\$25,739,570.00	\$16,634,858.00
	5	CD Players and Recorders	\$53,847,459.00	\$37,838,460.00	\$16,008,999.00
	6	Receivers	\$35,907,113.00	\$22,998,000.00	\$12,909,113.00

Again, if you pursue the self-guided tutorials in the IBM Redbook, you'll actually build this very dashboard!

Close the dashboard window and go back to your main BI Portal screen. You can also close the Resources tree on the right hand side by **clicking** on the X.



2 Sample Business Reports

2.1 Century Electronics

EZ-Install includes a folder that contains completed versions of the reports in the older Redbook tutorials. These reports are nice to get a feel for a variety of different looks and functions of reports and dashboards. A set of tutorials covering some of the Central Electronics reports are contained in the EZ-Install box location, or you may find them in the older Redbook, but just a word of caution – if you find the older Redbook (Version 2.1) just note that not all the screen shots will match up with the current level of code.

When you install EZ-Install, the Century Electronics folder is not, by default, imported into the BI Portal tree, so you may not see it until you've imported the change management package containing these reports. For this lab, the instructor has imported those reports and they are all placed into subfolders that start with "Assignment...." We've already been using some of these.

Let's take a look at a few more examples.

2.1.1 Leveraging Date Attributes

Most reporting requirements involve a date aspect. For example, a report showing data within a date range, or certain fields that represent a date orientation, such as "TODAY-30." Date processing in Db2 Web Query is very powerful, and again, there are probably 2-3 different ways you can implement these date functions. In addition, many customers have their dates stored in fields that are not defined as true ISO date data types, but data types like packed 8 decimal. This creates challenges for the end user to have to figure out how to get "today – 30" onto their report when the underlying field is a decimal field!

Db2 Web Query is a metadata driven BI tool. The metadata layer is very powerful for dealing with data transformations that provide many benefits:

- Shields the report author from having to know the underlying data structures
- Defines calculated fields, or field formats, ONCE – versus having to do this in every report
- Can be easily refreshed should an underlying database change be made, eliminating report maintenance
- Create a "single version of the truth" repository so everyone is working off the same definition of virtual fields no matter

Date processing is one area where metadata becomes very handy. Db2 Web Query EZ-Install provides both a sample date dimension table (DATE_CONV in library QWQCENT) as well as a utility to create a date table to match your desired date range or extend with other date attribute fields.

Within metadata, the date dimension table can be joined with the legacy file containing your packed 8 (or whatever format) date fields, and it becomes very simple to add all kinds of date attributes (day of week, year/qtr/month, fiscal period, etc.) to your report. You can build filters into reports to exclude holidays or weekends, and much more.

EZ-Install has set up the metadata over the DATE_CONV sample date dimension table in QWQCENT library. Below is a representation of joining the file/table containing your legacy data with the DATE_CONV file.

ORDDTL legacy file →

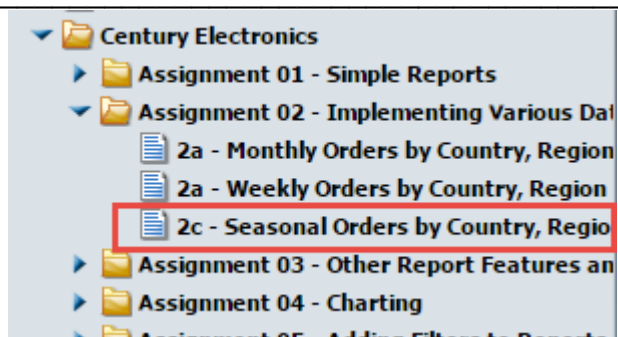
ORDER	CUST	ORDDAT	SHDPAT	SHPVIA	ORDSTS	ORDAMT	TOTLIN
1715810	H4541	2152005	6302005	UPS	1	933346.39	2
1563685	R1948	2202005	8042005	Mule Train	2	0.00	0
7195900	Q7881	2232005	5022005	Pick Up	2	0.00	0
8854635	S1511	2232005	9102005	Train	1	118086.88	2
6694902	X8863	2242005	7192005	Camel	2	0.00	0
8054679	F4327	2272005	9112005	Pneumatic Tube	2	0.00	0
527879	C3233	2282005	5022005	US Mail	1	897524.71	3
4011038	G1496	2282005	10162005	Train	1	865114.60	2
5417918	J3825	2282005	10022005	FedEx	1	84608.50	2
9456994	N2796	2282005	7012005	Train	2	0.00	0
3526155	Q7881	3012005	8062005	UPS	1	194660.67	2

Date dimension table ↓

Date	MDYY	Year	Month	Day	Month Name	Day of Week	Day Of Year	Day Name	Weekend Flag	Season	Fiscal Year	Fiscal Qtr	Week Starting Date	Same Day Last Year
2005/02/15	2152005	2005	2	15	February	2	46	Tuesday	N	Winter	2005	2	2005/02/12	2004/02/17
2005/02/16	2162005	2005	2	16	February	3	47	Wednesday	N	Winter	2005	2	2005/02/12	2004/02/18
2005/02/17	2172005	2005	2	17	February	4	48	Thursday	N	Winter	2005	2	2005/02/12	2004/02/19
2005/02/18	2182005	2005	2	18	February	5	49	Friday	N	Winter	2005	2	2005/02/12	2004/02/20
2005/02/19	2192005	2005	2	19	February	6	50	Saturday	Y	Winter	2005	2	2005/02/19	2004/02/21
2005/02/20	2202005	2005	2	20	February	7	51	Sunday	Y	Winter	2005	2	2005/02/19	2004/02/22
2005/02/21	2212005	2005	2	21	February	1	52	Monday	N	Winter	2005	2	2005/02/19	2004/02/23
2005/02/22	2222005	2005	2	22	February	2	53	Tuesday	N	Winter	2005	2	2005/02/19	2004/02/24
2005/02/23	2232005	2005	2	23	February	3	54	Wednesday	N	Winter	2005	2	2005/02/19	2004/02/25
2005/02/24	2242005	2005	2	24	February	4	55	Thursday	N	Winter	2005	2	2005/02/19	2004/02/26
2005/02/25	2252005	2005	2	25	February	5	56	Friday	N	Winter	2005	2	2005/02/19	2004/02/27
2005/02/26	2262005	2005	2	26	February	6	57	Saturday	Y	Winter	2005	2	2005/02/26	2004/02/28
2005/02/27	2272005	2005	2	27	February	7	58	Sunday	Y	Winter	2005	2	2005/02/26	2004/02/29
2005/02/28	2282005	2005	2	28	February	1	59	Monday	N	Winter	2005	2	2005/02/26	2004/03/01

Refer to the chapter on Sample Systems Administration reports to learn about the CREATE_DATE_TABLE utility to build your own!

Open up the Century Electronics and Assignment 02 sub-folder and double click on report 2c. In this report we've added a date attribute that reflects the season of the year that the date falls into, and then summarized the information.



This report includes SEASON. It actually shows the column header as DC_SEASON which is not necessarily what you should do for an end user. I.e., the end user doesn't care that your DC_ prefix is done for you to know that this came from the Data Dimension (or Date Conversion) table. So it would probably make more sense to change that to just SEASON. You can either do that in the metadata (one time) which would be the best practice, or just change the field TITLE in the report.

<i>Seasonal Orders by Country, Region, Store</i>				Number Of Orders	
				2016	2017
Country	Region	Store Name	DC_SEASON		
Canada	Eastern Canada	ABC Electronics	Autumn	144	143
			Spring	312	312
			Summer	182	194
			Winter	206	206
		Planete Digitale	Autumn	10	10
			Spring	20	20
			Summer	10	5
			Winter	5	5
	Western Canada	Winnipeg Audio	Spring	31	26
			Summer	11	5
			Winter	31	31
			Autumn	40	45
France	Ile de France	Home Audio Outfitters	Spring	35	35
			Summer	45	32
			Winter	63	63
			Autumn	29	26
	Nord-Pas-De-Calais	Images et Son	Spring	22	22
			Summer	41	41
			Winter	6	6
			Autumn	5	11
	Pays de la Loire	Videomarche	Spring	22	22
			Summer	10	20
			Winter	16	16
			Autumn	11	7
	Provence - Alpes du Sud	Audio 123	Spring	28	23
			Summer	11	16
			Winter	53	43
			Autumn	25	25
		Monde Digital	Spring	49	49
			Autumn	22	22

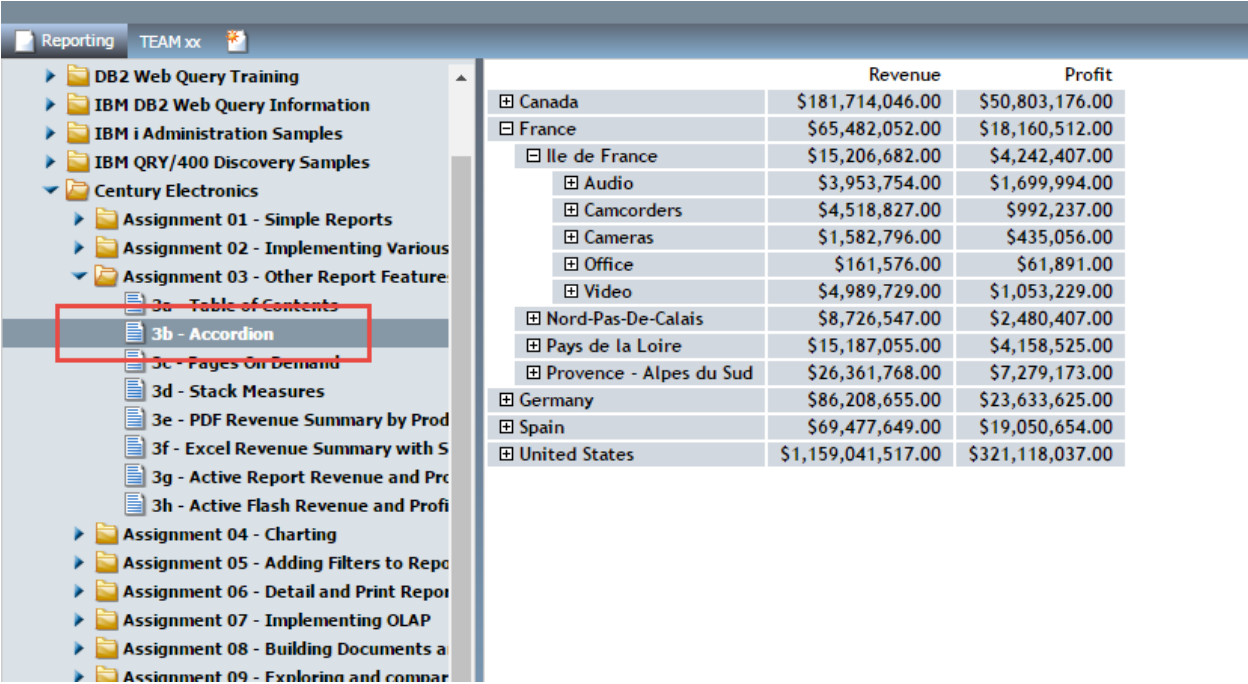
2.1.2 Other Report Features

There are any number of report features that come with the product. You can run through the many sample reports in the Century Electronics folder on your own.

For now, let's take a look at just a couple. Make sure "Assignment 03" sub folder is expanded.

Double click on report 3b – Accordion. Note that each country has a  next to it. This indicates that you can expand that selection.

Click the plus sign next to FRANCE, and then subsequently click on Ile de France.



	Revenue	Profit
Canada	\$181,714,046.00	\$50,803,176.00
France	\$65,482,052.00	\$18,160,512.00
Ile de France	\$15,206,682.00	\$4,242,407.00
Audio	\$3,953,754.00	\$1,699,994.00
Camcorders	\$4,518,827.00	\$992,237.00
Cameras	\$1,582,796.00	\$435,056.00
Office	\$161,576.00	\$61,891.00
Video	\$4,989,729.00	\$1,053,229.00
Nord-Pas-De-Calais	\$8,726,547.00	\$2,480,407.00
Pays de la Loire	\$15,187,055.00	\$4,158,525.00
Provence - Alpes du Sud	\$26,361,768.00	\$7,279,173.00
Germany	\$86,208,655.00	\$23,633,625.00
Spain	\$69,477,649.00	\$19,050,654.00
United States	\$1,159,041,517.00	\$321,118,037.00

An accordion report is an easy way to see the details that make up a summary value.

Now **click on 3c – Pages on Demand** in the tree structure on the left. This is just another feature you can easily apply to a report that provides a nice way to navigate to a page of a large report, either by selecting a specific page number, or using the search bar at the bottom. When you use the search bar, the result is the PAGE of where that result is found (this is not a filtering of records based on your search criteria – you can do that, but in a different type of report feature)!

Reporting Store Sales Qty Store Sales Qty ACTIVE Hernando Bedoya's Dashboard FORUMDEMO Dashboard Dashboard/Honduras Page 1

- Repository
 - Common
 - Db2 Web Query Training
 - Demo
 - Forum
 - IBM i Administration Samples
 - Retail Samples
 - Century Electronics
 - Assignment 01 - Simple Reports
 - Assignment 02 - Implementing Various Date Functions
 - Assignment 03 - Other Report Features and Format
 - 3a - Table of Contents
 - 3b - Accordion
 - 3c - Pages On Demand
 - 3d - Stack Measures
 - 3e - PDF Revenue Summary by Product Category
 - 3f - Excel Revenue Summary with Subtotals
 - 3g - Active Report Revenue and Profit Report
 - 3h - Active Flash Revenue and Profit Report
 - Assignment 04 - Charting
 - Assignment 05 - Adding Filters to Reports
 - Assignment 06 - Detail and Print Reports
 - Assignment 07 - Implementing OLAP
 - Assignment 08 - Building Documents and Dashboards
 - Assignment 09 - Exploring and comparing other Data Sources
 - Assignment 10 - Scheduling and Distribution of Reports
 - Assignment 14 - Stored Procedures in Action
 - Guided Ad Hoc Forms
 - CE_Logo

Country	Region	Product Type	Product Category	Product Name	Revenue	Profit
Canada	Eastern Canada	Audio	Amplifiers/PreAmps/Tuners	AM / FM Stereo Tuner	\$60,098.00	\$29,898.00
				Modular Components Series Preamp 5.1	\$528,675.00	\$91,425.00
				Power Amplifier	\$559,254.00	\$154,974.00
				PreAmp/Tuner Two	\$2,075,341.00	\$1,035,591.00
				PA4000 Stereo & Surround Power Amplifier	\$417,703.00	\$110,363.00
			Audio Systems	Home Theater Surround System	\$771,228.00	\$192,228.00
				Home Theater 5.1 System	\$8,661,667.00	\$3,028,767.00
				Home Theater 7.1 THX System	\$3,259,913.00	\$1,085,913.00
				Micro HiFi Stereo System	\$795,207.00	\$217,237.00
				Micro 5.1 System	\$386,725.00	\$76,725.00
			CD Players and Recorders	CD Changer / CD Player	\$422,278.00	\$167,638.00
				CD Recorder with 50GB Hard Disc Drive	\$1,103,419.00	\$274,819.00
				Digital CD Turntable	\$2,621,250.00	\$746,250.00
				Multichannel Super Audio CD Player	\$555,722.00	\$194,322.00
				400 Disc Super Audio CD Changer	\$160,022.00	\$35,422.00
			MP3	MP3 Digital Audio Computer	\$338,706.00	\$156,606.00
				MP3 Digital Audio Computer 10GB	\$245,106.00	\$58,206.00
				MP3 Digital Audio Computer 4GB	\$1,421,609.00	\$341,359.00
				MP3 Player	\$1,528,134.00	\$817,374.00
				MP3 Player Julebox Hard Drive	\$545,265.00	\$256,765.00
			Receivers	Audio/Video Receiver	\$351,036.00	\$174,636.00
				5.1 Channel Home Theater Receiver 100 WPC	\$114,517.00	\$57,067.00
				5.1 Channel Home Theater Receiver 150 WPC	\$211,843.00	\$90,443.00
				6.1 Channel Home Theater Receiver 100 WPC	\$1,816,847.00	\$489,297.00
				7.1 Channel THX Home Theater Receiver	\$831,575.00	\$369,075.00
				100 Watt Front-Firing Powered Subwoofer	\$900,420.00	\$621,220.00
			Speakers	2-Way Speaker Pair	\$975,498.00	\$632,358.00
				3-Way Speaker Pair	\$863,781.00	\$551,571.00
				6-Piece Home Theater Speaker System	\$3,536,736.00	\$2,561,696.00

Page 1 of 28 Search

In the Page input area, **type in page 21** and hit the page icon next to it.

Page of 28 

You just jumped to page 21. Go back to where you were by clicking on the "first page" icon.



In the search bar, **type in "West South Central"** and click on the binoculars icon.

Page 1 of 28   Search 

Country	Region	Product Type	Product Category	Product Name	Revenue	Profit
United States	West North Central	Audio	CD Players and Recorders	Multichannel Super Audio CD Player	\$541,729.00	\$189,429.00
				400 Disc Super Audio CD Changer	\$11,687.00	\$2,587.00
				MP3	\$81,468.00	\$37,668.00
				MP3 Digital Audio Computer 10GB	\$37,179.00	\$8,829.00
			Receivers	MP3 Digital Audio Computer 4GB	\$445,795.00	\$107,045.00
				MP3 Player	\$212,334.00	\$113,574.00
				MP3 Player Julebox Hard Drive	\$88,074.00	\$41,474.00
				Audio/Video Receiver	\$2,587.00	\$1,287.00
			Speakers	5.1 Channel Home Theater Receiver 100 WPC	\$26,910.00	\$13,410.00
				6.1 Channel Home Theater Receiver 100 WPC	\$30,656.00	\$8,256.00
				7.1 Channel THX Home Theater Receiver	\$45,849.00	\$20,349.00
				100 Watt Front-Firing Powered Subwoofer	\$54,309.00	\$37,469.00
			Camcorders	2-Way Speaker Pair	\$49,153.00	\$31,863.00
				3-Way Speaker Pair	\$148,155.00	\$94,605.00
				6-Piece Home Theater Speaker System	\$401,394.00	\$290,734.00
				7.1-Piece Home Theater Speaker System	\$367,763.00	\$271,953.00
			Digital8 Camcorders	Digital8 Easycam Camcorder 20x Power Zoom	\$92,463.00	\$46,053.00
			DVD Camcorders	D/D Easycam Camcorder - 3CCD	\$1,799,100.00	\$449,100.00
			MiniDV Camcorders	D/D Easycam Camcorder - 3CCD Pro	\$1,378,769.00	\$301,269.00
				D/D Easycam Camcorder 14x Power Zoom	\$762,534.00	\$82,634.00
				D/D Easycam Camcorder 16x Power Zoom	\$484,561.00	\$80,311.00
				D/D Easycam Camcorder 18x Power Zoom	\$293,706.00	\$43,806.00
			Cameras	MiniDV Easycam Camcorder - 3CCD	\$394,896.00	\$151,696.00
				MiniDV Easycam Camcorder - 3CCD Pro	\$26,388.00	\$7,188.00
				MiniDV Easycam Camcorder 14x Power Zoom	\$114,793.00	\$27,993.00
				MiniDV Easycam Camcorder 16x Power Zoom	\$152,146.00	\$48,006.00
			Digital Cameras	MiniDV Easycam Camcorder 18x Power Zoom	\$71,997.00	\$15,347.00
				EasyShot Digital Camera	\$449,985.00	\$96,285.00
				EasyShot Digital Camera 6.1 Megapixel	\$1,198,171.00	\$328,671.00
				EasyShot Digital Camera 8 Megapixel	\$117,769.00	\$39,169.00
			Office	EasyShot Ultra Zoom Digital Camera	\$399,846.00	\$102,226.00
				EasyShot Wide Zoom Digital Camera	\$60,256.00	\$15,456.00
				Handheld PDA 32MB Memory	\$20,332.00	\$5,372.00
				Handheld PDA 64MB Memory	\$57,855.00	\$7,105.00
			Handheld and PDA	Pocket PC Handheld Organizer 128MB Memory	\$22,743.00	\$5,073.00
				Pocket PC Handheld Organizer 33MB Memory	\$62,337.00	\$30,777.00

At the bottom you can see you jumped to page 26. That is because you jumped to the page containing the first instance of that search criteria. You'll need to scroll down on that page to see the records related to your search criteria.

				13 Inch Portable DVD Video System	\$1,806,295.00	\$360,295.00
				15 Inch Portable DVD Video System	\$365,817.00	\$91,317.00
			TV	20 Inch LCD TV with PC/DVD/TV Inputs	\$92,742.00	\$17,342.00
				42 Inch Plasma Monitor/TV	\$212,341.00	\$17,641.00
				50 Inch HD A/V Wireless Plasma TV	\$1,875,531.00	\$140,231.00
				World Wide VHS VCR	\$37,107.00	\$9,207.00
			VCR	4-Head Hi-Fi Super VHS VCR	\$28,611.00	\$7,821.00
				4-Head Hi-Fi VHS VCR	\$30,411.00	\$9,701.00
				AM / FM Stereo Tuner	\$64,078.00	\$31,878.00
				Modular Components Series Preamp 5.1	\$163,989.00	\$28,359.00
			Audio	Power Amplifier	\$559,005.00	\$154,905.00
				PreAmp/Tuner Two	\$1,810,372.00	\$903,372.00
				PA4000 Stereo & Surround Power Amplifier	\$223,951.00	\$59,171.00
				Home Theater Surround System	\$1,128,870.00	\$281,370.00

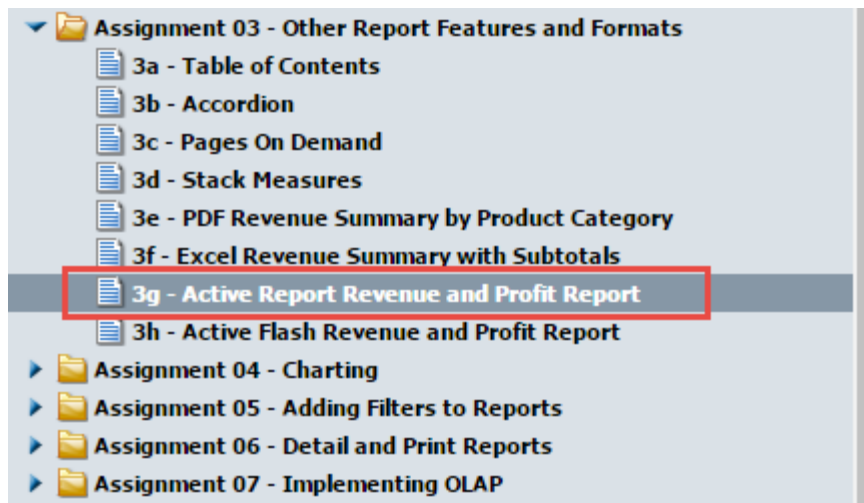
Page 26	of 28					Search West South Central			
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You might try running some of the other reports in the Assignment 03 folder. The Excel report assumes you have Excel or an Excel viewer on your laptop as it downloads the report directly into a new sheet.

2.1.3 Active Reports

“Active” are also known as HTML Analytical Documents. These reports are a report output type that allows an end user to manipulate the view of the data after the report is run. It is often positioned as a good technology for mobile computing because you could run the report in the background, email it out to a user with email on their tablet, and then they could work with that report offline.

Double click on the 3g – Active Report Revenue and Profit Report.



75 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit	Margin
Audio	Amplifiers/PreAmps/Tuners	AM / FM Stereo Tuner	\$950,822.00	\$473,022.00	99.0%
		Modular Components Series Preamp 5.1	\$6,376,419.00	\$1,102,689.00	20.9%
		Power Amplifier	\$6,116,685.00	\$1,694,985.00	38.3%
		PreAmp/Tuner Two	\$24,364,174.00	\$12,157,674.00	99.6%
		PA4000 Stereo & Surround Power Amplifier	\$4,566,328.00	\$1,206,488.00	35.9%
	Audio Systems	Home Theater Surround System	\$8,884,107.00	\$2,214,357.00	33.2%
		Home Theater 5.1 System	\$75,674,144.00	\$26,461,344.00	53.8%
		Home Theater 7.1 THX System	\$24,300,897.00	\$8,094,897.00	50.0%
		Micro HiFi Stereo System	\$8,244,537.00	\$2,252,267.00	37.6%
		Micro 5.1 System	\$5,241,995.00	\$1,039,995.00	24.8%
	CD Players and Recorders	CD Changer / CD Player	\$4,689,037.00	\$1,861,477.00	65.8%
		CD Recorder with 50GB Hard Disc Drive	\$5,788,755.00	\$1,441,755.00	33.2%
		Digital CD Turntable	\$29,666,958.00	\$8,445,958.00	39.8%
		Multichannel Super Audio CD Player	\$9,559,218.00	\$3,342,618.00	53.8%
		400 Disc Super Audio CD Changer	\$4,143,491.00	\$917,191.00	28.4%
	MP3	MP3 Digital Audio Computer	\$3,267,927.00	\$1,510,977.00	86.0%
		MP3 Digital Audio Computer 10GB	\$4,291,650.00	\$1,019,150.00	31.1%
		MP3 Digital Audio Computer 4GB	\$14,653,989.00	\$3,518,739.00	31.6%
		MP3 Player	\$15,382,734.00	\$8,227,974.00	115.0%
		MP3 Player Julebox Hard Drive	\$5,895,288.00	\$2,776,088.00	89.0%
	Receivers	Audio/Video Receiver	\$4,302,778.00	\$2,140,578.00	99.0%
		5.1 Channel Home Theater Receiver 100 WPC	\$3,230,097.00	\$1,609,647.00	99.3%

All these down arrows to the right of field names are a sign that this is an “Active” report. **Click on the down arrow** next to the field “Margin”, you’ll see a pop up menu that allows you to operate on the report with report level, or field level manipulation.

75 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type ▼	Product Category ▼	Product Name ▼	Revenue ▼	Profit ▼	Margin ▼
Audio	Amplifiers/PreAmps/Tuners	AM / FM Stereo Tuner	\$950,822.00	\$473,022.00	99.0
		Modular Components Series Preamp 5.1	\$6,376,419.00	\$1,102,689.00	20.9
		Power Amplifier	\$6,116,685.00	\$1,694,985.00	38.3
		PreAmp/Tuner Two	\$24,364,174.00	\$12,157,674.00	99.6
		PA4000 Stereo & Surround Power Amplifier	\$4,566,328.00	\$1,206,488.00	35.9
	Audio Systems	Home Theater Surround System	\$8,884,107.00	\$2,214,357.00	33.2
		Home Theater 5.1 System	\$75,674,144.00	\$26,461,344.00	53.8
		Home Theater 7.1 THX System	\$24,300,897.00	\$8,094,897.00	50.0
		Micro HiFi Stereo System	\$8,244,537.00	\$2,252,267.00	37.0
		Micro 5.1 System	\$5,241,995.00	\$1,039,995.00	24.8
	CD Players and Recorders	CD Changer / CD Player	\$4,689,037.00	\$1,861,477.00	65.8
		CD Recorder with 50GB Hard Disc Drive	\$5,788,755.00	\$1,441,755.00	33.2
		Digital CD Turntable	\$29,666,958.00	\$8,445,958.00	39.8
		Multichannel Super Audio CD Player	\$9,559,218.00	\$3,342,618.00	53.8
		400 Disc Super Audio CD Changer	\$4,143,491.00	\$917,191.00	28.4
	MP3	MP3 Digital Audio Computer	\$3,267,927.00	\$1,510,977.00	86.0
		MP3 Digital Audio Computer 10GB	\$4,291,650.00	\$1,019,150.00	31.1
		MP3 Digital Audio Computer 4GB	\$14,653,989.00	\$3,518,739.00	31.6
		MP3 Player	\$15,382,734.00	\$8,227,974.00	115.0%
		MP3 Player Julebox Hard Drive	\$5,895,288.00	\$2,776,088.00	89.0%
	Receivers	Audio/Video Receiver	\$4,302,778.00	\$2,140,578.00	99.0%

You can sort on a field, filter the records, add a calculated field, create a chart or rollup on the fly, even use a pivot tool to create a pivot type report.

For now, let’s hide the “Margin” field from this report (we can always bring it back in at any time). **Click on Hide Column.**

Let’s sort the records by Revenue. **Click on the down arrow** to the right of “Revenue” and select “Sort Descending.”

75 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type ▼	Product Category ▼	Product Name ▼	Revenue ▼	Profit ▼
Audio	Amplifiers/PreAmps/Tuners	AM / FM Stereo Tuner	\$950,822.00	
		Modular Components Series Preamp 5.1	\$6,376,419.00	
		Power Amplifier	\$6,116,685.00	
		PreAmp/Tuner Two	\$24,364,174.00	
		PA4000 Stereo & Surround Power Amplifier	\$4,566,328.00	
	Audio Systems	Home Theater Surround System	\$8,884,107.00	
		Home Theater 5.1 System	\$75,674,144.00	
		Home Theater 7.1 THX System	\$24,300,897.00	
		Micro HiFi Stereo System	\$8,244,537.00	

Turn on a visualization bar for Revenue. **Click on the down arrow** for “Revenue” and select “Visualize.” Do the same for the “Profit” field by **clicking on the down arrow** to the right of Profit and selecting “Visualize.”

The visualization bars can make it easier to compare values across two columns. Scroll down to the record for Audio/Speakers and see how it is easy to tell that this is a high profit product with low revenue. Also note that as you scroll across the records, they are highlighted, in this case in orange. You can control the color schemes used in Active Reports within the report authoring tool called InfoAssist (which we'll get to in a few minutes).

75 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit
Camcorders	DVD Camcorders	DVD Easycam Camcorder - 3CCD	\$191,386,259.00	\$47,774,759.00
Video	DVD	13 Inch Portable DVD Video System	\$167,003,590.00	\$33,311,590.00
Cameras	Digital Cameras	EasyShot Digital Camera 6.1 Megapixel	\$90,904,593.00	\$24,936,093.00
Video	TV	50 Inch HD A/V Wireless Plasma TV	\$83,071,227.00	\$6,211,127.00
Audio	Audio Systems	Home Theater 5.1 System	\$75,674,144.00	\$26,461,344.00
Camcorders	DVD Camcorders	DVD Easycam Camcorder - 3CCD Pro	\$68,640,943.00	\$14,998,443.00
Camcorders	DVD Camcorders	DVD Easycam Camcorder 14x Power Zoom	\$52,771,581.00	\$5,718,731.00
Video	DVD	15 Inch Portable DVD Video System	\$52,221,876.00	\$13,035,876.00
Video	DVD	DVD Recorder	\$50,355,606.00	\$16,161,306.00
Video	DVD	DVD Changer / Player	\$43,316,273.00	\$14,414,673.00
Audio	Speakers	6-Piece Home Theater Speaker System	\$40,863,984.00	\$29,598,224.00
Cameras	Digital Cameras	EasyShot Digital Camera 8 Megapixel	\$38,613,848.00	\$12,842,648.00
Camcorders	DVD Camcorders	DVD Easycam Camcorder 16x Power Zoom	\$35,039,424.00	\$5,807,424.00
Camcorders	MiniDV Camcorders	MiniDV Easycam Camcorder - 3CCD	\$32,426,937.00	\$12,456,537.00
Camcorders	DVD Camcorders	DVD Easycam Camcorder 18x Power Zoom	\$31,538,430.00	\$4,703,930.00
Audio	CD Players and Recorders	Digital CD Turntable	\$29,666,958.00	\$8,445,958.00
Video	TV	20 Inch LCD TV with PC/DVD/TV Inputs	\$29,392,818.00	\$5,496,218.00
Audio	Amplifiers/PreAmps/Tuners	PreAmp/Tuner Two	\$24,364,174.00	\$12,157,674.00
Audio	Audio Systems	Home Theater 7.1 THX System	\$24,300,897.00	\$8,094,897.00
Cameras	Digital Cameras	EasyShot Digital Camera	\$23,263,652.00	\$4,977,812.00
Video	TV	56 Inch Widescreen HDTV Monitor TV with DLP	\$23,068,584.00	\$3,004,584.00
Audio	Receivers	6.1 Channel Home Theater Receiver 100 WPC	\$19,434,467.00	\$5,233,917.00
Cameras	Digital Cameras	EasyShot Ultra Zoom Digital Camera	\$18,849,927.00	\$4,819,237.00
Audio	Speakers	7.1-Piece Home Theater Speaker System	\$18,846,731.00	\$13,936,761.00
Video	TV	30 Inch LCD TV with PC/DVD/TV Inputs	\$17,272,954.00	\$1,987,154.00
Video	DVD	DVD Player	\$16,974,700.00	\$4,179,700.00
Video	TV	42 Inch Plasma Monitor/TV	\$15,993,956.00	\$1,328,756.00
Audio	MP3	MP3 Player	\$15,382,734.00	\$8,227,974.00

You might want to add a comment to this record identifying it as something to take action on.

Click on the "Speakers" text in the 2nd column and select COMMENTS.



Add a comment and then **click on the ADD COMMENT** button.

Add Comment

Enter Comment

Let's drive more sales of these Speakers!

Add Comment

Camcorders	DVD Camcorders	DVD Easycam Camcorder - 3CCD Pro
Camcorders	DVD Camcorders	DVD Easycam Camcorder 14x Power Zoom
Video	DVD	15 Inch Portable DVD Video System
Video	DVD	DVD Recorder

Note that the cell in the report now indicates there is a comment behind it.

If you wanted to, you could send this report to a colleague, perhaps the sales manager responsible for Audio Products!

video	TV	56 Inch Widescreen HDTV Monitor TV wi
Audio	Receivers	6.1 Channel Home Theater Receiver 100
Cameras	Digital Cameras	EasyShot Ultra Zoom Digital Camera
Audio	Speakers	7.1-Piece Home Theater Speaker System
video	TV	38 Inch LCD TV with PC/DVD/TV Inputs
video	DVD	DVD Player

Perhaps we want to see if this is a pattern across all types of speakers. **Click on the Speakers cell** again and **select "Filter Cell."**

Cameras	Digital Cameras	EasyShot Ultra Zoom Digital Camr
Audio	Speakers	7.1-Piece Home Theater Speaker
Video		CD TV with PC/DVD/TV
Video		
Video		asma Monitor/TV
Audio		
Audio		l Audio Computer 4GE
Cameras		Wide Zoom Digital Can
Video	VCR	World Wide VHS VCR

The data view changes to just show records with Product Category = "Speakers." Now with this subset of records it's also a lot easier to see the comparisons across columns by looking at the numbers (and yes, we eliminated the "MARGIN" field which would also be a good indicator)!

5 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit
Audio	Speakers	6-Piece Home Theater Speaker System	\$40,863,984.00	\$29,598,224.00
Audio	Speakers	7.1-Piece Home Theater Speaker System	\$18,846,731.00	\$13,936,761.00
Audio	Speakers	3-Way Speaker Pair	\$9,435,357.00	\$6,024,987.00
Audio	Speakers	100 Watt Front-Firing Powered Subwoofer	\$9,172,932.00	\$6,328,612.00
Audio	Speakers	2-Way Speaker Pair	\$6,398,049.00	\$4,147,479.00
TOTAL			\$1,561,923,919.00	\$432,766,004.00

Wed, Apr 12, 2017

Let's add that Margin field back in. Click on the down arrow next to Profit and choose "Show Columns" and "Margin."

5 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit
Audio	Speakers	6-Piece Home Theater Speaker System	\$40,863,984.00	\$29,598,224.00
Audio	Speakers	7.1-Piece Home Theater Speaker System	\$18,846,731.00	\$13,936,761.00
Audio	Speakers	3-Way Speaker Pair	\$9,435,357.00	\$6,024,987.00
Audio	Speakers	100 Watt Front-Firing Powered Subwoofer	\$9,172,932.00	\$6,328,612.00
Audio	Speakers	2-Way Speaker Pair	\$6,398,049.00	\$4,147,479.00
TOTAL			\$1,561,923,919.00	\$432,766,004.00

Wed, Apr 12, 2017

Show All

Margin

Sort Ascending

Sort Descending

Filter

Calculate

Chart

Rollup

Pivot (Cross Tab)

Visualize

Hide Column

Show Columns

Grid Tool

Chart/Rollup Tool

Pivot Tool

Show Records

Comments

Export

Print

Window

Restore Original

Sort on Margin by **clicking on the down arrow** next to Margin and choosing "Sort Descending."

5 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit	Margin
Audio	Speakers	6-Piece Home Theater Speaker System	\$40,863,984.00	\$29,598,224.00	262.7%
Audio	Speakers	7.1-Piece Home Theater Speaker System	\$18,846,731.00	\$13,936,761.00	283.8%
Audio	Speakers	3-Way Speaker Pair	\$9,435,357.00	\$6,024,987.00	176.7%
Audio	Speakers	100 Watt Front-Firing Powered Subwoofer	\$9,172,932.00	\$6,328,612.00	222.5%
Audio	Speakers	2-Way Speaker Pair	\$6,398,049.00	\$4,147,479.00	184.3%
TOTAL			\$1,561,923,919.00	\$432,766,004.00	38.3%

Wed, Apr 12, 2017

Sort Ascending

Sort Descending

Filter

Calculate

Chart

Rollup

Pivot (Cross Tab)

Visualize

Hide Column

Grid Tool

Chart/Rollup Tool

Pivot Tool

Show Records

Comments

Export

Print

Window

Restore Original

Now it's quite easy to see that indeed the type of speakers we added the comment to are high margin products, but other types of Speakers look pretty profitable as well!

5 of 75 records, Page 1 of 1

3g - Active Report Revenue and Profit Report

Product Type	Product Category	Product Name	Revenue	Profit	Margin
Audio	Speakers	7.1-Piece Home Theater Speaker System	\$18,846,731.00	\$13,936,761.00	283.8%
Audio	Speakers	6-Piece Home Theater Speaker System	\$40,863,984.00	\$29,598,224.00	262.7%
Audio	Speakers	100 Watt Front-Firing Powered Subwoofer	\$9,172,932.00	\$6,328,612.00	222.5%
Audio	Speakers	2-Way Speaker Pair	\$6,398,049.00	\$4,147,479.00	184.3%
Audio	Speakers	3-Way Speaker Pair	\$9,435,357.00	\$6,024,987.00	176.7%
TOTAL			\$1,561,923,919.00	\$432,766,004.00	38.3%

Wed, Apr 12, 2017

One last thing – let's build a simple chart to reflect this story. **Click again on the down arrow** next to Margin and choose CHART -> LINE -> Product Name.

t

Profit	Margin
\$13,936,761.00	283.8
\$29,598,224.00	262.7
\$6,328,612.00	222.5
\$4,147,479.00	184.3
\$6,024,987.00	176.7
\$432,766,004.00	

Group By (X)

- Product Type
- Product Category
- Product Name
- Revenue
- Profit
- Margin

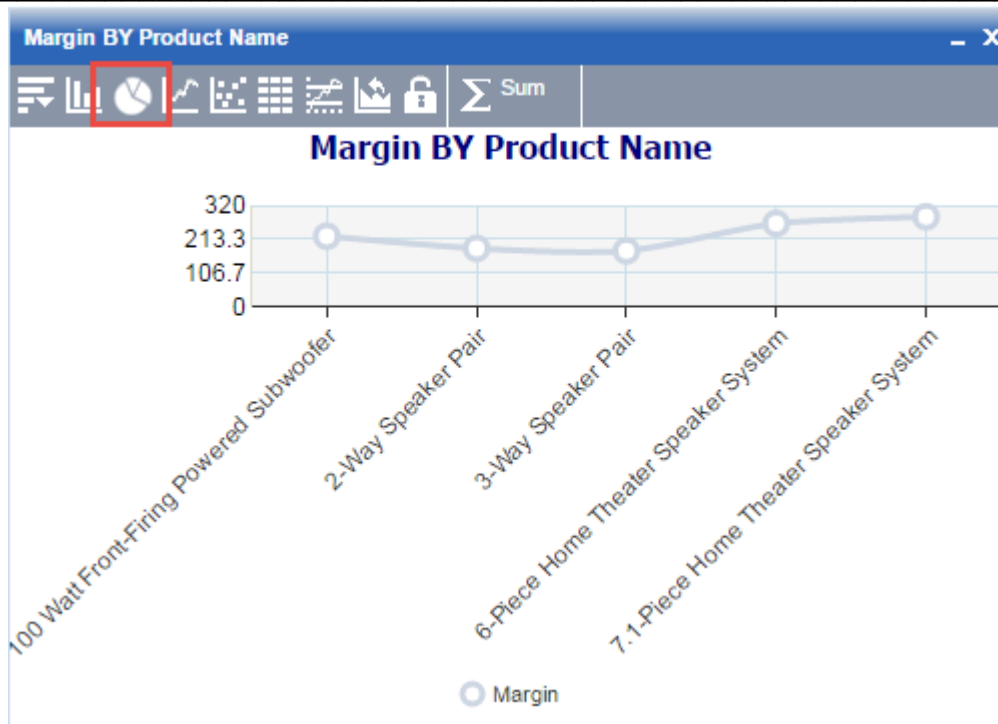
Sort Ascending
Sort Descending

Filter
Calculate
Chart
Rollup
Pivot (Cross Tab)
Visualize

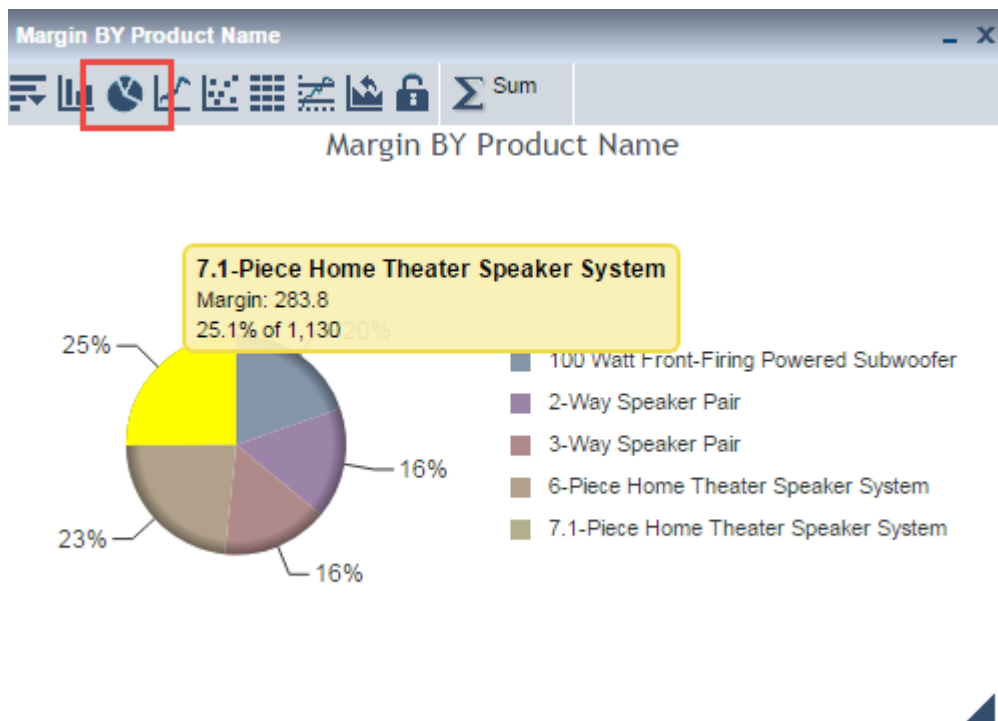
Pie
Line
Column
Scatter

Hide Column
Grid Tool
Chart/Rollup Tool
Pivot Tool

Show Records
Comments
Export
Print
Window
Restore Original



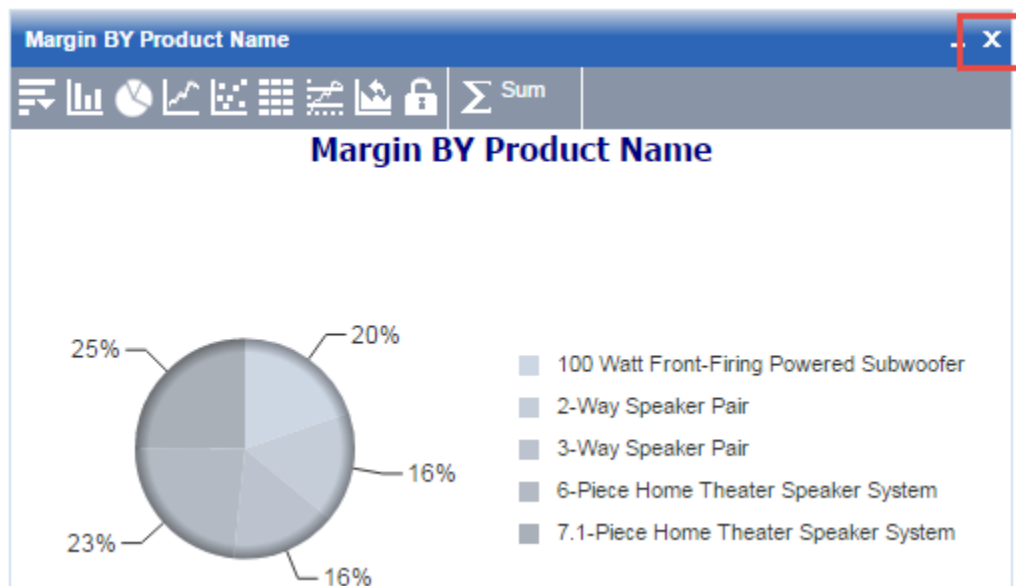
Upon seeing this, it's possible a bar chart or pie chart might have been a better choice. **Click on the Pie Chart Icon in the toolbar** at the top.



This is better. If you move your cursor across one of the pieces of the pie you can see the pop-up information window that shows what that represents.

This is just a taste of Active Reports, and keep in mind that these COULD be leveraged for those employees or clients using tablets or other mobile devices with all the function available to them on those devices as you would have just using a laptop browser. Db2 Web Query recognizes the type of device and renders the output to match the device, making it easier, for instance, to use your fingers or a stylus to manipulate the data views in the report or chart.

Let's go ahead and close the chart and move on! **Click on the X in the upper right hand corner** of the chart.

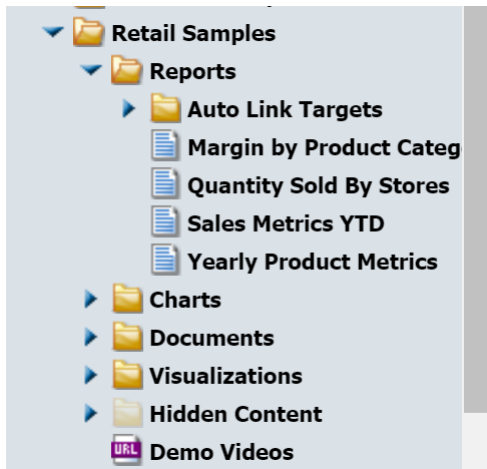


2.2 Retail Samples

In this section we will take a look at some of the new (business oriented) sample reports and visualizations available as of Version 2.2.1.

2.2.1 Reports

Expand the Retail Samples folder, and the Reports sub-folder.



Double click on the Margin by Product Category report to run this.

Product Category	AVE Margin		Revenue		Cost of Goods		Gross Profit	
Camcorder	40.41%		\$154,465,702.24		\$104,866,857.00		\$49,598,845.24	
Accessories	36.51%		\$129,608,338.53		\$89,753,898.00		\$39,854,440.53	
Computers	35.88%	Drill down to Product Subcategory	\$103,316,482.12		\$69,807,664.00		\$33,508,818.12	
Video Production	33.04%		\$58,053,276.62		\$40,105,657.00		\$17,947,619.62	
Stereo Systems	31.33%		\$291,294,933.52		\$205,113,863.00		\$86,181,070.52	
Media Player	24.66%		\$246,073,059.36		\$190,240,481.00		\$55,832,578.36	
Televisions	22.14%		\$78,381,132.81		\$61,551,109.00		\$16,830,023.81	
Total:	31.96%		\$1,061,192,925.20		\$761,439,529.00		\$299,753,396.20	

Click on **COMPUTERS** and you'll see a pop-up to allow you to drill down to Product Subcategory. This is an example of an auto-drill report where you can, within the same report object, drill up and down to different dimensional levels.

Select "Drill down to Product Subcategory."

[Home](#) → [Computers](#)

Product Subcategory	AVE Margin		Revenue		Cost of Goods		Gross Profit	
Tablet	40.67%		\$43,446,005.97		\$25,771,890.00		\$17,674,115.97	
Smartphone	32.04%		\$59,870,476.15		\$44,035,774.00		\$15,834,702.15	
Total:	36.35%		\$103,316,482.12		\$69,807,664.00		\$33,508,818.12	

Note that the in the upper left hand corner there is some information on where you've drilled to, and that you are now only looking at product subcategories under the "Computers" product set. In this report, you also see some traffic lighting (Tablet margins in green font), and visualization bars, which is a report feature that is nice for visually comparing values across several columns.

Click on tablet and drill down to MODELS.

[Home](#) → [Computers](#) → [Tablet](#)

Model	AVE Margin		Revenue		Cost of Goods		Gross Profit	
GLXYT10732	55.69%		\$6,732,041.14		\$2,953,809.00		\$3,778,232.14	
GLXYT10716	46.66%		\$6,858,809.70		\$3,618,906.00		\$3,239,903.70	
GLXYT70	43.76%		\$859,485.49		\$479,040.00		\$380,445.49	
SGP312U1/B	42.72%		\$5,334,811.58		\$3,022,590.00		\$2,312,221.58	
GLXYT3B	42.44%		\$2,868,552.25		\$1,635,436.00		\$1,233,116.25	
GLXYT3W	42.39%		\$2,990,235.87		\$1,704,978.00		\$1,285,257.87	
SGPT121US/S	39.07%		\$6,002,404.30		\$3,621,063.00		\$2,381,341.30	
SGPT122US/S	27.22%		\$3,432,946.75		\$2,475,753.00		\$957,193.75	
SGP311U1/B	26.81%		\$4,269,080.95		\$3,092,040.00		\$1,177,040.95	
SGPT123US/S	21.96%		\$4,097,637.94		\$3,168,275.00		\$929,362.94	
Total:	38.87%		\$43,446,005.97		\$25,771,890.00		\$17,674,115.97	

Click on any of the model values in that Model column and select "restore original."

[Home](#) → [Computers](#) → [Tablet](#)

Model	AVE Margin		Revenue		Cost of Goods		Gross Profit	
GLXYT10732	55.69%		\$6,732,041.14		\$2,953,809.00		\$3,778,232.14	
GLXYT10716	46.66%		\$6,858,809.70		\$3,618,906.00		\$3,239,903.70	
GLXYT70	43.76%		\$859,485.49		\$479,040.00		\$380,445.49	
SGP312U1/B			\$5,334,811.58		\$3,022,590.00		\$2,312,221.58	
GLXYT3B			\$2,868,552.25		\$1,635,436.00		\$1,233,116.25	
GLXYT3W	42.39%		\$2,990,235.87		\$1,704,978.00		\$1,285,257.87	
SGPT121US/S	39.07%		\$6,002,404.30		\$3,621,063.00		\$2,381,341.30	
SGPT122US/S	27.22%		\$3,432,946.75		\$2,475,753.00		\$957,193.75	
SGP311U1/B	26.81%		\$4,269,080.95		\$3,092,040.00		\$1,177,040.95	
SGPT123US/S	21.96%		\$4,097,637.94		\$3,168,275.00		\$929,362.94	
Total:	38.87%		\$43,446,005.97		\$25,771,890.00		\$17,674,115.97	

Restore Original

Drill up to Product Subcategory

Back on the BI Portal, in the Retail Samples -> Report folder, **Click on the Quantity Sold by Stores report.**

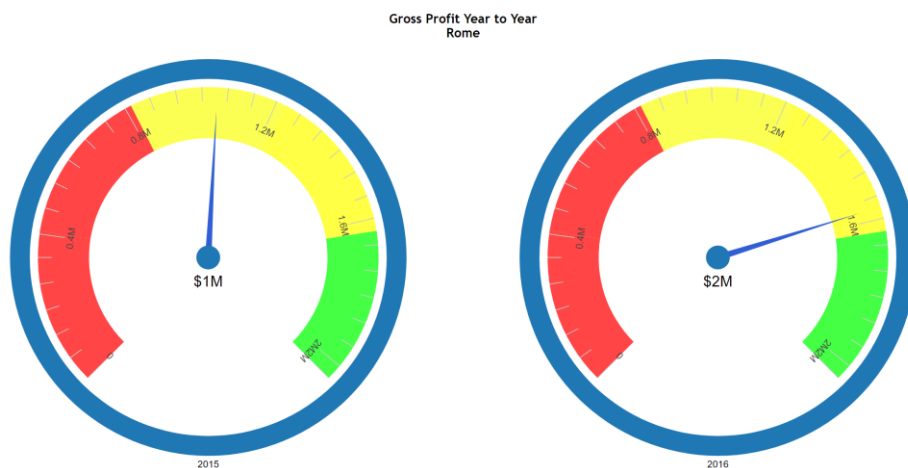
Store Name ▼	Quantity Sold ▼	Revenue ▼	Gross Profit ▼	
London	105,546	\$31,761,274.99	\$8,981,831.9	Sort Ascending
Amsterdam	89,289	\$26,865,293.34	\$7,618,371.3	Sort Descending
Madrid	88,014	\$26,389,341.76	\$7,478,716.7	Filter
Warsaw	87,323	\$26,274,758.38	\$7,437,220.3	Calculate
Stockholm	87,114	\$26,168,073.77	\$7,406,284.7	Chart
Rome	86,522	\$25,917,112.25	\$7,388,750.2	Rollup
Milan	87,216	\$26,030,446.07	\$7,380,715.0	Pivot (Cross Tab)
Brasilia	86,606	\$25,974,011.78	\$7,359,004.7	Visualize
New York	86,120	\$25,902,385.29	\$7,349,101.2	Hide Column
Geneva	85,934	\$25,839,275.28	\$7,316,028.2	Grid Tool
Copenhagen	85,834	\$25,601,433.27	\$7,291,746.2	Chart/Rollup Tool
Houston	85,702	\$25,729,530.27	\$7,284,421.2	Pivot Tool
Berlin	85,265	\$25,518,194.26	\$7,277,519.2	Show Records
Vancouver	85,623	\$25,542,620.75	\$7,274,008.7	Comments
Toronto	85,869	\$25,605,167.61	\$7,267,666.61	Export
Brussels	67,288	\$20,304,708.22	\$5,740,235.22	Print
Edinburgh	65,408	\$19,709,710.47	\$5,575,020.47	Window
Chicago	64,161	\$19,326,381.04	\$5,468,506.04	Restore Original

As you've seen before, this is an "ACTIVE" report, sometimes called "In-Document Analytics." If you click on any of the down triangles next to the column heading, you'll see the pop up menu that allows you to manipulate the data view.

But this report also leverages auto linking capabilities. **Click on the store name "ROME."** **Click on the Auto Links option** and note that you have two other related reports that you can drill to by simply selecting the report of interest. This is a new feature in Version 2.2.1 that makes it very easy for a report author to enable a report as a parent or child report without having to specifically design links into every report.

Store Name ▼	Quantity Sold ▼	Revenue ▼
London	105,546	\$31,761,274.99
Amsterdam	89,289	\$26,865,293.34
Madrid	88,014	\$26,389,341.76
Warsaw	87,323	\$26,274,758.38
Stockholm	87,114	\$26,168,073.77
Rome	86,522	\$25,917,112.25
Auto Links		
Comments		
Highlight Value		
Highlight Row		
Unhighlight All		
Filter Cell		
Berlin	85,265	\$25,518,194.26
Vancouver	85,623	\$25,542,620.75

Select the auto link report by Clicking on the GAUGE – Gross Profit by Sale Year report.

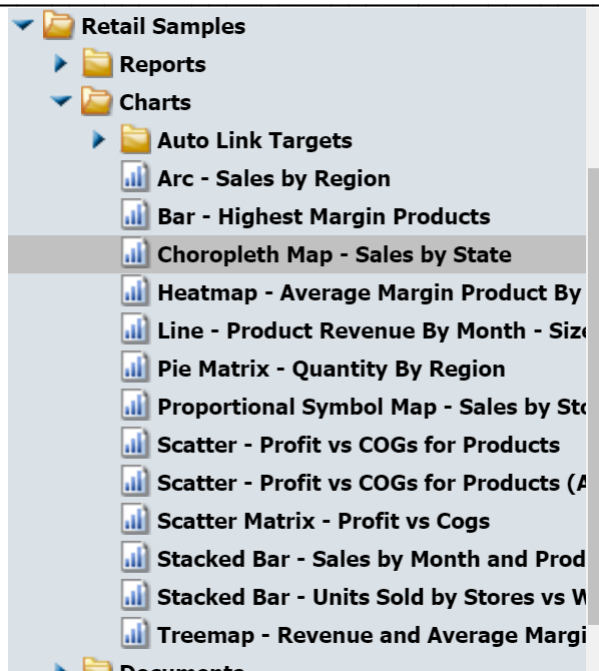


Auto linking reports is a very powerful way to also have drill-down effect in your reports. Note the title of the chart includes the store name (in this case, ROME) in the header, making it clear to the end user that they drilled down on that store from the parent report.

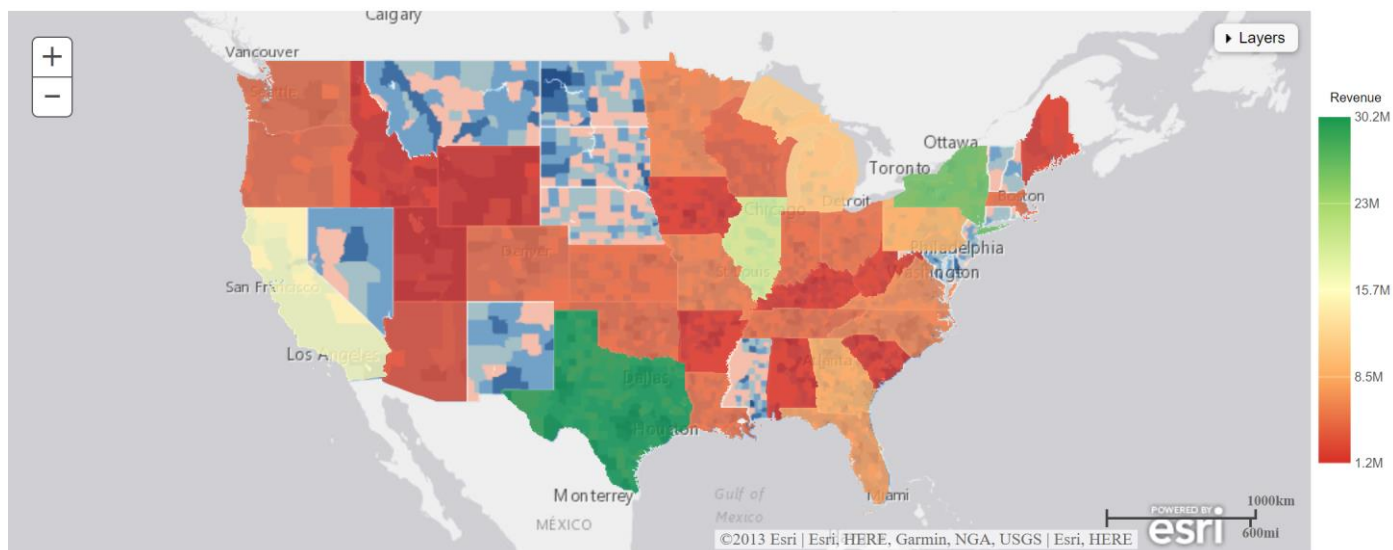
Close the gauge chart browser window.

2.2.2 Charts

Collapse the REPORTS folder and expand the CHARTs folder. **Double click on the Choropleth Map – Sales by State chart.**



Pause long enough to see the map center itself over the continental United States. This map is an example of a multi-layer map. The first layer reflects REVENUE based on color. The color scale on the right hand side helps to see that GREEN colored states have higher revenue than red colored states. The color scale, and the geographical locations (states in this case) are elements of the map you can alter, down to the Latitude/Longitude points if need be.



Click on the LAYERS tab in the upper right hand corner.

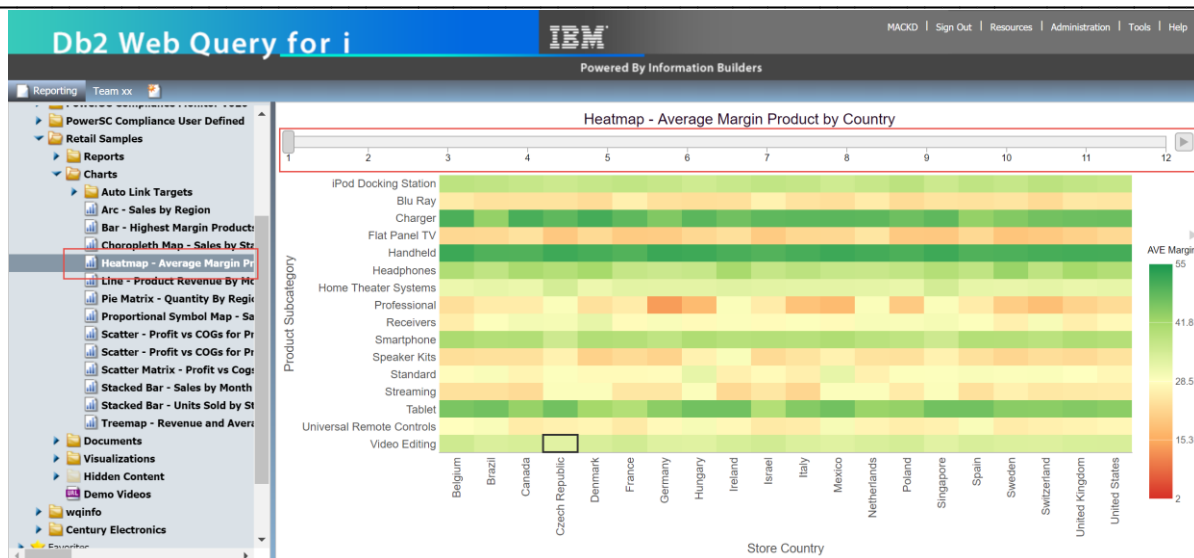


In version 2.2.1, not only do you have geographical map visualizations, but you can add certain demographic layers on top of the maps. Today, these layers are somewhat restricted to U.S. data, but IBM expects to expand these layers and provide an ability to purchase additional layers from the cloud.

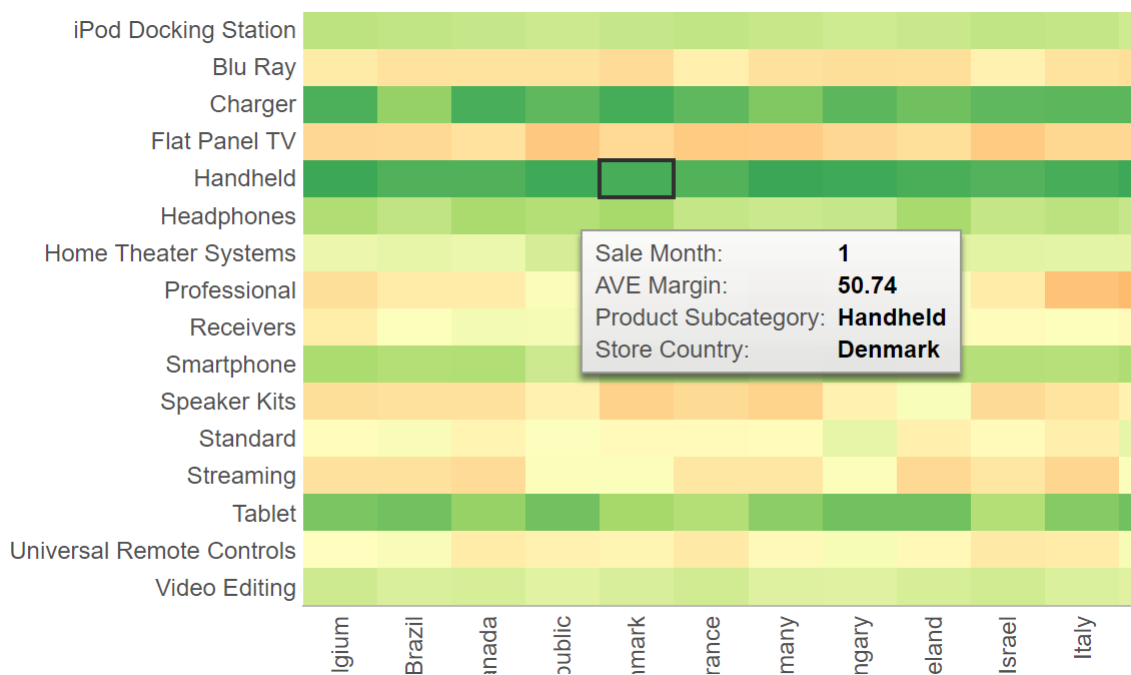
Note the second layer is USA Projected Population Growth, and the “Opacity” slider bar. You can move the slider bar to make the layer stronger or weaker on the map. **Try moving each of the slider bars** to see the effect it has on the map. Note that deeper blue when the projected population slider is in a stronger position reflects a higher percentage of growth, compared to the light blue or grey colors. And these are measurements linked to counties within each state.

A visual like this can be very powerful to perhaps target growth areas of the country that have previously been ignored by your marketing efforts. Keep in mind that while this is a standalone graphic, you could easily add this view to a dashboard as one of the several views on a single pane of glass!

Back in the RETAIL SAMPLES -> CHARTS folder, **Click on the Heatmap** – Average Margin Product by Country chart.

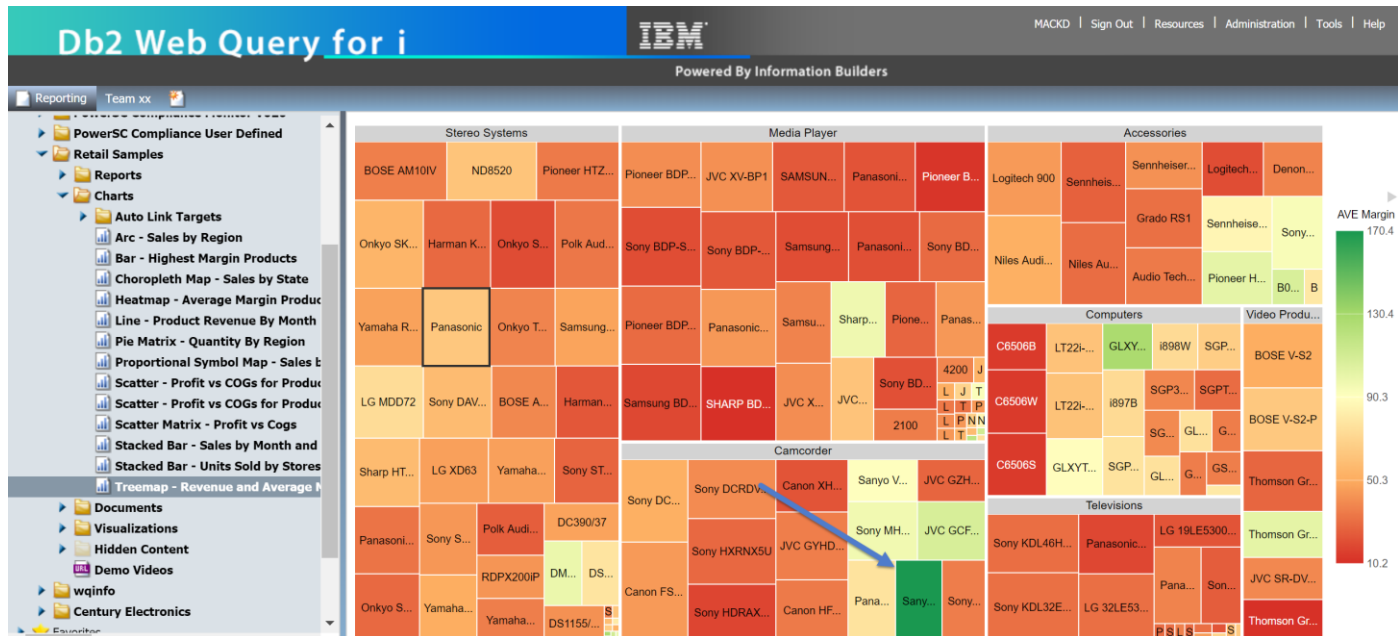


This type of map shows average margin by color scale across countries (horizontal axis) and product subcategories (vertical access). It also showing the measurement (average margin) by month across a 12 month period (this could be the last 12 months based on current date, or whatever 12 month period you set it to). The slider at the top of the chart adds "animation" to the heatmap. Move your mouse to hover over one of the cells of the heatmap to see information about that cell pop up.



Click on the run button to start the animation and see how the colors of the heatmap change over time. If you noticed, Norway saw some major changes in the 11th month. Go back and move the time to month 11 by **clicking right above the number 11**. With animation, you can identify some anomaly in the data such as what happened to sales/profit in Norway in month 11, and then investigate it more (we could have added a drill down or a filter on country on this map, for example).

Click on the Treemap chart. Treemaps are really stuffed with information. In this chart, you see a measurement, average margin affecting the color of each box. The box represents a specific product MODEL grouped by product type. Even more interesting, the SIZE of the box reflects a 2nd measurement, REVENUE.



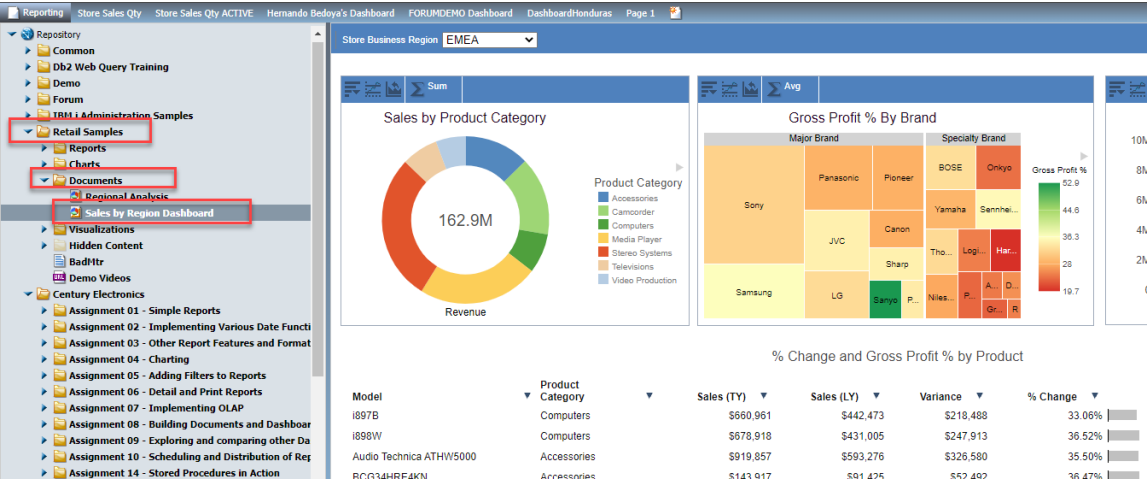
Note the Sanyo box is green, meaning its profits are excellent, but the size of the box is probably a little below average compared to the sizes of others. From this, you could ascertain that you really should be selling more of these models to drive more profit in your business!

Feel free to double click on some of the other charts in this subfolder. Db2 Web Query comes with many different charts you can use in dashboards or standalone visualizations.

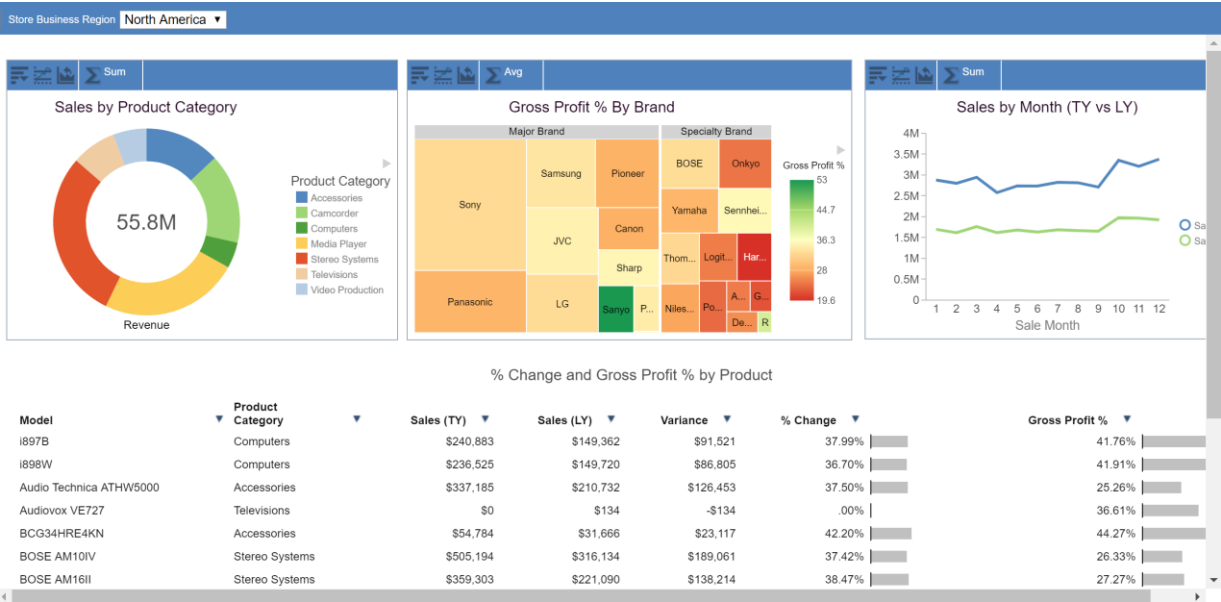
When done, collapse the CHARTS subfolder.

2.2.3 HTML Analytical Documents

Expand the DOCUMENTS subfolder. Double click on the Sales by region dashboard.



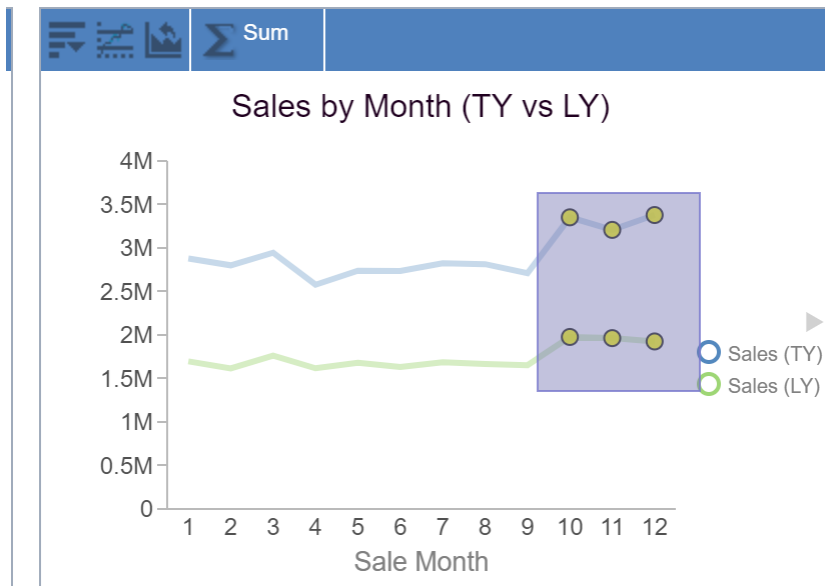
You can use the scroll bars at the bottom and side of your browser window (or again, run this into a separate browser window using the resources button at the upper right hand of the BI Portal). This dashboard has a lot of information on it. At the top is a drop down control to filter by region. **Click the drop down and select North America.**



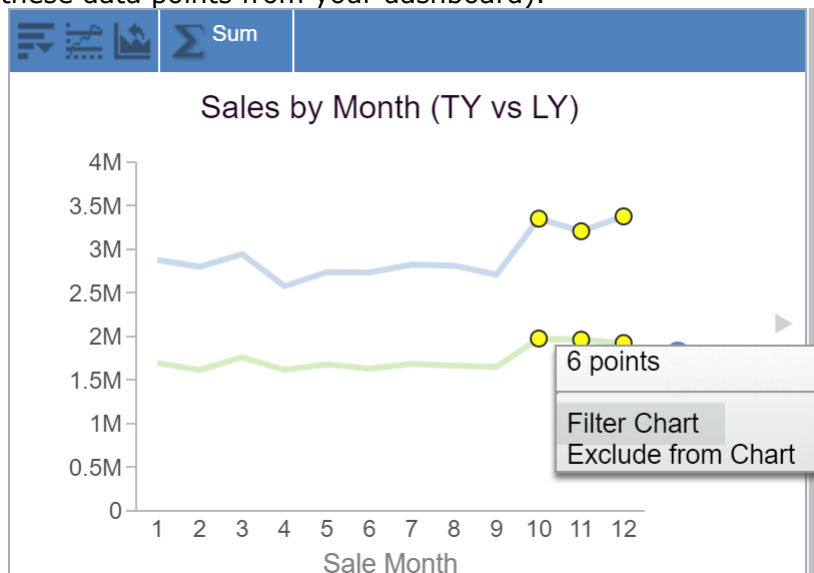
All four views of the dashboard are altered to reflect the change. In this dashboard, we have a donut chart, the tree map you previously saw, and line chart, and an “active” or “in document analytics” data grid at the bottom. An “active” dashboard is a nice way to provide some user interaction with the data, even from a mobile device. With Db2 Web Query Standard Edition you could set up a schedule to run this report on a timed basis and distribute it out to users. Those users could be just using a browser or using the appropriate app for their tablet device.

This dashboard also features “marquis filtering”, a new feature in Version 2.2.1. On the line chart we notice the last 3 months have been pretty good for the business. You can focus on

data just from those 3 months by **dragging your mouse across the two lines** to select/capture the 6 data points representing months 10, 11, and 12.

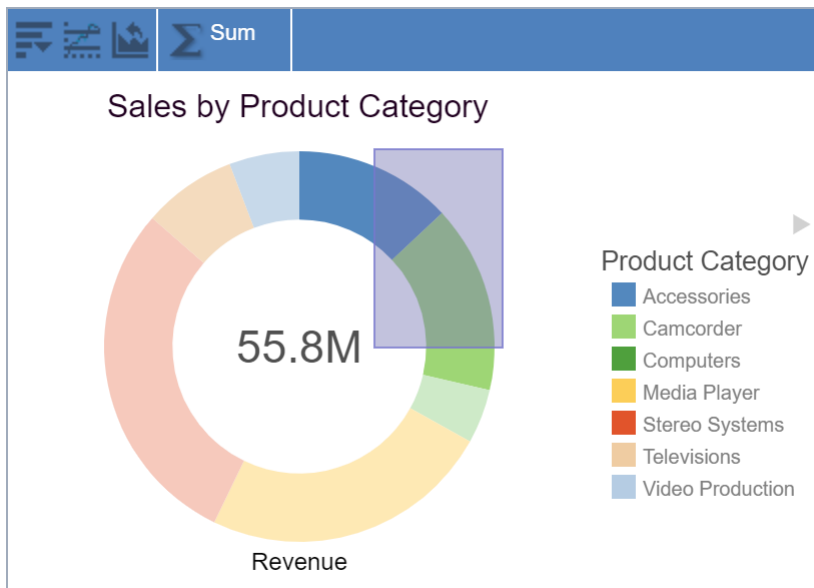


Select the FILTER CHART option in the pop up window (but notice that you can also EXCLUDE these data points from your dashboard).

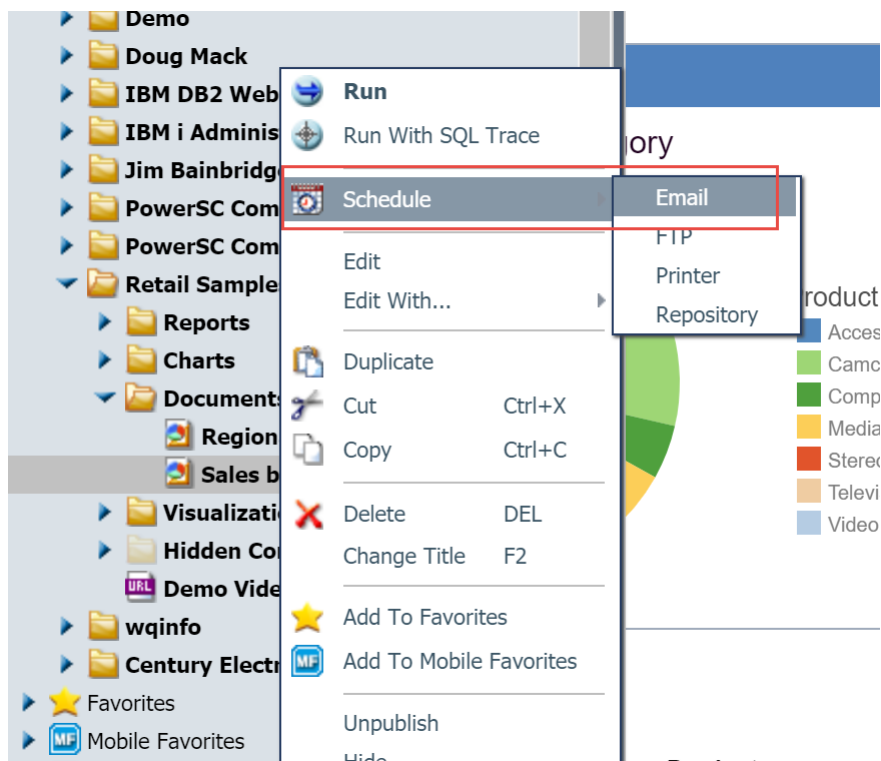


Select some data points again and this time **select REMOVE FILTER** to go back to the original views.

Try the marquis filtering on the donut chart. Select two elements of the chart, perhaps accessories and camcorders, by **dragging your mouse with the left mouse button held down**. Select FILTER CHART on the pop-up menu.



If you have Scheduler Edition or Standard Edition and were authorized to schedule this dashboard to run in the background you could right click on the document in the BI Portal and select the SCHEDULE option. You probably haven't set up your email server configuration yet in Db2 Web Query, so we won't do that just yet. With either Scheduler or Standard Edition you could also run this dashboard and distribute (or save to a network drive or the IFS) through a CL command. That method is good if you want to leverage your existing IBM i job scheduler.



Sales by Region Dashboard- Schedule (Basic)

Schedule

Actions: Save & Close, Delete, Properties, Recurrence, Task, **Distribution**, Notification, Log Reports

Show: Parameters, Advanced Task Settings, Email Server

Distribution: Email

Distribution Information

Type: Email Address(s)

To...: Sales_force_distribution_list

From...: Db2 Web Query Mail

Reply Address...: mackd@us.ibm.com

Subject: Sales by Region Dashboard

Email Information

☐ Send the report as inline message

☒ Send all reports as attachments

☒ Message: Please see attachment(s).

☐ File: Browse...

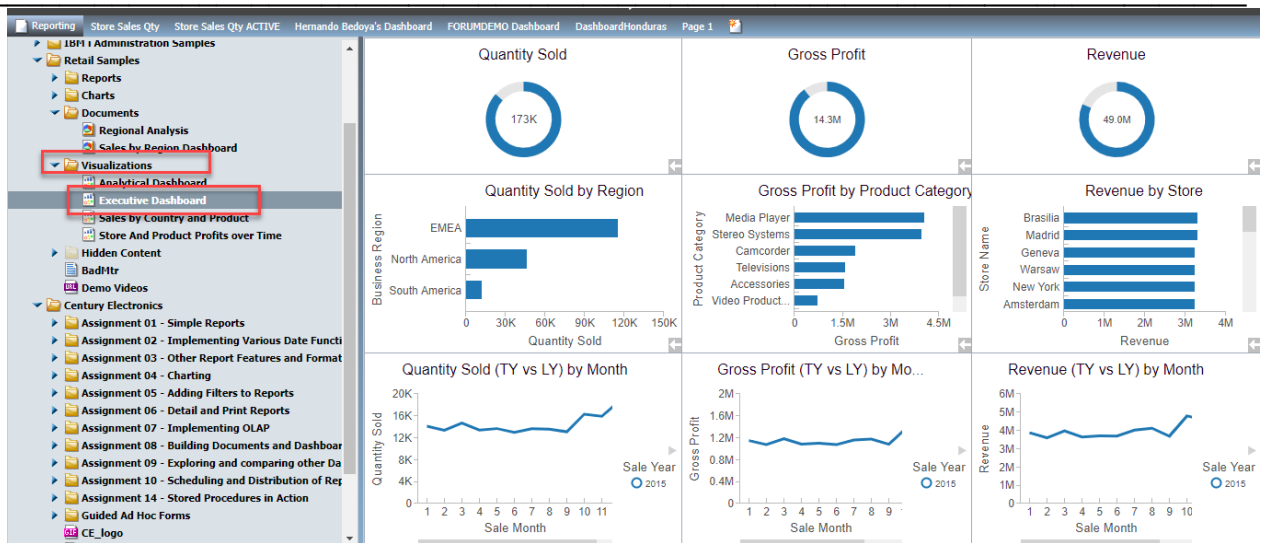
Packet Email: Default (Yes)

Collapse the DOCUMENTS folder on the BI Portal Resources panel.

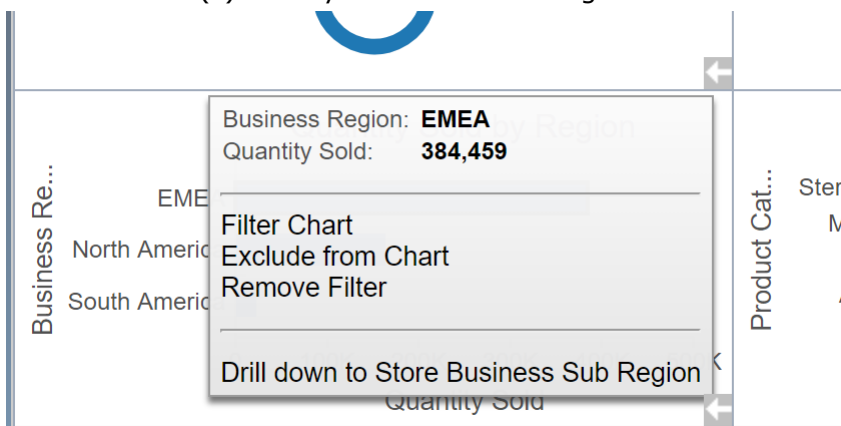
2.2.4 Visualizations

Expand the Retail Samples -> Visualizations Folder by **double clicking** on it. **Double click on the Executive Dashboard** visualization. This is a very busy dashboard so give it a moment to load.

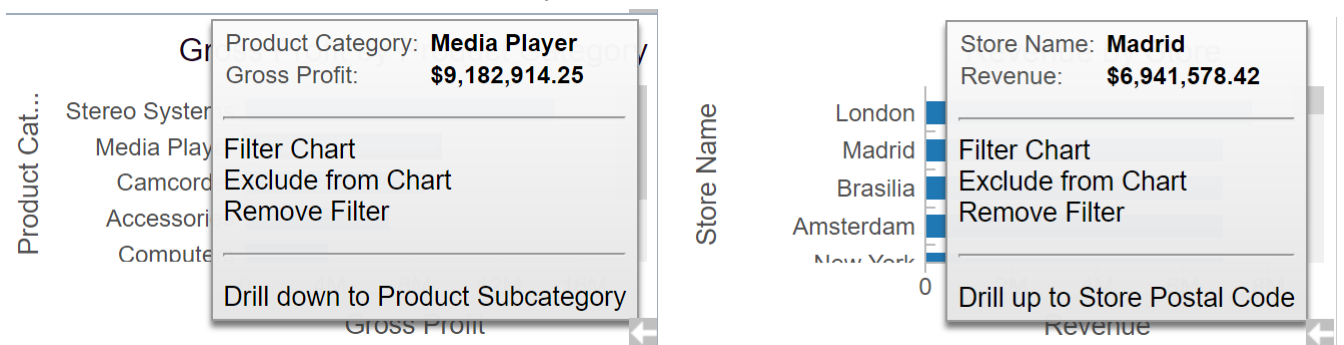
Visualizations provide very interactive capabilities for end users. The Executive Dashboard sample has 3 columns, each representing 3 different perspectives on a measurement. The first column measure is Quantity sold, the second is Gross Profit, and the 3rd being Revenue. Each row of the dashboard represents different dimensions – totals, geographical dimension, and a time dimension initially by month in the last row.



Place your mouse cursor on the EMEA bar in the Quantity Sold by Region chart. Hover on that bar and note the pop up window that would allow you to drill down to sub-region, or filter the chart(s) to only focus on EMEA region.

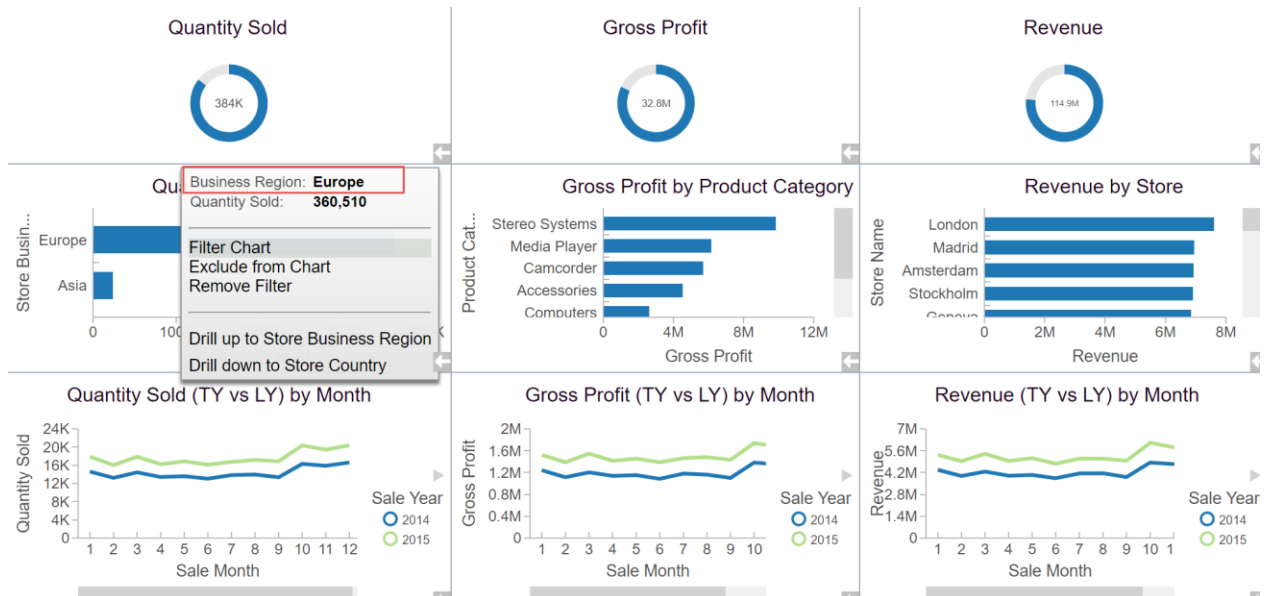


Do the same for one of the bars in the next chart over, Gross Profit by Product Category, and then the one over from that, Revenue by Store.



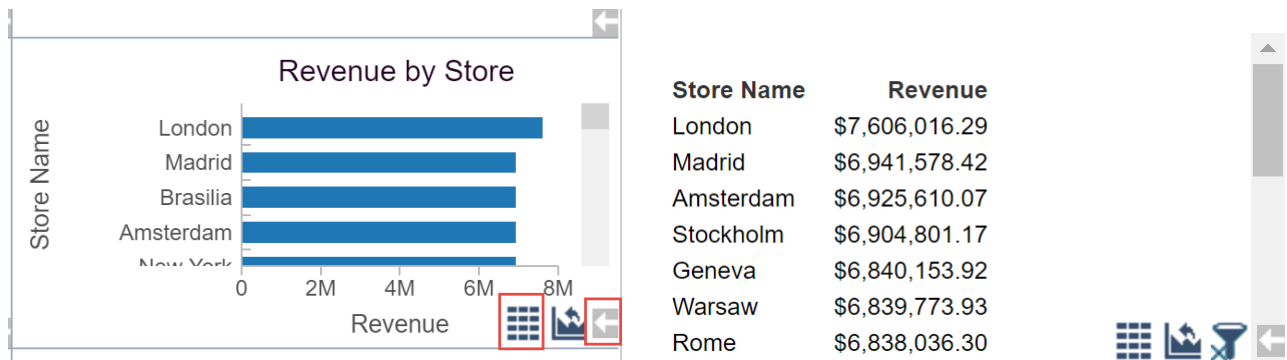
Note that STORE is the lowest layer of that geographical dimension as you only have a DRILL UP option there.

Go back to the EMEA bar in the quantity sold bar chart, hover over it and select "Drill down to Store Business Sub Region."



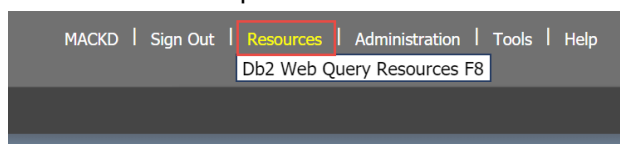
Note the impact to the entire set of charts. Hover over the EUROPE sub business region, and drill down to STORE COUNTRY.

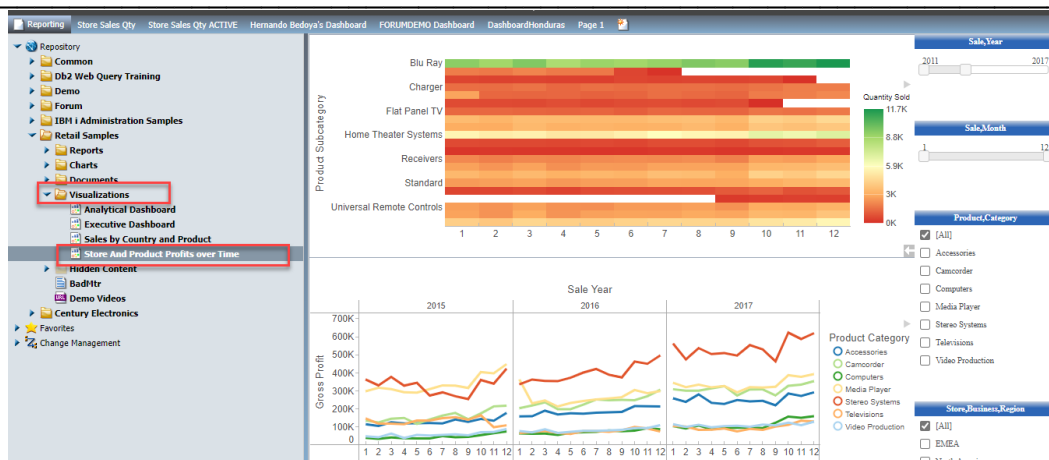
You are now looking at data only from countries in the European sub region. If you want to, at any time, see the data that is behind the graph, there is a way to do that. In the Revenue by Store bar chart, **click on the small arrow in the lower right hand side of that chart.** Then click on the Data Grid icon.



This changes the view from the bar chart to a data grid. **Click on the data grid icon again** to go back to the bar chart.

For our next adventure into Visualizations, in the BI Portal interface, **click on "Resources"** in the upper right hand window to open up the list of folders. Navigate to Retail Samples, Visualizations, and **double click on Store and Product Profit over Time** visualization. This should run the report in a new browser window.



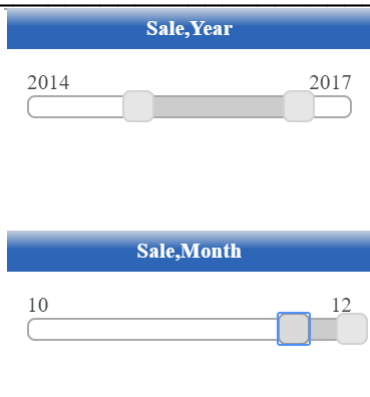


There is a lot going on here. You can hover over one the elements of the heat map to see filtering and drill up/down options, then do the same in the line chart showing gross profit over time at the product category level. There are multiple drilling options on both charts.

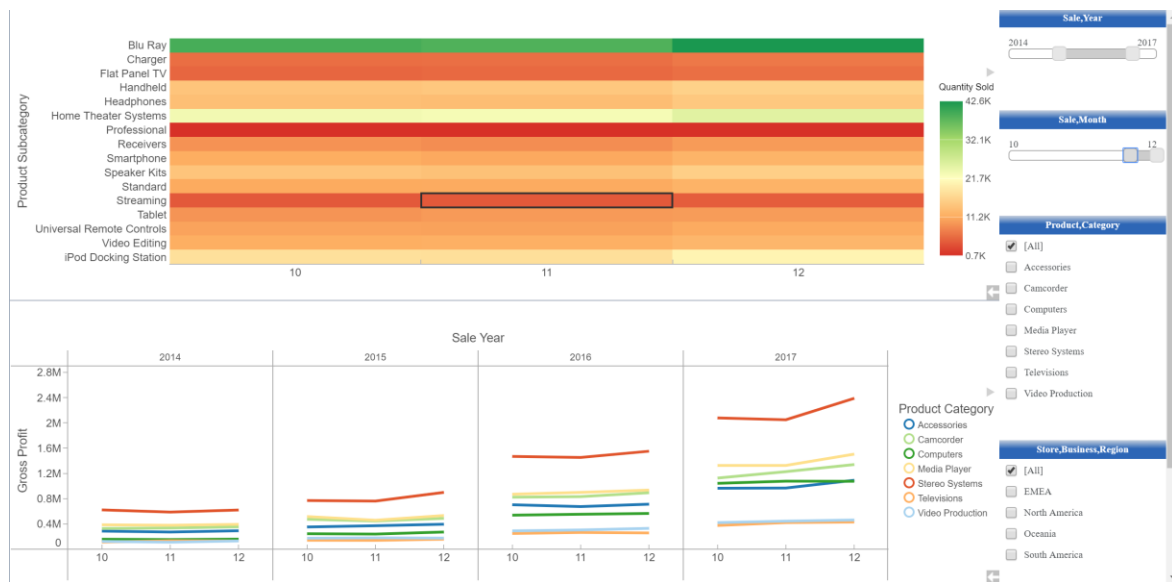


Note that on the right-hand side you also see some different ways you can allow end users to manipulate the views. There are slider bars to select only certain year or month ranges, and selection boxes for different criteria for product category, region and store type. It might be a subtle point if you are new to Db2 Web Query Version 2.2.1 made it much easier for a report author to build this kind of powerful, yet intuitive, end user interface – all within the InfoAssist (or now referred to as InfoAssist PLUS) browser based report authoring component.

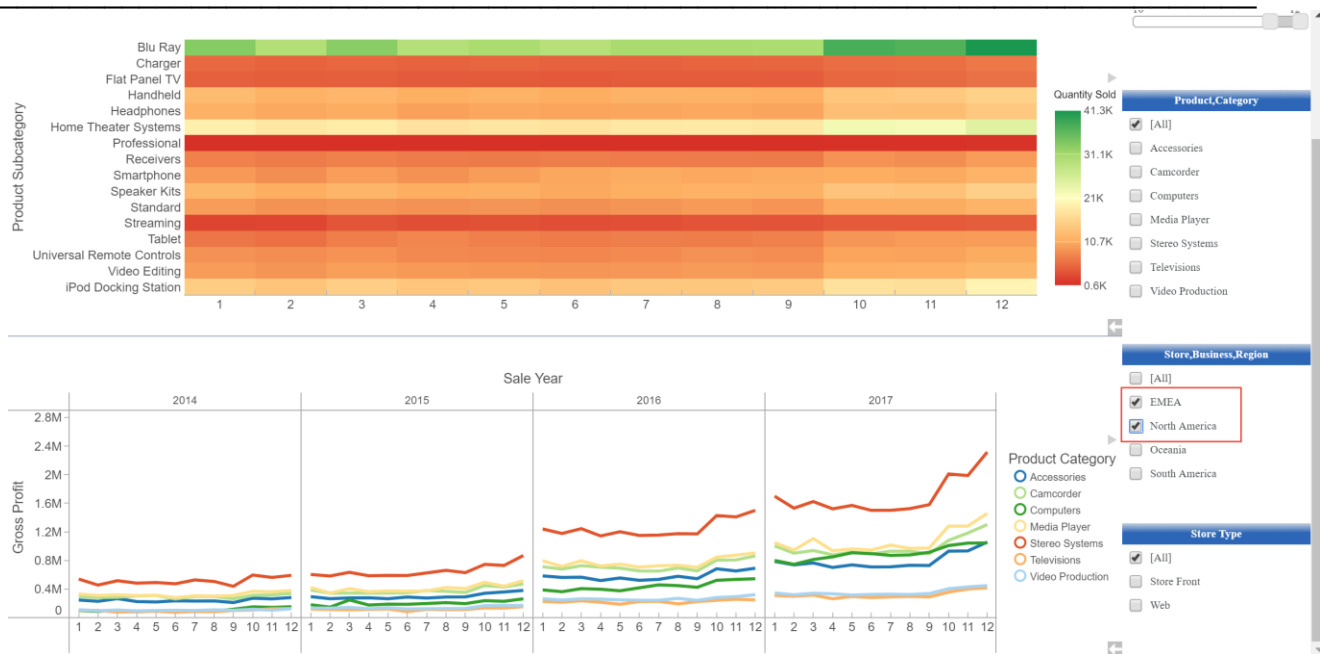
For now, let's focus on the most recent high profit years. Using the slider bar for years, **move it to the right to only show 2014 to 2017 data**. Since Q4 is also this company's best quarter typically, let's focus on just the months in Q4 by **using the Sale,Month slider bar to select only months 10 through 12**.



See how the selection criteria has altered the views on the visualization:



For some selection criteria, you may want to make multiple selections available to the end user. In the Store,Business,Region selection area, **click on both EMEA and North America**. The charts will reflect your change.



Feel free to play around with this, or any of the visualization samples in the Retail Samples, Visualization folder. For now, **close the Store and Product Profit over Time** browser window and return to the BI Portal window.

Scroll down a bit in the Retail Samples folder to get to the **DEMO VIDEOS** icon at the bottom of Retail Samples folder and double click on it.

This brings up a Db2 Web Query web page (you can also do this outside of Db2 Web Query by just pointing your browser to ibm.biz/db2wq-221-videos). Every report, chart, document and visualization you have in the Retail Samples folder has an accompanying video demonstration not only showing you interacting with the report, but these were built.

Note that different browsers behave differently for the demo videos, and some companies block access to Youtube. You can always go to our wiki page at <http://ibm.biz/db2wqwiki> and click on the VIDEO DEMONSTRATIONS link to get to product videos.

Video demonstrations

Reports

- Margin by product category (00:04:04)
- Quantity sold by stores (00:04:03)
- Sales metrics year to date (00:03:41)
- Yearly product metrics (00:05:29)

Charts

- Bar – highest margin products (00:04:30)
- Scatter – profit vs. COGs for products (animation) (00:05:06)
- Choropleth map – sales by state (00:03:11)
- Scatter matrix – profit vs. COGs (00:05:17)
- Heatmap – average margin product by country (00:03:51)
- Stacked bar – sales by month and product category (00:02:19)
- Line – product revenue by month – sized by discount (00:02:48)
- Stacked bar – units sold by stores vs. web (animation) (00:02:57)
- Pie matrix – quantity by region (00:05:55)
- Treemap – revenue and average margin for models (00:04:12)
- Proportional symbol map – sales by store (00:01:55)

Documents

- Sales by region dashboard (00:10:15)

Visualizations

Click on a couple of the videos to see some in action.

After viewing a couple of videos, be sure to scroll down on that resource page and note the other links there to the “Nuts and Bolts” Redbook, additional Redbook tutorials, Consulting/Training options, and the Db2 Web Query wiki containing a wealth of technical documentation and information about everything Db2 Web Query!

📺 Analytical dashboard (00:06:49)

📺 Executive dashboard (00:04:14)

📺 Sales by country and product (00:04:16)

📺 Store and product profits over time
(00:03:36)

IBM Redbooks

→ Db2 Web Query Nuts and Bolts

→ Db2 Web Query InfoAssist Tutorials

Additional resources

➡ Db2 Web Query EZ-Install

→ Consulting and training options

→ Db2 Web Query technical resources wiki

➡ Db2 Web Query blog

3 Additional Information: Links

Links:

[Ibm.biz/db2webqueryi](https://ibm.biz/db2webqueryi) - main website

[Ibm.biz/db2wqwiki](https://ibm.biz/db2wqwiki) - technical wiki

[Db2webqueryi.blogspot.com](https://db2webqueryi.blogspot.com) - Db2 Web Query blog

[Ibm.biz/db2wgezinstall](https://ibm.biz/db2wgezinstall) - EZ-install getting started page

Contact the Db2 Web Query Team at QU2@us.ibm.com