



SAP Webi

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About the Tutorial

Web Intelligence, the business intelligence reporting tool, is a part of SAP BusinessObjects product suite. This is a handy tool for business users for analytical and ad hoc reporting.

Using Web Intelligence, business users can create basic, medium, and complex reports from transactional data in database to meet business requirements. This tutorial explains the key concepts of SAP Web Intelligence (SAP Webi).

Audience

This tutorial is designed for all those readers who want to learn the basics of SAP Web Intelligence and implement it to analyze data with the help of BI Launchpad and Webi.

Prerequisites

You need to have the required skills to unearth relevant data and analyze it in order to create professional reports.

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1. SAP Webi – Overview

Web Intelligence is part of SAP BusinessObjects product suite and is used for analytical and ad hoc reporting to meet an organization's business requirements. Web Intelligence is a Business Intelligence reporting tool for business users to analyze data in Data Warehouse. It assists business managers in the decision-making process for building future strategies.

Using Web Intelligence, business users can create basic, medium, and complex reports from transactional data in database and by creating Universes using Information Design Tool/UDT. Various SAP and non-SAP data sources can be used to create reports in Web Intelligence. SAP Business Warehouse (BW) system doesn't require a Universe to connect to Web Intelligence tool.

Web Intelligence tool can work as a client tool of BusinessObjects platform and also as a standalone tool for reporting.

Versions and History

BusinessObjects was first started in 1990 with the tool name Skipper SQL 2.x, and in the year 1994 Business Objects v3.0 was launched.

In 2005, BO XI was released and later on various other versions introduced. Some of the versions are:

- BO XI R1
- BO XI R2
- BO XI R3
- BO XI R3.1
- BO XI R3.2

In 2007, SAP acquired this company for \$6.8 billion and the product has been renamed as **SAP BusinessObjects**.

Later in the year 2011, BO XI 4.0 was introduced. The latest version of the tool is SAP BO 4.2.

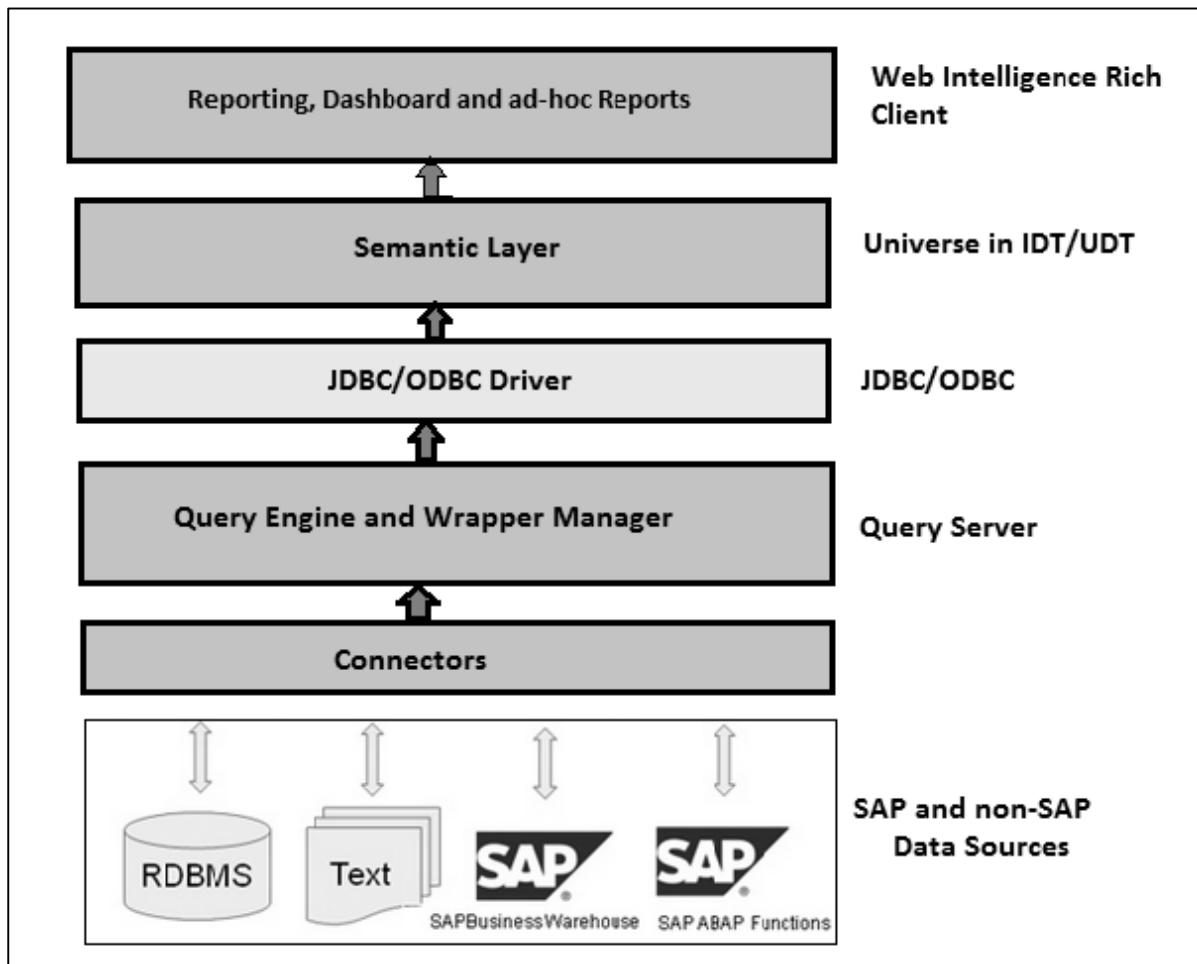
Web Intelligence Architecture

SAP Webi has a three-layered architecture:

- **Database Layer** – This layer defines multiple SAP and non-SAP data sources.
- **Semantic Layer** – This layer defines multidimensional data model.
- **Presentation Layer** – This layer defines where data is presented to end-users.

Various data sources can be used to create analytical and ad hoc reports. You can pull data from SAP systems, like SAP ECC, SAP ERP, SAP SRM, and other SAP modules.

Non-SAP data sources include Oracle Database, Microsoft SQL Server, IBM DB2, and Sybase.



2. SAP Webi – BI Launchpad

BI Launchpad is a Java or HTML based interface of BusinessObjects tool to perform analytical reporting and data analysis. You can set the preference for your BI Launchpad that determines which tool interface is launched via Launchpad.

Using Web or Internet Application to access Webi interface via BI Launchpad, you can perform the following tasks:

- Create, edit and refresh all the reports in Web Intelligence.
- Create and edit all the queries in no data source (Universes) but not BEx queries in Web application.

Note: If you are using Webi 4.0 SP2, it is not possible to create queries and you can only work on documents and reports.

BI Launchpad has the following important tabs:

- Home – Displays recent messages, alerts, documents, and applications that can be run.
- Documents – Displays the available documents and folders, making it easier to view, organize, and manage the documents.
- Any open Document – Displays each open document.

You can use the Application tab to start an application including Web Intelligence. You can use the Preference tab to define BI Launchpad preferences.

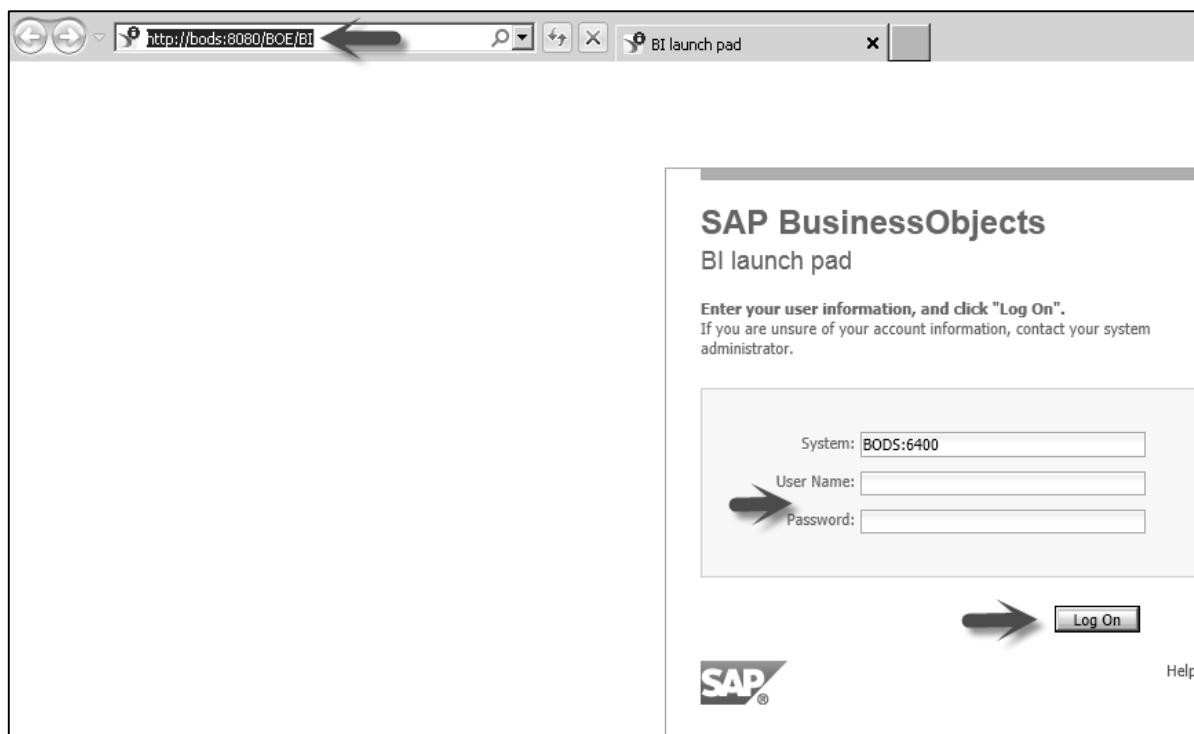
Logging to BI Launchpad

As mentioned, BI Launchpad is HTML5 or Java-based web interface to launch an application via BI Launchpad.

To access BI Launchpad, you should have a web URL, user name and password. Access profile to be set for the resources.

To get the BI Launchpad details and user credentials you can reach the BO Administrator using the link, <http://BOSERVER:8080/BOE/BI>

To login to BI Launchpad, open the web browser and enter the Launchpad URL provided by your administrator. The following screen pops up.



Select the system name you want to login. Enter the user name and password.

In the Authentication dropdown, select the Authentication type - Enterprise, Windows AD, etc. (In the above snapshot, this server has a single login).

Click 'Log On' and it will open the home page for BI Launchpad.

Welcome: demo1 | Applications▼ Preferences Help menu▼ | Log off

Home Documents

My Recently Viewed Documents
No recently viewed documents

My Recently Run Documents

- Publish Report
- World Sales Report
- World Sales Report
- World Sales Report

0 unread messages in My Inbox
No unread messages

0 Unread Alerts
No unread alerts

My Applications

- Report Center
- Report Designer
- Report Publisher
- Report Scheduler
- Report Manager
- Report Catalog
- Report Auditor
- Report Monitor

You can use Applications tab of Launchpad to run any of the application.

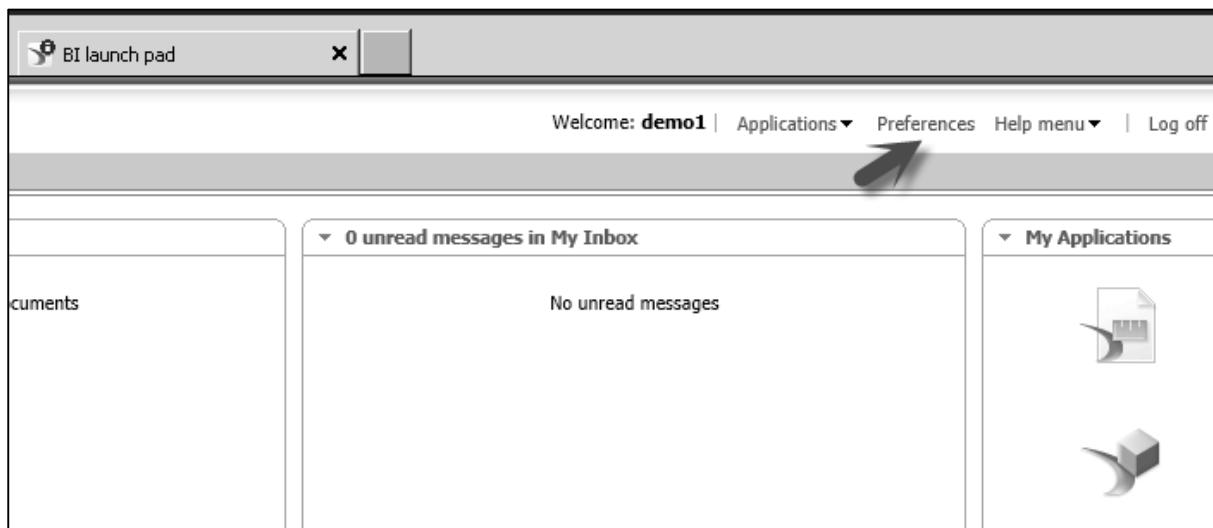


3. SAP Webi – BI Preferences

Let us now discuss how to set BI preferences.

Setting BI Preferences

You can set BI Launchpad preferences for the following tasks.



General Preferences: These are defined by the administrator. You can reset your password. You can also set time zone, locales preferences, and Web Intelligence preferences.

A screenshot of the SAP Preferences dialog for user 'demo1'. The left sidebar shows categories like 'General', 'Locales and Time Zone', 'Analysis edition for OLAP', 'Web Intelligence', 'BI workspaces', and 'Crystal Reports'. A large arrow points to the 'General' category. The right panel displays the 'General' tab settings. It has a checked checkbox for 'Use Default Settings (Administrator defined)'. Under 'Set BI launch pad start page:', there are three radio buttons: 'Home tab' (selected), 'Default Home tab', and 'Select Home tab' with a 'Browse Home Tab' button. Below this are sections for 'Documents tab' (with 'My Documents' selected), 'Folders' (with 'Public Folders' selected), and 'Categories' (with 'Corporate Categories' selected).

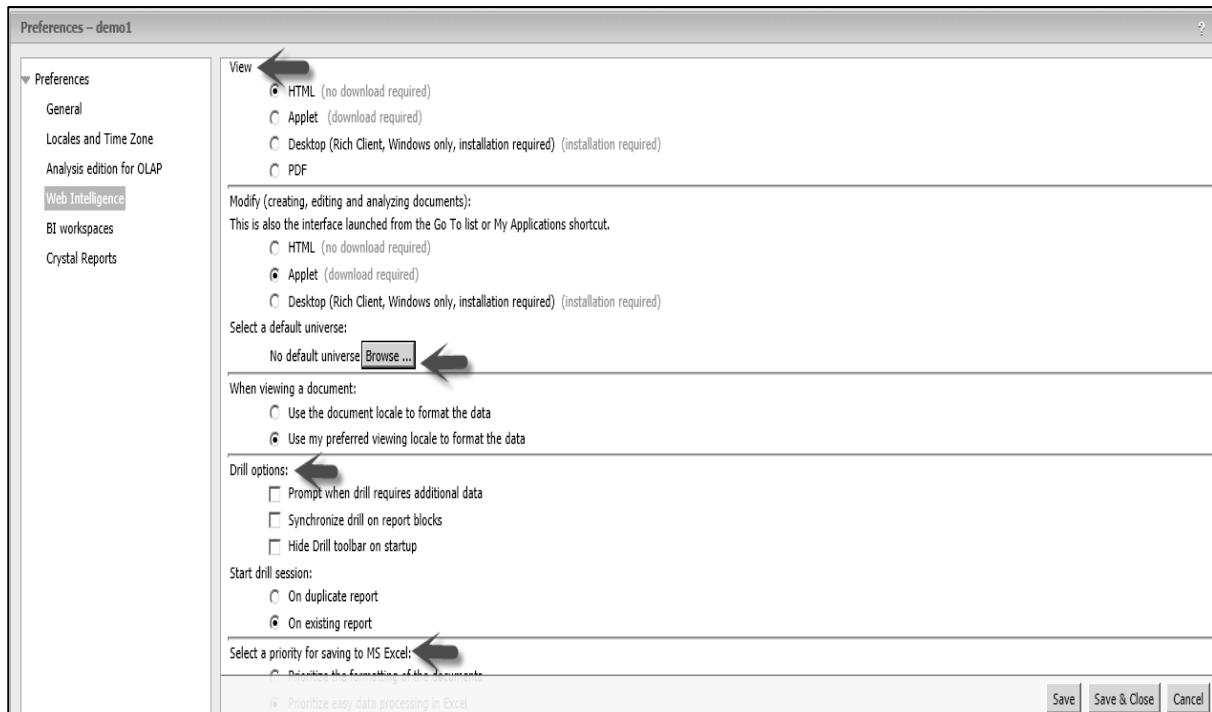
General Tab: Using this tab you can set user default settings.

Change Password: As per your user access.

Locales and Time Zone: To set product locale, preferred viewing locale, current time zone.

Analysis Edition for OLAP: To define accessibility mode.

Web Intelligence: You can select the interfaces to use for view and modify modes. You can also select a Default Universe. You can set the drill options. You can also select saving priorities when saving a report in .xls format.



BI Workspaces: Used to select a default stylesheet to use when creating a new workspace.

Crystal Reports: Used to set crystal reports options like printing options, default measuring unit, etc.

4. SAP Webi – Application Modes

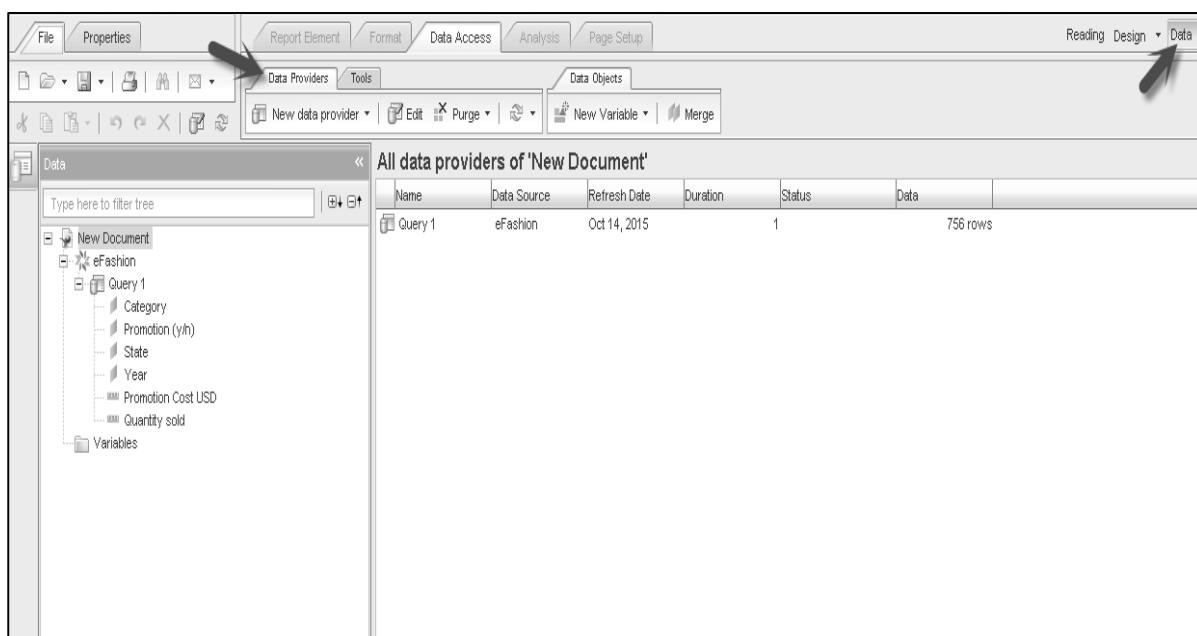
There are three different application modes that can be used to build the queries, create documents and to analyze the reports. When you open an existing report, the following modes are available:

- Data
- Reading
- Design

Data Application Mode

In this mode, you can create new data provider, change an existing data source or rename a data provider. You can also create, edit, and manage queries, which is used to pass data to reports.

In Data mode, it shows the list of all the available data providers. All the options in tool mode are disabled in this mode.



Reading Mode

This mode allows you to display existing reports, search text, monitor changes in the reports, and drill down on the data in the report.

You can also use the left panel and tool bar in the Reading mode.

Year	Category	Promotion C	Promotion (y)		Year	Category	Quantity sold	State
2005	2 Pocket shirt	\$12,650	y		2004	2 Pocket shirt	283	California
2005	Evening wear	\$13,000	y		2004	2 Pocket shirt	46	Colorado
2005	Jewelry	\$9,500	y		2004	2 Pocket shirt	102	DC
2005	Long sleeve	\$8,050	y		2004	2 Pocket shirt	67	Florida
2005	Short sleeve	\$10,700	y		2004	2 Pocket shirt	105	Illinois
2005	T-Shirts	\$7,075	y		2004	2 Pocket shirt	56	Massachusetts
					2004	2 Pocket shirt	236	New York

Design Mode

Design mode allows you to add, delete objects in a report, applying conditional formatting, applying formulas in report, creating variables, etc.

Design mode with Structure only allows you to view the structure of the report. All the changes that you make in this mode, they are not applied to the server till you populate it with data.

In Design mode with data, all the modifications applied in a report are on the server. In case you have to make a lot of changes in an existing report, it is recommended to make changes in structure mode and then populate the report with data.

6400 Connected] - New Document *

format Data Access Analysis Page Setup Reading Design Data With Data Ctrl+2 Structure Only Ctrl+3

Data Objects | Edit Purge | New Variable | Merge

Report 1

Year	Category	Promotion C	Promotion (y)
2005	2 Pocket shirt	\$12,650	y
2005	Evening wear	\$13,000	y
2005	Jewelry	\$9,500	y
2005	Long sleeve	\$8,050	y
2005	Short sleeve	\$10,700	y
2005	T-Shirts	\$7,075	y

Year	Category	Quantity sold	State
2004	2 Pocket shirt	283	California
2004	2 Pocket shirt	46	Colorado
2004	2 Pocket shirt	102	DC
2004	2 Pocket shirt	67	Florida
2004	2 Pocket shirt	105	Illinois
2004	2 Pocket shirt	56	Massachusetts

5. SAP Webi – Creating Documents

In this chapter, we will learn how to create Webi documents.

Creating Documents in Webi

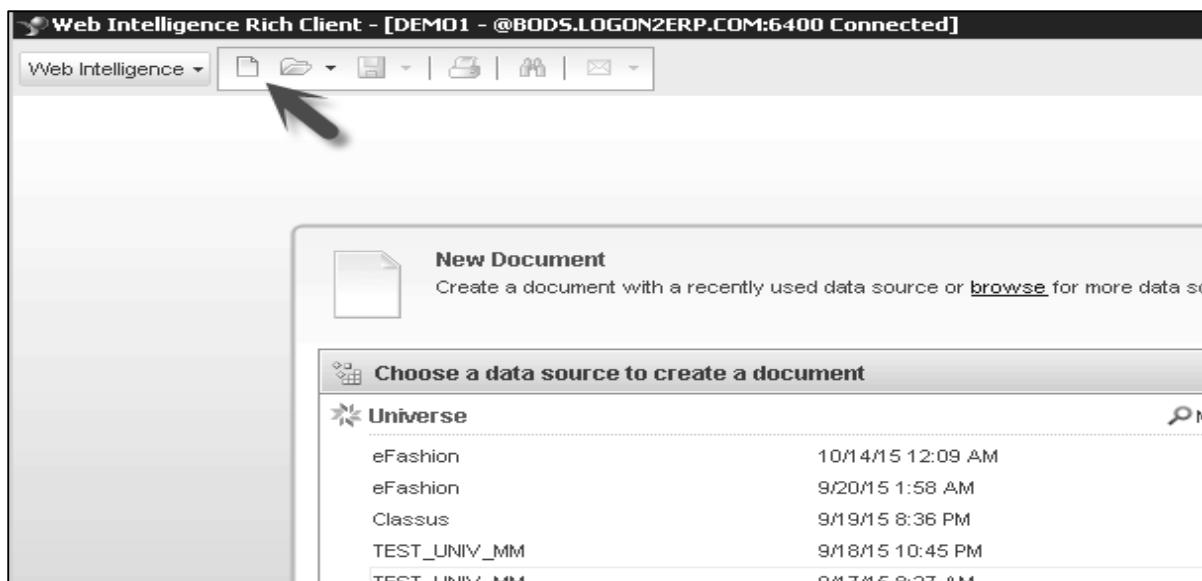
When you open Web interface via BI Launchpad or open Webi rich client, you have an option to create a new document or edit an existing one. You can create a new document as blank document or use an interface to create a document based on the following data sources:

- Universe
- Flat files in .csv or .xls format
- BEx queries
- Analysis view

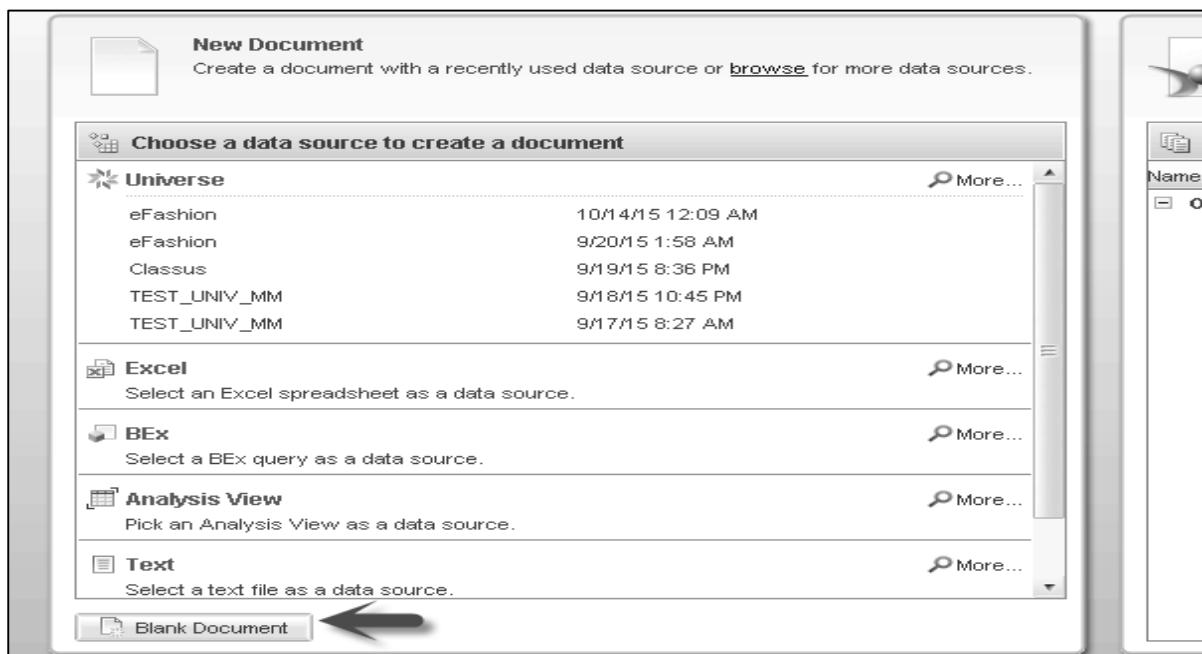
Rich Internet application interface and Webi rich client allows you to use from list of available data sources; however, Web Interface supports only no data source or Universe from IDT/UDT.

Data Source	Web Interface via BI Launchpad	Rich Internet Application Interface	Web Rich Client Tool
No Data	Yes	Yes	Yes
.unx or .unv Universe file	Yes	Yes	Yes
BW BEx Query	No	Yes	Yes
Analysis View	No	Yes	Yes
Text Files CSV and XLS	No	Yes	Yes

To create a blank document to use later: Launch Webi Rich Client -> Click 'New document' option at the top -> No Data Source -> Ok.



Or you can select a blank document by clicking the icon below the list of available data sources.



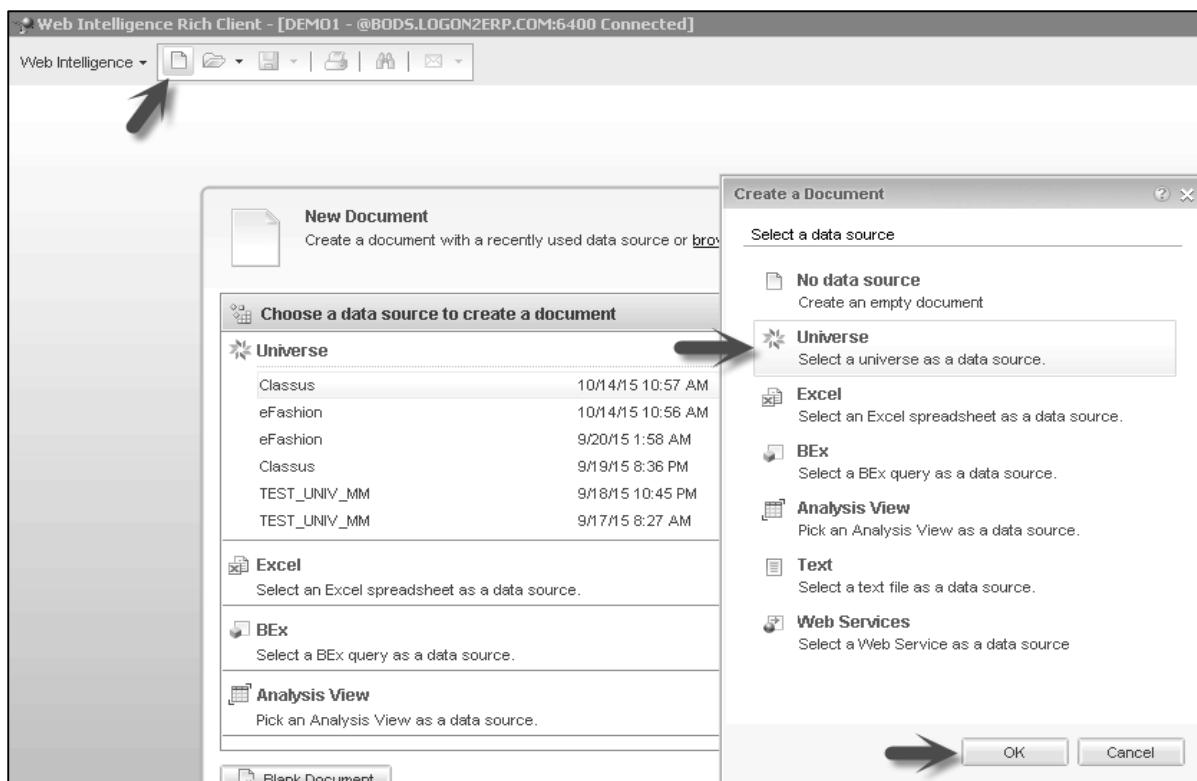
You can also use other data sources like Universe, BW BEx query, and text sources like CSV and XLS files, Analysis view or a web service as data source to create a new document.

Creating Document Based on Universe

You can create a Webi document based on Universe using Information Design Tool/Universe Design Tool.

- .unx – File created with Information Design Tool
- .unv – File created in Universe Design Tool

To use a Universe as data source, go to New -> Select a Universe as data source and click Ok.



It will open a list of all Universes published to BI repository to use in a document. You can select any available universe and click 'Select'.

It will show you all .unx and .unv files available to use in a document.

Object	Count	Description
Report Conversion Tool Audit Universe	12	@BODS_6400\Report Conversion Tool Universes
Resort	2	@BODS_6400\webi universes
sales unv	16	@BODS_6400\webi universes
sample	2	@BODS_6400\webi universes
sample.unx	1	@BODS_6400\
santest1	1	@BODS_6400\webi universes
sapbo.unx	8	@BODS_6400\
SC_REL.unx	1	@BODS_6400\MY UNiverses
SC_REL.unx	1	@BODS_6400\New Folder
TEST_UNIV_MM	0	.

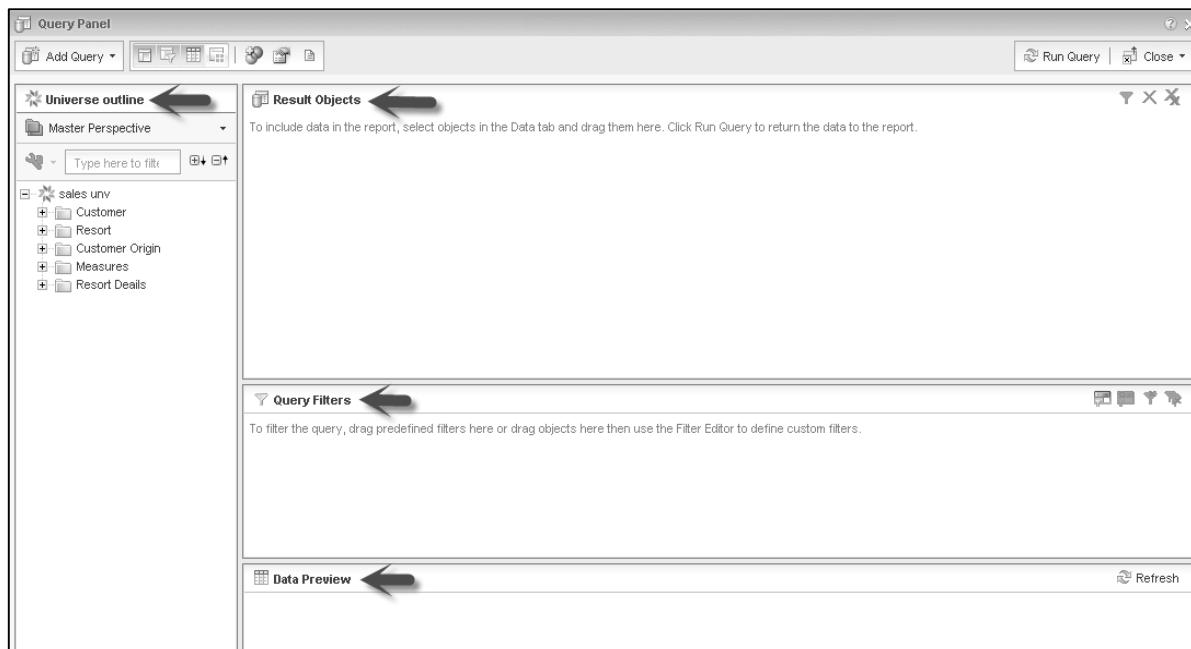
Help on selected universe:

```
name=ramakrishna
date=02/10/16
domain=sales
```

→ Select Close

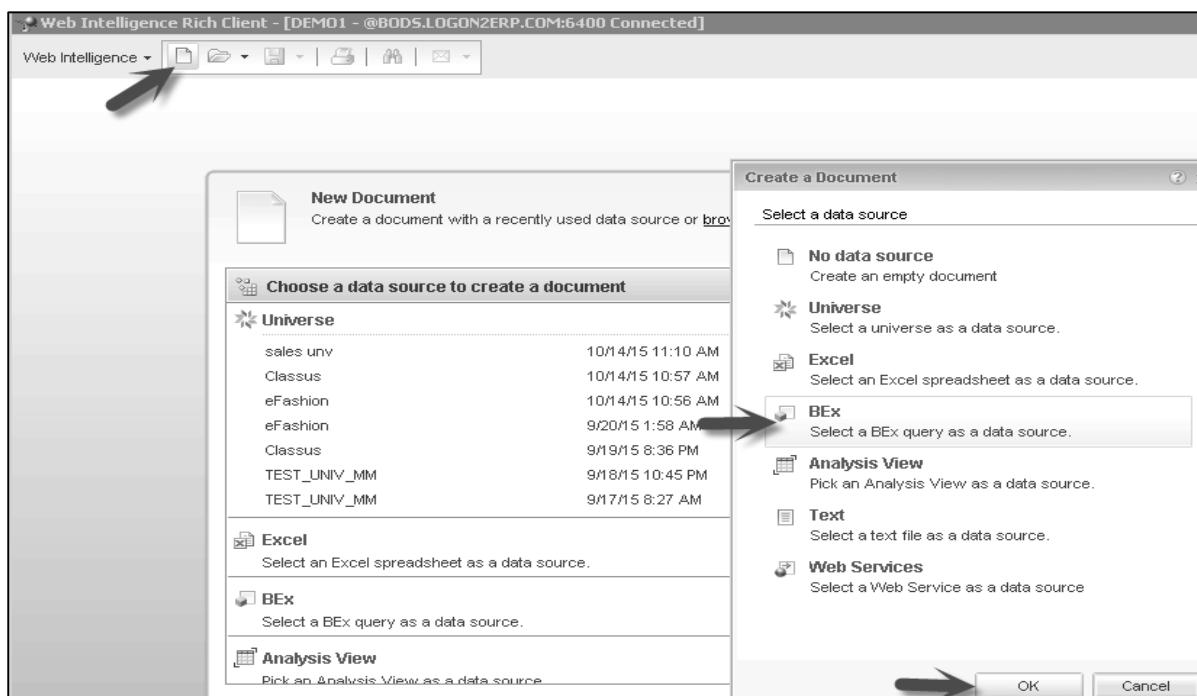
Query Panel will be open. You can select from list of available objects as per your access permissions. You may not be able to use a few of the objects because of permission issues.

In query panel, you have Universe outline in the left pane, and result objects, query filters, data preview panels in the main pane.

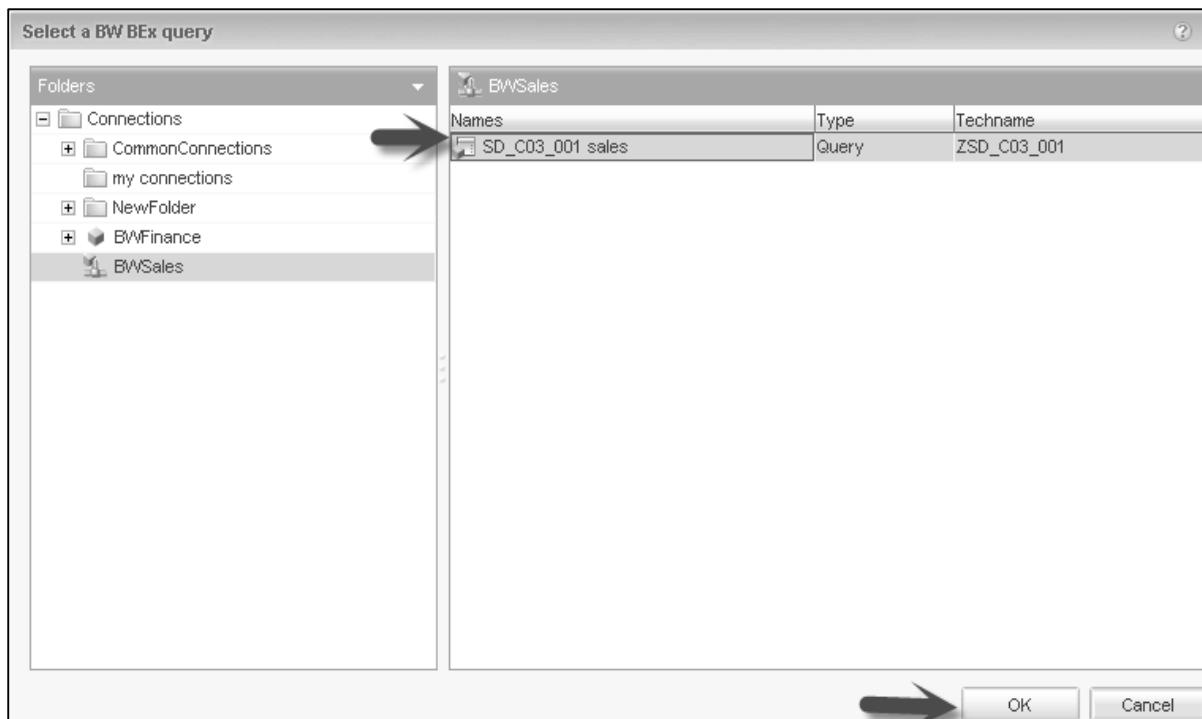


Creating Document based on BEx

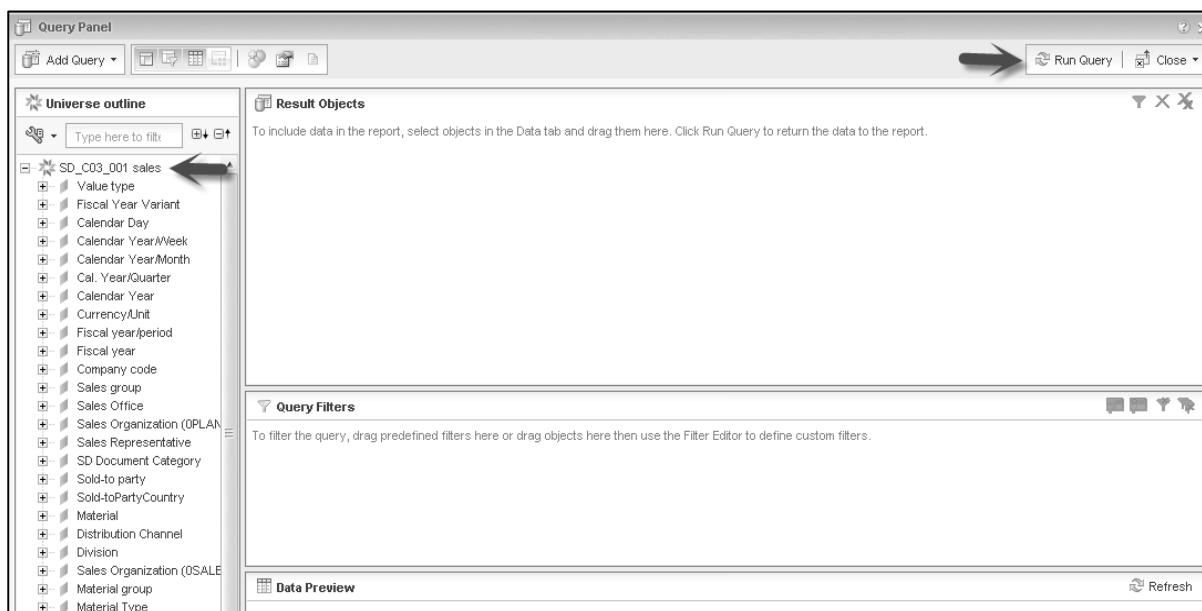
To use BEx as data source, go to New -> Select BW BEx query as data source and click 'Ok'.



It will show you a list of all available BEx queries. You can select only those which you have permission to access. On the left side of the screen, it shows you the name of Info provider for BEx query.

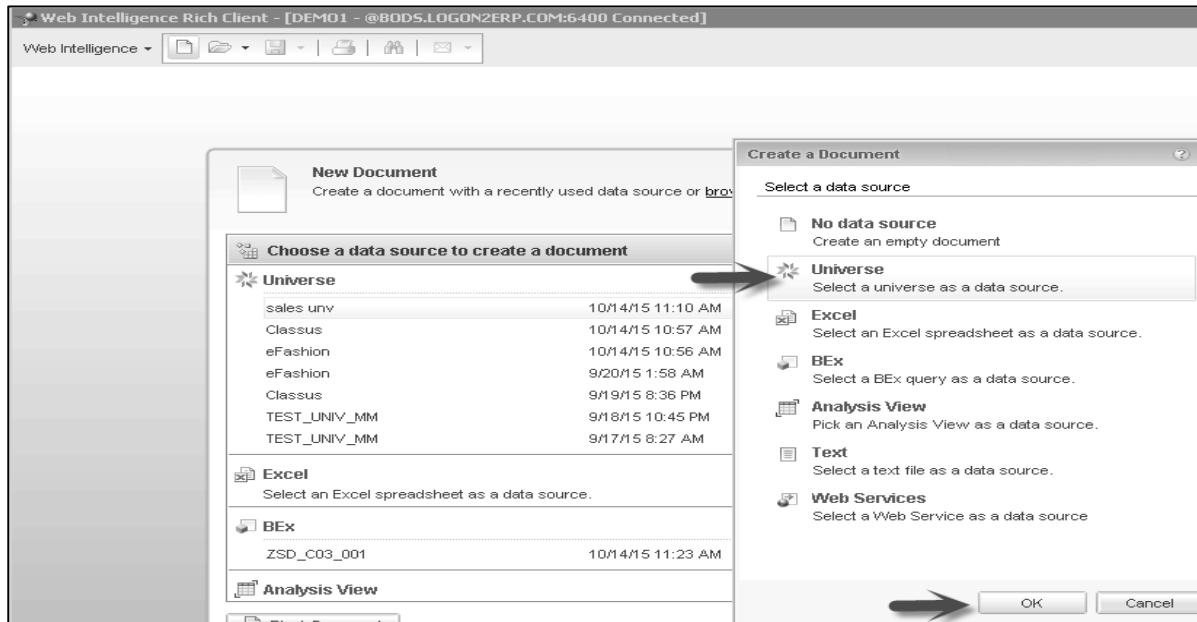


It will open the Query panel, you can select the list of available objects from Universe Outline and name of BEx query below that.



Creating Document Based on Analysis View

Click New icon -> Select Universe -> Ok.



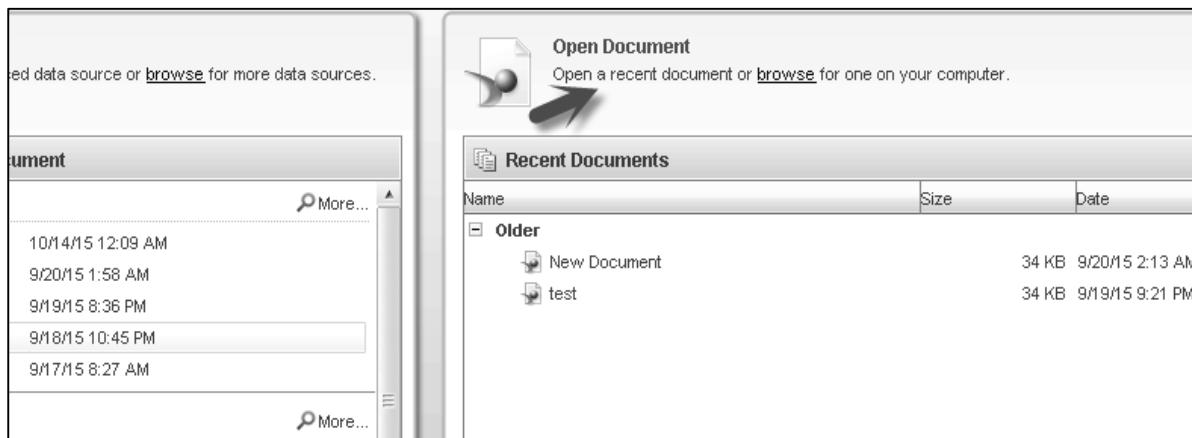
Select the Analysis view you want to use and click Ok.

It will open the Query panel with a list of available objects.

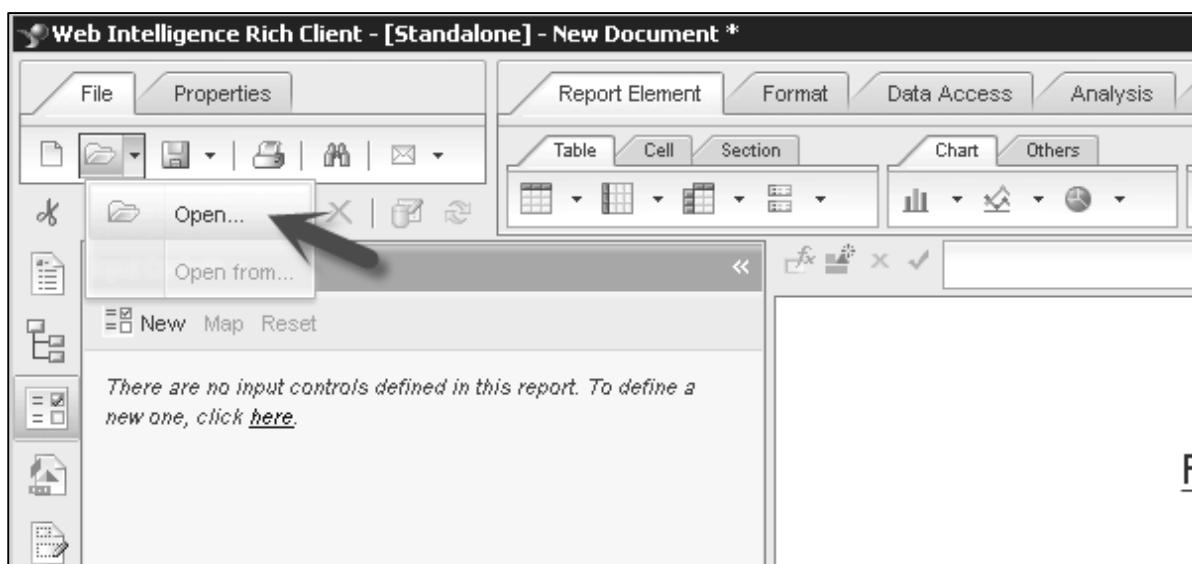
6. SAP Webi – Editing & Opening Documents

You can edit an existing document via BI Launchpad -> Web Interface or by opening a document in Webi Rich Client.

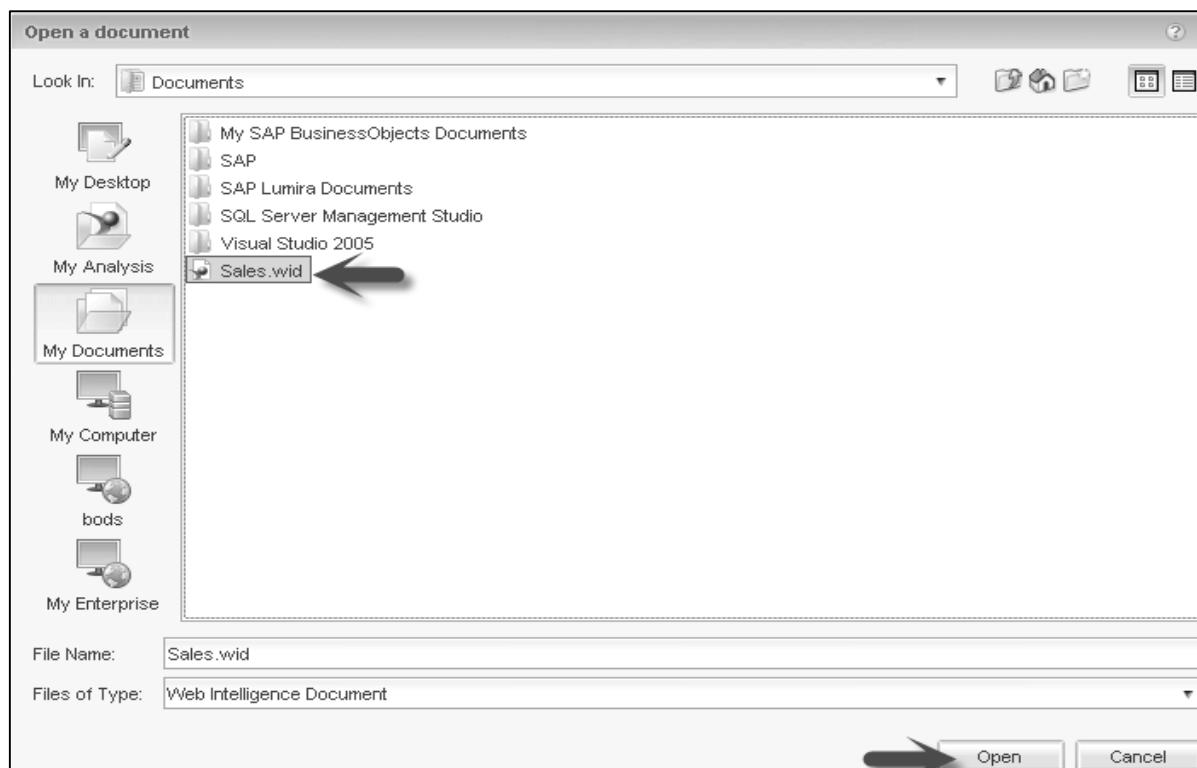
You can also open recent documents using Webi Rich client directly. Launch Webi rich client and you will get a list of recent open documents on the left side of the screen.



You can also select an existing report to edit in Webi. Extension of a Webi File is “.wid.”. To open an existing document, select a blank document. Go to File -> Open.



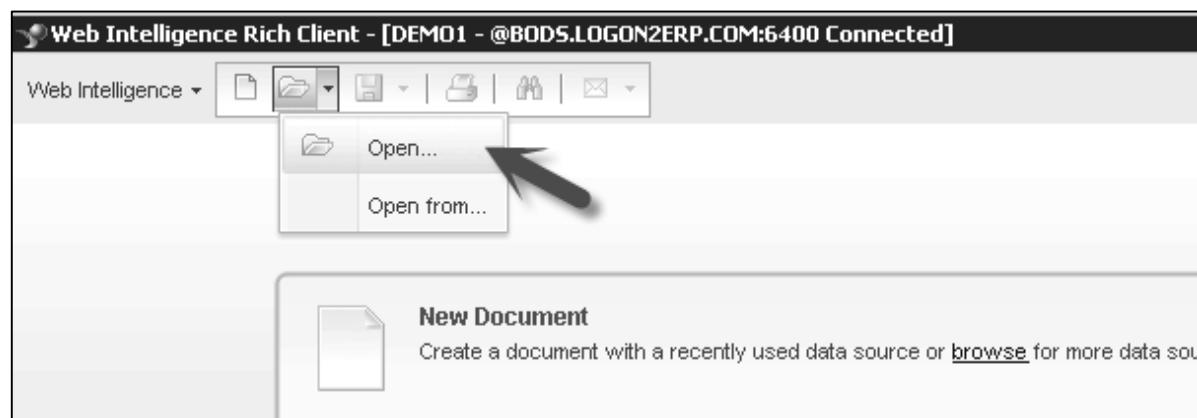
Select the path of an existing ‘wid’ file and click ‘Open’.



By default, it will open the report in Design mode.

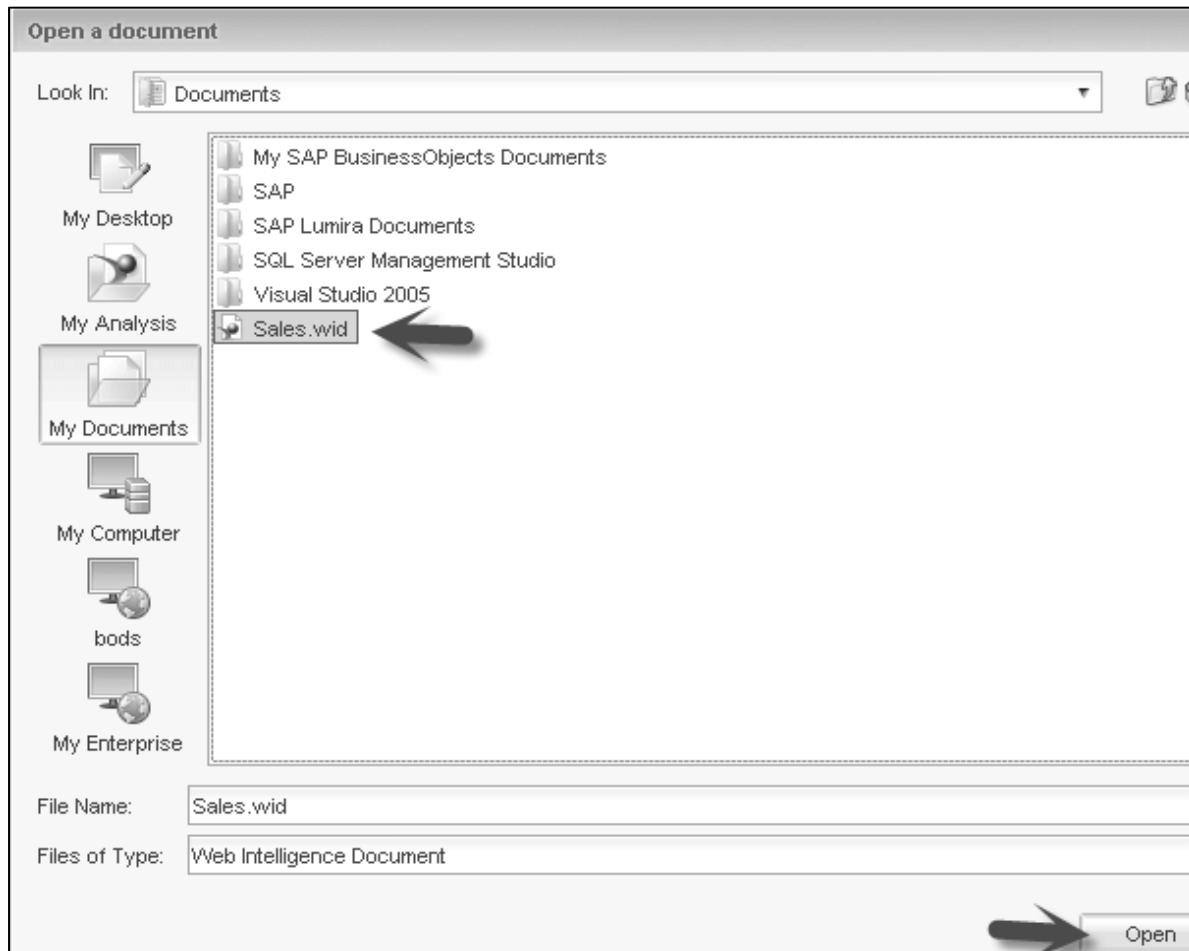
Opening a Document

To open a document, go to Webi rich client -> Click 'Open' tab.



Navigate through the folder you want to open, select the file and click 'Open'. This will open the file in Design mode.

You can select design and read mode as per your access rights.

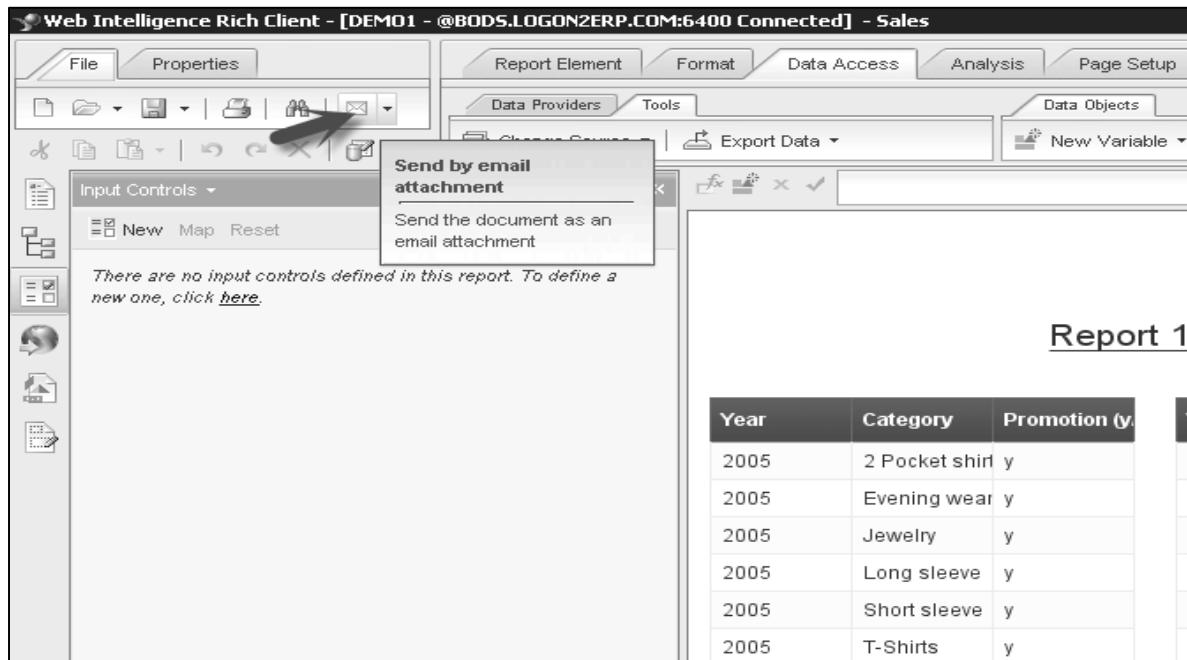


7. Web Intelligence – Sending Documents

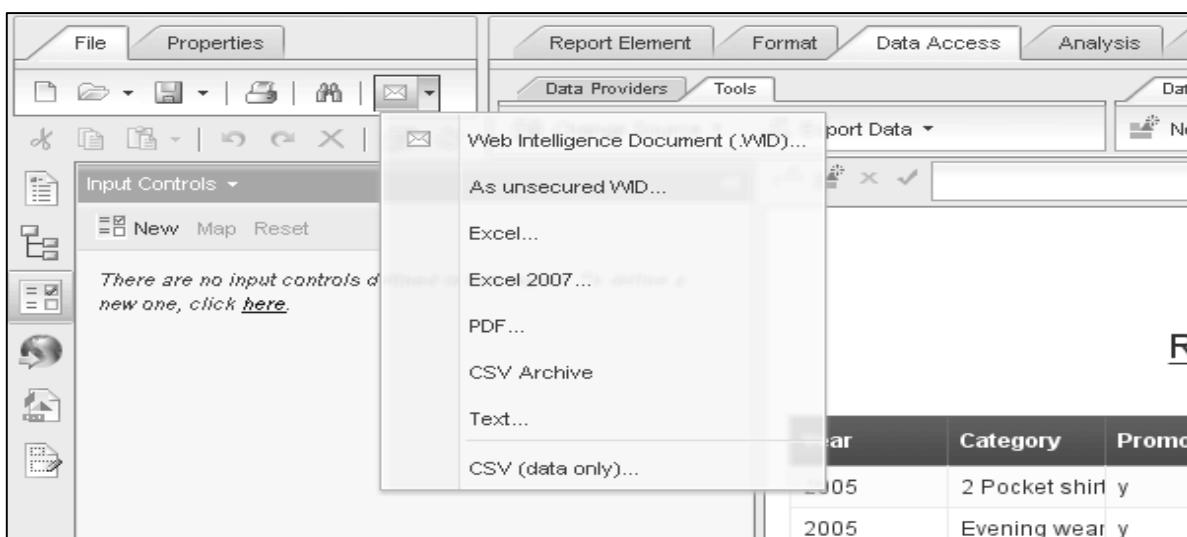
In this chapter, we will get acquainted with the various ways of sending a document.

Sending a Document via E-mail

Open the document in Webi Rich client -> Click 'Send by e-mail attachment'

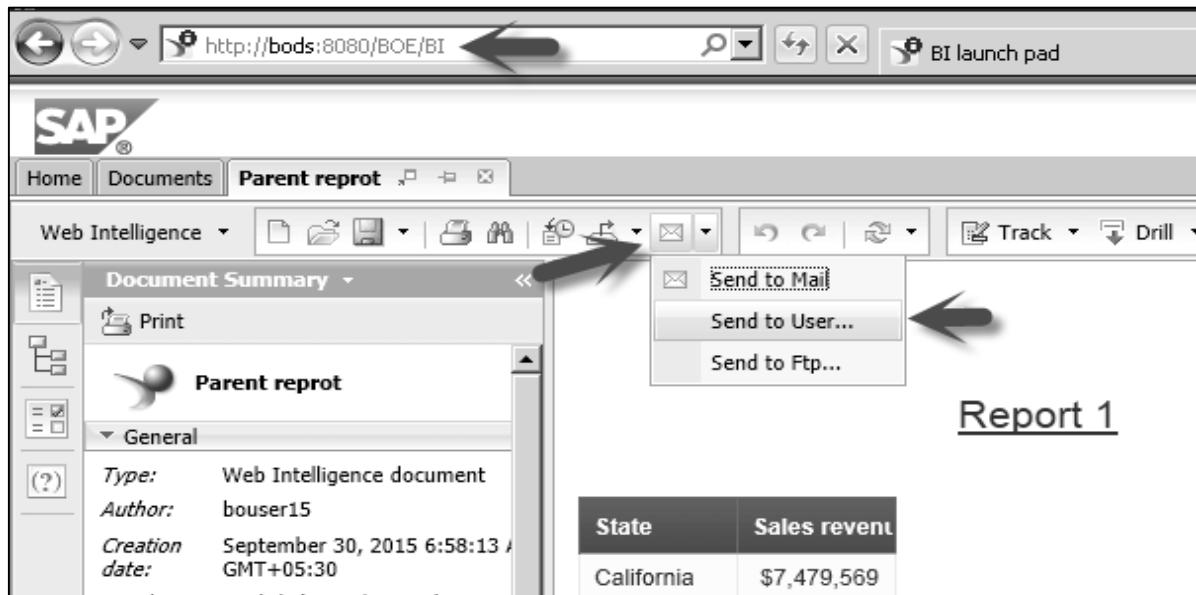


You have an option to select the different attachment formats like PDF, XLS, CSV, Text, and/or unsecured wid.



Sending Documents to Other Users

To send a document to other users/groups, open the document via BI Launchpad. Click 'Send' on toolbar -> Send to User.



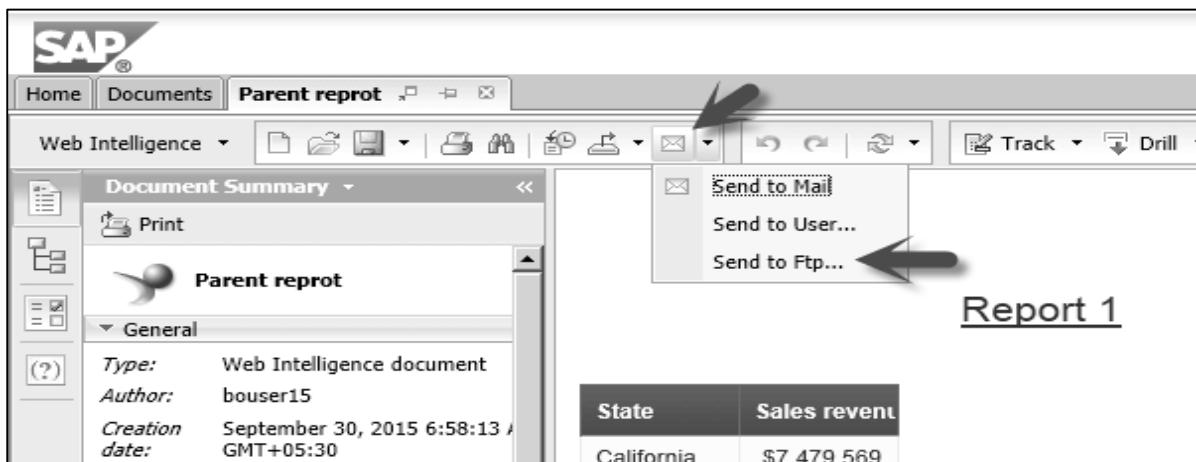
Select the users/groups to which you want to send the document to from the list of users and groups. You can select 'automatically generated' to send the document with an auto generated name. Select the specific name and enter the name you want to send the document.

You can also select "shortcut" to send a shortcut or "Copy" option to send a copy of the document.

Sending Documents Using FTP

To send a document via ftp, login to BI Launchpad. You have to save the document first. Click 'Save' icon at the top of the screen to save the document.

Click 'Mail' icon in the tool bar -> Select 'Send to Ftp'.



You have to enter the host name, port number, user name and password. Select the naming method for document to send. Click 'Send'.

8. SAP Webi – Managing Reports

Webi documents contain at least one or more reports. You can manage multiple reports in a single Webi document. You can also add, delete, rename, and move existing reports in one Webi document.

To add, delete, or move a report in a Webi document, right-click on the Report tab.

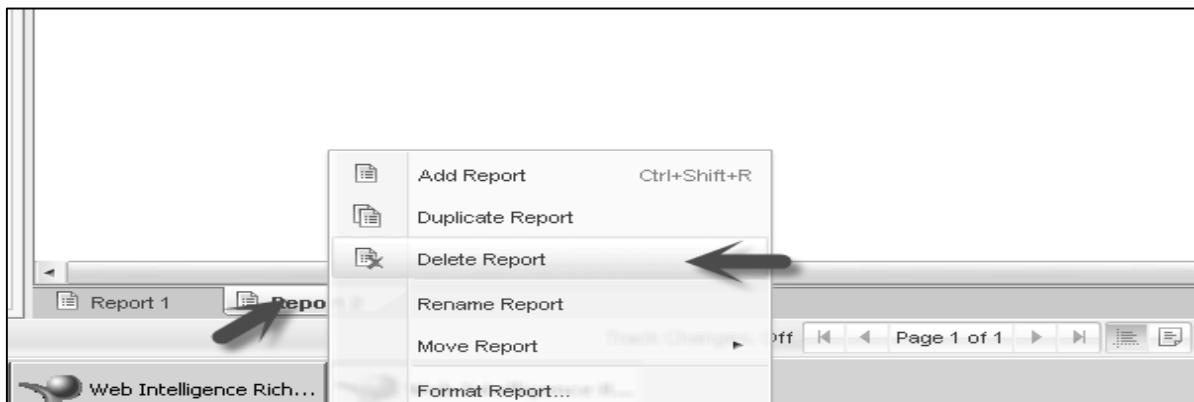
The screenshot shows a SAP Webi interface with two reports displayed side-by-side. The left report is titled 'Report 1' and contains data for the years 2005, categorized by item type (e.g., 2 Pocket shirt, Evening wear, Jewelry, Long sleeve, Short sleeve, T-Shirts) and promotion status (y). The right report is also titled 'Report 1' and contains data for the years 2004, categorized by item type (e.g., 2 Pocket shirt, Belts,bags,w, Bermudas, Boatwear, Cardigan, Casual dress, Day wear, Dry wear, Evening wear, Fancy fabric, Full length, Hair accesso, Hats,gloves,s, Jackets) and quantity sold. A context menu is open over the 'Report' tab on the left, listing options: Add Report (Ctrl+Shift+R), Duplicate Report, Delete Report, Rename Report, Move Report, and Format Report... A large black arrow points to the 'Add Report' option in the menu.

Add, Delete, Rename, Save a Report

To add a report, right-click on the existing report tab and click 'Add Report'.

This screenshot is similar to the previous one, showing two reports in SAP Webi. The left report is titled 'Report 1' and the right report is also titled 'Report 1'. A context menu is open over the 'Report' tab on the left, with the 'Add Report' option highlighted by a large black arrow. The menu also includes options for Duplicate Report, Delete Report, Rename Report, Move Report, and Format Report... The reports themselves show data for various years and categories.

To delete a report, right-click on the report tab and click 'Delete'. Each Webi document should have at least one report.



You can use "Rename Report" option to rename an existing report.

To save a document in Webi, you have options to save a report locally, save in BI repository, or export as CSV format. To do this, go to File tab and choose from the options Save/Save As/Save as Enterprise.

A screenshot of the SAP Webi interface showing the 'File' menu open. The options available are: Save (Ctrl+S), Save As... (F12), and Save to Enterprise... Below the menu, a preview pane shows a table of data:

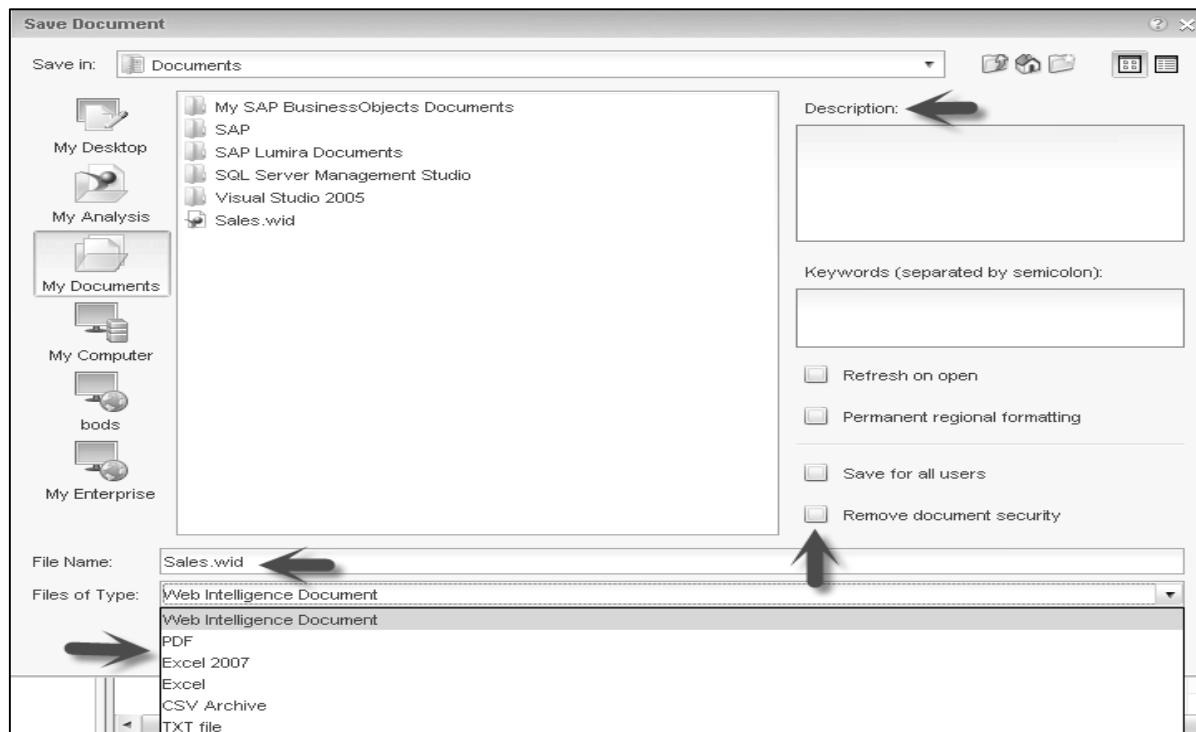
Year	Category	Promot
2005	2 Pocket shirt	y
2005	Evening wear	y
2005	Jewelry	y
2005	Long sleeve	y
2005	Short sleeve	y
2005	T-Shirts	y

If you open a Webi document, you can click 'Save' to keep the changes. 'Save as' option is used to save a document in different formats such as:

- WID
- PDF
- Excel
- Excel 2007
- CSV Achieve
- TXT File

When you use the 'Save as' option, on the right side of the screen you get many options – Refresh on open, Permanent Regional formatting, Save for all users, Remove document Security.

You can enter the report name, change an existing report name and also add a description.



9. SAP Webi – Using Queries

Queries in Webi are managed in the Query panel. When you create a Webi report, you use queries in the query panel to get data from the data source.

Queries can be created from different interfaces like you can create queries based on Universe, represent data in OLAP database as objects, flat files like Excel and CSV files, data in SAP InfoCubes using BEx queries, Analysis view or Query as a web service.

Each query has dimensions and measures. Measures always return numeric data based on the calculation and other objects in the data source. Queries can be hierarchical or non-hierarchical in nature. Non-hierarchical queries has no relationship between the objects.

Hierarchies define relationship between the objects. For example: In a Geographical hierarchy, you have measures based on geographical hierarchies like counties, states and cities. Using hierarchies, you can drill up and down to see data at the next level.

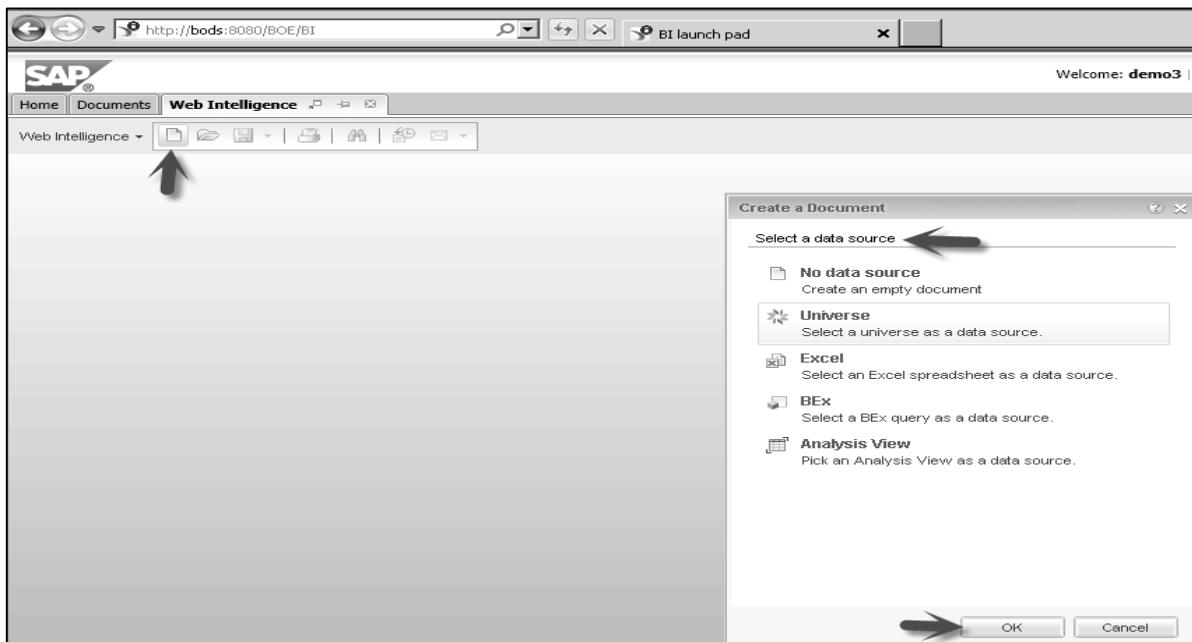
Query panel is not available, if you use Web Interface of Webi tool.

Query Definition

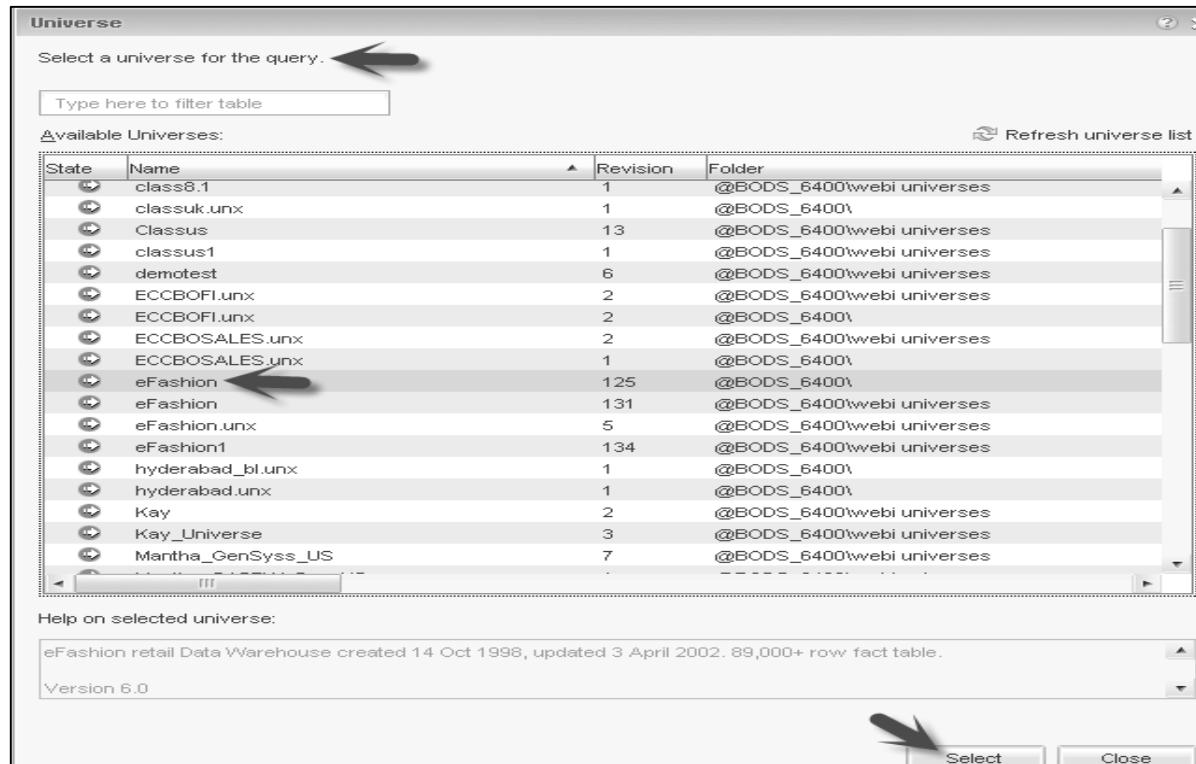
In a Webi document, you retrieve data in report from the data source using the query panel. All the queries are built in the query panel and interface of query panel depends on the data source you are using to get data.

Queries can be created on Universe, which contains Relational and OLAP data models, data from flat files like CVS, XLS files, SAP BW BEx query, and Analysis view. Query is run to get data from the data source. You can apply filters and also preview data in the query panel.

To open a Query Panel: Go to Web Intelligence -> New -> Select Data Source ->Ok.



When you click 'Ok', you have to select data source from the list of selected data source type.



New window will open known as Query Panel. Select the objects from Universe outline, which you want to add to the report in result objects.

Year	Holiday (y/h)	State	Extended price (1)
2004 N	California	\$700,939.76	
2004 N	Colorado	\$244,976.37	
2004 N	DC	\$324,370.39	
2004 N	Florida	\$219,738.96	
2004 N	Illinois	\$316,900.22	

To add a filter, select the object in Query filters by dragging an object and select a value. For data preview, click 'Refresh' tab. To add this query to the report, click 'Run Query' option at the top of the screen to add to Webi document.

Query and Documents User Rights

You can view multiple objects in the Query panel and create, edit, and delete objects in queries as per login user access rights. Users are normally created by BusinessObjects Administrator. CMC is used to create user profiles to login to BO tools.

If you don't have enough access rights, you will not be able to access few objects of a report. Access rights are defined by the BO administrator.

Classes and Subclasses

Classes are used to group similar objects in a report. A class can contain one or more subclasses. Subclasses contains further subcategory of objects in the upper level of a class.

Classes are used to organize objects in a logical manner. While creating queries on Universe, you can find the information on objects that you have to use in query.

Dimension

Dimension lists all the objects using which we want to analyze the data. Dimension provides the basis for analysis in a report. Dimension normally contains non-hierarchical character type data like customer name, product name, customer address, sales office address, etc.

Common examples of Dimensions are - Product, Customer, Time, etc.

Analysis Dimension: An analysis dimension contains group of hierarchies related to each other. When you add an analysis dimension in a report, its default hierarchy appears in query.

- ◆ - Analysis Dimension appears as this symbol in the query panel

Attributes and Measures

Attribute provides data about dimensions or hierarchy. For example: Home address of a customer dimension. Attribute has one-to-one relationship with corresponding dimension. Each customer has only one address object.

- ◆ - Attribute appears as this symbol in the query panel

If your Universe is not designed correctly, an object returns the multiple values for a dimension and the corresponding cell in the report shows MULTIVALUE error.

Measures are defined as numerical values in the report on which analysis is performed. They are integer values, which are used to compare the performance of an organization with defined KPI's.

For example: Sales in each region, total Revenue per year, profit per product, etc.

- ◆ - Measure appears as this symbol in the query panel

Hierarchies

A hierarchy represents parent-child relationship in Universe. It allows you to drill up or down in the report to the next level. For example: Geography hierarchy contains Country, State and City. Time hierarchy contains Year, Quarter, Month and Week.

Using the member selector in defining hierarchy, you can define which member appears in the result set. In hierarchical data sources, hierarchies are associated with a dimension.

Members and Named Set in Hierarchy

Members are defined at different level of hierarchies in a data source. For example: Consider a Geography hierarchy containing members – “India” at the country level and “Haryana” at the State level.

You can also include individual members in query from hierarchy, if you don’t want to add all the members. Named set can be used to define a set of members.

A named set is defined as named expression and results a set of members. You can define named set at Universe level or a relational or OLAP database level.

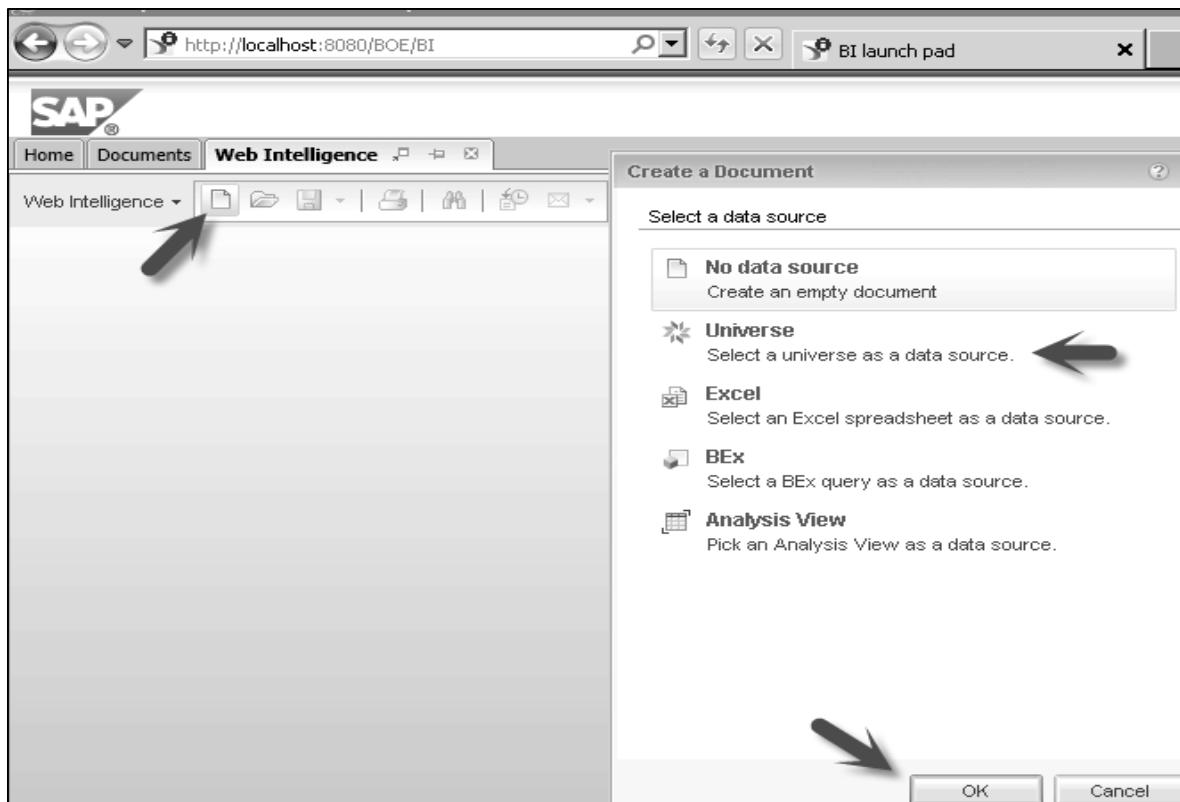
10. SAP Webi – Queries using Universe

You can build queries in the Query panel using various data sources like Universe, BEx from SAP BW or an Analysis view.

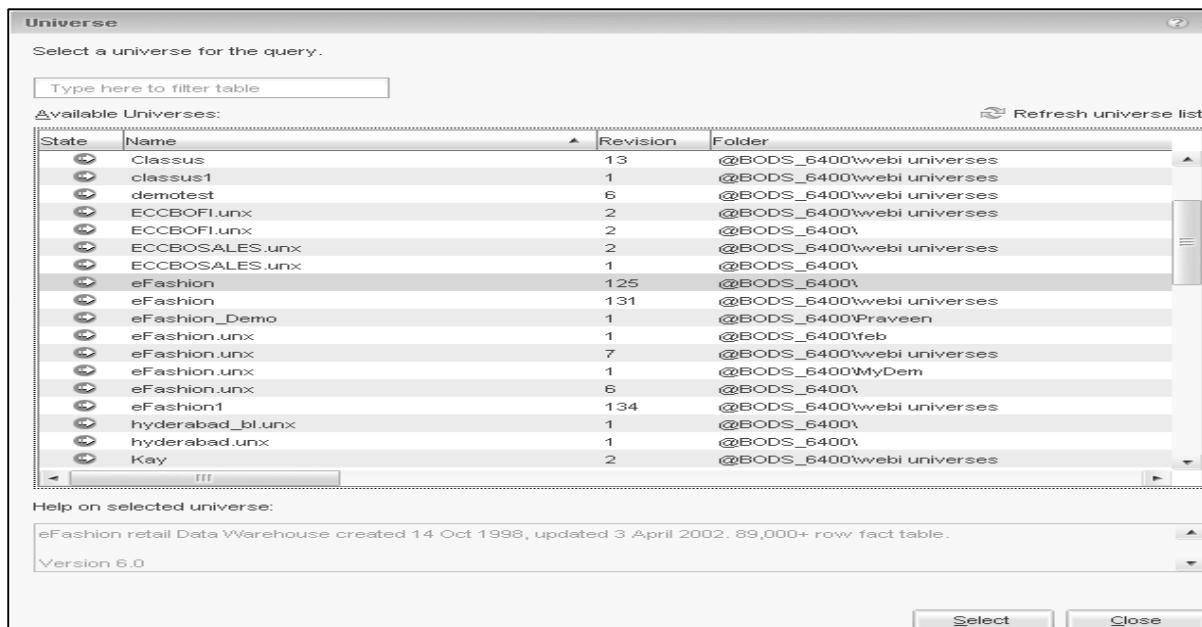
Using Universe for Building Queries

Universe contains data from OLAP and Relational data sources. Data in Universe can be a relational data or hierarchical data.

Open Web Intelligence via BI Launchpad -> New (Create a new Webi document). You will be prompted to select a Data Source.

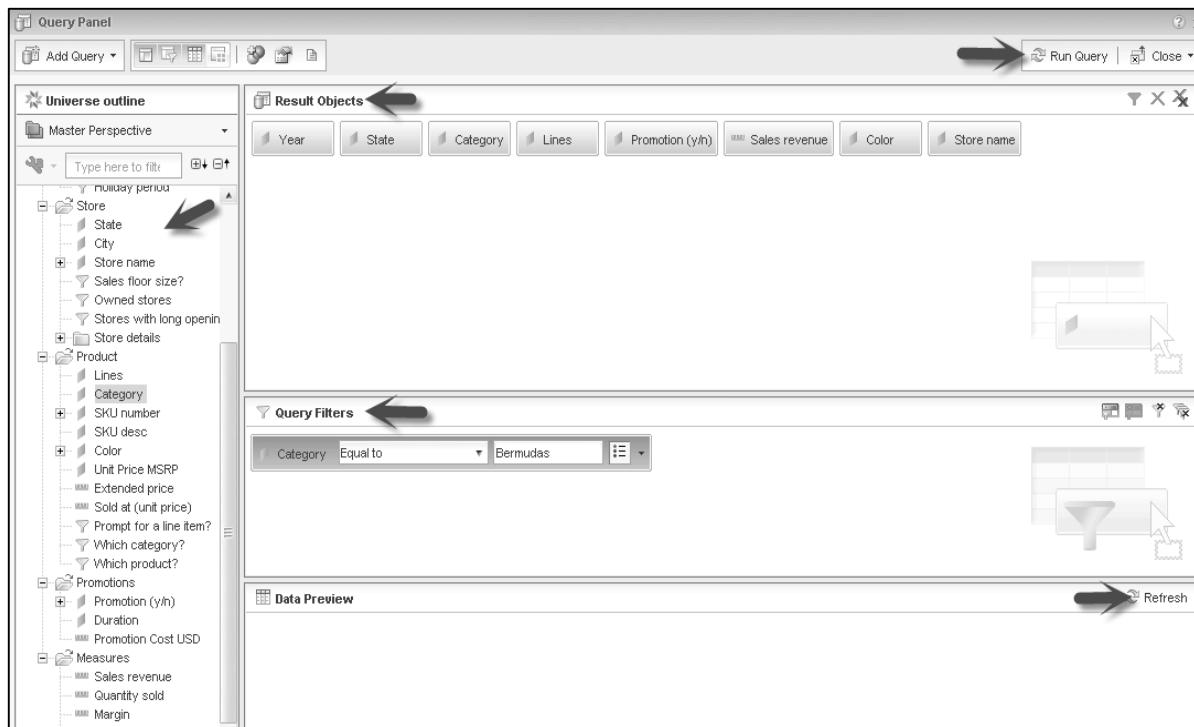


Select a Universe as data source and click 'Ok'. You will get a list of all available Universe. Select a Universe, which you want to use to create a Webi document.



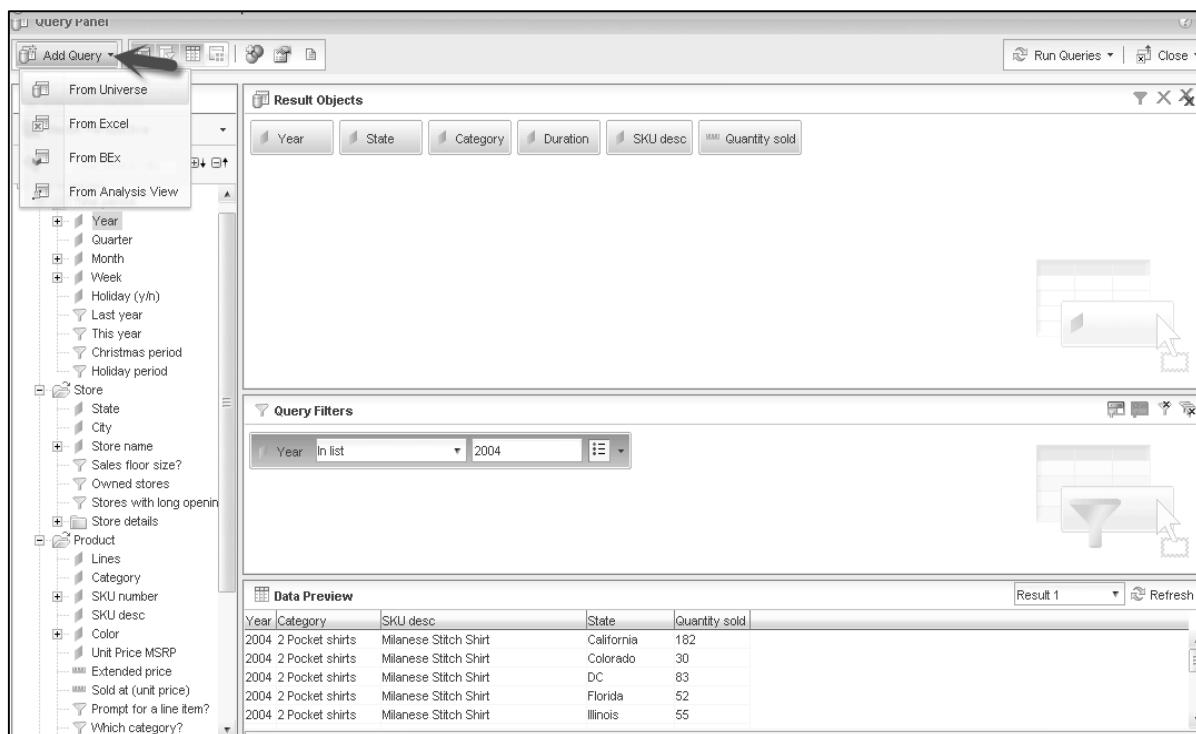
A new window will open with the name Query Panel. In the query panel, on the left side of the screen, you have a list of available objects. You have Result Objects where you drag objects from the left panel, which you want to add in a Webi document.

You have Query Filter using which you can add different filters. Data Preview can be used to view data before it is added to Webi document. Run query tab at the top of the screen is used to run the query.

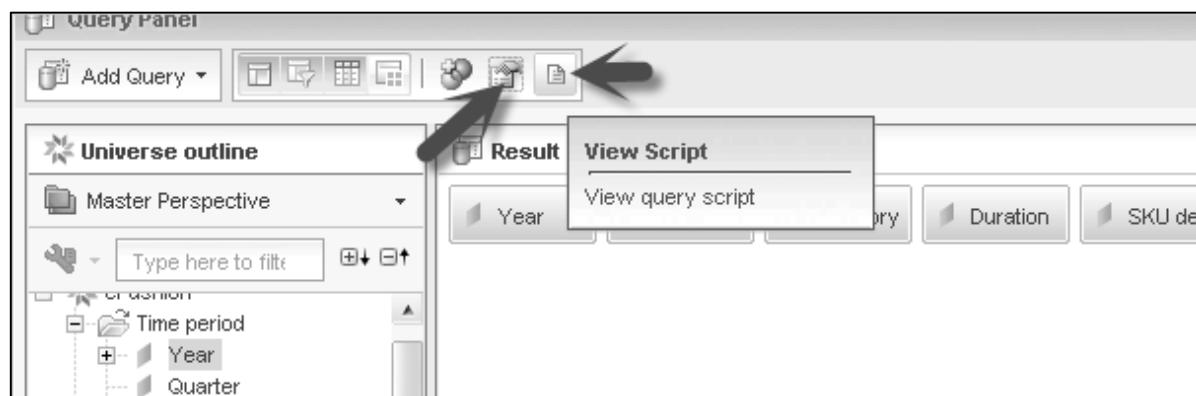


In the Query panel, you have an option using which you can add data from multiple sources in a single Webi document by creating multiple queries.

To add a Query, go to Add query option at the top of the screen. You can select different data sources to add a second query.



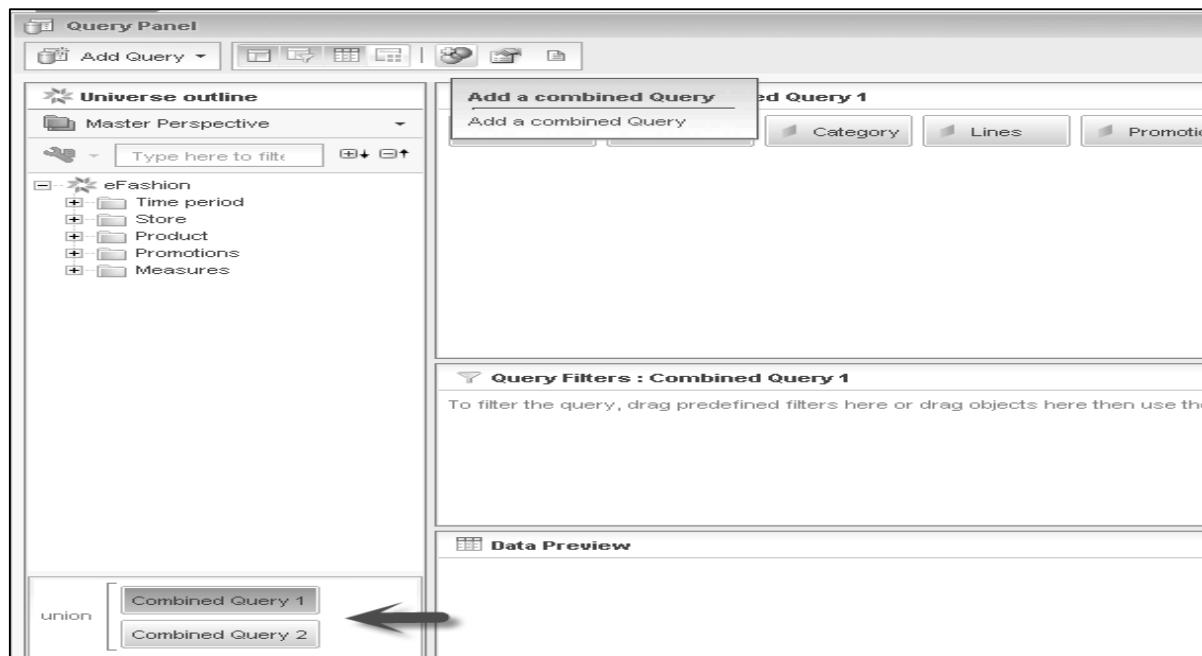
You can also edit the properties of Query, like the name of the query, number of records, etc. 'View Script' option allows you to check the script of the query.



Following functions can be set using Query Properties:

Retrieving duplicate rows	Relational .unx, OLAP , but not available in BEx queries.
Returning sample result sets	Available in relational .unx, but not available in OLAP .unx or BEx queries.
Retrieving/excluding empty rows	Available in OLAP .unx only. Not available in BEx queries.

In this case, you have an option to run multiple queries separately. You can go to Run queries and select the query you want to run. You can also combine queries using the Query Panel.



11. SAP Webi – Queries using BEx

You can create Webi documents based on BEx (Business Exchange Queries) created by BEx Query Designer, which is based on InfoCube in SAP BW system. You can connect to a BEx query in Webi with the use of BI Consumer Service (BICS) connection. You need not create Universe for BEx queries, and all attributes, hierarchies, dimensions and measures are automatically mapped in Webi document.

You can edit, create, and refresh documents based on BEx using Web Intelligence Rich Internet Application Interface (Applet based) or Webi Rich Client. If you are using Webi DHTML web interface, you can only view or refresh a Webi document based on BEx but you cannot edit them.

Following important points about BEx should be considered:

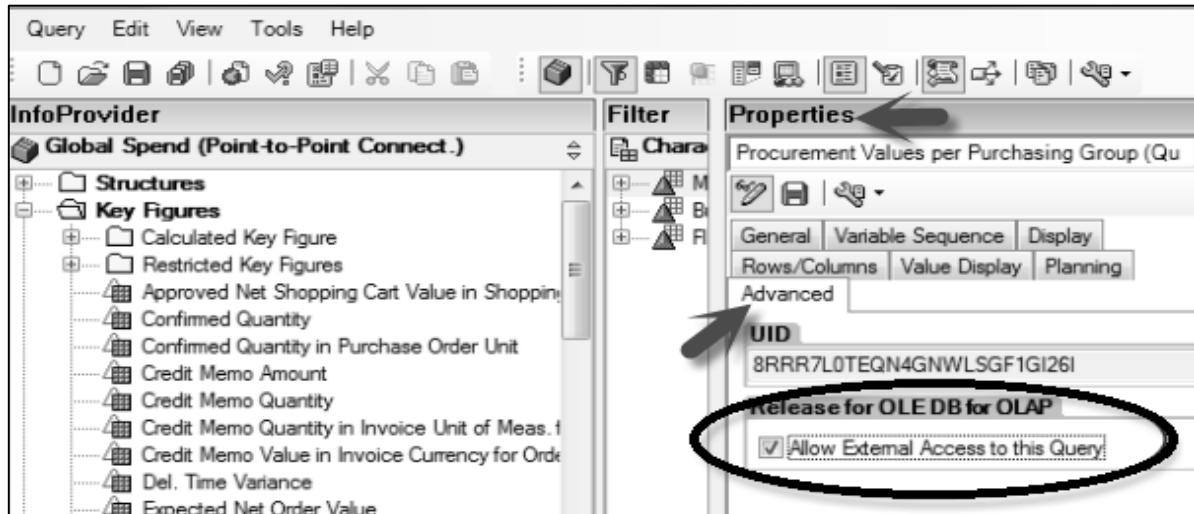
- You can only use BEx queries, which are flagged with "Allow External Access to the Query".
- To manage object mapping, refer to restriction and equivalent pages to ensure correct use of queries.

Following metadata objects are supported from BEx in Webi:

- Hierarchies
- Characteristics
- Navigation Attributes
- Display Attributes
- Basic Key Figures
- Calculation figures and formulas
- Restricted Key figures
- Variables
- Customized Structure

How to Enable Access to BEx Query?

Open BEx Query Designer and select the query you want to use in BO tool. Go to Properties -> Advanced tab and select Allow External access to Query. Save the query.



BICS Connection in CMC

You can create a BICS connection in CMC or also in Information Design Tool. A connection can be created to a single BEx query or to an Info Provider.

Login to CMC console -> Select OLAP connection from the dropdown list.

Title	Type	Description
CommonConnections	Folder	
my connections	Folder	

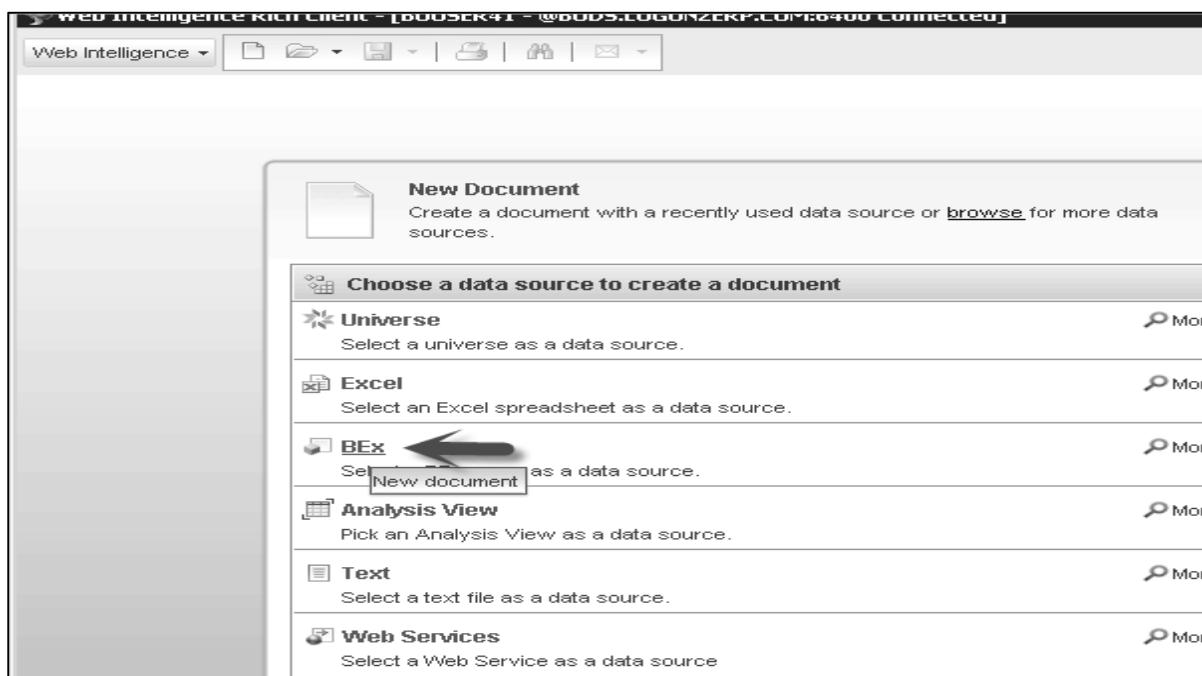
Click on a New Connection -> In Provider list, select SAP NetWeaver Business Warehouse.



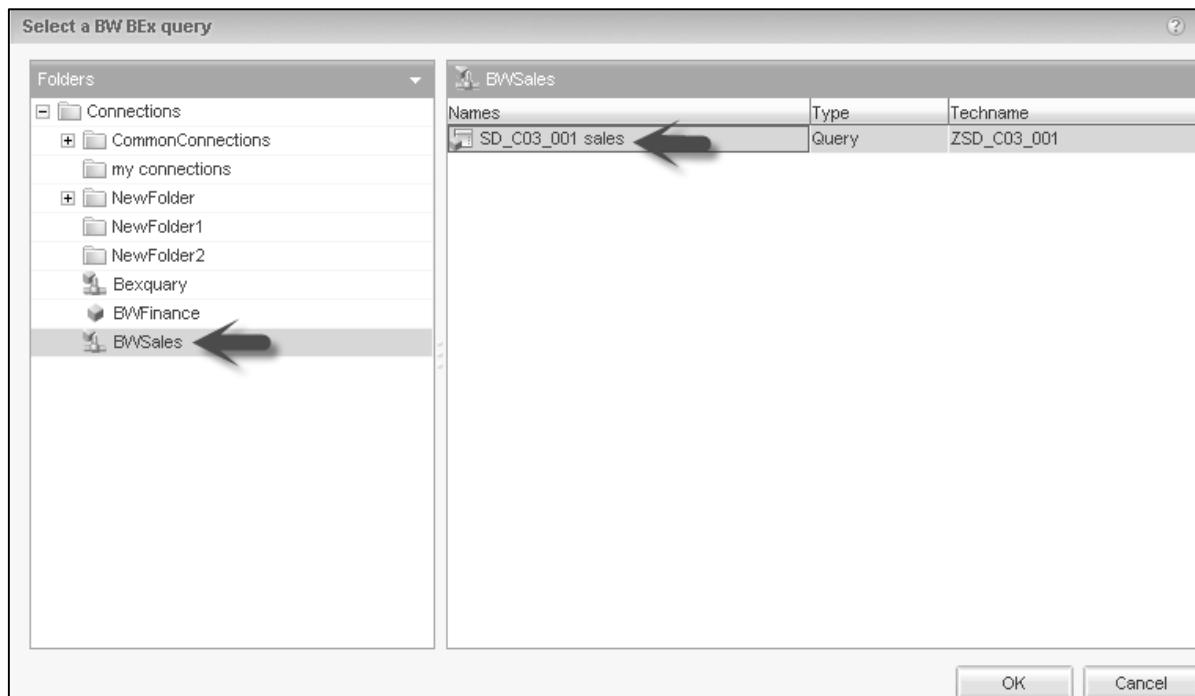
Similarly, you can define a BICS connection in IDT. Select an OLAP connection and choose SAP NetWeaver Business Warehouse -> SAP BICS Client Middleware driver.

How to Use BEx as Data Source in Webi Rich Client?

Open Webi Rich Client -> New Document.

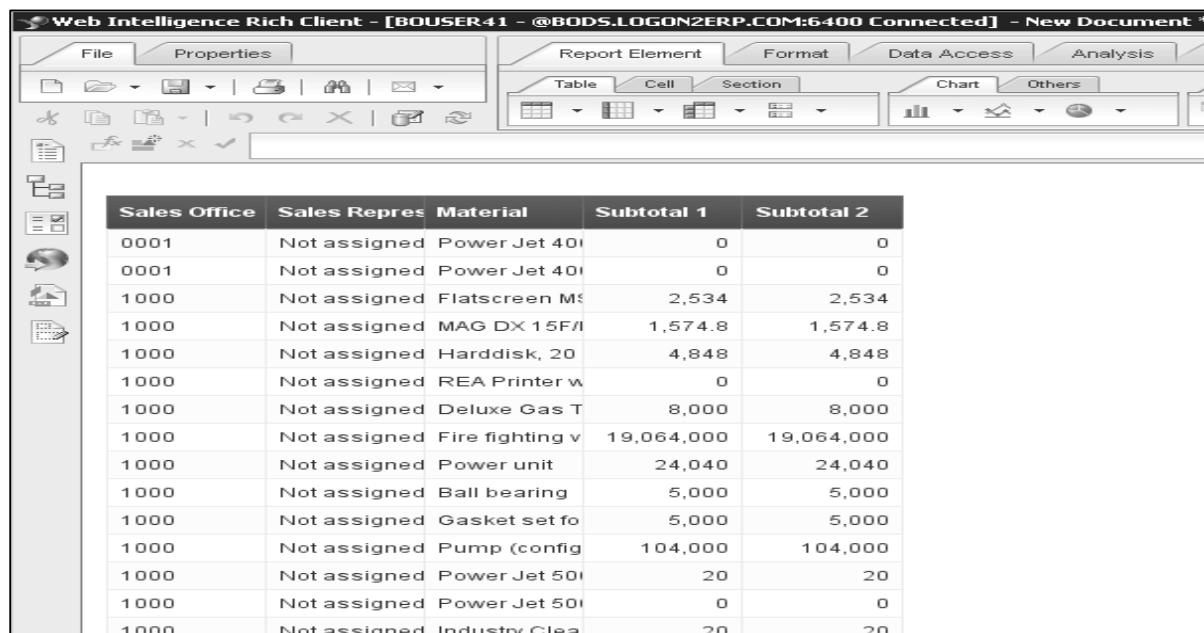


Click on select a BEx query as data source. In the new window, select BICS connection in the right pane and corresponding BEx query -> Ok.



All the objects from BEx will be added to Query Panel on the left side. You can drag the objects to Result Objects.

Once you click on Run query, all the result objects will be added to a new Webi document as shown in the following snapshot.



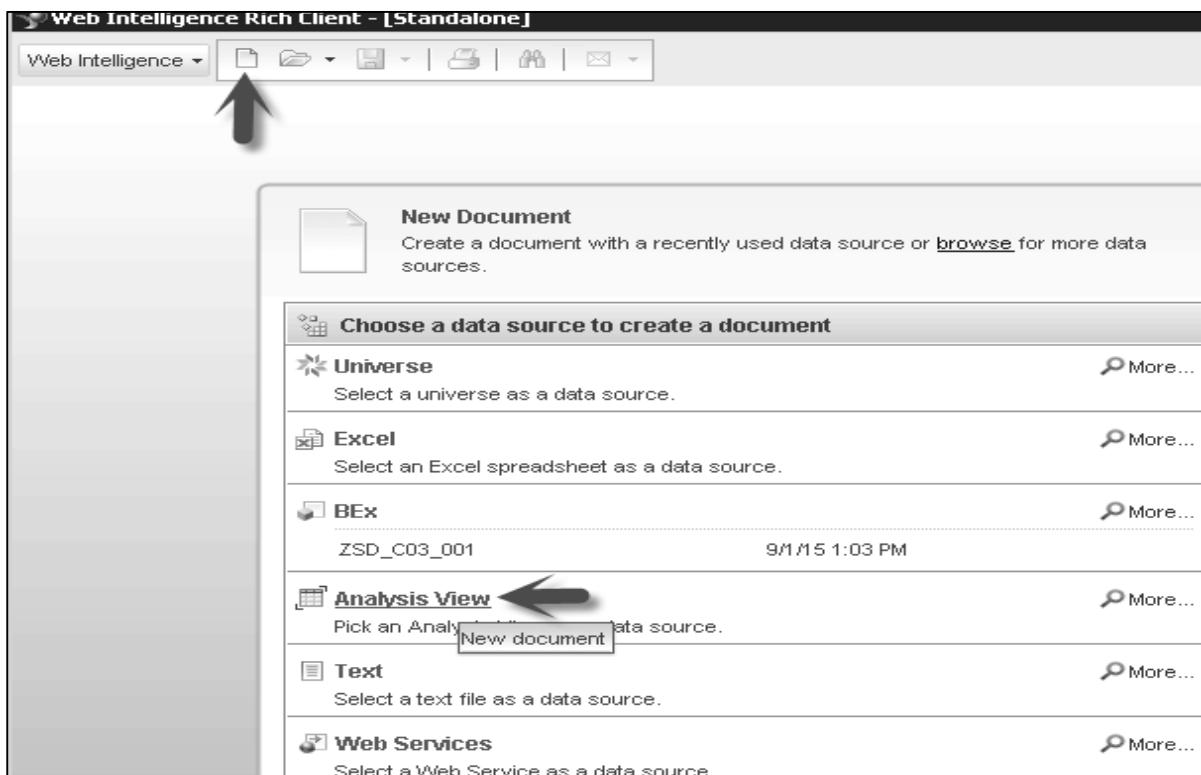
The screenshot shows the SAP Web Intelligence Rich Client interface. The main area displays a table with the following data:

Sales Office	Sales Repres	Material	Subtotal 1	Subtotal 2
0001	Not assigned	Power Jet 40I	0	0
0001	Not assigned	Power Jet 40I	0	0
1000	Not assigned	Flatscreen M	2,534	2,534
1000	Not assigned	MAG DX 15F/I	1,574.8	1,574.8
1000	Not assigned	Harddisk, 20	4,848	4,848
1000	Not assigned	REA Printer w	0	0
1000	Not assigned	Deluxe Gas T	8,000	8,000
1000	Not assigned	Fire fighting v	19,064,000	19,064,000
1000	Not assigned	Power unit	24,040	24,040
1000	Not assigned	Ball bearing	5,000	5,000
1000	Not assigned	Gasket set fo	5,000	5,000
1000	Not assigned	Pump (config	104,000	104,000
1000	Not assigned	Power Jet 50I	20	20
1000	Not assigned	Power Jet 50I	0	0
1000	Not assigned	Industry Clea	20	20

12. SAP Webi – Queries using Analysis View

Analysis view is created in BI workspace. Analysis views with custom objects are not supported and it only supports Analysis view coming from SAP NetWeaver BW.

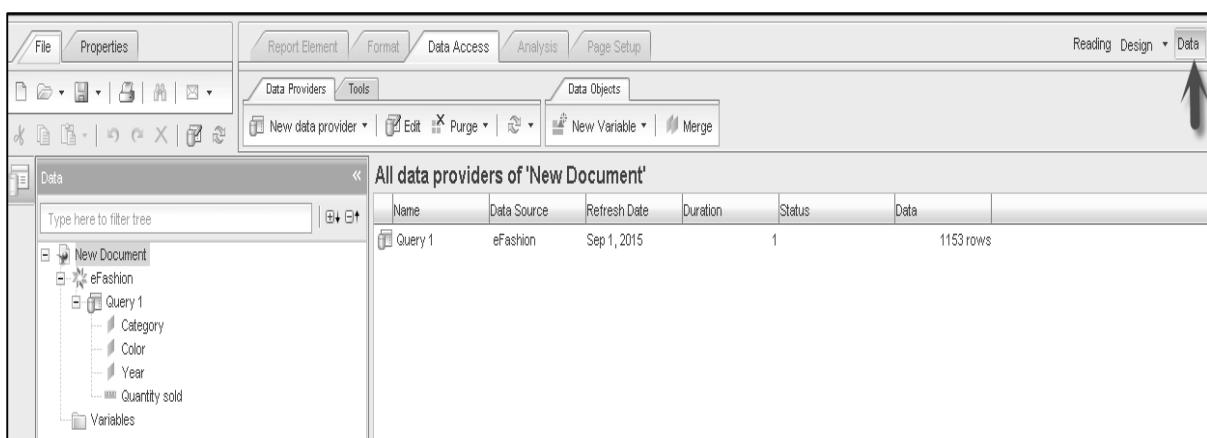
Open Webi Rich Client -> New Document -> Select Analysis view as Data source.



Select an Analysis View, and click 'Ok'.

Managing Queries

To manage multiple queries, you have an option of Data at the top right corner. This option is not available in Webi DHTML interface.



All the data providers appear in the list to the right side of the data pane. It also tells you the Data Source, Refresh date, Duration, status, etc.

To see the details of data, double-click on the Query. It will open the details of data added in Query.

Category	Color	Quantity
2004	2 Pocket shirts	Black
2004	2 Pocket shirts	Bottle Green
2004	2 Pocket shirts	Brown
2004	2 Pocket shirts	Clay
2004	2 Pocket shirts	Ficelle
2004	2 Pocket shirts	Indigo Blue
2004	2 Pocket shirts	Ink
2004	2 Pocket shirts	White
2004	Belts,bags,wallets	Anise
2004	Belts,bags,wallets	Black
2004	Belts,bags,wallets	Black Fancy 9
2004	Belts,bags,wallets	Black/Blue
2004	Belts,bags,wallets	Blue Fancy 2
2004	Belts,bags,wallets	Blue Fancy 8
2004	Belts,bags,wallets	Blue Striped
2004	Belts,bags,wallets	Blue Turquoise
2004	Belts,bags,wallets	Brown
2004	Belts,bags,wallets	Brown Fancy 1

To edit a query, right-click on query in Data mode. Select edit or you can also select an option of Edit in the tool menu.

Name	Data Source	Refresh Date	Duration
Query 1	eFashion	Sep 1, 2015	

You can also Rename, Delete, Copy or Purge a query using this Data Manager option.

13. SAP Webi – Query Filters

Query filters are used to limit the rows returned in a Webi document. Query filters allow you to hide the data that you don't want to show to specific people and also limit the size of .wid document. When you run a query, it only returns the rows that meet the query filter definition.

Following are the key features used in Query filter:

- You can retrieve data as per specific business requirement.
- You can hide the data that you don't want specific users to see in a Webi document.
- Limit the size of Webi document of the network and hence provides performance optimization.

Example: Being an Area Sales Manager for NY, you want to see the margin values for your region. Sales universe contains data from all the regions in United States. Also you only want to see data from the stores in NY where the sales margin is greater than 100K USD in the second Quarter (Q2) 2015.

Now to create a Webi document with this information, you have to apply filters on these dimensions - State, Year, and Quarter and Filter on sales margin.

Filter Operator AND	Filter Condition
	Year=2015
	Quarter=Q2
	State=NY
	Sales Margin >= 100000

Difference between Query Filters and Report Filters

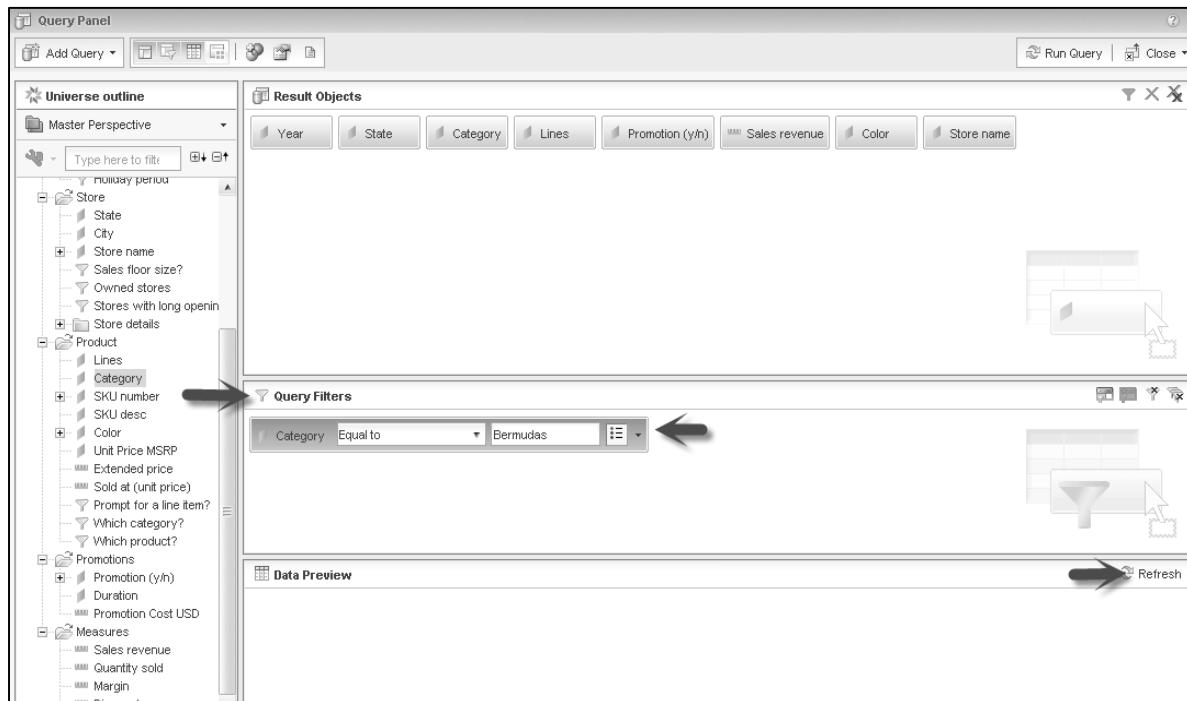
Query filters are applied in Query Panel and they are used to limit the number of rows from data sources and to return the same in the document.

Report filters are applied at the report level on reports, tables, charts, etc. These filters are not used to limit the data retrieval from the data source and only hide certain values at the report level.

Query Filter Structure

Query filter is applied in this format:

Object (On which filter is applied), Operator (You can use various comparison operators), and Operand.



Operand: You can select from the following list of Operands –

- Constant
- List of Values (LOVs)
- Prompt
- Universe Object
- Result from Other Query

Operators: You can select from the following operators –

- Equal to (=)
- Not Equal to
- Greater than
- Less than
- Greater than Equal to
- Less than Equal to
- Between

14. SAP Webi – Query Filter Types

Following types of query filters are normally used:

- Predefined Filters
- Custom Filters
- Quick Filters
- Prompts

You can add multiple filter types on a single query.

Predefined Query Filters

These filters are normally Administrators and saved at the Universe level. They are used to populate data that is permanently available.

These filters require some good knowledge of database design and complex expressions. Using predefined filters on Universe means you don't need to create custom filter every time when a new Webi document is created.

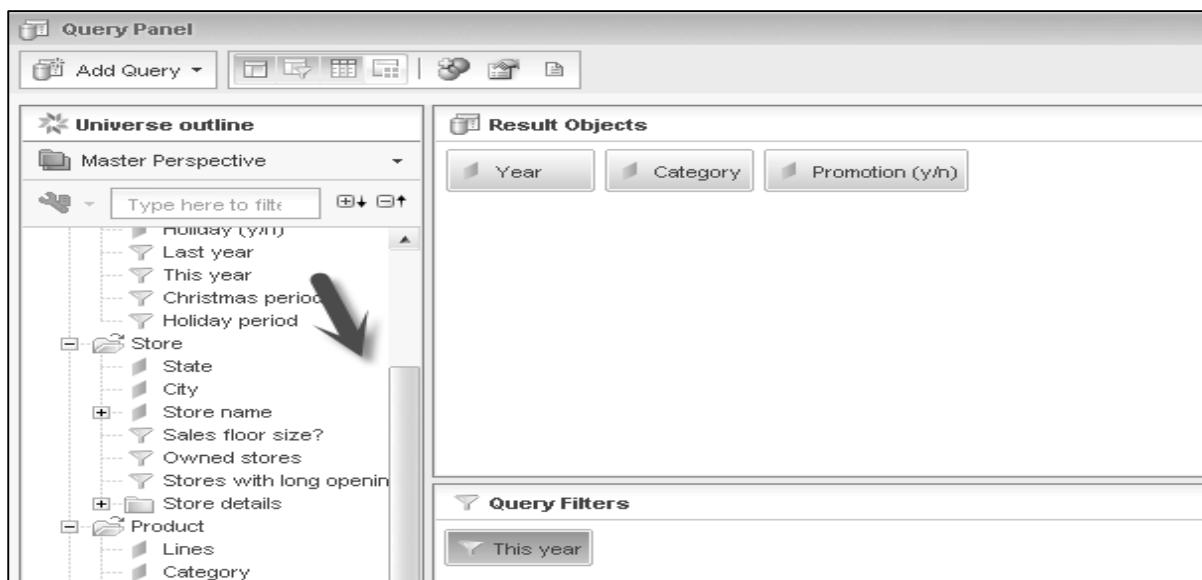
Also note that you can't access the components of Predefined filters and it is also not possible to edit them.

To add a Predefined filter, you can drag or double-click this filter to Query Panel -> Filters Pane.

When you run the query, corresponding data w.r.t filters will be added to the report.

How to Use a Predefined filter?

You can use a Predefined filter by a double-click or just by dragging the filter to Query Filter.



Quick Filters

Quick filters are used to quickly retrieve the values you want without the use of filter editor. Quick filters use equal to operator while using a single value or list in operator when you use multiple values.

Quick filters can't be used with BEx queries.

How to Use a Quick Filter?

Quick filters are used in Query panel. To apply a Quick Filter, select the object you want to filter.

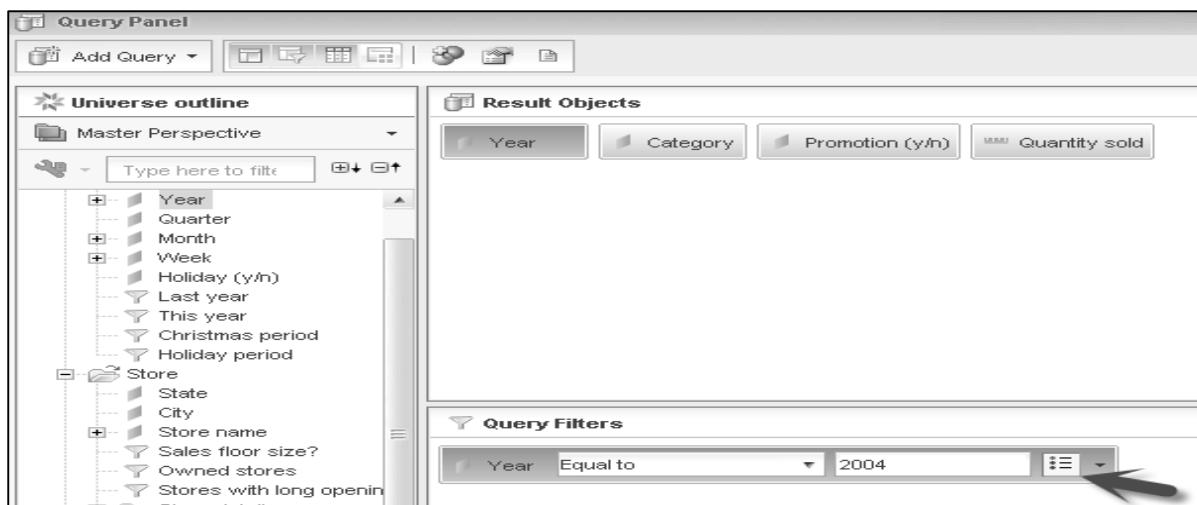
Select 'Add Quick Filter' at the top right corner of Result Object Pane.



New dialog box will open. You have to select the value you want to use in the Quick filter from LOVs.



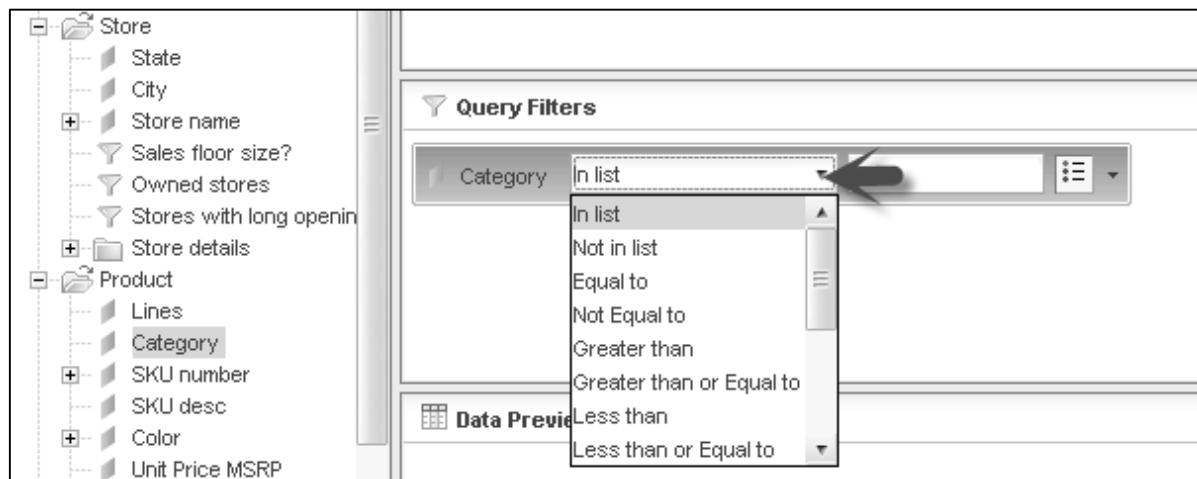
That filter will be added Query Filters pane. To delete this filter, select the filter in Query filter pane and press 'Delete' button.



Custom Query Filters

You can also create custom query filters to meet the business requirement or to hide the data from specific users.

To create custom query filter, add the object you want to use in the filter. Drag it to Query filter pane. Click the arrow next to default operator and select the operator.



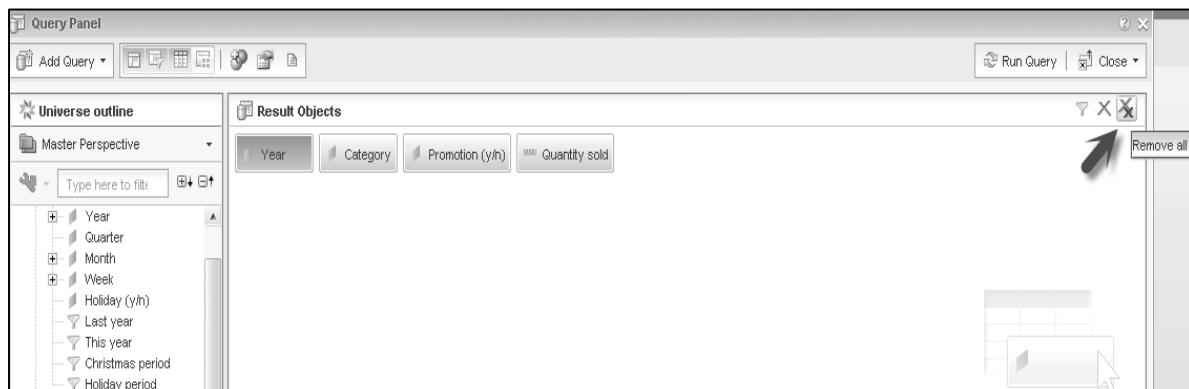
Click on the arrow to select the filter type.



You can select the following filter type:

- Constant
- Value from list
- Prompt
- Object from this query
- Result from another query

Select the value from this that you want to include in the filter. To remove a filter, select the filter and press 'Delete' button. To remove all the filters, use 'Remove All' option at the top right corner of the screen.



Prompts

Prompt is defined as a special filter for users, which allows them to enter a value every time data is refreshed in the document.

Using prompts, you have multiple users viewing one document to display different sub set of data in database. Prompts allow you to retrieve the data from database and reduce the time.

Following are the elements of a Prompt:

- An Object
- An Operator
- Message

Example: Current Year Equal to ("Enter the Year"). In this Prompt, Current Year is the object, "Equal to" is the Operator and prompt message is "Enter the Year".

A Prompt can be applied to Dimension, Measures, attributes, hierarchies, etc.

You can use AND, OR operators to create multiple prompts in the same query. While using BEx and .unx Universe, you can only use AND operator with prompts.

Merged Prompts

When you use multiple data providers in a single document, you can merge multiple prompts with same data type, same operator types and same prompt text are merged. While refreshing all the data providers, one prompt appears for all multiple prompts.

LOVs displayed by merged prompt is the list associated with the object in prompt with the most displayed property constraints.

Hierarchical Prompts

You can also create hierarchical prompts where the following objects display their LOVs hierarchically in a Prompt:

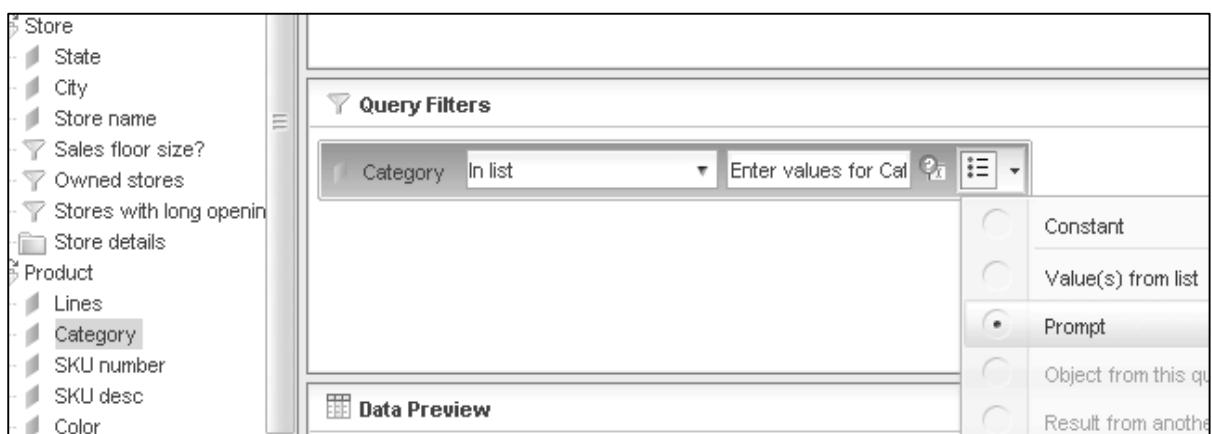
- Hierarchies
- Levels
- Dimensions associated with hierarchical LOVs

Hierarchical prompts are displayed in a tree form and you can navigate up and down the tree. As per the filters in Prompt, you can select items from different levels of LOVs.

Building Prompts

To build a prompt, add the object you want to filter with a prompt to Query Filter pane.

Select the filter operator from the list and click on the last arrow mark to select a prompt.



You can add the text message for Prompt value and run the query.

The screenshot shows the SAP Webi interface. At the top, there are icons for saving, printing, and exiting. To the right is a 'Run Query' button with a magnifying glass icon. Below these are tabs for 'Result Objects': 'Year', 'Category', 'Promotion (y/h)', and 'Quantity sold'. In the bottom left, there's a 'Query Filters' section with a dropdown menu set to 'Category' and 'In list'. A large red arrow points from the bottom of this section towards the 'Run Query' button.

When you run the query, Prompt dialog box will allow you to enter the values as per the selected operator.

The screenshot shows the SAP Webi 'Prompts' dialog box. On the left, under 'Prompts Summary', it says '* Enter values for Category: 2 Pocket shirts; Bel...'. In the center, there's a list titled 'Enter values for Category:' with a text input field above it. The list contains categories like '2 Pocket shirts', 'Belts,bags,wallets', 'Bermudas', etc., with 'Cardigan' currently selected. On the right, a 'Selected Value(s)' list shows '2 Pocket shirts', 'Belts,bags,wallets', and 'Cardigan'. Arrows point from the text input field, the list of categories, and the selected values area.

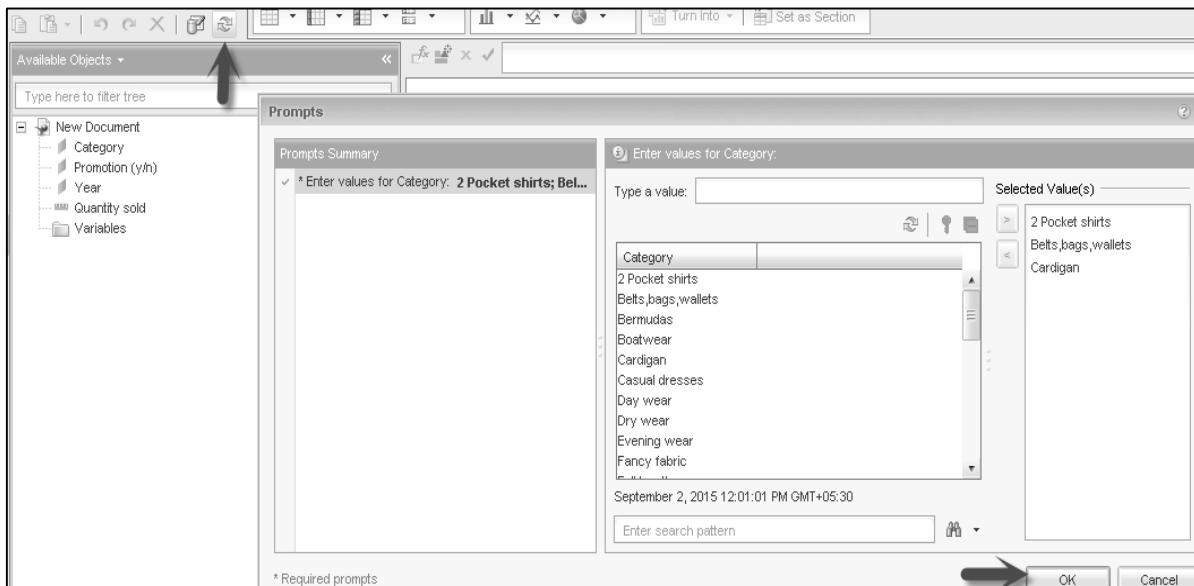
When the values are selected and you click 'Ok', and the data for selected values in the document will be reflected.

The screenshot shows the SAP Webi interface. On the left, the 'Available Objects' tree includes 'New Document', 'Category', 'Promotion (y/h)', 'Year', 'Quantity sold', and 'Variables'. On the right, a report titled 'Report 1' is displayed with two tables. The first table has columns 'Year', 'Category', and 'Promotion (y/h)'. The second table has columns 'Year', 'Category', and 'Quantity sold'. Both tables show data for the years 2004 through 2006 across various categories.

Year	Category	Promotion (y/h)
2005	2 Pocket shirt	y

Year	Category	Quantity sold
2004	2 Pocket shirt	1,263
2004	Belts,bags,w:	2,869
2004	Cardigan	1,876
2005	2 Pocket shirt	537
2005	Belts,bags,w:	3,677
2005	Cardigan	3,824
2006	2 Pocket shirt	3,642
2006	Belts,bags,w:	4,348
2006	Cardigan	435

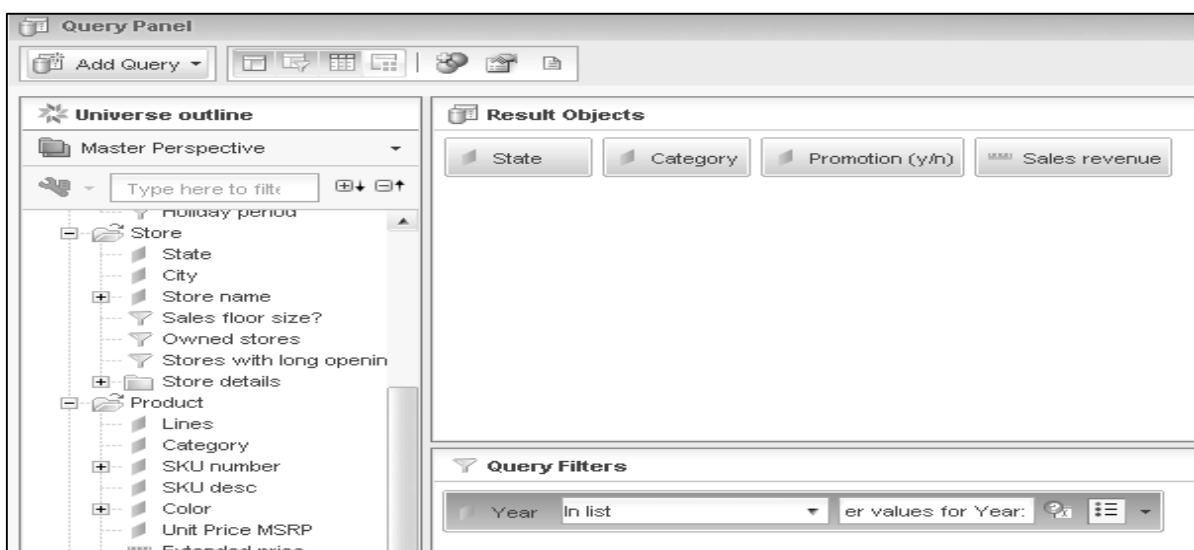
When you refresh the document in Webi, prompt will appear every time to select the values.



Select an Existing Prompt

You can also select from existing prompts to add to the query in query panel.

To use an existing prompt, drag the object on which prompt has to be applied to query filter pane.



Select from Universe, select an existing Prompt -> Ok. It will display the list of all prompts that are compatible with the object in Query filter.

Deleting a Prompt

To delete a prompt, select the prompt in Query filter pane and press the 'Delete' button. You can also select Remove or Remove all option.



Combining Prompts with Query Filter

You can also combine prompts with query filters to limit the data in the document and to select a specific record from the filtered data.

Example: You can apply Query filters for Department and Year and Prompt for a specific Employee name input.

State Not Equal to Florida
Year 2005
Which Category

Result Objects

- State
- Category
- Promotion (y/n)
- Sales revenue
- Lines

Query Filters

And

- Year Equal to 2005
- State Not Equal to Florida
- Category In list Enter values for Cal

Data Preview

When you run the query, it will ask you to enter the value for Category.



In Webi document, it will filter the data as per filters in the query panel and display the result according to Prompt value.

The screenshot shows a report titled 'Report 1'. It contains two tables. The first table is a grid with columns: State, Category, Sales revenue, and Lines. The data includes:

State	Category	Sales revenue	Lines
California	2 Pocket shirt	\$33,103	Shirt Waist
Colorado	2 Pocket shirt	\$7,171	Shirt Waist
DC	2 Pocket shirt	\$7,655	Shirt Waist
Illinois	2 Pocket shirt	\$13,354	Shirt Waist
Massachusetts	2 Pocket shirt	\$1,656	Shirt Waist
New York	2 Pocket shirt	\$27,509	Shirt Waist
Texas	2 Pocket shirt	\$33,447	Shirt Waist

The second table is a summary table with columns: Category, Promotion by, and Lines. It shows:

Category	Promotion by	Lines
2 Pocket shirt	y	Shirt Waist

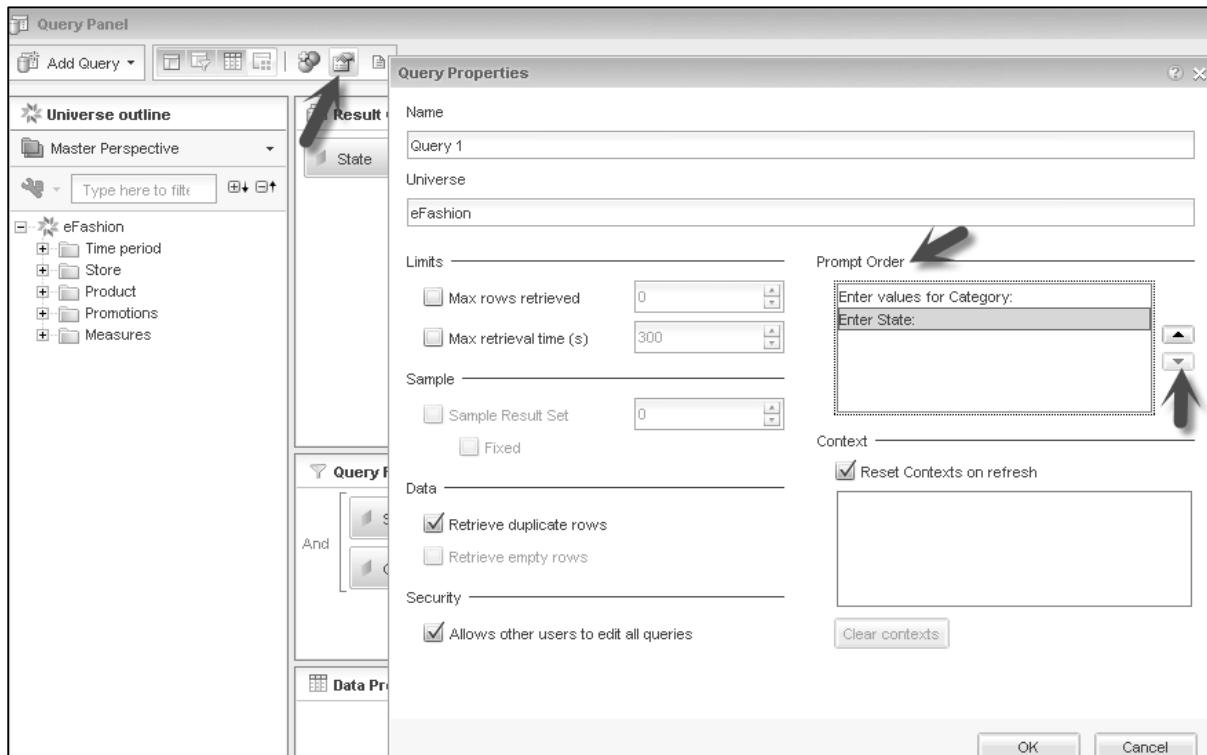
Order of Prompts

You can also use multiple prompts in a single query. To add multiple prompts, drag all the objects on which you want to apply prompts. Select prompt by clicking on Arrow mark in the end of query.

The screenshot shows the SAP Webi Query Filters panel. It displays two filter conditions under the heading 'And':

- State: Not in list, Enter State: [text input field] [button] [arrow icon]
- Category: In list, Enter values for Cat: [text input field] [button] [arrow icon]

To define the order of Prompts, you have to go to Query properties at the top. From there, you can select the order of prompts as per requirement. You can move up/down a prompt from the list.



Subqueries for Data Filtering

Subqueries provides a more flexible option to filter the data as compared to an ordinary query filter. Using subqueries, you can limit the values returned with a WHERE clause. You can also compare the values of objects in a subquery with the other objects.

Using subqueries, you can implement complex logic to limit the size of data, which is not possible to apply with simple query filters.

Subqueries work on SQL which is used to retrieve the query data. SQL is supported by most of RDBMS and each database uses its own syntax. If any database doesn't support SQL, an option to create a subquery will not highlight in the query panel.

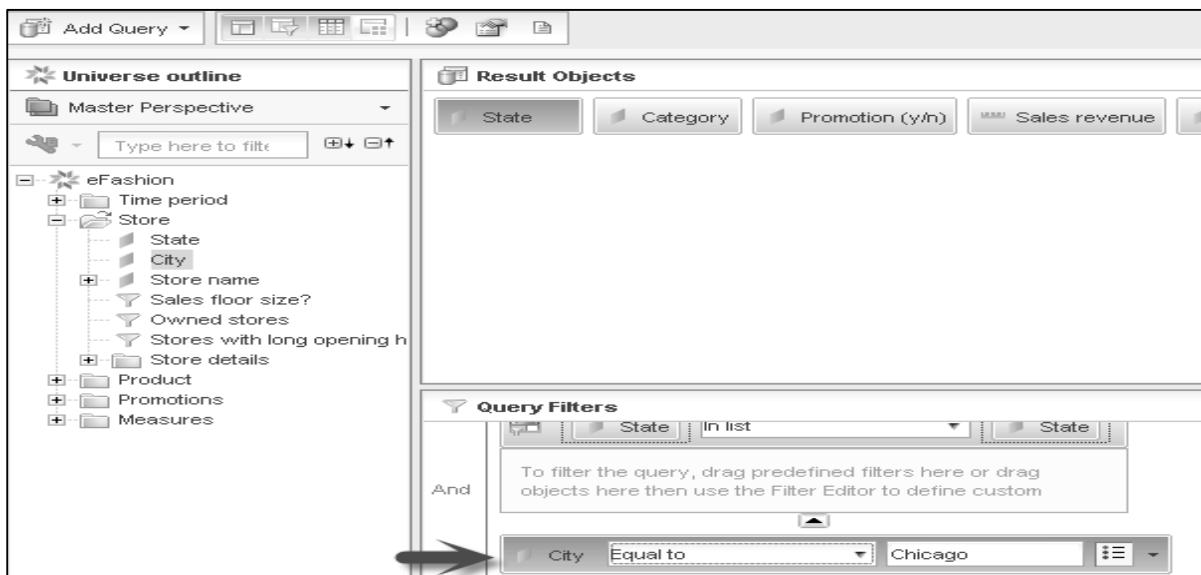
Subqueries can be built on dimensions, measures and attributes and not on the hierarchical objects.

Building a Subquery

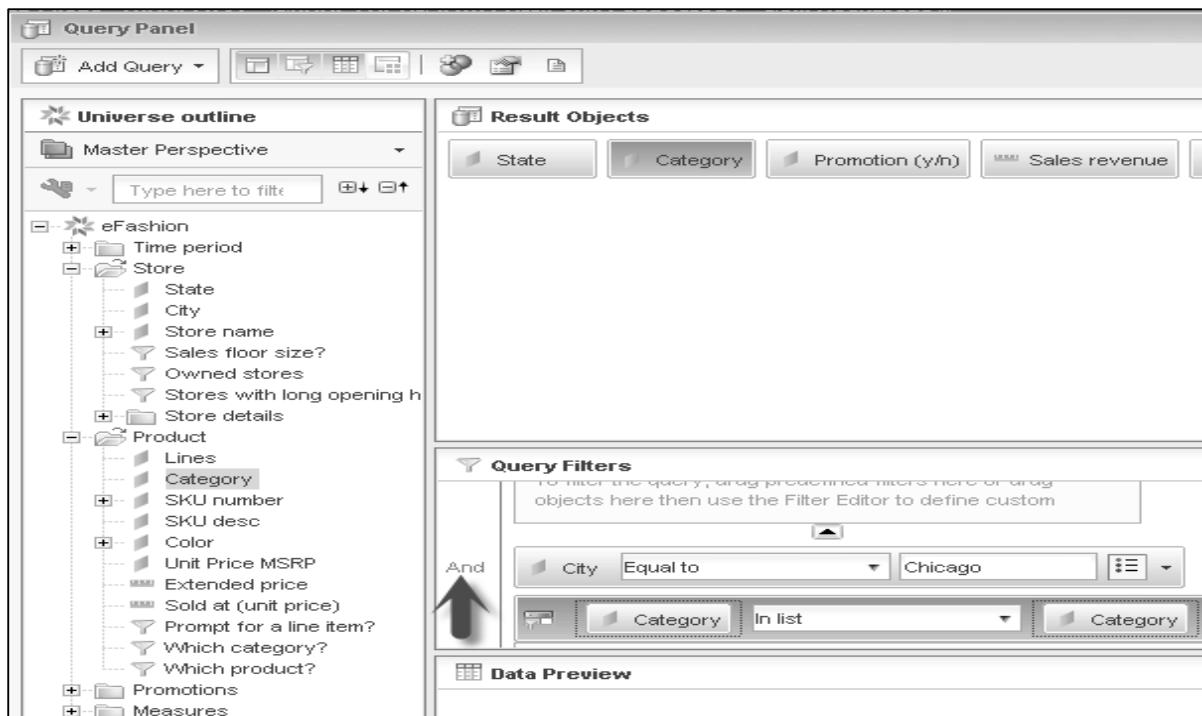
Select the object in the result pane on which you want to build a subquery.



It will add a subquery outline in the Query filter pane. Now if you want to add a WHERE condition, drag an object to the area of subquery.



Select the Operator and Value used to filter object in WHERE condition. You can add multiple subqueries to query panel. You can use "AND" or "OR" relationship between subqueries. To change the relationship, you can click on AND to change it to OR.



By default, two subqueries are linked with an AND relationship. You can also nest a subquery. Drag a subquery to the area and drop an object.

Parameters: You can use the following parameters while passing a subquery to Query filter pane.

Filter Objects: These are the objects whose values are used to filter result objects.

Filter By Objects: The object that determines which filter value subquery returns.

Operator: This operator defines the relationship between the filter object and the filter by object.

WHERE Condition: This is used to constraint the list of values of the filter by object.

Relationship Operator: AND, OR

15. SAP Webi – Ranking Data

You can rank the unranked data from the database in your report. Database ranking allows you to rank the data at database level so when you run a query, data returned by query is already ranked.

Database ranking is done by editing the script generated by query. If your database doesn't support ranking, then the option to create ranking will not highlight in query panel.

Also note that Ranking can't be created on hierarchical data.

Creating Database Ranking

First add the objects to Result Objects in Query panel. Select Add Ranking at the top of Query filter pane.



Select the ranking dimension and type - top, bottom, top %, and bottom %.

You can select the number of records or % of records you want the rank to return in the next box. Drag the ranking dimensions, measures, to based-on box. You can also drag dimensions to provide a calculation context to Ranked by box. You can also add WHERE condition by dragging a dimension to the bottom of ranking.

Click Run Query.



16. SAP Webi – Working with Reports

Webi Report can contain hierarchical and non-hierarchical data according to data source used to create the report. Hierarchical and non-hierarchical data works in different way in the report. A non-hierarchical data contains no parent-child relationship. Hierarchical data contains parent-child relationship between objects and you can use them to analyze and navigate data in a report.

Working with Non Hierarchical Data

Non-hierarchical data is defined as data with no parent-child relationship. A simple example of non-hierarchical data is Dimension.

A non-hierarchical data can be analyzed using various parameters like sorts, filters, etc.

Example: Customer, Product

Working with Hierarchical Data

Hierarchical data is defined as data with Parent-child relationship and you can analyze the data at different levels of hierarchy.

All the measures that are associated with hierarchical data are aggregated as per object level in hierarchy.

Example: Consider a Geography hierarchy; you have Country India and State defined as Delhi. Now if you use this geographical hierarchy in report and want to analyze Number of Units sold at each level for different categories, then hierarchies allow you to use Aggregation at country level and if you drill down to state level, for each state too.

Hierarchical Data in Tables

Hierarchical data is presented in columns in hierarchical tables. Below table shows the hierachal data in parent-child relation and aggregated on Quantity sold as measure.

India	1200
Delhi	600
Kerala	200
Haryana	400

If you see the above table, the number of units sold for corresponding country India is 1200 and corresponding value at each hierarchy level is also shown.

Organizing Data with Sections, Breaks, Sorts

You can use sections to divide the information into smaller part for better analysis. Section allows business managers to analyze the data in a more effective manner.

Example: You are an area manager in a multinational company and you have received Sales report showing total revenue for each city and quarter as shown in the following table for the year 2015:

City	Quarter	Total Revenue (USD)
Delhi	Q1	50000
Delhi	Q2	40000
Bangalore	Q1	30000
Bangalore	Q2	40000
Mumbai	Q1	50000
Mumbai	Q2	40000

Now if you want to apply Section on Quarter column, you can compare the Total Revenue in each city compared on the basis of Quarter.

Q1

Delhi	50000
Bangalore	30000
Mumbai	50000

Q2

Delhi	40000
Bangalore	40000
Mumbai	40000

Creating a Section from a Column

To create a section on a column, Select the data and column, right-click on the column and select set as Section.

The screenshot shows a SAP Webi report titled "Report 1". A context menu is open over a data cell in the "Quarter" column. The menu includes options like Cut, Copy, Paste, Insert, Delete, and Set as Section. The "Set as Section" option is highlighted with a black arrow. The report data is as follows:

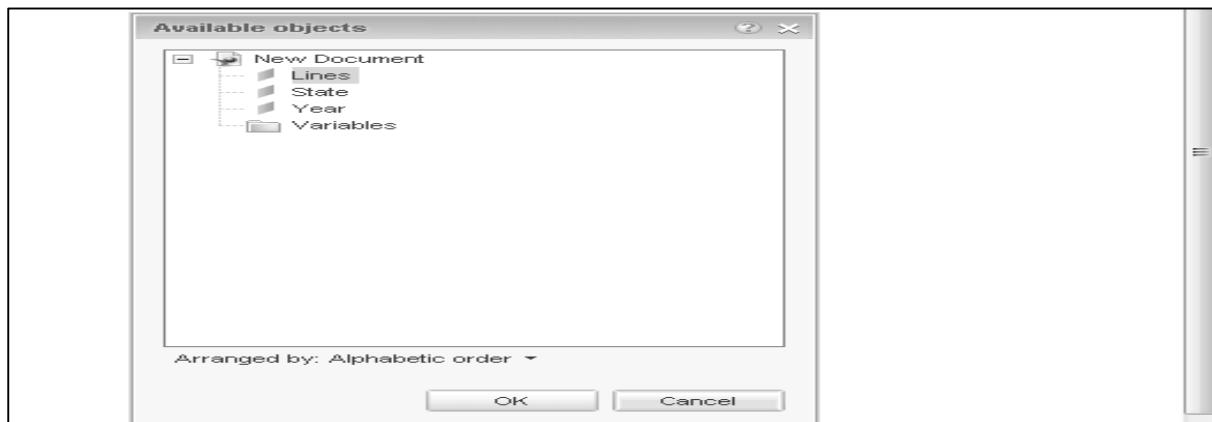
State	Lines	City	Sales revenue	Quarter
California	Accessories	Los Angeles	\$4,000	Q1
California	Accessories	Los Angeles	\$377,025	Q2
California	Accessories	Los Angeles	\$167,391	Q3
California	Accessories	Los Angeles	\$56,108	Q4
California	Accessories	San Francisc	\$306,217	Q1
California	Accessories	San Francisc	\$299,309	Q2
California	Accessories	San Francisc	\$111,834	Q3
California	Accessories	San Francisc	\$55,482	Q4
California	City Skirts	Los Angeles	\$5,043	Q1
California	City Skirts	Los Angeles	\$5,630	Q2
California	City Skirts	Los Angeles	\$14,220	Q3
California	City Skirts	Los Angeles	\$16,754	Q4

Creating a Section from a Dimension

To create a section from a Dimension, Go to Report Elements -> Section -> Insert Section.

The screenshot shows the SAP Webi interface with the "Report Element" tab selected. In the toolbar, the "Section" tab is active, and the "Insert Section" button is highlighted with a black arrow. Below the toolbar, a message says "Click to insert the section here. Press Esc to cancel." The report title "Report 1" is visible at the bottom. The interface includes tabs for Format, Data Access, Analysis, and Page Setup.

Click on the report area where you want to insert a Section. Choose the Dimension on which Section has to be created.



Creating Sections from Hierarchy

You can also create Section on Hierarchies in the report. When a section is created on a hierarchy, each member of hierarchy becomes a section header.

Let us understand this with the help of an Example:

Customer Geography		Gender	Internet Sales Amount
All Customers		Male	235.243
		Female	254,342
	Australia	Male	34,342
		Female	45,464
	Canada	Male	12,232
		Female	14,242
	France	Male	17,343
		Female	18,001

If you create a section on Customer Geography, you will get the following report.

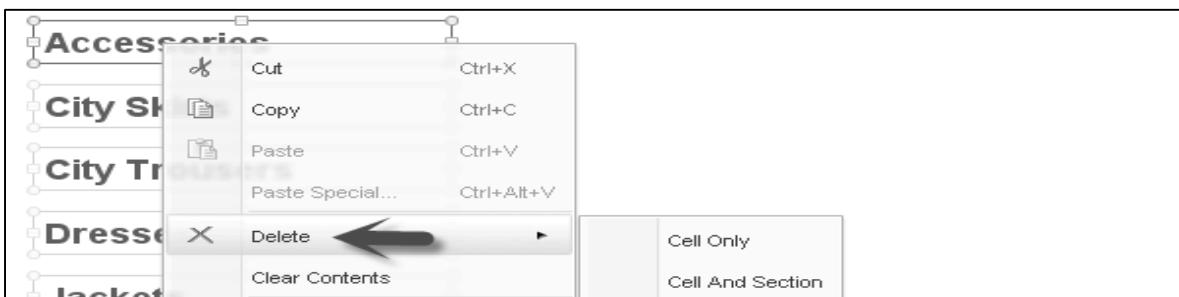
All Customers
Gender
Male

By expanding the Section header, you will get the following report.

All Customers	
Gender	Internet Sales Amount
Male	235,243
Gender	Internet Sales Amount
Female	254,342
Australia	
Gender	Internet Sales Amount
Male	34,342
Female	45,464
Canada	
Gender	Internet Sales Amount
Male	12,232
Female	14,242
France	
Gender	Internet Sales Amount
Male	17,343
Female	18,001

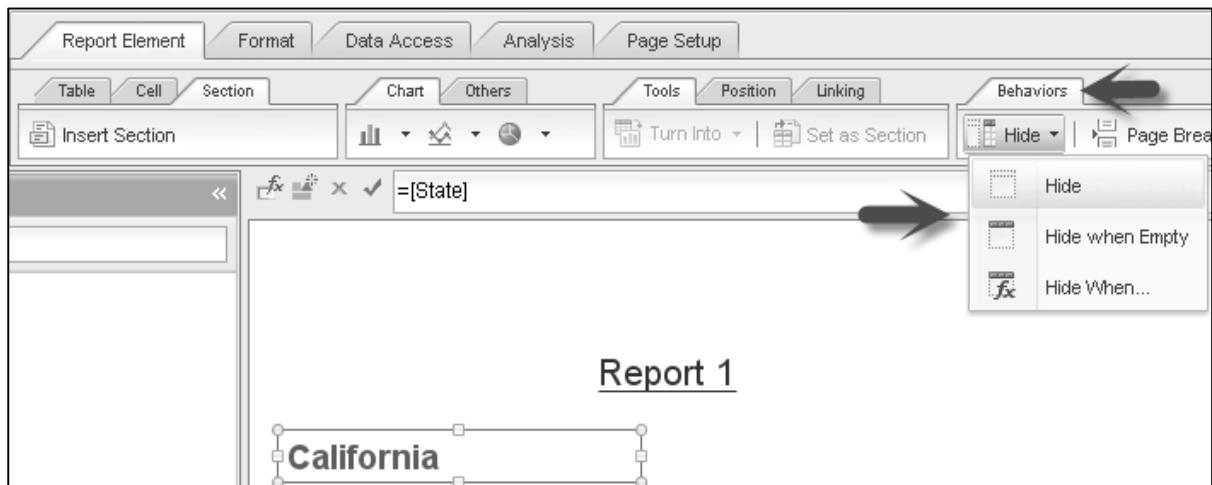
Removing or Hiding a Section

To delete a Section, right-click on the section Select -> Delete.



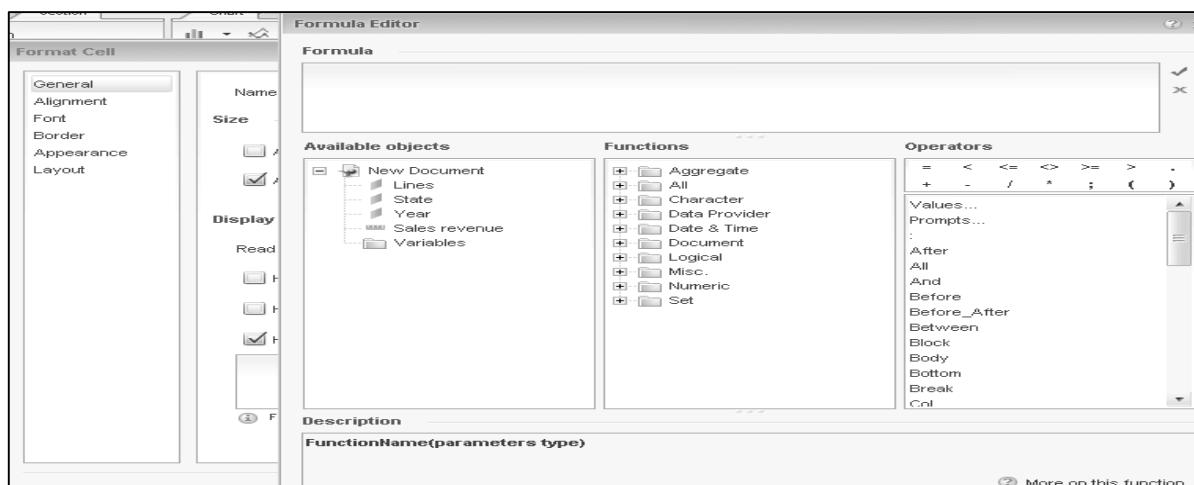
If you select 'Cell Only', it will delete 'Section Cell' only and if you select 'Cell and Section', it will remove 'Section and Cell' both.

To Hide Sections: Select Section. Go to Report Elements -> Behaviors -> Hide to hide the section.



'Hide When Empty' is used to hide the section when empty.

'Hide When-Enter the formula' is used to hide the Section. If formula is true, it will hide the section.



17. SAP Webi – Breaks

Breaks are used to define all data for every unique value of an object in separate parts. Using Breaks you can apply:

- Subtotals and Sub aggregations
- Display data in more effective manner

Break vs Sections

Section breaks up the data into multiple cells that are called **section headers** and each section header contains a value for dimension and data corresponding to dimension value.

Break is used to divide the data into one block and each column carries dimension, attributes and measures. These values are repeated for each row value in the block.

How to Insert a Break?

Select the column in which you want to insert a Break. Go to Analysis -> Display -> Break -> Add Break.

Year	State	Lines	Sales revenue
2004	California	Accessories	\$489,666
2004	California	City Skirts	\$11,072
2004	California	City Trousers	\$10,935
2004	California	Dresses	\$110,210

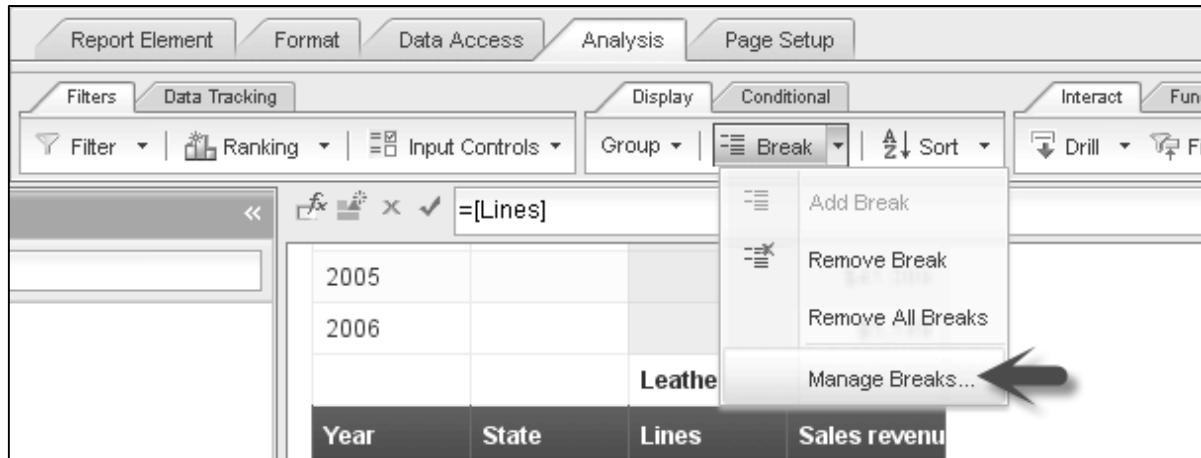
This will divide the table into many mini tables as there are unique values in the column.

2006		Sweaters	\$290,029
2006		Sweat-T-Shirt	\$1,595,535
2006		Trousers	\$53,509
California			
Year	State	Lines	Sales revenue
2004	Colorado	Accessories	\$145,093
2004		City Skirts	\$4,229
2004		City Trousers	\$2,772

Manage Breaks

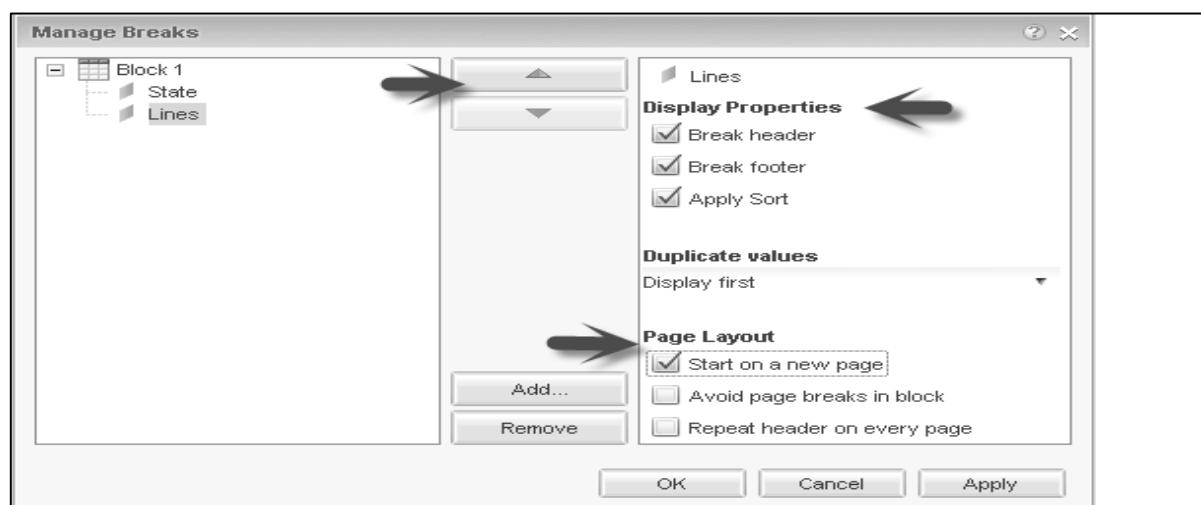
To manage a break, you should use Design mode.

Go to Analysis -> Display -> Break -> Manage Break. It will open a new window and show all the breaks in the table.



You can define the following properties about Break in this dialog box. You can prioritize Break using up-down arrows.

- Display Properties
- Page Layout
- Duplicate Values



You can also Add or Remove a Break using Break Properties.

18. SAP Webi – Sorts

Sorting can be applied in table on sections, charts to organize the data in a specific order in a Webi report. Default sorting that is applied in a report is from left to right order of objects in Result object of Query Panel.

You have the following Sorting Orders:

Default: This is default order where data is sorted as -

- Ascending numeric order for numeric data
- Ascending chronological order on date
- Chronological order for months
- Alphabetical order for alphanumeric data
- Ascending - In this, smallest value at the top to highest value at the bottom.
Example: 1000, 2000, 3000, or Delhi, Kolkata, Mumbai
- Descending - In this, highest value at the top to smallest value at the bottom

Custom: Using this, you can define your own sort order. Custom orders are available on dimensions and attributes and not on hierarchies, measures and level.

How to Insert a Sort?

To insert a sort, open report in Design mode. Select the Column you want to sort.

Go to Analysis -> Display -> Sort -> Ascending/Descending

The screenshot shows the SAP Webi interface in Design mode. The top navigation bar includes tabs like Report Element, Format, Data Access, Analysis (which is currently selected), and Page Setup. Below the toolbar, there are several dropdown menus: Filters, Data Tracking, Display, Conditional, Interact, and Fun. The 'Display' menu is open, showing options like Group, Break, and Sort. The 'Sort' dropdown menu is also open, displaying five options: None (selected), Ascending, Descending, Remove All Sorts, and Advanced... A cursor is visible over the 'None' option. The main workspace is titled 'Report 1' and contains a table with four rows of data. The table has four columns: Year, Location, Category, and Value.

Year	Location	Category	Value
2004	California	Accessories	\$489,666
2004	California	City Skirts	\$11,072
2004	California	City Trousers	\$10,935
2004	California	Dresses	\$110,210

A screenshot of the SAP Webi interface. At the top, there are tabs: Report Element, Format, Data Access, Analysis, and Page Setup. Below the tabs, there are several buttons: Filters, Data Tracking, Display, Conditional, Interact, Drill, and Filter Bar. A dropdown menu labeled 'Sort' is open, showing options: None, Ascending (with up and down arrows), Descending (with up and down arrows), Remove All Sorts, and Advanced... The main area shows a table with the following data:

2006	Florida	Dresses	\$88,000
2006	Illinois	Dresses	\$93,000
2006	Massachusetts	Dresses	\$87,000
2006	New York	Dresses	\$330,000
2006	Texas	Dresses	\$409,074
2004	California	City Trouzers	\$10,935
2004	Colorado	City Trouzers	\$2,772
2004	DC	City Trouzers	\$4,610

You can apply multiple sorts in a single table on different columns. You can use 'Remove All Sorts' option to delete all the sorts.

To manage the Order of Sorts, go to Advance tab. You can define order for all sorts using up and down arrows. You can define Custom Sorts here if no other sort is applied.

A screenshot of the SAP Webi interface showing the 'Manage Sorts' dialog box. The dialog box has a tree view on the left showing 'Vertical Table: Block 1' with 'Lines' and 'Sales revenue' selected. On the right, there are sections for 'Priority' (with up and down arrows), 'Order' (set to 'Descending'), 'Sort' (with 'Add...' and 'Remove' buttons), and 'Custom Order' (with 'Values...' and 'Reset' buttons). Arrows point to the 'Priority' and 'Custom Order' sections. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

This can also be used to Add/Remove Sorts.

19. SAP Webi – Charts

In a Webi document, you can include one or more charts. You can insert charts in an existing document or in a new document.

When a Webi document containing chart is exported into an Excel or PDF format, the chart is converted into an image.

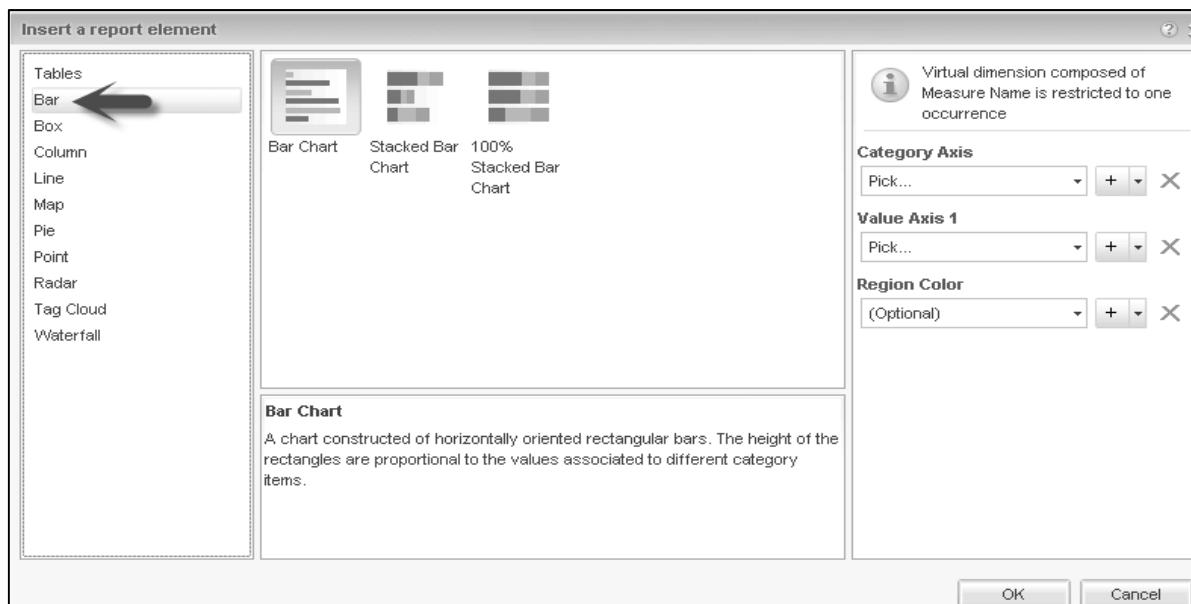
Chart Types

You can convert the tables in a Webi report into different chart types. There are different Chart types available in Webi.

Bar Charts

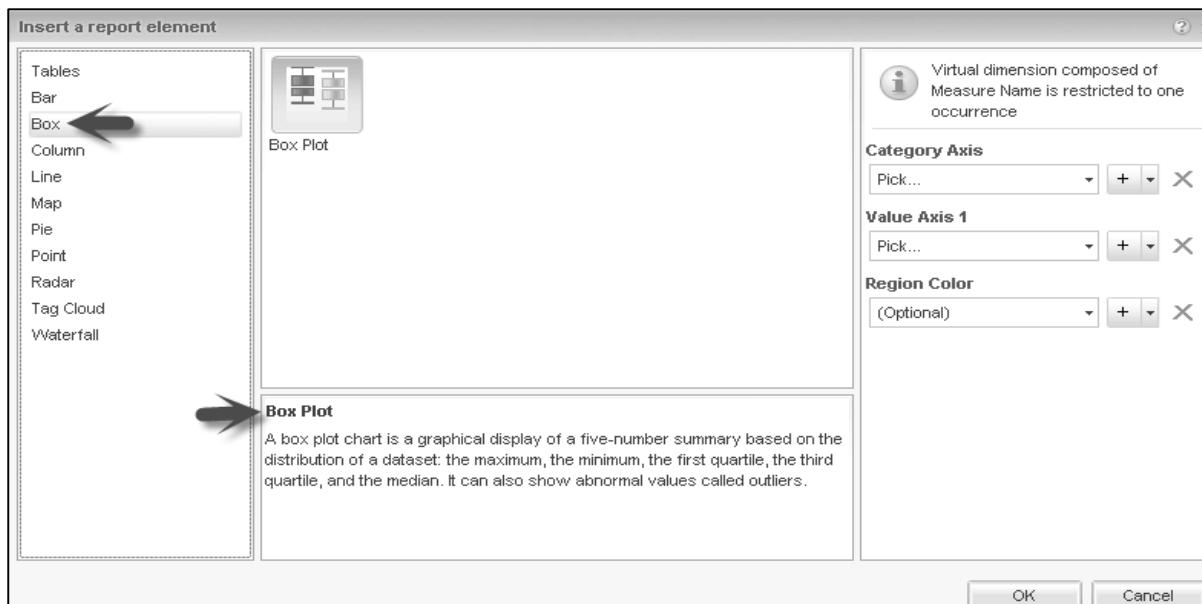
Bar charts are used to compare similar groups of data and they display data in rectangular form horizontally. Following are the different types of Bar Chart:

- Bar Chart
- Stacked Bar Chart
- 100% Stacked Bar Chart



Box Plot Charts

As mentioned in description of box charts, it is a graphical display of a five number summary based on distribution of a dataset: the maximum, the minimum, the first quartile, the third quartile, and the median. It can also show abnormal values called **outliers**.

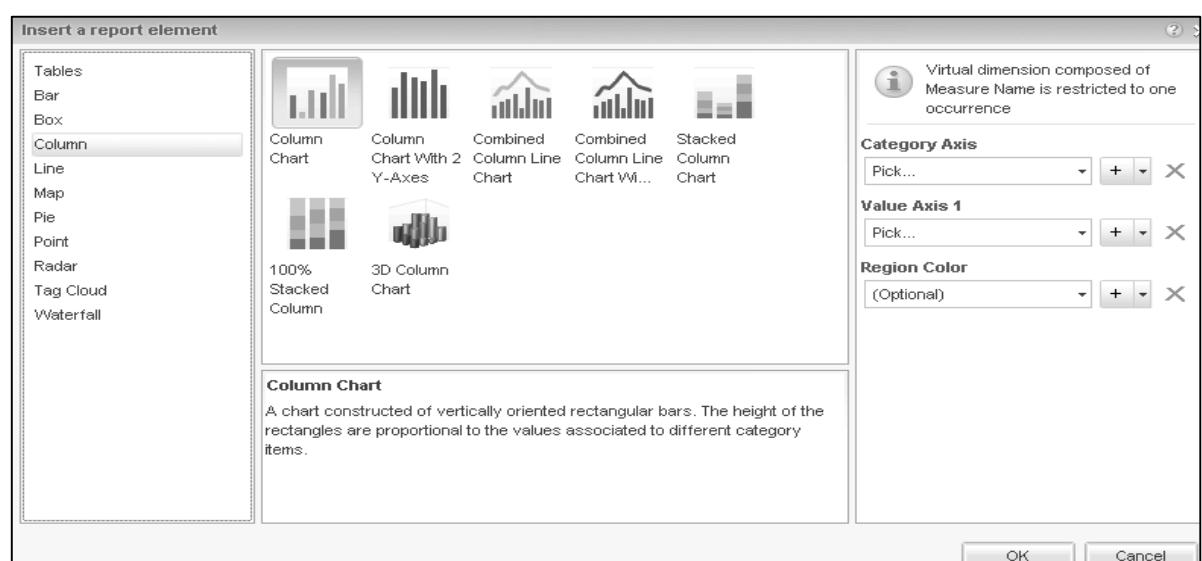


Column Charts

Column charts are constructed of vertically-oriented rectangular bars. The height of the rectangles are proportional to the values associated with different category items.

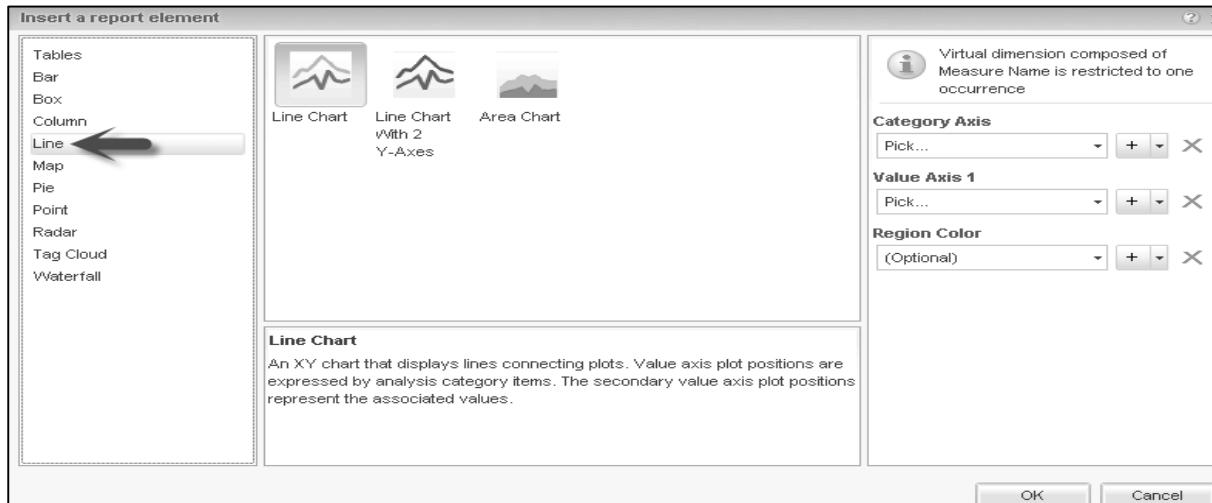
Following are the different types of Column charts:

- Column Chart
- Column Chart with 2 Y-axes
- Combined column Line Chart
- Stacked Column Chart
- 100% Stacked Column Chart
- 3D Column Chart



Line Charts

An XY chart that displays lines connecting plots. Value axis plot positions are expressed by analysis category items. The second value axis plot positions represent the associated values.

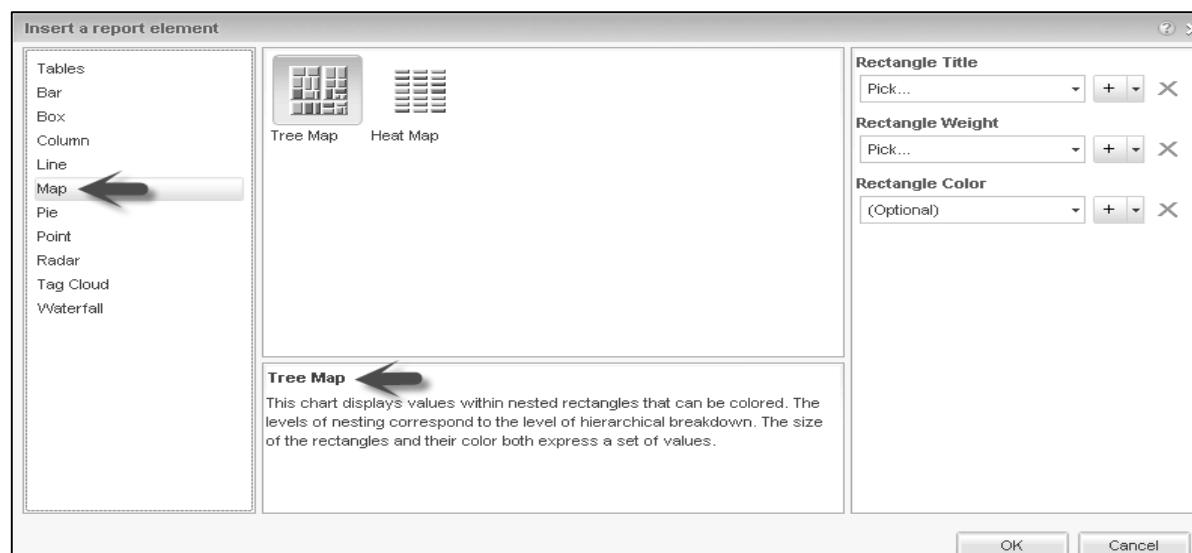


Following are the different types of Line Chart:

- Line Chart
- Line Chart with 2 Y Axes
- Area Chart

Map Charts

This chart displays values within nested rectangles that can be colored. The levels of nesting correspond to the levels of hierarchy breakdown. The size of rectangles and their color both express a set of values.



Following are the different types of Map Charts:

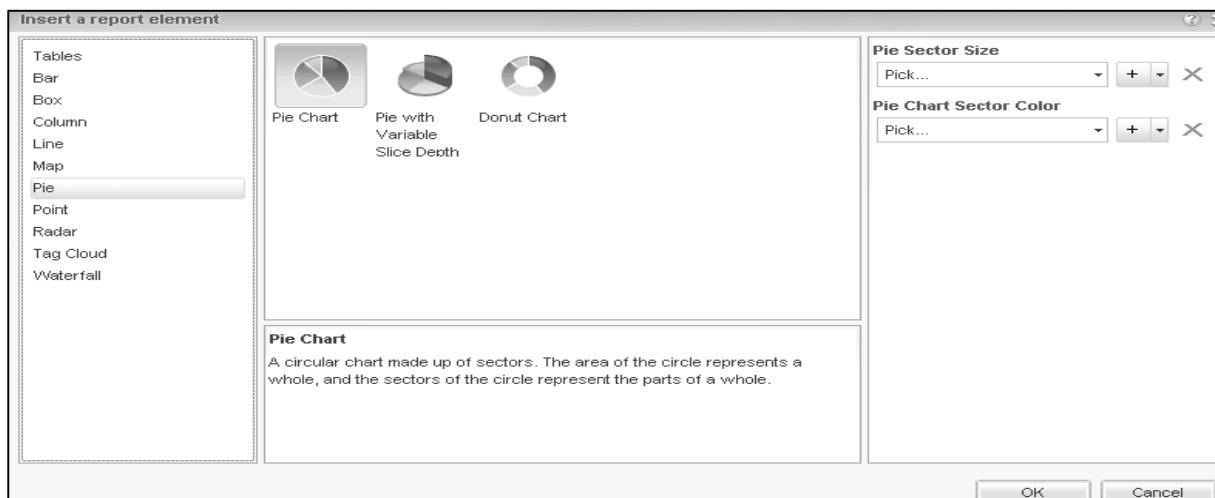
- Tree Map
- Heat Map

Pie Charts

A circular chart made up of sectors. The area of circle represents a whole, and the sectors of circle represent the parts of a whole.

Different types of Pie Charts:

- Pie Chart
- Pie Chart with Variable Slice Depth
- Donut Chart

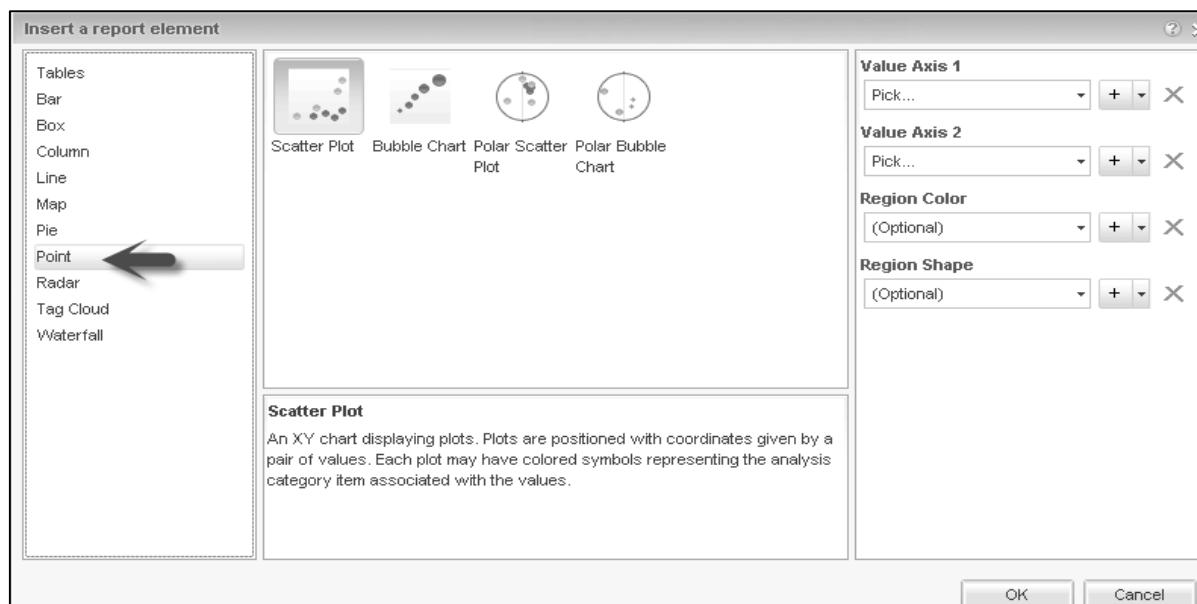


Point Charts

Point chart is an XY chart displaying plots. Plots are positioned with coordinates represented by a pair of values.

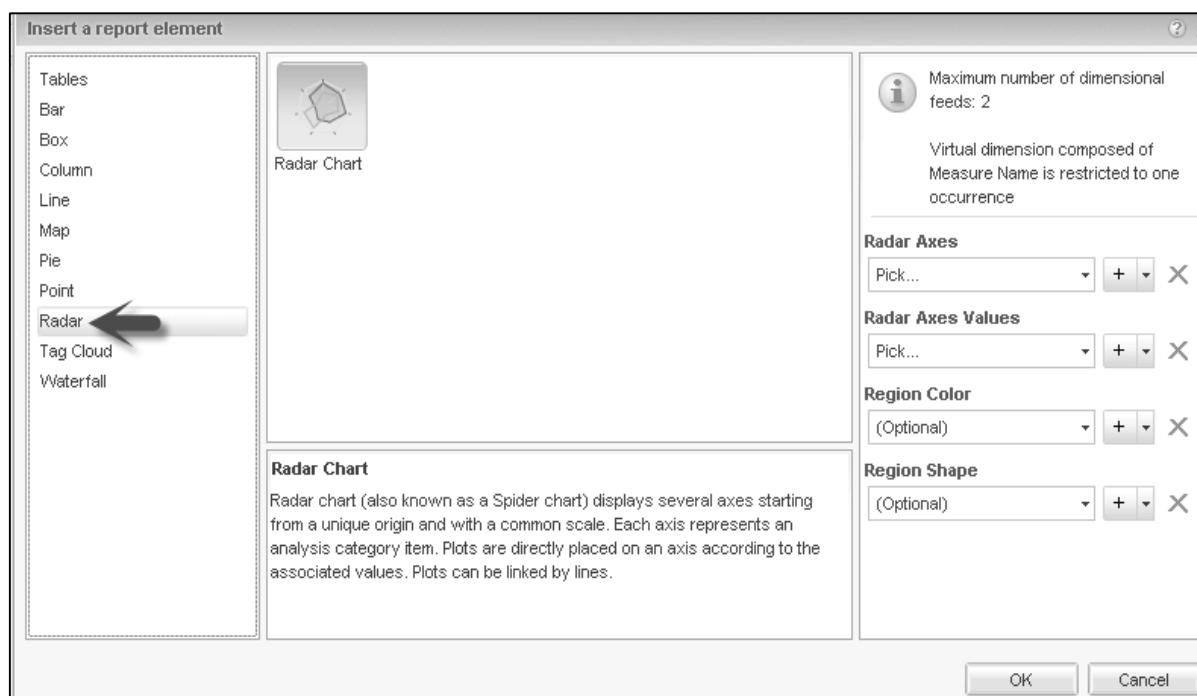
Following are the different type of Point Charts:

- Scatter Plot
- Bubble Chart
- Polar Scatter Chart
- Polar Bubble Chart



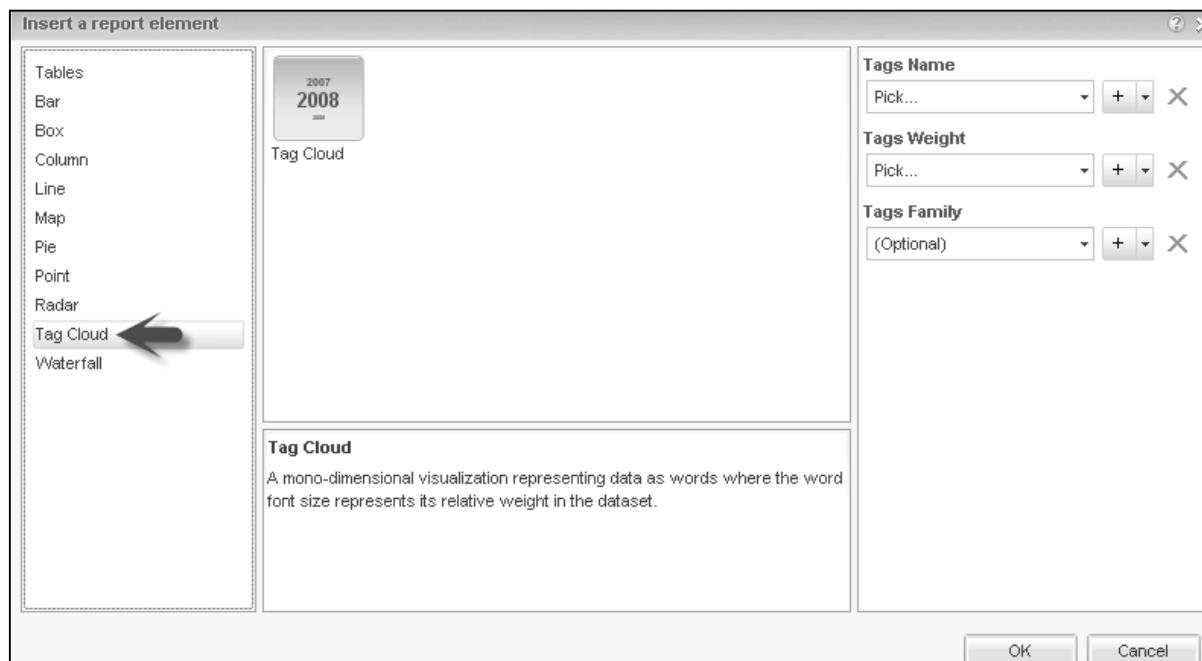
Radar Chart

It is also known as Spider chart and displays several axes starting from unique origin with a common scale.



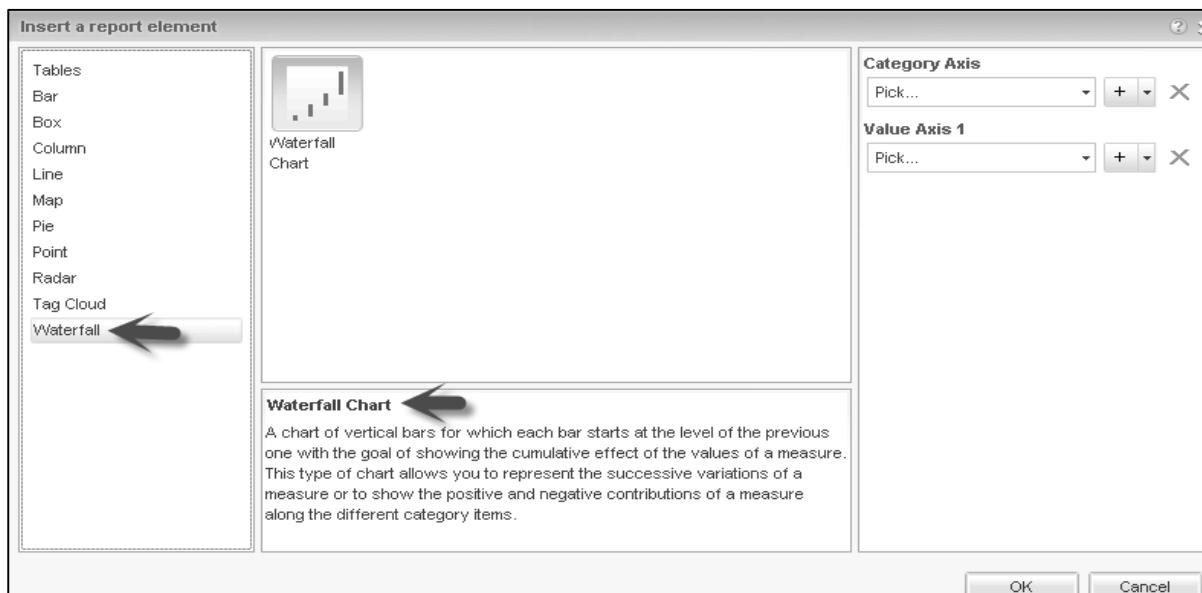
Tag Cloud

A mono dimensional visualization representing data as words where the word font size represents its relative weight in dataset.



Waterfall

It is used to show the cumulative effect of values of a measure and each bar starts with the level of previous one.



Add a Chart to Report

You should be in Design mode to add a chart. There are different ways to add a chart to a Webi Report.

Method 1

Go to Report Element -> Chart -> Select a Chart and click on the report area where you want to insert a chart.

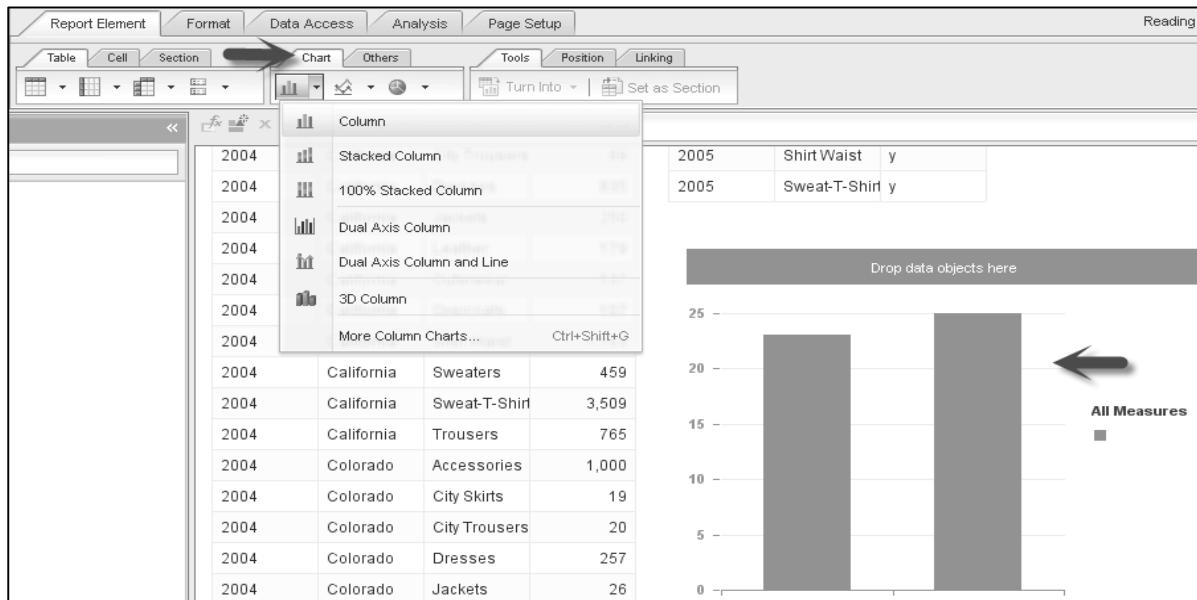
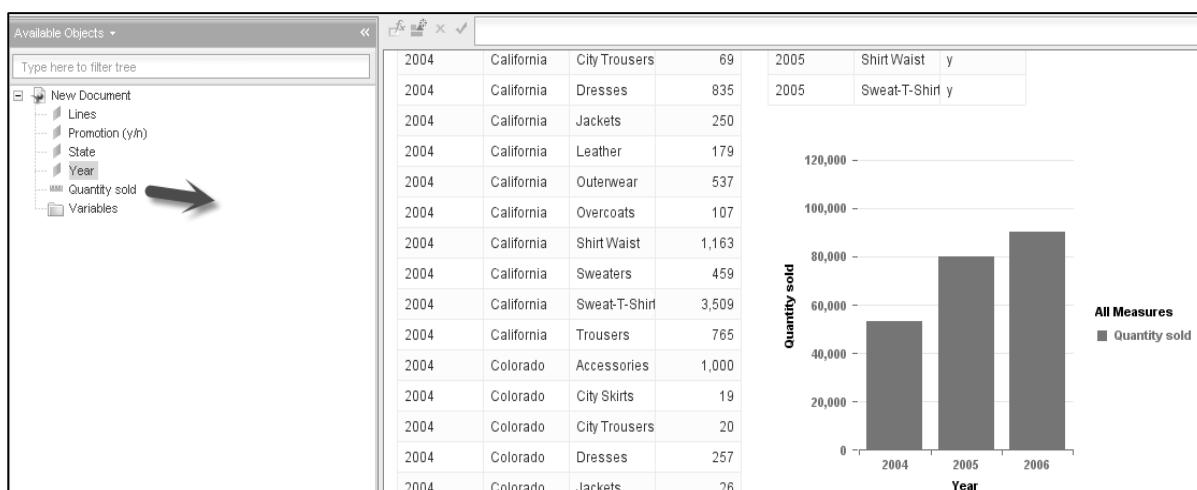


Chart is greyed when there is no data assigned to it. To assign data, you can drag the object from the list of available objects to chart axes.



Method 2

Right-click -> Insert -> Select the Chart type as shown in the following screenshot. Click the report to add a blank chart and then assign data by dragging objects from the list of available objects.

Outerwear	537
Overcoats	107
Shirt Waist	1,163
Sweaters	459
Sweat-T-Shirt	3,509
Trousers	765

Accessories

- Section
- Vertical Table
- Horizontal Table
- Cross Table
- Blank Cell Ctrl+Shift+E

Outfit

- Column Chart
- Line Chart
- Pie Chart
- Scatter Plot

Insert a Report Element...

The screenshot shows a software application window. On the left, there's a sidebar with categories like 'Accessories' and 'Outfit', each with a list of report elements (e.g., Section, Vertical Table, etc.). Below this is a placeholder for 'Insert a Report Element...'. On the right, a context menu is open over the table, listing standard operations like Cut, Copy, Paste, and Paste Special, followed by a separator line and an 'Insert' submenu. The 'Insert' submenu contains 'Refresh All', 'Show Structure', 'Show Results', 'Start Drill', 'Filter', and 'Format Report...', each with a keyboard shortcut next to it.

Method 3

Another method is by converting a table into chart. You can do this by selecting a table in a Webi report. Right-click on a column -> Turn Into -> Select a Chart.

The screenshot shows a Microsoft Excel ribbon interface. A context menu is open over a table containing the following data:

Year	Lines	Promotion (y)
2004	Accessories	y
2004	Dresses	y
2004	Shirt Waist	y
2004	Sweat-T-Shirt	y

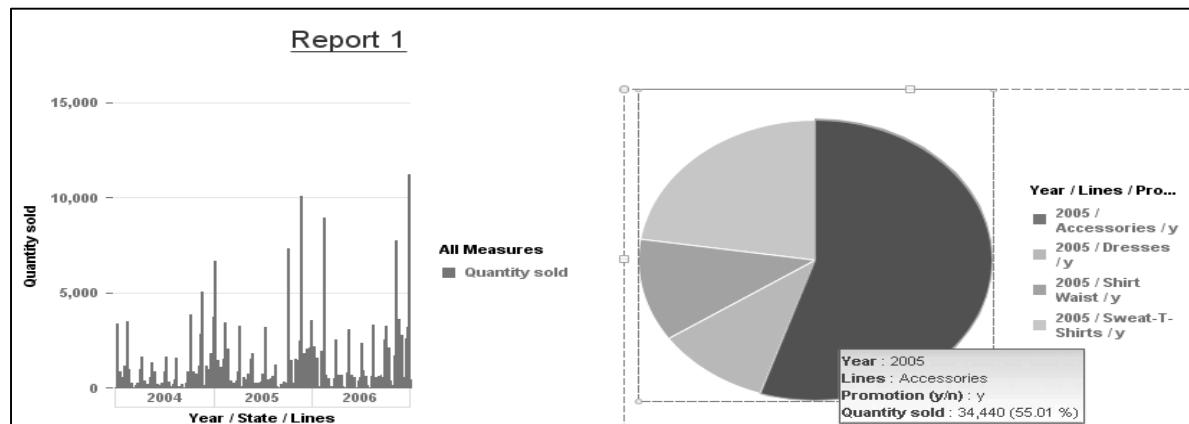
The context menu includes the following options:

- Cut (Ctrl+X)
- Copy (Ctrl+C)
- Paste (Ctrl+V)
- Paste Special...
- Insert (with a dropdown arrow)
- Delete (Delete key icon)
- Clear Contents
- Set as Section (with a dropdown arrow)
- Turn Into (highlighted with a black arrow)
- Edit Formula... (Ctrl+Enter)
- Linking (with a dropdown arrow)
- Start Drill (with a dropdown arrow)
- Group (with a dropdown arrow)
- Filter (with a dropdown arrow)
- Ranking (with a dropdown arrow)

Below the context menu, there is a list of transformation options:

- Vertical Table
- Horizontal Table
- Cross Table
- Column Chart (highlighted with a gray box)
- Line Chart
- Pie Chart
- More Transformations...

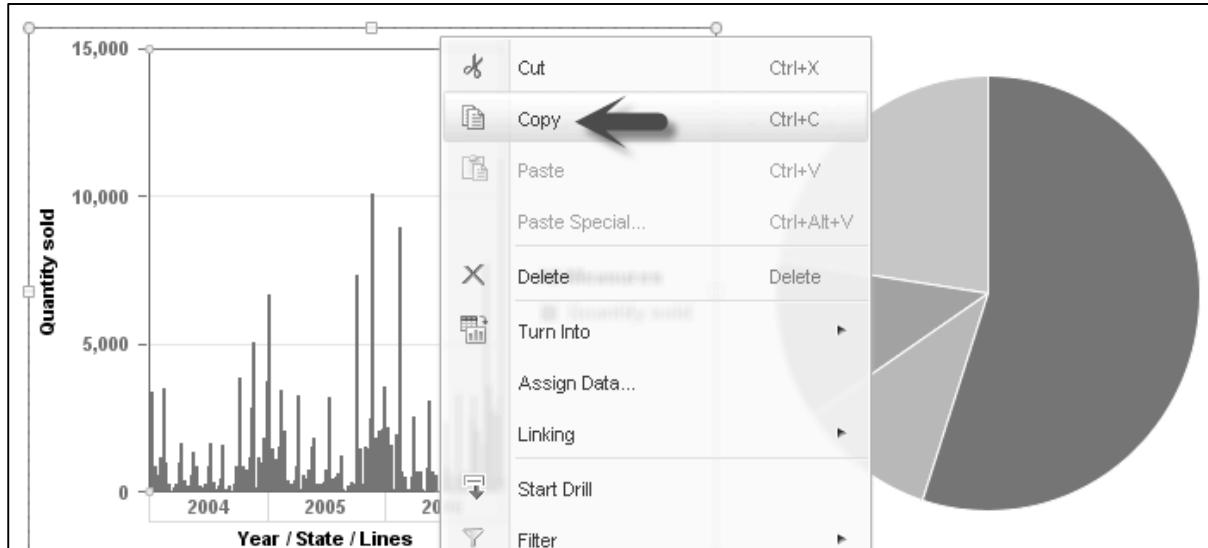
The table will be converted into a column chart.



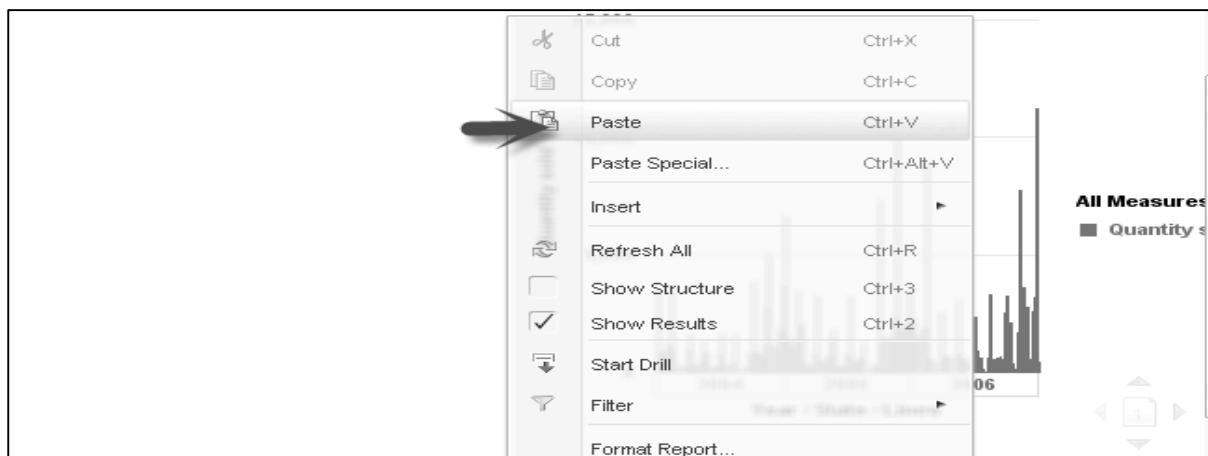
Copy Chart

You can also copy a chart from a Webi report to the same report or to an application. To copy a chart, you have to first select the chart.

To copy a Chart, right-click on the chart and select copy.



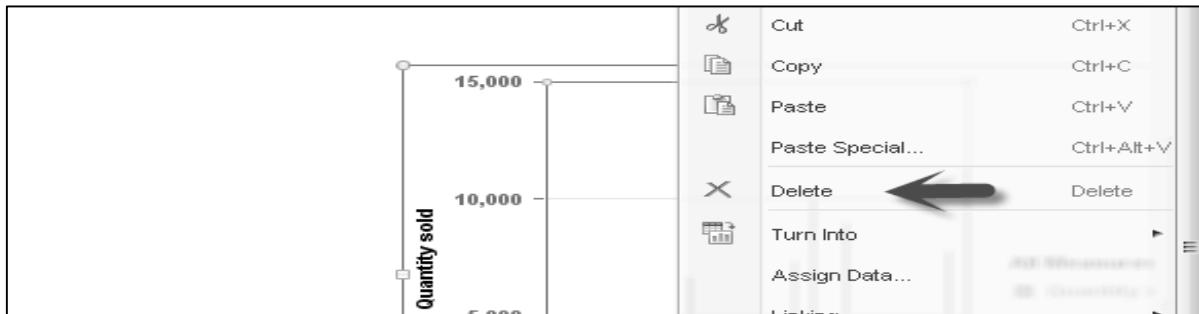
Now to paste this chart in the same report, select an area in the report. Right-click and Paste.



To copy this chart to an application, you can drag the chart directly to an open application or this can be done by copying the chart to the clipboard and pasting it in the application.

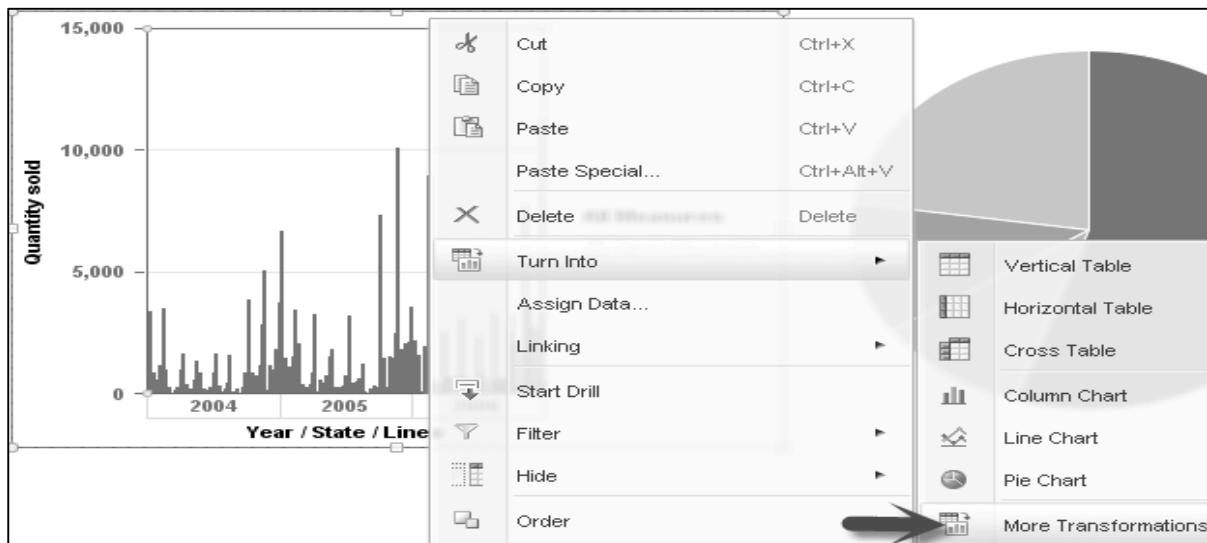
Delete a Chart

To delete a chart, you can select a chart. Right-click -> press Delete or select delete option.

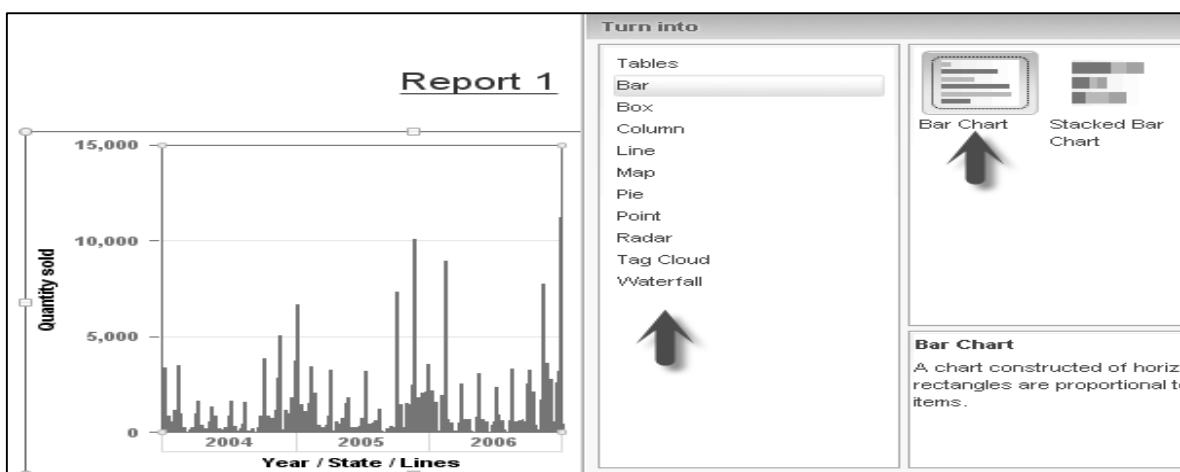


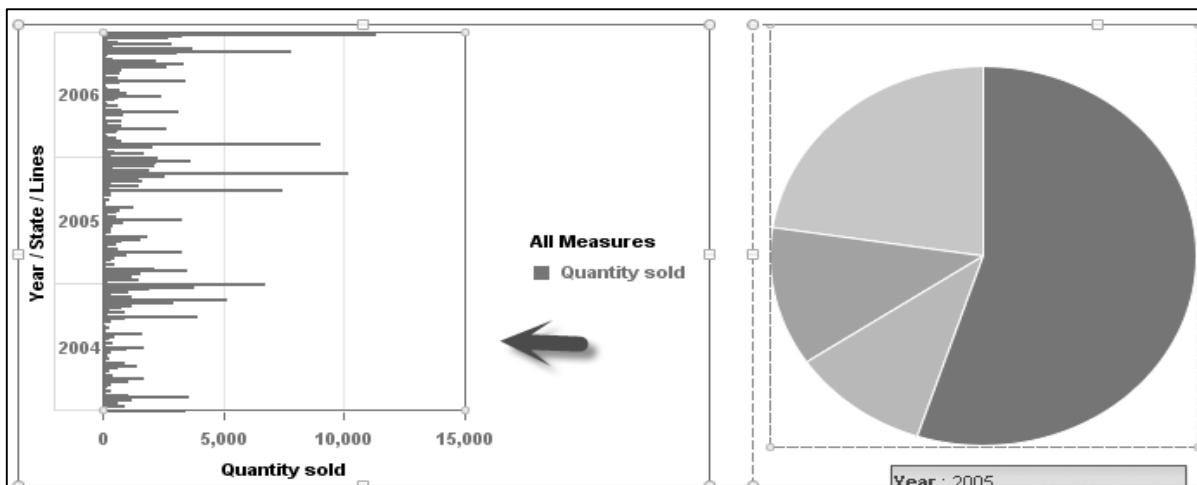
Changing a Chart Type

Select the table or Chart -> Right-click -> Turn into -> More Transformations.



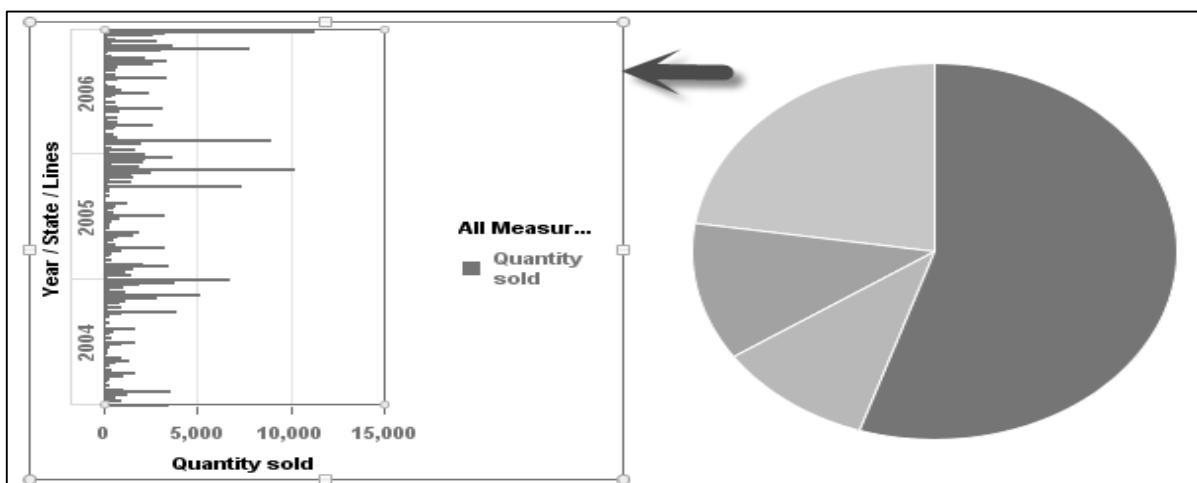
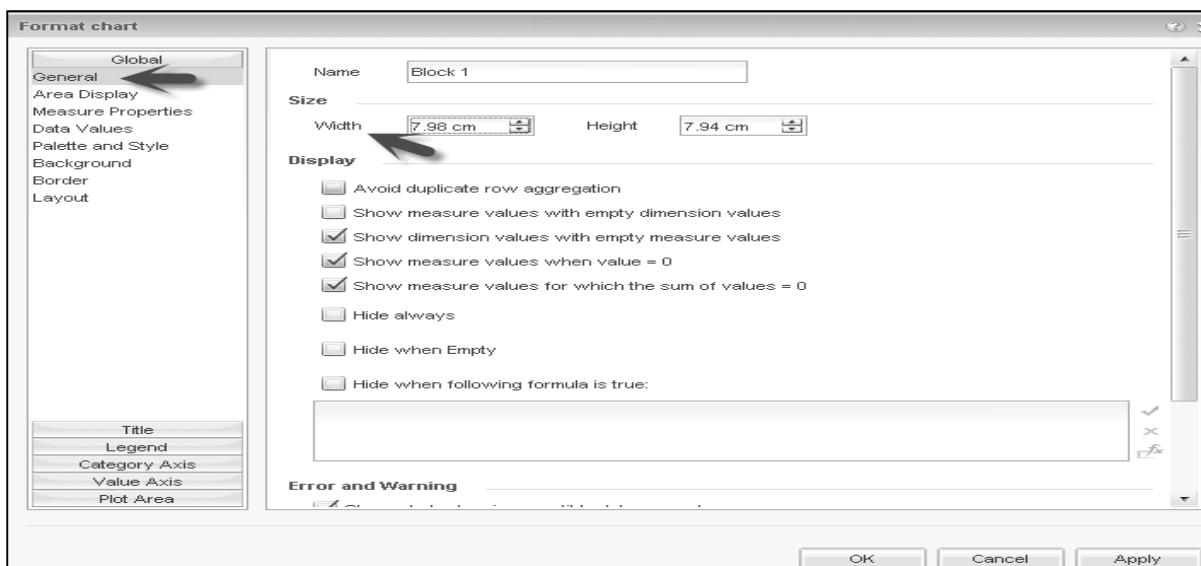
Once you click on More Transformation, it will open a window with different Chart options. You can select any chart type and the chart will be changed in the report.





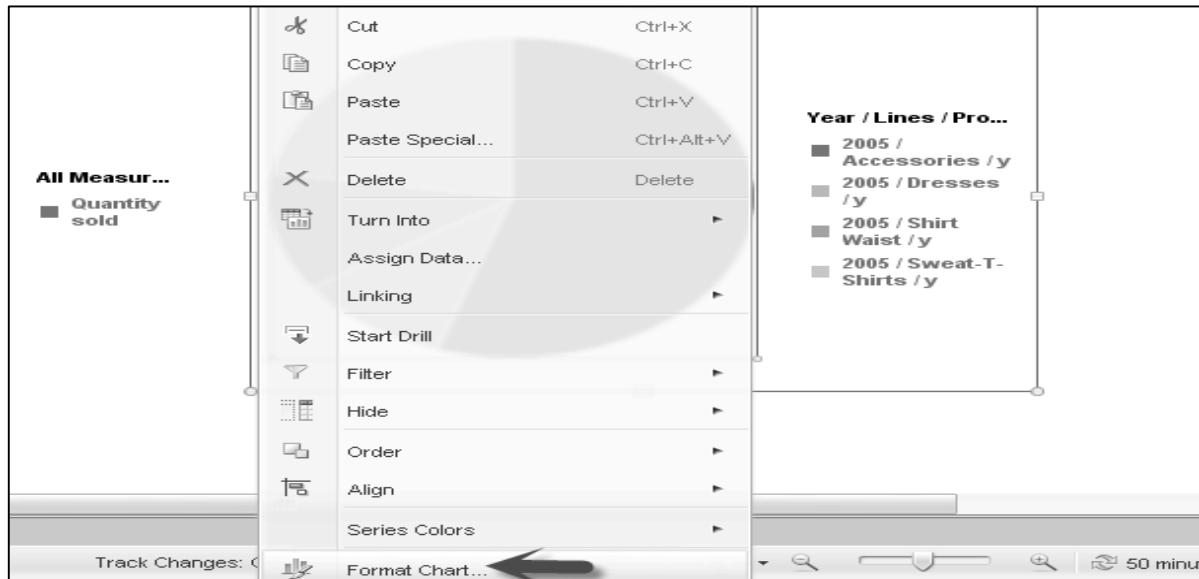
Resize Charts

You can also resize the chart by using the mouse option. Right-click the chart and select format chart option. It will open a new window. Go to General tab -> Width and Height option -> Select the chart parameters. Click 'Apply' and then 'Ok'.



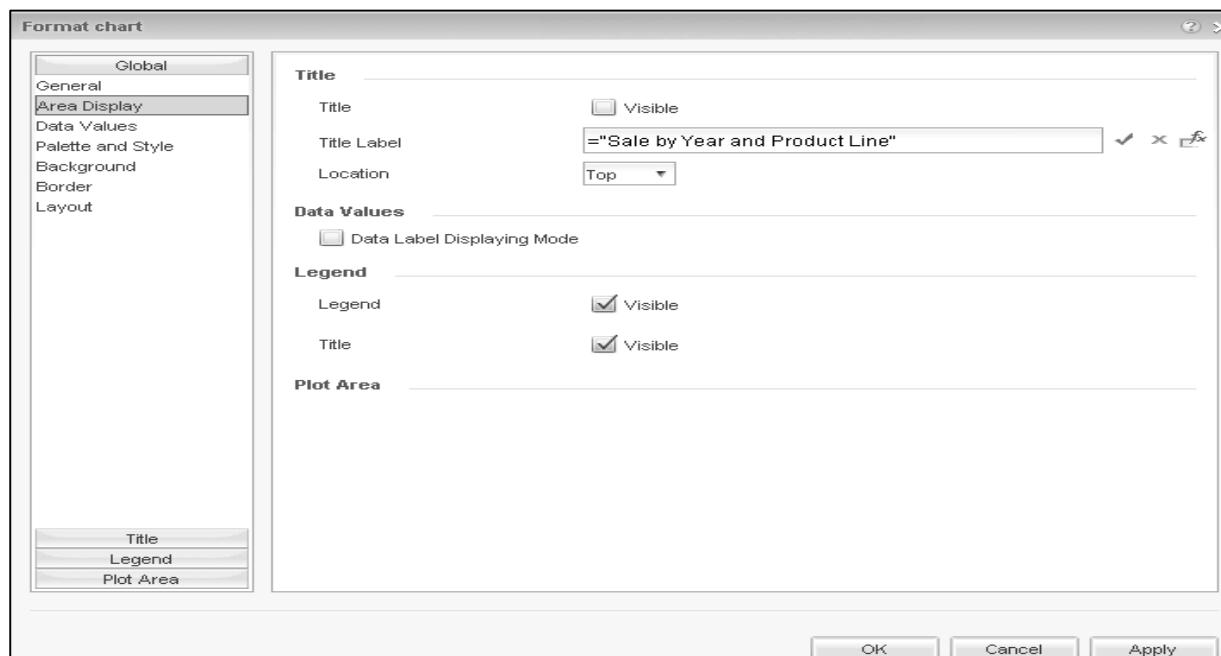
Formatting a Chart

To format a chart -> Select the chart -> Right-click -> Format Chart.

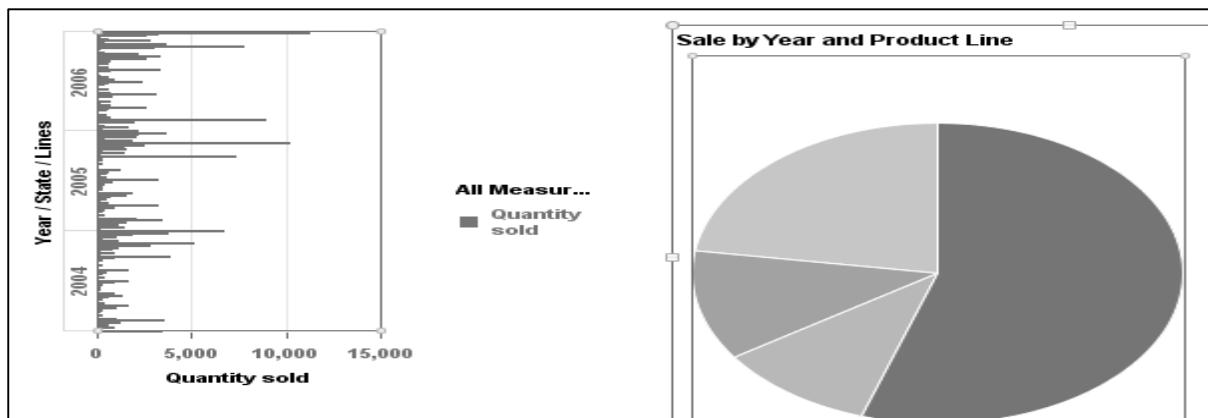


Following are the various chart properties you can choose from:

- Area Display
- Data Value
- Background
- Border
- Layout, etc.



Once you make Title label visible, it will be displayed at the top of Chart.



20. SAP Webi – Conditional Formatting

Conditional Formatting is used to highlight some specific values in the report. If you want you can show specific low or high values with some specific colors. Conditional formatting can be applied to the following elements:

- Rows in horizon tables
- Columns in vertical tables
- Cells in forms and cross-tables
- Sections
- Free holding cells

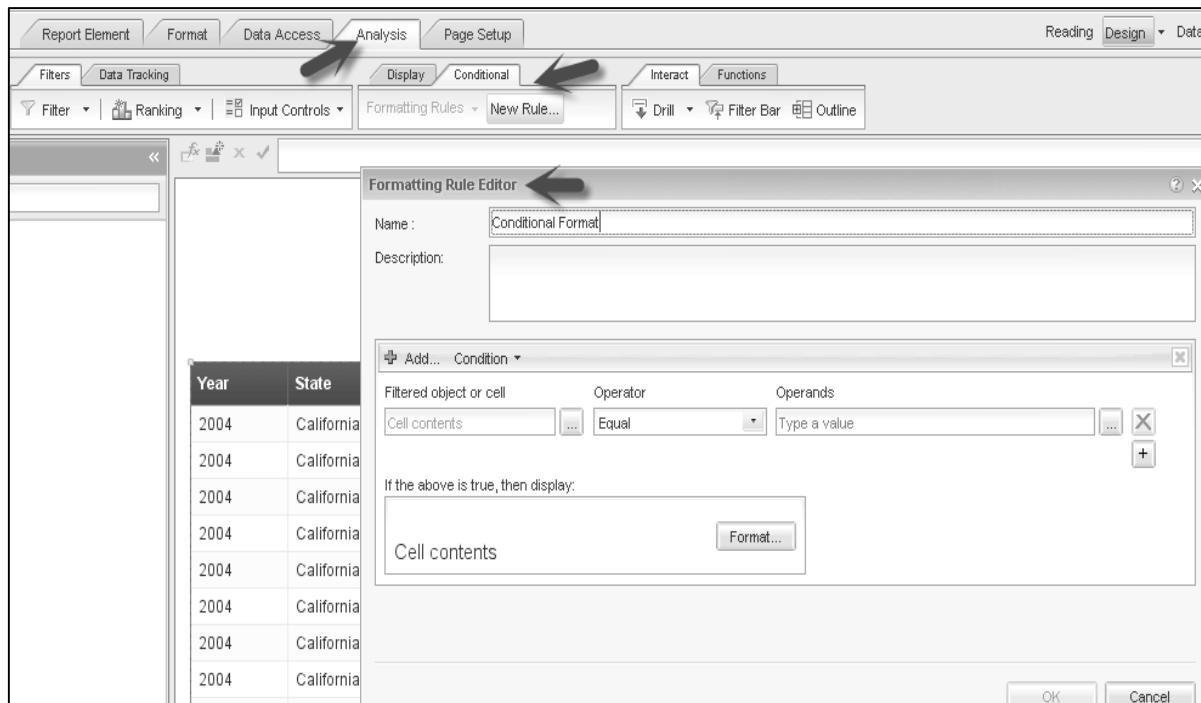
Condition formatting can be used to make the following formatting changes: Text color, size and style, cell border, color, size and style, and cell backgrounds.

You can add up to 30 conditional formatting formulas in a Webi document.

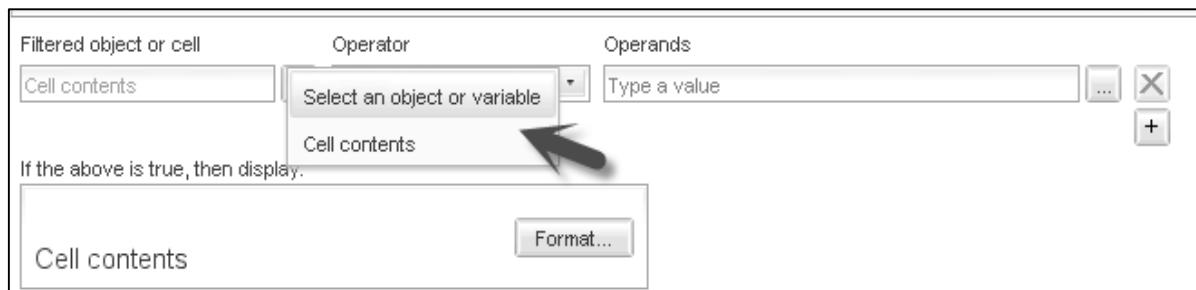
Creating a Conditional Formatting Formula

To create a conditional formula, open the report in Design mode. You must be using Rich client or App Interface and shouldn't work in Web mode.

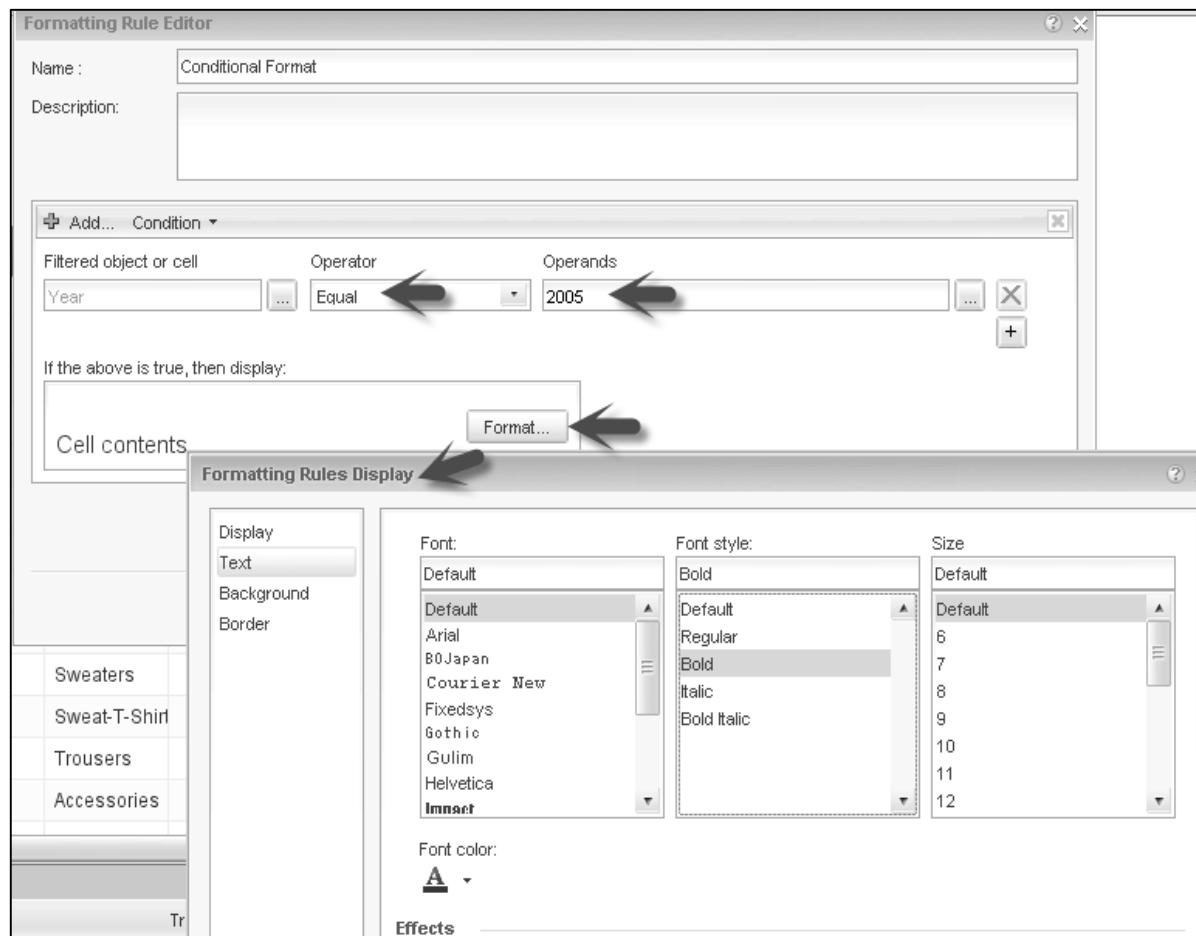
Go to Analysis -> Conditional -> New Rule. It will open formatting rule editor.



Enter the rule name and description. Select the cell contents in filtered object or cell box.



You can select Operator and Operands value. You have to define text formatting in Format tab. Click on Format to set the formatting of the tab.



You can select the font, font style, size, effects (underline, etc.) and alignment. Once formatting is defined for condition, you have to click Ok.

Now to apply conditional formatting to the object, select the column in the report. Go to formatting rules dropdown -> Select the conditional formatting rules checkbox you have created.

A screenshot of the SAP Webi interface. At the top, there are tabs: Report Element, Format, Data Access, Analysis, and Page Setup. Below these are sub-tabs: Filters, Data Tracking, Display, Conditional, Interact, Drill, and Fun. A search bar contains the text '=Year'. A dropdown menu for 'Formatting Rules' is open, showing 'Conditional Format' with a checked checkbox and 'Manage Rules...'. The main area displays a table with the following data:

	California		
2005	Leather	242	
2005	Outerwear	1,096	
2005	Overcoats	190	
2005	Shirt Waist	1,498	
2005	Sweaters	822	
2005	Sweat-T-Shirt	3,454	

Conditional formatting will be applied to the desired cells. You can add multiple conditions in a single formatting rule on multiple objects.

A screenshot of the SAP Webi interface showing the 'Formatting Rule Editor' dialog. The table on the left shows data for Texas and California. The 'Conditional Formats' dialog on the right lists a rule named 'Conditional Format' with the following conditions:

- Filtered object or cell: Year, Operator: Equal, Operand: 2005
- And: Quantity sold, Operator: Greater or equal, Operand: 400

The 'Cell contents' section is selected. Arrows point from the text 'Conditional Format' in the dialog to the 'Conditional Format' button in the toolbar and the 'Conditional Format' entry in the dropdown menu.

Manage Conditional Formatting Rules

Go to Analysis tab -> Conditional -> Manage Rules.

A screenshot of the SAP Webi interface showing the 'Formatting Rules' dropdown menu. It includes options like 'Conditional Format' and 'Conditional Format (1)'. An arrow points to the 'Manage Rules...' option at the bottom of the list.

Once you click 'Manage Rules', it will open window for Conditional Formats. To edit a rule, select the rule and click on Edit. You can also change the order of Conditional Formatting rules.



You can also duplicate/remove conditional formatting rules using Manage option.

21. SAP Webi – Filtering Report Data

You can filter the data in a report to limit the data displayed in a Webi document. You can select filter condition to present the data that is of your interest.

Data filtered using Report filters remain in the document and any time you can remove the filters to check hidden data.

You have to mention the following elements to create report filters:

- Filtered object
- Operator
- Filter value
- Report element where filter has to be applied

Example: You can apply a filter to see data related to a specific customer or sales region.

Query Filters vs Report Filters

Query filters are defined at query level in query panel and they are used to limit the data retrieved from the data source and return to a Webi document.

Report filters are used to hide the data in a table, report, chart, section in a Webi document. Report filters don't edit the data that is retrieved from the data source.

Report Filter Operators

You can use various operators to filter the data at the report level. Following are some of the common report filter operators:

- Equal To
- Not Equal To
- Different From Operator
- Greater Than
- Greater Than or Equal To
- Less Than
- Less Than or Equal To
- Between
- Not Between
- In List
- Not In List
- Is Null
- Is Not Null

Types of Report Filters

You can create the following types of report filters:

- **Standard Report Filters:** These filters are used to filter on a single value or lists of values. These are most flexible type of report filters.
- **Simple Report Filters:** They provide an easy way to create filters using Equal to operator. These filters apply on single value.

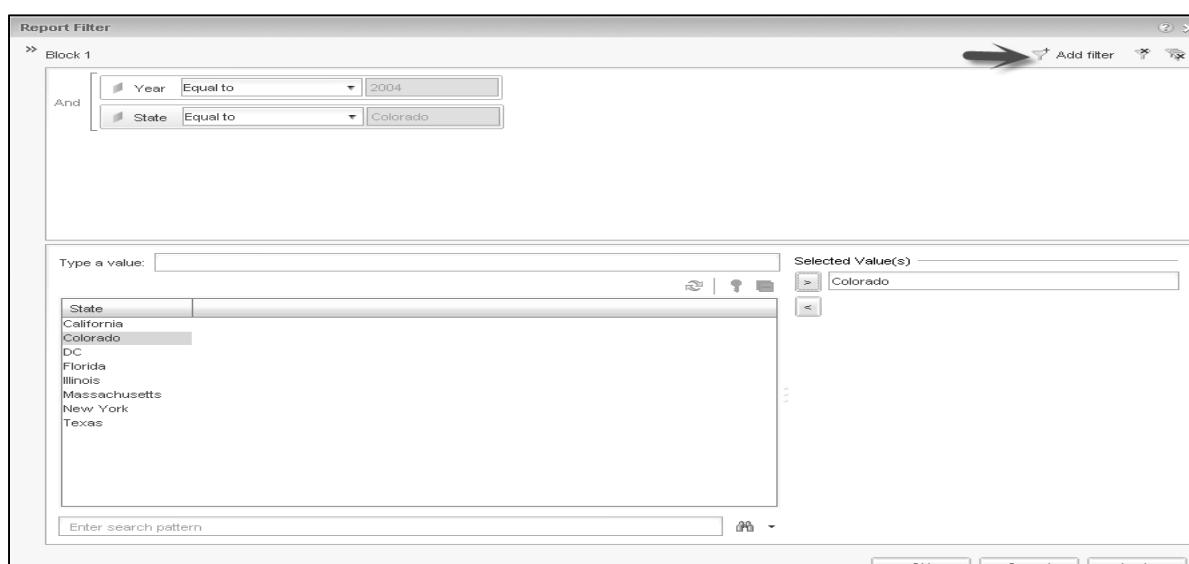
Create, Edit, Delete Standard Report Filters

Select the Report Element you want to apply a filter. Go to Filter -> Add Filter.

Year	State	Lines	Quantity sold
2004	California	Accessories	3,377
2004	California	City Skirts	54
2004	California	City Trousers	69
2004	California	Dresses	835

Year	Lines	Promotion (y)
2005	Accessories	y
2005	Dresses	y
2005	Shirt Waist	y
2005	Sweat-T-Shirt	y

It will open the Report Filter dialog box. You can add objects, operand and value to apply filter at the report level.



Using the functions - Add Filter, Remove or Remove All - you can add or delete filters accordingly.

Year	State	Lines	Quantity sold	Year	Lines	Promotion
2004	Colorado	Accessories	1,000	2005	Accessories	y
2004	Colorado	City Skirts	19	2005	Dresses	y
2004	Colorado	City Trousers	20	2005	Shirt Waist	y
2004	Colorado	Dresses	257	2005	Sweat-T-Shirt	y
2004	Colorado	Jackets	26			
2004	Colorado	Leather	26			
2004	Colorado	Outerwear	125			
2004	Colorado	Overcoats	34			
2004	Colorado	Shirt Waist	289			
2004	Colorado	Sweaters	155			
2004	Colorado	Sweat-T-Shirt	965			
2004	Colorado	Trousers	55			

To Edit a Filter -> Go to Analysis Tab -> Filter -> Edit Filter.

The screenshot shows the SAP Webi interface with the Analysis tab selected. In the 'Filters' section, a dropdown menu is open, and the 'Edit Filter' option is highlighted with a large black arrow pointing to it. The input field contains the filter condition '=Year'. Below the dialog, a preview of the report data is visible, showing a single row for Colorado with Accessories sold in 2005.

You can make changes to filters in Report Filter Dialog box. Click Ok to apply.

To Delete a Filter, Go to Analysis -> Filter -> Remove Filter. Click "Yes" to remove the filter.

22. SAP Webi – Input Controls

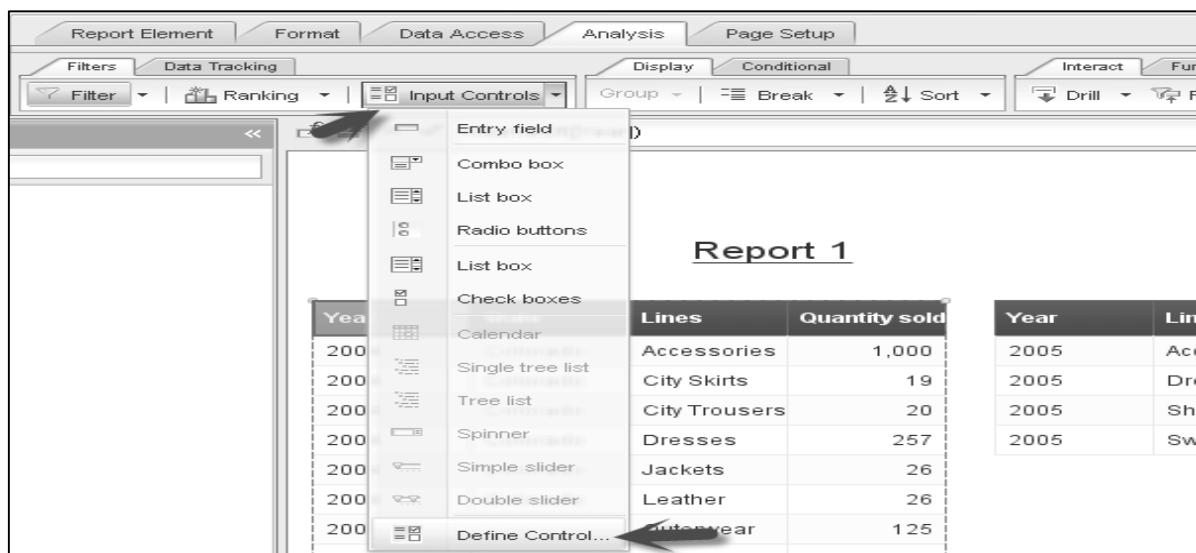
Input controls are used to filter and analyze the report data. You define input controls using text boxes and radio buttons. Input controls are associated with report elements, like tables and section headers, and use control to apply filter on report elements.

When you select a value for input control, it filters the values in the report element that is associated with input control by selected value.

Input controls can also be used on hierarchical data.

Defining Input Controls in Webi

You should be in Design mode to use input controls. Go to Analysis -> Filters -> Input Controls -> Define Control.



It will open Define Input Control dialog. Select the report object used to filter data and click 'Next'.

Note that if you select a Report element and then you select Define Control, you will get an option to include objects from selected block only. If you select this checkbox, it will show you objects only from the selected report element.

The screenshot shows a SAP Webi interface. On the left is a data grid with columns: Year, State, Lines, and Quantity sold. On the right is a 'Define Input Control' dialog. The 'Select Report Object' tab is active, displaying a tree view of report objects: New Document, Lines, Promotion (y/n), State, Year, Quantity sold, and Variables. The 'Year' node is selected. Below the tree is a checkbox 'Include objects from selected block only'. At the bottom are navigation buttons: '<< Previous', 'Next >>', and 'Cancel'.

You will get an option to choose and define control. Choose control allows you to select different control types like single value or multiple values. Define control allows you to select the name of control, description, values in control to select, operator and number of lines displayed in input control, etc.

The screenshot shows a 'Choose Control Type' dialog window. It has two main sections: 'Single value' (selected) and 'Multiple values'. The 'Single value' section includes options: Entry field, Combo box (selected), Radio buttons, List box. The 'Multiple values' section includes options: Check boxes, List box. To the right of the 'Single value' section is a description of the 'Combo box' control. Below these sections is a 'Input control properties' panel with fields: Label (Year), Description, List of Values (All values from report), Use restricted list of val..., Default value(s) (Yes), Allow selection of all val..., Operator (Equal to). Navigation buttons at the bottom include '<< Previous', 'Next >>', and 'Cancel'.

In the next window, you have to assign **Report Elements**. It will allow you to choose from report elements. You can assign report elements to input controls. (Example: I have selected as input control from both the blocks as shown below).

Click 'Finish' and input controls will be added to the left pane under Input Control tab.

The screenshot shows the 'Define Input Control' dialog box. In the top section, under 'Report object' and 'Control', 'Year' is selected as a 'Combo box'. Below this, the 'Assign Report Elements' tree view shows 'Report 1' with 'Page Header', 'Page Body' (selected), and 'Page Footer'. Under 'Page Body', 'Vertical Table: Block 1' and 'Vertical Table: Block 2' are listed, both with checkboxes checked. A large black arrow points from the text 'Vertical Table: Block 1' down towards the 'Finish' button. At the bottom are buttons for '<< Previous', 'Finish', and 'Cancel'.

The screenshot shows the 'Input Controls' dialog box. On the left, there's a toolbar with icons for New, Map, and Reset, and a dropdown menu labeled 'Input Controls'. A large black arrow points from this menu towards the main content area. The main area displays a dropdown menu for 'Year' with options: 'All values' (selected), 'All values', '2004', '2005', and '2006'. To the right, a preview pane shows a table with columns 'Year', 'State', and 'Lines', containing three rows of data: 2004, Colorado, Access; 2004, Colorado, City SK; and 2004, Colorado, City Tr.

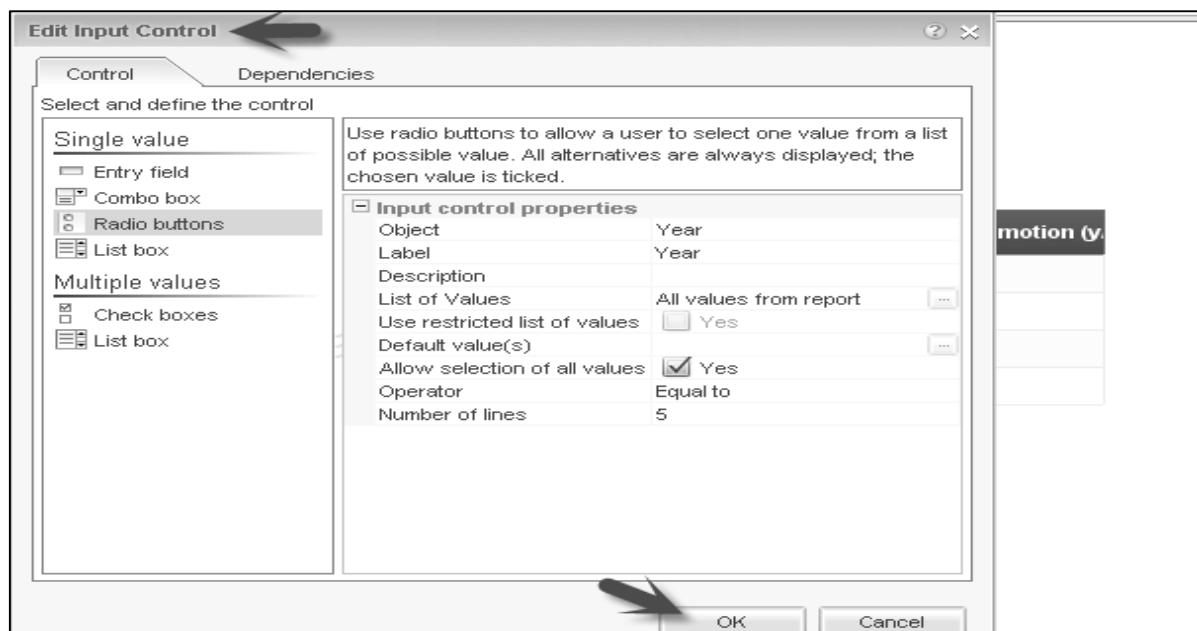
Now as per your selection of input control and type of input control, data will be reflected in the report.

Edit an Input Control

To edit an input control -> Select Input control from the left pane -> Click Edit icon.

The screenshot shows the 'Input Controls' dialog box. On the left, there's a toolbar with icons for New, Map, and Reset, and a dropdown menu labeled 'Input Controls'. A large black arrow points from the 'Edit' icon in the toolbar towards the 'Edit' icon in the dropdown menu. The main area displays a dropdown menu for 'Year' with options: 'All values' (selected), 'All values', '2004', '2005', and '2006'. To the right, a preview pane shows a table with columns 'Year', 'State', and 'Lines', containing three rows of data: 2004, Colorado, Access; 2004, Colorado, City SK; and 2004, Colorado, City Tr.

It will open Edit Input Control dialog box. Make changes to Input Control and click Ok.



Organize Input Controls

To organize input controls, go to Input control tab on the left pane.

Drag and drop input controls to move them up/down on input controls pane. Just hold the input control dialog box and move it up and down.

Year	State	Lines
2004	Colorado	Access
2004	Colorado	City SK
2004	Colorado	City Tr
2004	Colorado	Dress
2004	Colorado	Jacket

Use the "x" mark to remove the input control.

View Input Controls Map

To view map of input control, select the input control -> Click 'Map' at the top.

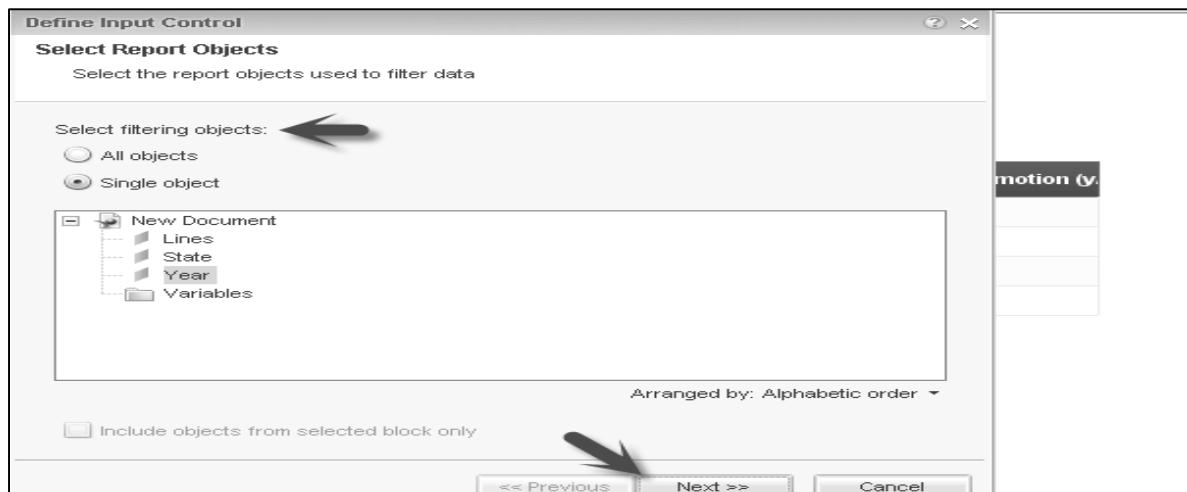
Year	State	Lines
2004	Colorado	Access
2004	Colorado	City Sk
2004	Colorado	City Trd

Define Table and Charts as Input Controls

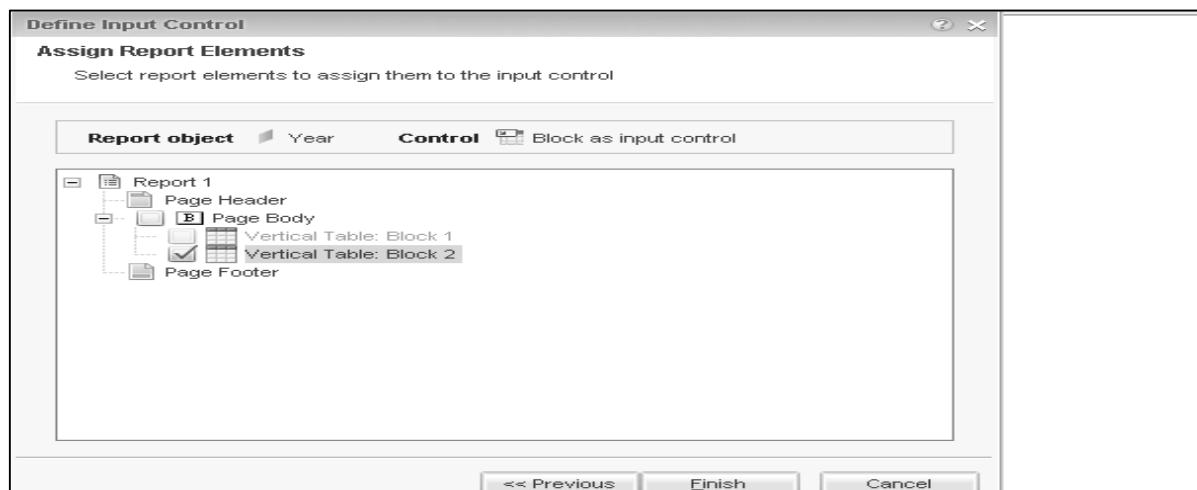
You can also use a table or chart to define input control. Select the table -> Right-click and select linking -> Add Element Linking.

Year	Quantity sold	Year	Lines	Promotion
2004	3,377	2005	Accessories	y
2004	54	2005	Dresses	y
2004	69	2005	Shirt Waist	y
2004	835	2005	Sweat-T-Shirt	y
2004	250			
2004	179			

You can select a single object or all objects to define as filtering objects. Click 'Next'.



You can enter the name and description of input control. Click 'Next'. Once you click Next, you can select any other block to use this object as input control. Click 'Finish'.



Similarly, you can use charts as input control for other Report elements.

23. SAP Webi – Formulas and Variables

You can also insert formulas and variables in a Webi report.

How to Enter a Formula?

To enter a formula in Webi report, the report should be opened in Design mode. Click the formula editor to enter a formula. If the formula editor is not visible, go to Properties tab -> View -> Formula Bar.

Once the formula editor is open, build the formula. If the formula editor is not visible, go to Properties tab -> View -> Formula Bar.

The screenshot shows the SAP Webi interface in Design mode. A formula editor dialog box is open in the foreground, containing the formula `=[Sales revenue]`. In the background, a report titled "Report 1" is displayed, featuring a table with four columns: Year, State, Lines, and Sales revenue. The data in the table is as follows:

Year	State	Lines	Sales revenue
2004	California	Accessories	\$489,666
2004	California	City Skirts	\$11,072
2004	California	City Trousers	\$10,935

How to Create a Variable?

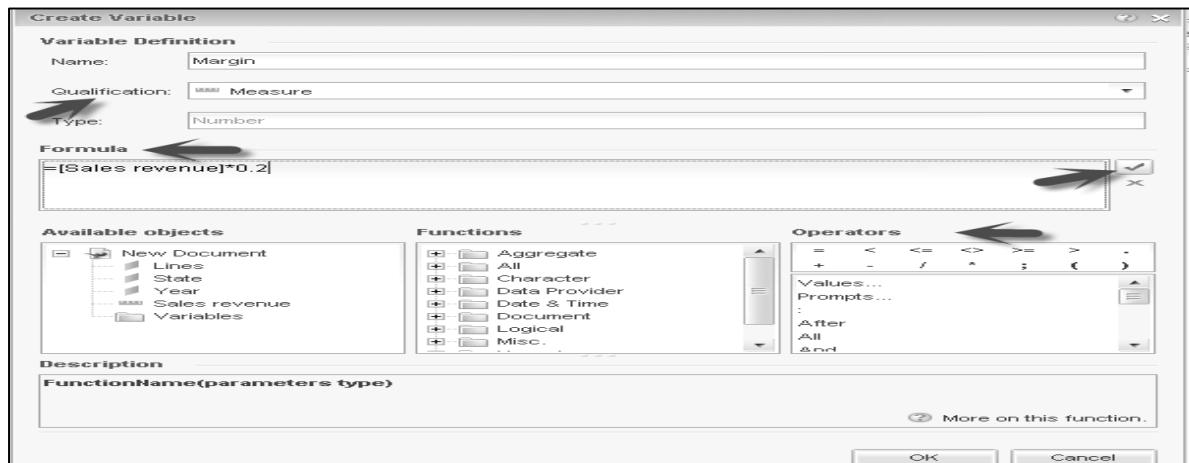
The report should be in Design mode to create a Variable in formula.

To create a variable, click on Create Variable icon in formula bar to display variable editor.

The screenshot shows the SAP Webi interface in Design mode. A "Create Variable" dialog box is open in the foreground, prompting the user to "Create a new variable using this formula". The formula entered is `=[Sales revenue]`. In the background, a report titled "Report 1" is displayed, featuring a table with four columns: Year, State, Lines, and Sales revenue. The data in the table is as follows:

Year	State	Lines	Sales revenue
2004	California	Accessories	\$489,666
2004	California	City Skirts	\$11,072
2004	California	City Trousers	\$10,935
2004	California	Dresses	\$110,210
2004	California	Jackets	\$38,369

Enter the name of Variable, Qualification – Dimension, Measure, and Detail. If you select Detail, it opens a new field - Associate dimension.



Enter the formula for variable, you can select from the list of available objects, functions and operators to create a formula. You can click on the tick mark to validate the formula. Once the formula is defined, click Ok.

On the left side, you can see this new variable in the list of available objects. To use this variable, you can drag this to Webi report.

Year	State	Lines	Margin	Sales revenue
2004	California	Accessories	\$97,933	\$489,666
2004	California	City Skirts	\$2,214	\$11,072
2004	California	City Trousers	\$2,187	\$10,935
2004	California	Dresses	\$22,042	\$110,210
2004	California	Jackets	\$7,674	\$38,369
2004	California	Leather	\$5,382	\$26,912
2004	California	Outerwear	\$12,033	\$60,165
2004	California	Overcoats	\$4,419	\$22,094
2004	California	Shirt Waist	\$38,637	\$193,186
2004	California	Sweaters	\$14,144	\$70,720
2004	California	Sweat-T-Shirt	\$114,601	\$573,003
2004	California	Trousers	\$19,576	\$97,881
2004	Colorado	Accessories	\$29,019	\$145,093

You can also edit or delete the variable. To edit/delete a variable, select the variable from the list of available objects -> right-click -> Edit/Remove.

The screenshot shows the SAP Webi interface. On the left, there is a tree view titled "Available Objects" with a search bar. The tree includes "New Document" (with "Lines", "State", "Year" children), "Sales revenue" (with "Margin" child), and "Variables". A context menu is open over the "Margin" node, showing options: "Edit", "Rename", "Copy", and "Remove". An arrow points to the "Copy" option. On the right, there is a table titled "Repo" with the following data:

Year	State	Lines
2004	California	Accessories
2004	California	City Skirts
2004	California	City Trousers
2004	California	Dresses
2004	California	Jackets

24. SAP Webi – Drill Options in Reports

The drill option is used to analyze data at different levels. With **drilling** you can go to the next levels to analyze data in tables, charts, and sections.

You can also specify how drill options will make changes to reports when you perform drilling in Webi. Setting drill options depends on the Web Intelligence interface used.

- BI Launchpad
- Webi Rich Client

Setting Drill Option

Note that to use drill option, you should have hierarchy defined at Universe level. Once you have hierarchy at Universe, you can add that object to Result objects in Query panel. Once you run the query, the object will be added to the list of available objects in a Webi document.

Drill allows you to move to level up or level down as per the hierarchy in Universe.

To set drill option in a Webi report, go to Analysis tab -> Interact -> Drill -> Start Drill.



The screenshot shows the SAP Webi interface with the Analysis tab selected. In the top right corner of the toolbar, there is a 'Drill' button with a dropdown arrow. A large red arrow points to the 'Start Drill' button located just below and to the right of the main 'Drill' button. The main window displays a report titled 'Report 1' containing a table with data from 2004. The table has columns for Year, State, Lines, Margin, and Sales revenue.

Year	State	Lines	Margin	Sales revenue
2004	California	Accessories	\$97,933	\$489,666
2004	California	City Skirts	\$2,214	\$11,072
2004	California	City Trousers	\$2,187	\$10,935
2004	California	Dresses	\$22,042	\$110,210

Once you start drill, you can move to the next levels or end drill using the option in the same tab.

Example: Drill on 2015 - the results displayed on the drilled table are Q1, Q2, Q3, and Q4 for the year 2015. This means that the quarterly values you drilled are filtered by 2015.

You can also take a snapshot of Drill result in a separate report. Use the snapshot option to add a new report with drilled data.

The screenshot shows the SAP Webi interface. At the top, there is a toolbar with various tabs: Report Element, Format, Data Access, Analysis, Page Setup, Filters, Data Tracking, Display, Conditional, Interact, and Functions. Below the toolbar, there are several dropdown menus and buttons for filtering, ranking, input controls, grouping, breaking, sorting, drilling, and filtering. A central workspace area contains the title "Report 1" and a table with the following data:

Year	State	Lines	Margin	Sales revenue
2004	California	Accessories	\$97,933	\$489,666
2004	California	City Skirts	\$2,214	\$11,072

25. SAP Webi – Sharing Reports

You can publish a Webi content outside Webi documents by publishing report elements like charts and tables as web services. This is called BI services.

Publishing as Web Services

To publish a Webi document as web services, open the report in Design mode. You can use Publish Content Wizard to publish Webi document. The report should be saved in BI repository to publish as web services.

Select the Report Element you want to publish, right-click and click 'Publish as Web Service'.



This will open the Publish Content Wizard -> Click 'Next'.

Publishing Prompts

For web services, you should reproduce prompts multiple times to produce different responses. Select the prompts you want to Publish and click 'Next'.

If you don't select any prompts for publishing, web services uses prompt value that was supplied when the document was last refreshed.

Defining Web Services

Before publishing a block as a web service, you use the 'Define Published Content' screen in the publish content wizard to name the table, make filters available on the block data, and select the server where the block will be published.

Save and Publish as Web Services

You use the 'Publish new content' or 'Re-publish Existing Content as Web Service' screen in the Publish Content wizard to save and publish the web service to a host server.

To re-publish an existing web service, select the web service, click 'Publish'.

To publish a new web service, select the folder where you want to publish the content and click 'Create to display the Publish Web Service' dialog box.

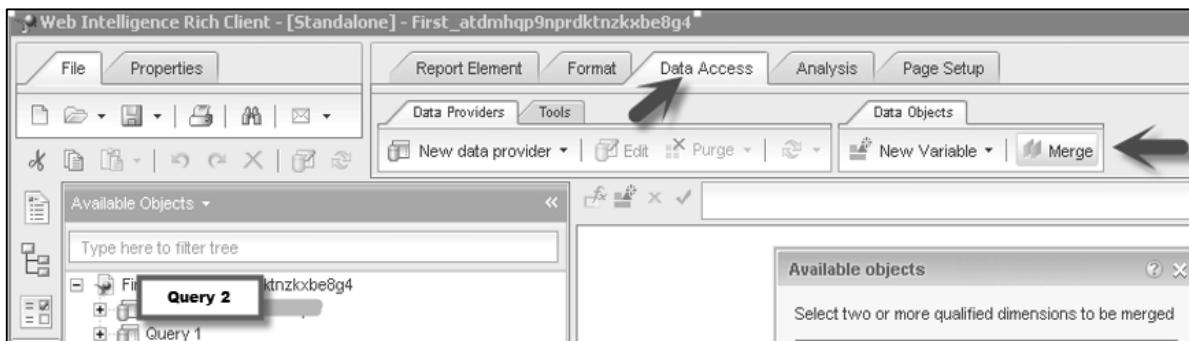
Enter the name of the web service in the web service box and add the description -> Select Authentication method for the web service from the Authentication list.

Click Ok and it will save and publish the web service.

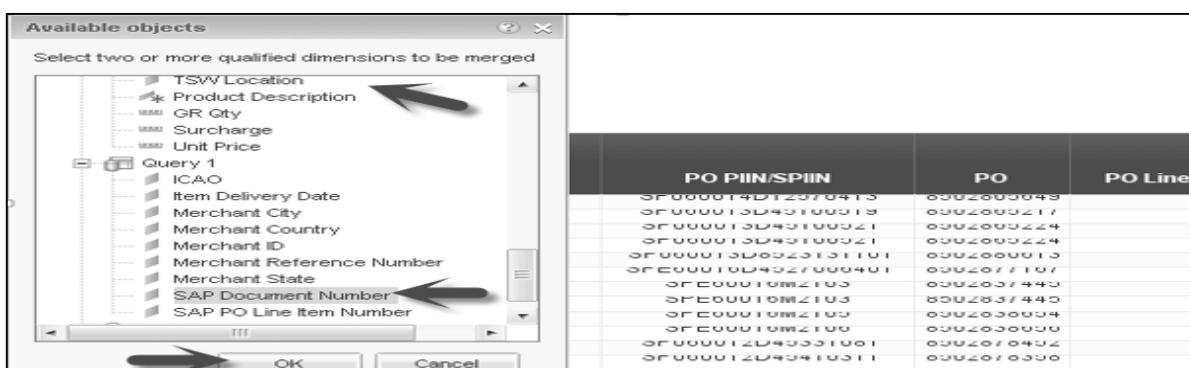
Choose the web service where you want to publish -> Click Finish.

26. SAP Webi – Merge Dimension

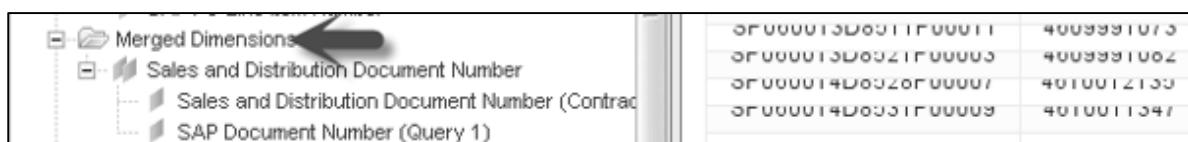
This option allows you to merge the data from different data sources. Assume that you have created Query 1 and Query 2 in Query Panel. When you combine both the queries in a single Webi report, objects from both the queries are shown in the list of available objects.



Select the unique object from both the queries and click Ok as shown in the following screenshot.



It will create a Merge Dimension under the list of available objects.



It allows you to sync both the queries and you can add the objects from both the queries in a single report. Sometimes it doesn't allow you to add objects in the report from either of the queries because of sync issues. In such a case, you can create a new variable for that object.



Enter the variable name, qualification as "Detail" and it will add a new field 'Associate Dimension'. In Associate dimension, select the unique object from the same query.

In the Formula tab, select the object from the list of available objects for which you want to create a new variable and click 'Validate'.



Once the variable is created for that object, you can drag that object to the report.