Introduction to Qlik Sense

What is Qlik Sense?

Qlik Sense is a data analysis and visualization software. It operates with an associative QIX engine which enables the user to link and associate data from varied sources and carries out **dynamic searching** and selections. Qlik Sense serves as a data analytics platform for a wide range of users i.e. from non-technical to technical users. As opposed to **QlikView**, Qlik Sense is more about data visualization as it has augmented graphics. Whereas in QlikView, we can manipulate the data in a lot of technical ways through scripting. Nevertheless, if our motive of using Qlik Sense is showing and analyzing data in the best possible graphical ways, then we have made the right choice.

So, Qlik Sense as a tool provides a great deal of flexibility to the users as they can carry out completely independent operations with the self-service visualizations and analysis or be guided by the automated machine-guided analysis by the cognitive engine. As opposed to the traditional query-based model, Qlik Sense used an Associative Model in which users are free to explore the vast and complex labyrinth of data in whichever direction and ways they please to and draw intuitive insights from it. Also, it is possible to integrate large data files from varied sources without any issues. The collaborative properties also aid to the users' capabilities to draw ingenious inferences from the data. The client team can share data applications and reports on a centralized hub, share secure data models, export the data stories to enhance and flourish the business.

QIX Engine - It is a powerful, in-memory data engine that enables us to rapidly explore relationships in various sources of data, without having to write queries.

Associative selection data model -Making selections is the main interaction method in Qlik Sense. Selections filter out a subset of the data that is loaded into Qlik Sense. You use selections to focus on something you want to know more about. Qlik Sense responds by color coding values according to their different states.

Qlik Sense Tutorial – Editions

There are three editions of Qlik Sense available in the market.

i. Qlik Sense Desktop

The Qlik Sense Desktop edition is a windows version, which can be locally installed on the system's desktop. It provides all the important features like local file sharing, visualizing and exploring, data loading and preparation, exporting applications to the cloud, enterprise support, storytelling etc. Although this version is not the full version as it provides limited functionalities as opposed to the enterprise edition. The Desktop version is used on an individual level and is free of cost.

Recommended Reading – **Qlik Sense Key Concepts**

ii. Qlik Sense Cloud

Qlik Sense Cloud is a cloud deployed edition. Users can create and share applications. They can also share analytics reports in with others. It also provides access to multiple devices. The benefit of cloud edition is expanded storage and unlimited data. There are two types of cloud version; Cloud Basic and Cloud Business version. The Qlik Sense Cloud Business version provides extra functionalities for collaborating group analysis and data governance. The Cloud Basic edition is free of cost service and can be shared between a maximum of 5 users, whereas, the Cloud Business version's charge is $15 per month and can be shared amongst unlimited users.

iii. Qlik Sense Enterprise

Qlik Sense Enterprise version is the premium or full version specific for enterprise use. It provides a complete set of data analysis features like reporting, visualization, exploration, multi-platform cloud deployment, collaboration, data integration, API for custom analytics, enterprise governance and scalability. Basically, the enterprise edition is sold on the basis of a token model i.e. $1,500 for one token.

Comparison of different Editions-

Qlik sense Desktop	Qlik sense Cloud	Qlik sense Enterprise
Suitable for a single user doing development / trialing of the software & it is free	Can share a dashboard with a small number of users but no automation of anything. We expect the cloud offerings will mature and improve over time. Trial version is for 30 days.	Fully multi-user, automated reloads, fine control over security roles & access. No free version, you have to buy license tokens

What is QVF, QVD and QVS file in Qlik Sense-

A **QVF file** is an app created by **Qlik Sense**, an analytics program used to create personalized, interactive reports and data visualizations. It contains one or more visualizations of data, such as charts, maps, tables, and plots. **QVF files** also include settings that configure the appearance of the visualizations

A **QVD** (**QlikView** Data) file is a file containing a table of data exported from **Qlik Sense**. **QVD** is a native **Qlik** format and can only be written to and read by **Qlik Sense** or **QlikView**. The file format is optimized for speed when reading data from a script but it is still very compact.

Qvs file : **Qvs** is a Script file,which is used to save script written in edit Script. QVS file which generally say Qlik sense Settings file is an simple

file people maintain to create the GLOBAL variables to store the locations of QVDs, data store connection string and any other files which are used in our application.

Qlik Sense Data Model

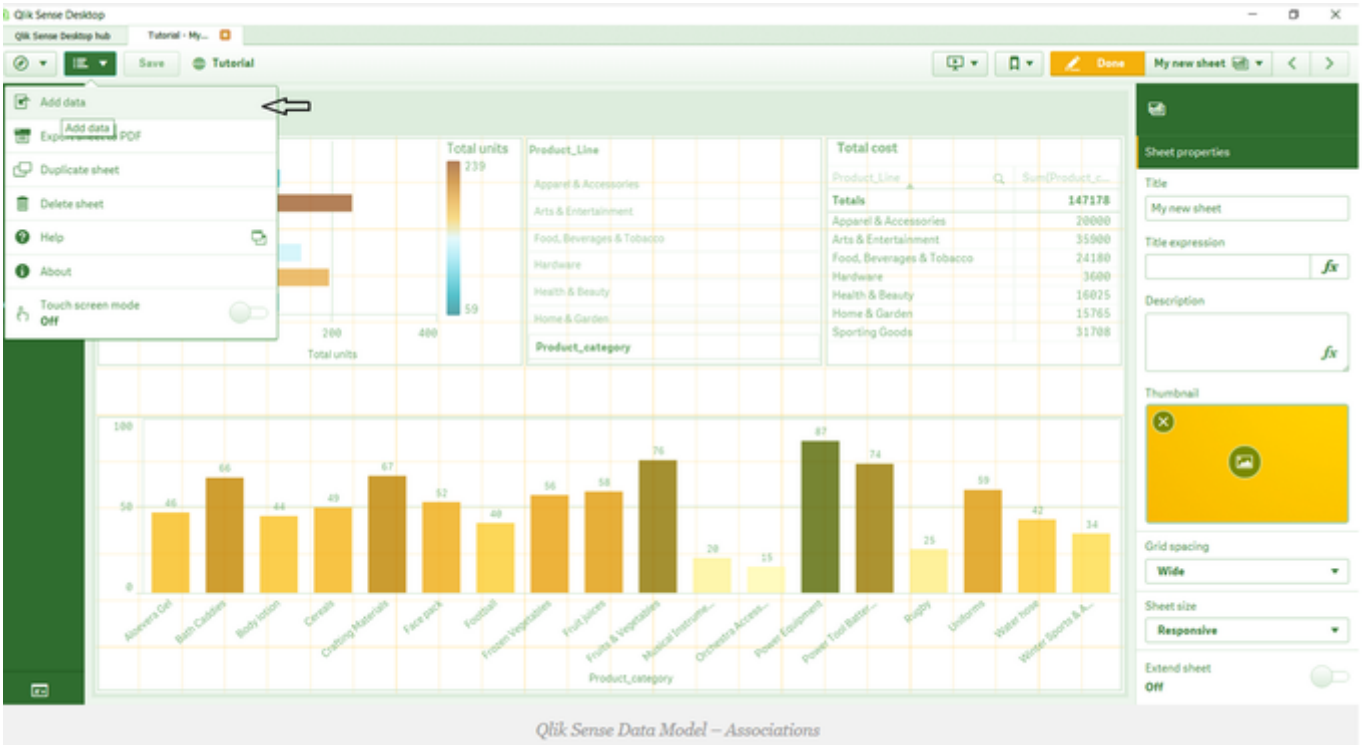
The associative model powered by the QIX engine of Qlik Sense makes data discovery and analysis a very easy task in the **BI tools**. Basically, through these associations between data tables, we make a logical connection, by linking relevant data fields and data values with one another. When all the relevant data residing in the entire data set link with one another. Then it forms a logical structure of data and gives it some meaning.

Now, when you use different fields and data values to create visualizations on the sheet, you would obviously not do that to only watch the visualizations idly. You would want them to be responsive and interactive. This interactive nature is achieved by the associative selection data model, where the software reacts or responds in a suitable way upon making a selection. In the following sections, we will learn ways to make your data tables interactive and dynamic ensuring better results of data analysis.

How to Make Associations in Qlik Sense?

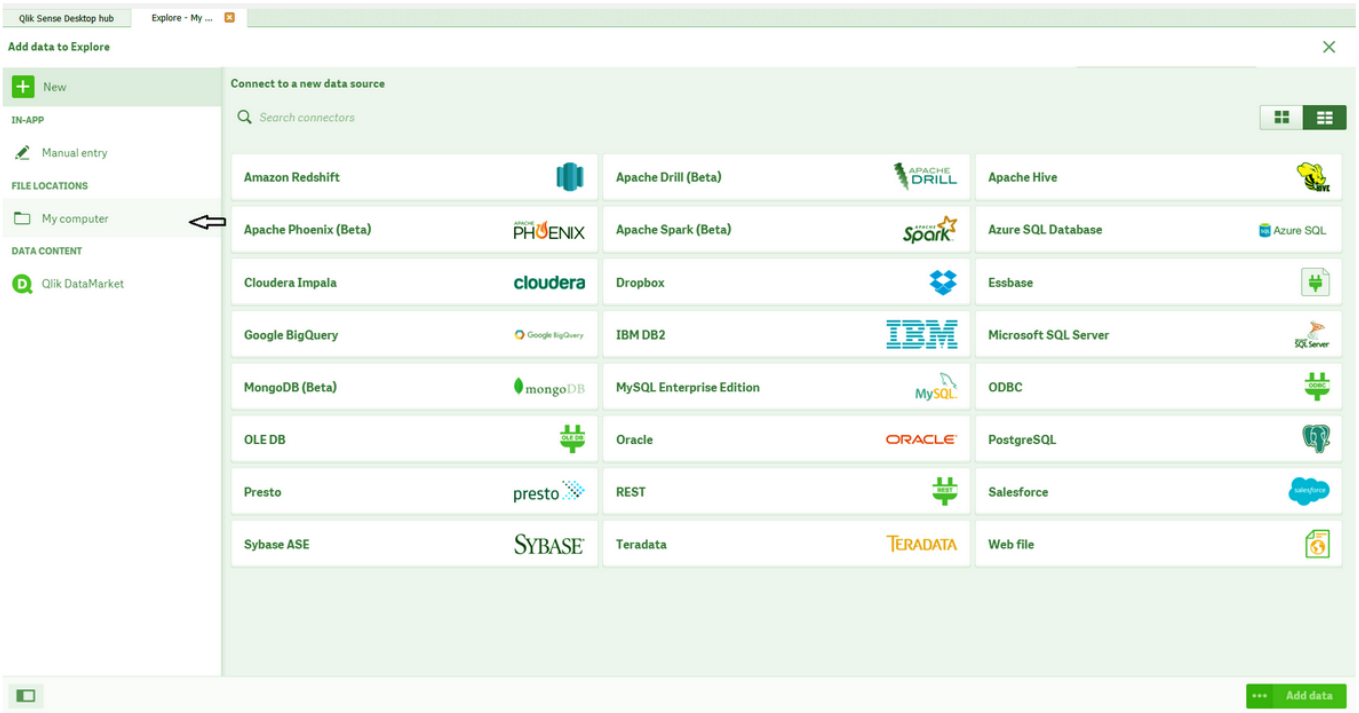
In order to make an association between data tables, let us suppose that we have two tables already loaded in Qlik Sense. The two tables are named *Product Records* and *Order Details* which are sample tables used by us. Now, we want to add a third table named *Sales Record*. So, we will open Qlik Sense, open the app which contains the two tables and we want to add the third in. Click on **Edit** option from the toolbar of the sheet.

Open the Global Menu and select Add Data option. This will add the third table. Select the data file from the source is located in your system and click on **Add Data** button**.**

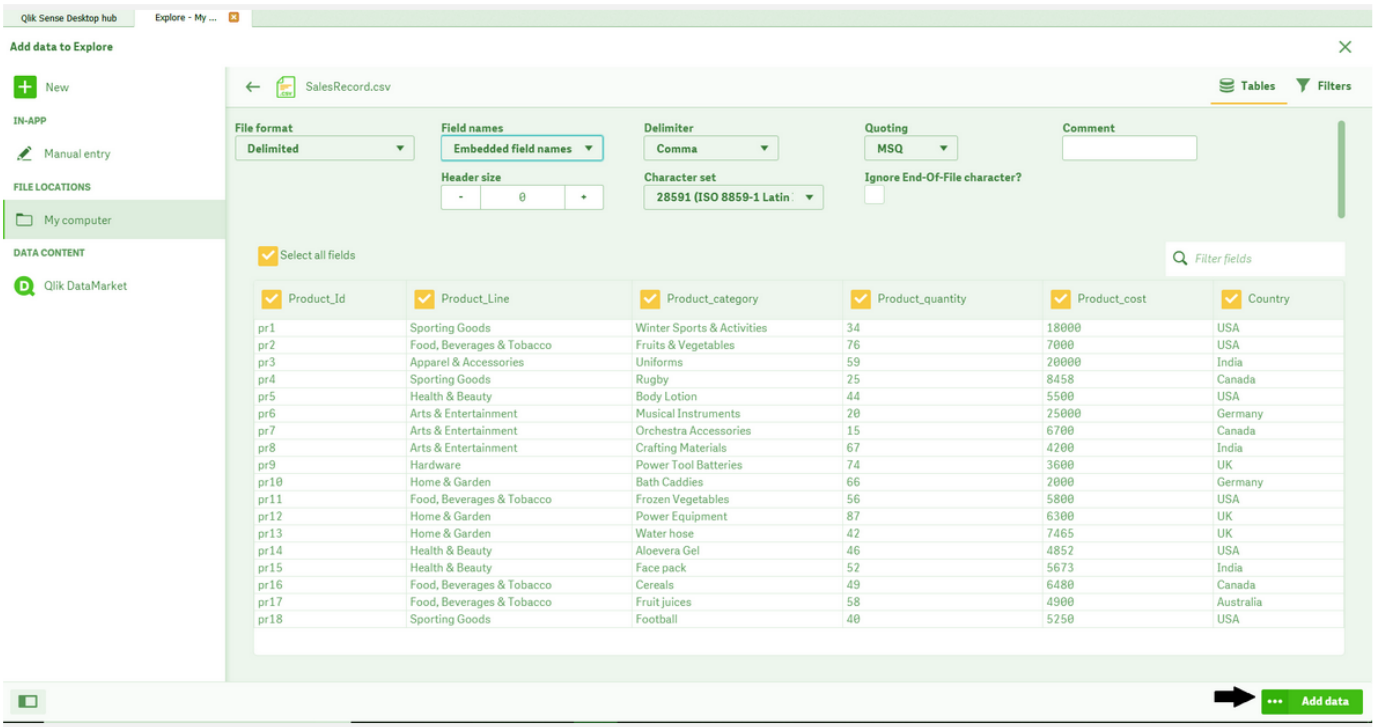


Qlik Sense Data Model – Associations

Have a look at Qlik Sense Selections Visualizations



Data Model in Qlik Sense – Associations

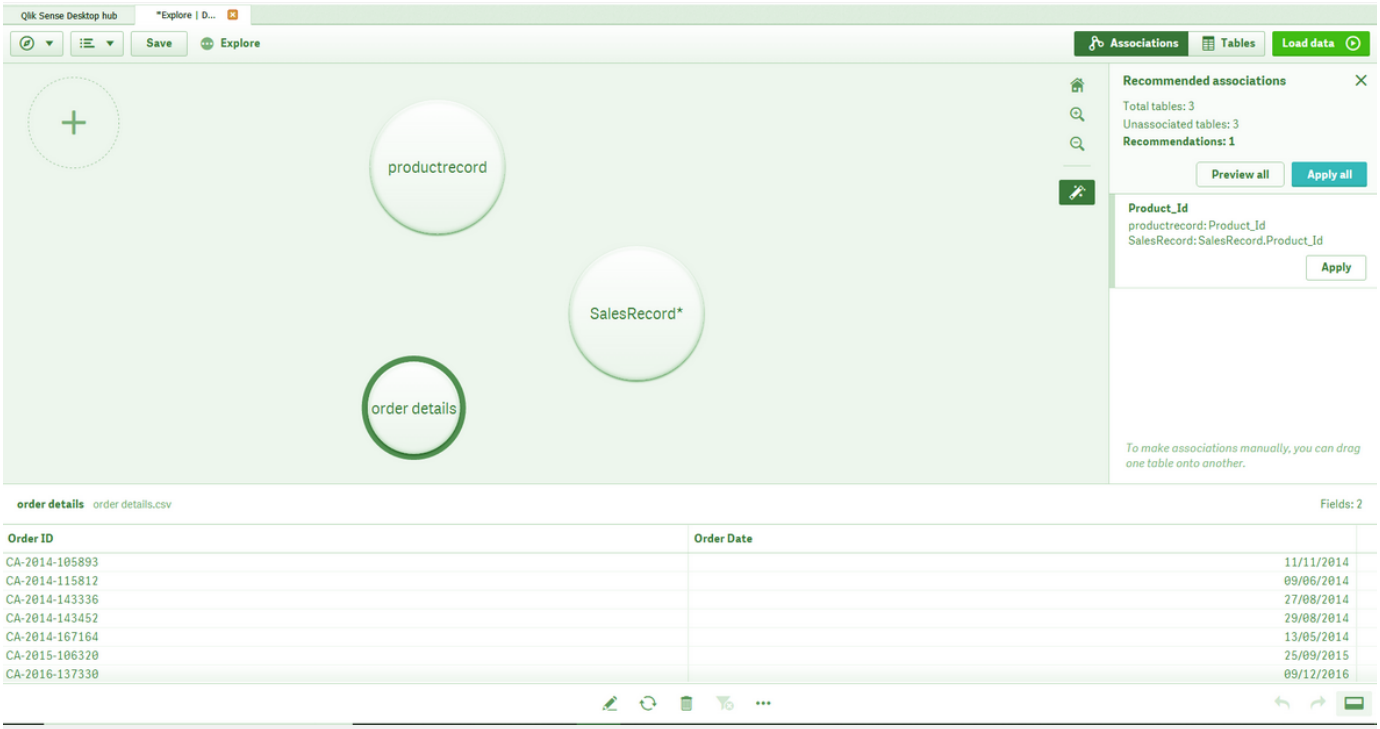


Product_Id	Product_Line	Product_category	Product_quantity	Product_cost	Country
pr1	Sporting Goods	Winter Sports & Activities	34	18000	USA
pr2	Food, Beverages & Tobacco	Fruits & Vegetables	76	7000	USA
pr3	Apparel & Accessories	Uniforms	59	20000	India
pr4	Sporting Goods	Rugby	25	8458	Canada
pr5	Health & Beauty	Body Lotion	44	5500	USA
pr6	Arts & Entertainment	Musical Instruments	20	25000	Germany
pr7	Arts & Entertainment	Orchestra Accessories	15	6700	Canada
pr8	Arts & Entertainment	Crafting Materials	67	4200	India
pr9	Hardware	Power Tool Batteries	74	3600	UK
pr10	Home & Garden	Bath Caddies	66	2000	Germany
pr11	Food, Beverages & Tobacco	Frozen Vegetables	56	5800	USA
pr12	Home & Garden	Power Equipment	87	6300	UK
pr13	Home & Garden	Water hose	42	7465	UK
pr14	Health & Beauty	Aloevera Gel	46	4852	USA
pr15	Health & Beauty	Face pack	52	5673	India
pr16	Food, Beverages & Tobacco	Cereals	49	6480	Canada
pr17	Food, Beverages & Tobacco	Fruit juices	58	4900	Australia
pr18	Sporting Goods	Football	40	5250	USA

Qlik Sense Data Model – Association in Qlik Sense

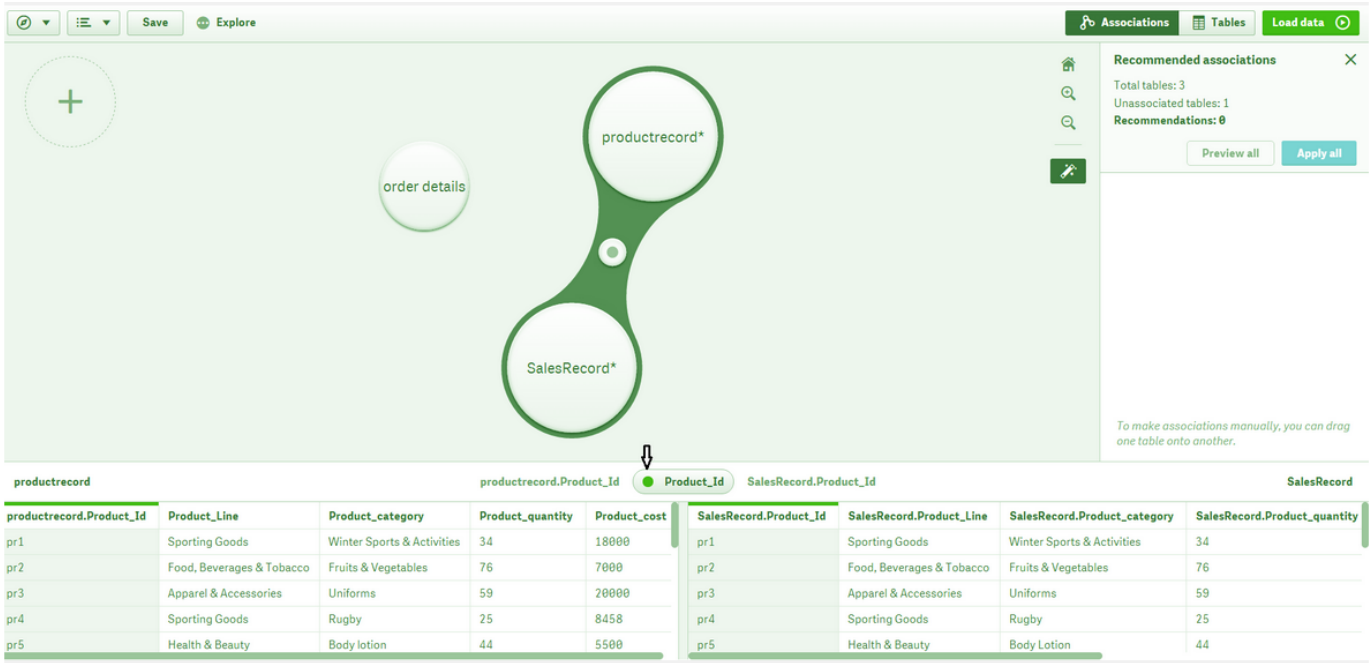
This will load the table and automatically show the tables as bubbles in the Data Manager. Notice the Recommended associations section present at the right side which shows the system recommended associations. In our sample, the recommended association is between the tables *Product Record* and *SalesRecord*, because these tables must have one or two fields in common.

Let's discuss Qlik Sense Filter Pane



Qlik Sense Data Model – Tables as Bubbles

To make the recommended association, click and hold on one of the recommended tables and drag it towards the other. This will create an association between the two tables as soon as you release the mouse button. This newly formed association is shown by a grey bridge made between the bubbles (representing tables). Also, the bar given right beneath the association display pane shows a button at the center having the name of the common field between the two tables (Product_Id) with a green dot (representing a strong recommendation or is a sign of good data structure). On either side of this button are the names of the two associated tables. The section below this displays the contents of each table, with a long green bar on those fields which are common between the two tables.



Qlik Sense Data Model – Association Between Two Table