

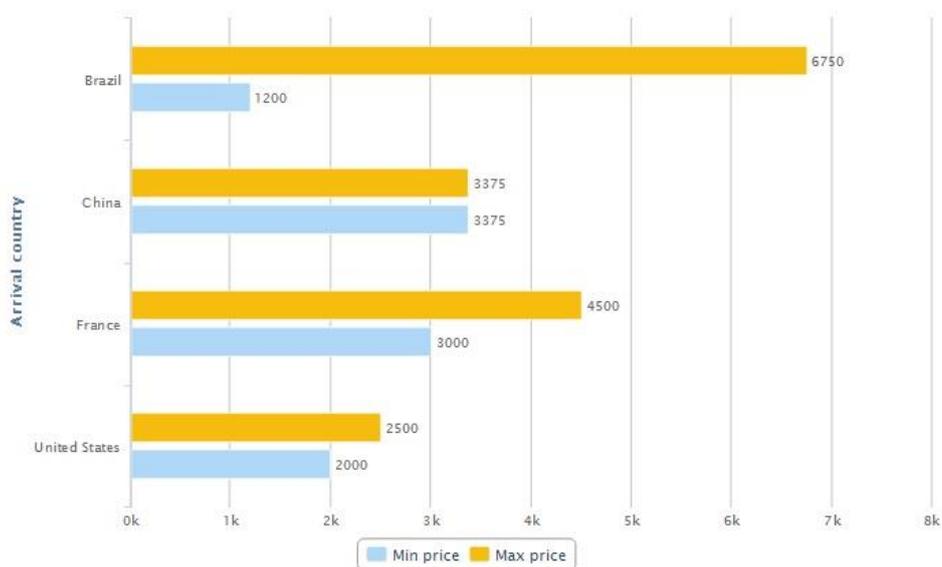
## Query with Chart output (Part I)

We already saw, in previous videos, the creation of queries with Table and Pivot table output.

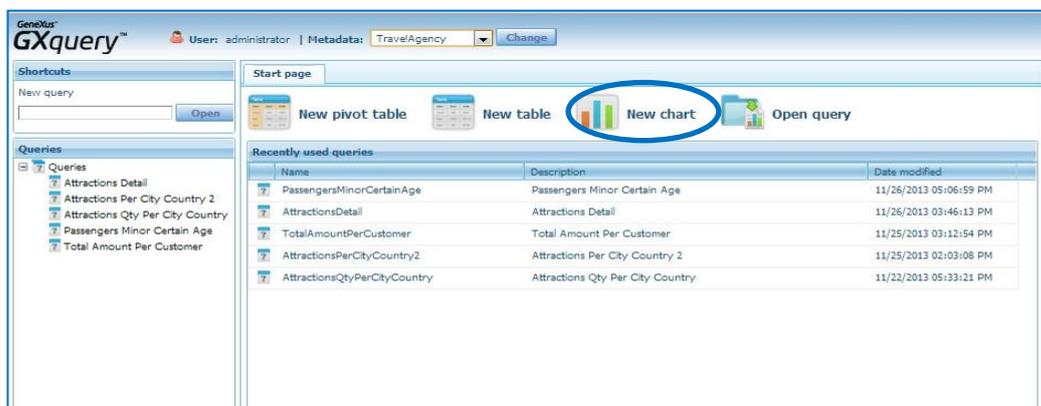
We will now see the creation of a query with Chart output, that is: we will view it as a graph.

As we continue to use the metadata corresponding to the TravelAgency knowledge base, we will now create a graph to show the maximum and minimum values of ticket prices per destination country.

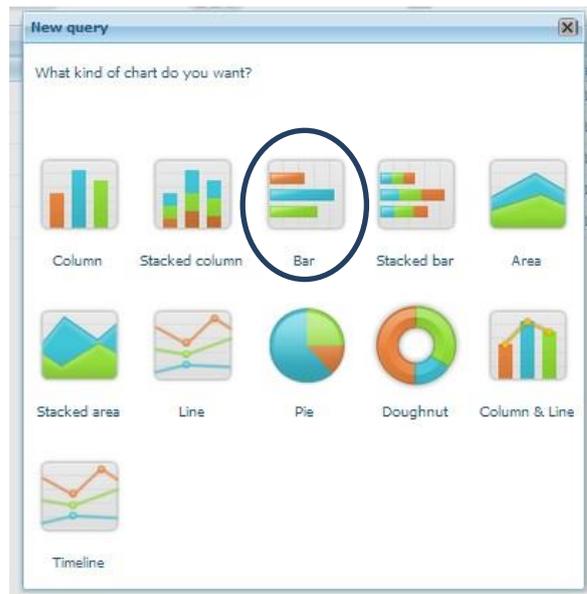
The graph must then show two values for each destination country, namely, one corresponding to the maximum price and the other corresponding to the minimum price.



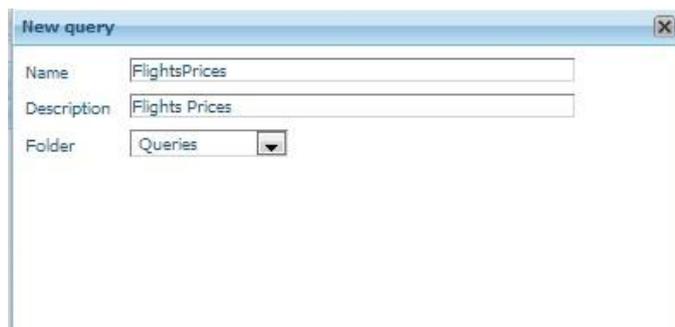
We then enter the GXquery web and select New Chart:



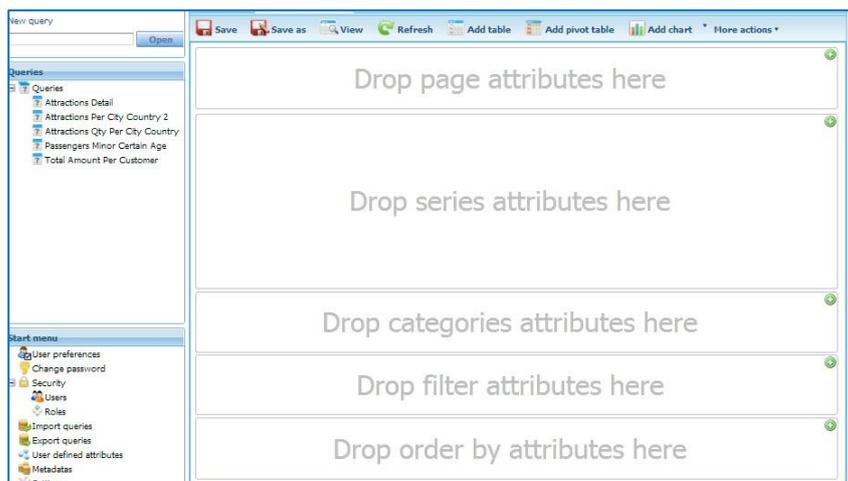
We choose the graph type, such as, for example: bars...



Now we call the query under the name "FlightsPrices":



We can see the graph in its edit mode, with all the areas that comprise it:



In previous videos we have explained what the order, filter and pages areas correspond to.

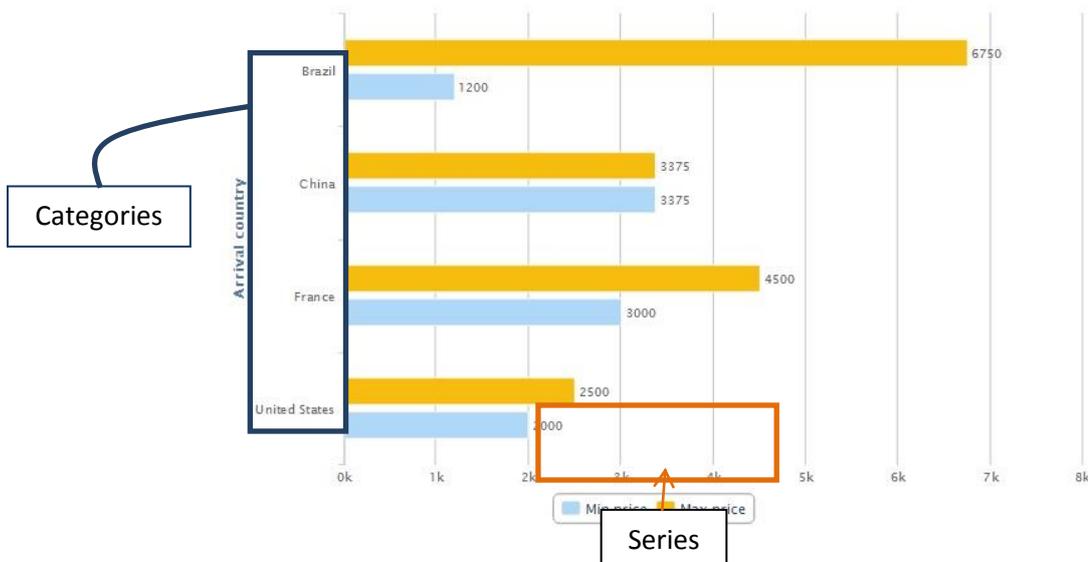
So, we will now go on to explain the Series and Categories areas:

“Series” are **values to be graphed**. In this example, the “Higher Price” is a series and the “Lower Price” is another series to be graphed. Each series will be seen on the graph with a different color.

In the case of a graph of the Pie type, it is only possible to graph **one single series** of values, since this type of graph shows the percentage of each value as compared to a total.

“Categories”, on the other hand, are frequencies or instances for which we want to include values on the graph.

In our example, since we want to view prices per country, then countries are the “Category” and the two prices are the “Series”.



Depending on the graph type, categories may be on the X (horizontal) axis or on the Y (vertical) axis.

For instance, in the case of a bar graph, categories are located along the vertical axis.

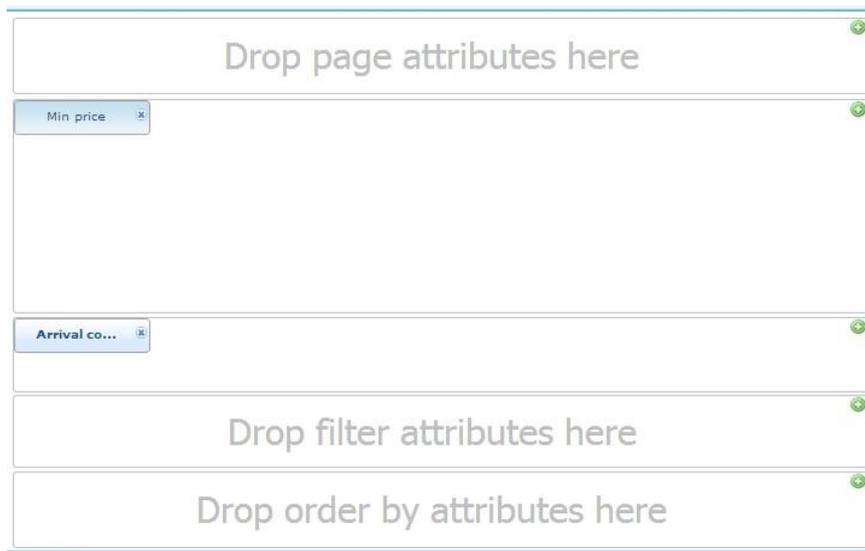


While column graphs have categories on the horizontal axis



Now let’s get back to the edit mode to define the query we try to explain.

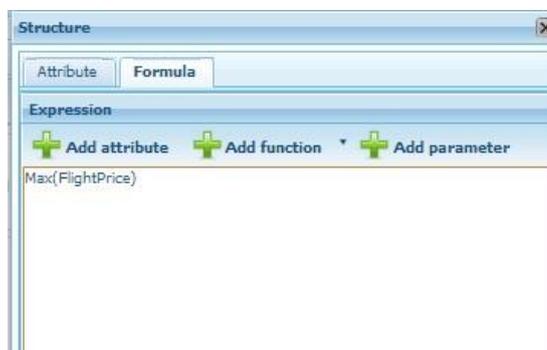
From the attributes panel we drag FlightPrice over the Series area, and FlightArrivalCountryName over the Categories area.



Now we double click on FlightPrice and see that, by default, the Sum operation was applied. But since we want the highest and the lowest values, we modify this calculation to obtain the lesser value. This is done by declaring `Min(FlightPrice)`

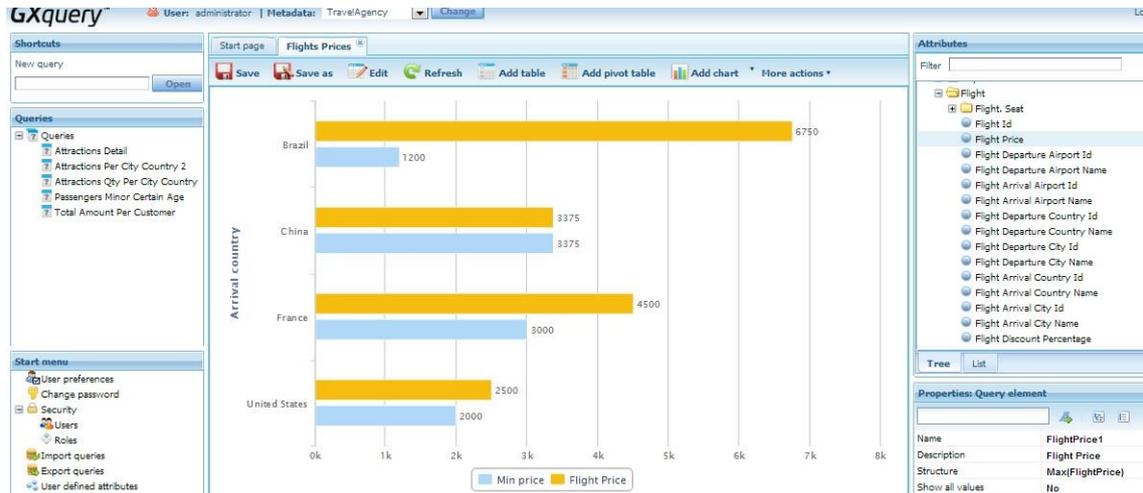


To also obtain the greatest value we drag FlightPrice again over the series area and apply the `Max(FlightPrice)` formula.



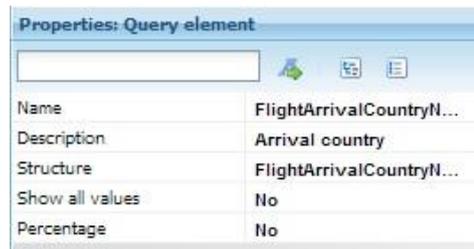
We should recall that, because these attributes are of the numeric type, by default, GXquery applies to them the Sum operation. If we had dragged an attribute of any other data type, then GXquery would have applied Count.

Let's press View to see the results...



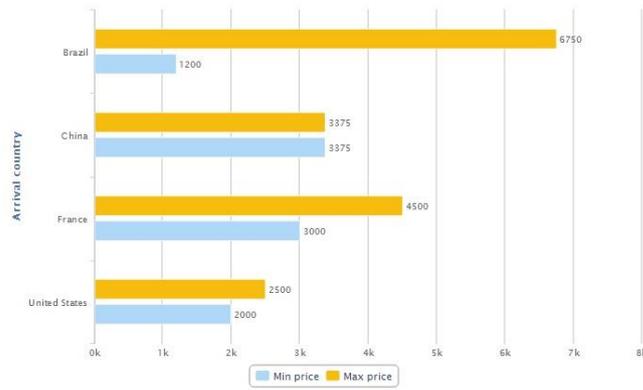
We will now modify the description of the query elements.

We edit the query again, and using the properties panel we modify the description of FlightArrivalCountryName so that it reads: "Arrival country name"



Then we also change the descriptions of the series so that they read "Min price" and "Max price".

We press View again and see the changes we just made:



As we saw in designing Tables y Pivot tables, also in graphs we can filter data in order to inquire only on what we want to analyze.

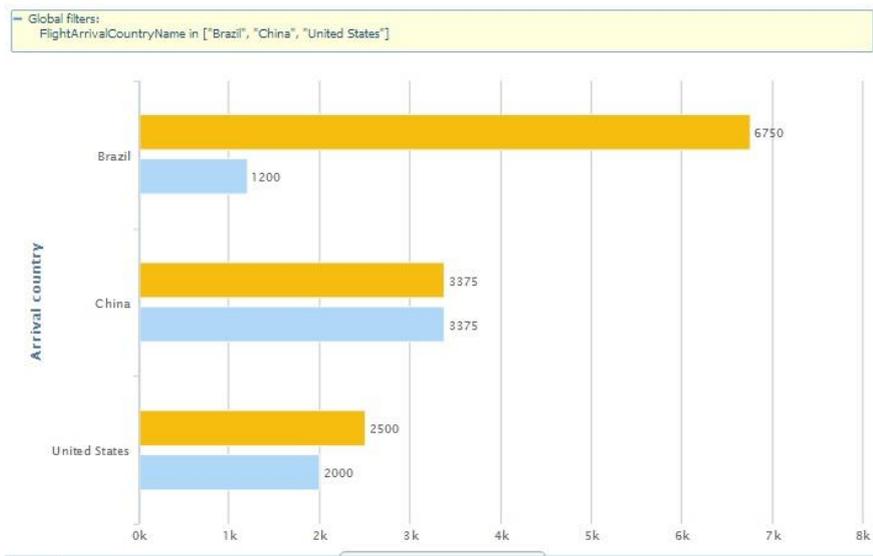
Let's suppose, for example, that we only want to view information on the graph for Brazil, China and the U.S.A. We then return to editing the query and drag FlightArrivalCountryName over the filters area:



We select Brazil, China and the U.S.A., and then press Ok.



We press View again to see the results:



To supplement the query we will add a view as Table.

So we press Add Table:

Global filters:  
FlightArrivalCountryName in ["Brazil", "China", "United States"]

Min price	Flight Price	Arrival country
1200	6750	Brazil
3375	3375	China
2000	2500	United States

And to end, we press Save to save the query.