26 Ranking Data in Queries

This session describes how to query a database to request data such as:

- Top 5 customers based on Customer Spend in this year
- Bottom 10 products based on Quantity Sold in last quarter

Database Ranking calculates the ranking based on a measure and then filters the data to only return the records satisfying the request, therefore the above queries will be processed by the database as:

- Top 5 customers based on Customer Spend in this year
  Only the Top 5 customers are returned based on Customer Spend.
- Bottom 10 products based on Quantity Sold in the last quarter
  Only the Bottom 10 products are returned based on Quantity Sold.

NOTES

1. Database Ranking is only available if your database supports this type of query. If your database does not support Database Ranking then the 'Add a database ranking' button in the Query Panel will be disabled.

2. To demonstrate this functionality the ‘eFashion’ data has been migrated to Oracle and a new universe has been created to work with Oracle instead of Microsoft Access. This universe is called ‘eFashion Oracle’ in our examples. If you do not have ‘eFashion Oracle’ available to you then hopefully you can still follow the examples shown to get an understanding of ‘Database Ranking’.

3. After selecting an object and then clicking on the ‘Add a database ranking’ button adds the Database Ranking Filter into the Query Filters pane:

   ![Database Ranking Filter](image)

   For Reference, Web Intelligence uses the SQL-99 Rank function in ranking SQL.

   NOTE

   For ‘eFashion Oracle’ universe, further details and instructions can be found at [www.webiworx.com](http://www.webiworx.com). Look for information on ‘SAP BusinessObjects Web Intelligence Training Course’ on the 'Downloads' page.
26.1 Parameters for Database Ranking

The Database Ranking Filter has a number of parameters as shown below:

- **Ranking Order.** You can rank based on a value (e.g. Top or Bottom 10 based on [Quantity sold]).
  
- **Ranking Dimension.** e.g. if the dimension is [State] and the ranking is Top 10 then the Ranking Filter returns the top 10 states.
  
- **Number of records to return,** for example the Top 10 records when Ranking Order is **Top** or **Bottom.**
  
- **Based on (a Measure) by which the Ranking Dimension is ranked.**
  
- **Where condition (optional)** is used to specify additional restriction(s) on the values returned in the database ranking.
  
- **Percentage when Ranking Order is % Top or % Bottom.** In this case the number of records will vary as it will be based on the records that contribute to the percentage you specify.

For example, a ranking for [State] with a condition of [Christmas period] restricts the ranking to use data available for the seasonal sales around Christmas.

```
Top 3 [Store name] Based on [Quantity sold] Where [Year] = 2005
```

then

Web Intelligence is requesting the database to return the Top 3 stores in each state for 2005.
26.2 Using Database Ranking Filter in Queries

Let us take the example we used in Sub-Queries and adapt it to use database ranking instead.

In the Sub-Query we demonstrated how to:

Show data for all years for the States that have sold less than 6000 (in quantity) in this year, i.e. show data for all years for the states Massachusetts, Colorado and Florida.

We specified a finite limit (6000), so in the future we could run this query to find all states that have sold less than 6000 (say in January of next year) or all states have sold less than 6000 (say in September of next year). Therefore, in January we could get all states being reported and in September we would have no data at all!

It would be better if we had a dynamic query that returned the Bottom 3 states based on the [Quantity sold] (irrespective of the actual number).

In the Sub-Query example, we first ran a query for [This year] that was sorted descending on [Quantity sold].

From this we were able to see the 3 states that had sold less than 6000 in this year.

We then modified the query to show all years for the states that have sold less than 6000 (in quantity) in this year, i.e. show data for all years for the states Massachusetts, Colorado and Florida.

To do this we edited our query to include a Sub-Query as shown below.
We want to keep the same result objects as the sub-query example but we will also use the Database Ranking Filter instead of the Sub-Query Filter.

**NOTE** – Use the ‘eFashion Oracle’ universe for this example.

1. Add the following objects into the ‘Result Objects’ pane, then click on [State] object and then click on ‘Add a database ranking’ button.

Web Intelligence will add the database ranking filter into the Query Filters pane.

2. For our example we want to specify Bottom 3.

3. Drag [Quantity sold] and drop into the area labelled ‘Drop a measure here’ in the database ranking filter.

The Database Ranking Filter is now requesting Bottom 3 [State] Based on [Quantity sold].
4. For our example we also want to add in a filter to the database ranking filter itself, so drag and drop [This year] into the database ranking filter.

5. Running the query shows data for all years for the Bottom 3 [State] in [This year] Based on [Quantity sold].

Our results are the same as the Sub-Query example (shown opposite), except we now have a query that is dynamic in that it will always show data for the Bottom 3 states in this year (irrespective of the values for [Quantity sold]).