For each cell in a report where you want data to be displayed, you can create a query, using the Query Definition Dialog.

This is a familiar dialog, but let's look at some of the features that we do not always use.
Workspace

The Query Definition Dialog consists of a Data Type field and one to three tabs, depending upon the Data Type chosen.

Data Type

The Data Type options are:

- Cell
- Field References
- 4 Query types
  - Summary Link
  - Reference Link
  - Summary Report
  - Detail Report
- Chart
- Query Templates
- Task

In a later lesson we will examine each of these options in depth. For this lesson, we will focus on the dialog environment and its options.

The Data Type you chose is important. It controls the definition options the user sees. We will look at the dialog using the Detail Report Data Type.

Definition Tab

By default, the Query Definition Dialog opens to the Definition Tab.

The Definition Tab has three panes:

- Filter Pane
- Selection List Pane
- Output Pane
**FILTER PANE**

The Filter Pane stretches across the upper portion of the Definition Tab.

The Filter items to be specified depend upon the Data Type chosen for the query; however, the first three items, Product, Business Unit, and Table are mandatory for all query data types.

To populate a Filter data item:

- Click the item row to select that row
- Enter the Filter From value in the Filter From field above the Filter grid
- Double-click in the item row to open the database selection list, or
  - Right-click on the data item
• Select Lookup from the dropdown list

• Select the Filter From value from the list of items

There are two icons in the gray panel at the right of the dialog:

- **Clear** – removes a selected data item from the Filter From field, while displaying available selection choices

- **Copy to Windows Clipboard** – Copies all information about the active field to the Clipboard

Depending upon the Data Type you select, more filter items might be automatically added to the Filter Pane:
For all query types other than Reference Link, multiple filter items can be chosen.

To select multiple filter item values:

- Hold down Shift while selecting multiple contiguous items, or
- Hold down Control while selecting multiple non-contiguous items

**Filter Item Values**

In addition to selecting an item from a table, filter item values can also be:

Cell references
• Position the definition dialog so that you can see the report worksheet
• Click in the cell from which the value will be taken in the extraction.
  o The Filter From Filter To field backgrounds will be yellow
• Cell References are Absolute, but can be made Relative
  o Absolute References $A$1 (column and row are locked)
  o Relative References
    ▪ $A1$ column is locked, row is not
    ▪ $A$1 row is locked, column is not
  o Comparison Operators and Wildcards can be used, but we will not cover them in this lesson.
• Prompts
  o Click the filter item
  o Click Field References icon to the left of the Filter From/Filter To fields $F$1
  o Expand the Prompt node and select the prompt to use
We will study how to create prompts in a later lesson.

**Selection List Pane**

The Selection List pane is in the lower left side of the Definition Tab. Here you will select the data items to be output into your report.
The items in the Selection List include database tables. To select data items from a table, click the + to the left of the table name to expand the table.

To select an item from the Selection List:
- Double-click on the data item name, or
- Click the data item name and drag it into the Output Pane, or
- Right-click on the data item name
  - Select Output
To add a data item to the Filter Pane:

- Select the data item in the Selection List
- Drag it into the Filter Pane
You can add the same data item multiple times to the Filter Pane, to allow for filtering by non-contiguous ranges.

**Selection List Dropdown menu**

If you right-click on an item in the Selection List, the dropdown menu in the above screenshot will be displayed.

If you choose:

- **Filter** Selected data item becomes an additional filter
- **Output** Data item is added to the Output pane
- **Find** Search for a data item name in the Selection List
- **Find Next** Finds the next occurrence of the data item
- **Collapse All** Collapses all expanded database tables in the Selection List
- **Expand and Show Selected Items** Expands Selection List and highlights selected Data output Items in green.

Branches that have not had items selected will remain unexpanded.

**OUTPUT PANNE**

The Output Pane is located on the lower right side of the Definition Tab.

Data items chosen for inclusion in the query will be gathered in the Output Pane.

To add an item to the Output pane:

- Double-click on the item name in the Selection List, or
- Drag the item from the Selection List into the Output Pane, or
- Right-click on the item in the Selection List and select Output
To remove an item from the Output Pane:

- Drag it to the Selection List, or
- Right-click on an item and select Delete

**Right-Click Output Options**

**Sorting**

In Detail Report and Summary Report queries, you can specify ascending or descending sort orders on output items.

- Right-click an output item and select Sorting
  - The extraction displays items in successive order, for example, 1,2,3.
Order in which items appear in the Sorting window determines sort order:
- A sort number of 1 sorts that data item first,
- a sort number of 2 sorts the data item second, etc.

Items can be reordered using the move buttons or by dragging them within the window.

- The Move to Top button promotes data output items to the very top of the list
- The Move to Down buttons promote or demote data output items one at a time.

The Sort sequence does not affect the column output sequence.

The Top option limits the number of sorted records that are returned.

The results can be limited by a fixed number of rows or as a percentage of total records.
To apply ascending and descending sort orders to output items in a Summary or Detail Report:

- Click Sorting, or right-click in the Output pane and select Sorting
- The Sorting dialog has two parts:
  - Sorting
  - Selection List
- Double-click items in the Selection List window or drag them to the Sorting window.
  - Items added to the Sorting window have sequential sort numbers in the order in which they were added to the Sorting window.
  - An ascending symbol is displayed beside each item
- Double-click items in the Selection List window to modify sort orders between ascending and descending
- Click Top option to limit the number of sorted records returned
- Select the required limit option, either:
  - Rows
  - Percentage
- Enter the limit number for rows, or as a percentage of total records
  - Use either the toggle buttons or enter the figure directly
- Click OK
  - Sort order numbers appear in the Output window

**Debit/Credit Marker in Selection List**

You can use the Debit/Credit Marker data item to specify whether a query will extract debits, credits, or both.

To use the Debit/Credit Marker as a filter, drag it into the Filter Pane, then select the marker you want to extract.

Options:

- Both – extracts debits and credits, credits only, debits only, suppress credits, suppress debits, suppress credits by account or suppress debits by account – default
- Debit – extracts only transactions having a Debit marker
- Credit – extracts only transactions having a Credit marker
- Suppress Credits – extracts transactions with both debit and credit markers, then evaluates the result of the extraction.
  - If the result is a debit, it displays the result of the extraction
  - If the result is a credit, it displays 0 (zero)
    - i.e., a Balance Sheet report should only include the sum of all bank accounts in the asset section if the result is a debit
• Suppress Debits – extracts transactions with both debit and credit markers and then evaluates the result of the extraction
  o If the result is a credit, it prints the result of the extraction
  o If the result is a debit, it prints the 0 (zero)
    i.e., a Balance Sheet report should only include the sum of all bank accounts in the liability section if the result is a credit
• Suppress Credits by Account – extracts accounts with a debit balance and ignores accounts with a credit balance
  i.e., a range of 5 accounts might have 2 accounts with a debit balance and 3 accounts with a credit balance
  the result would be the sum of the 2 accounts with the debit balance
• Suppress Debits by Account – extracts accounts with a credit balance and ignores accounts that have a debit balance.
  i.e., a range of 5 accounts might have 2 accounts with a debit balance and 3 accounts with a credit balance. The result would be the sum of 3 accounts with the credit balance
  Suppress Credits by Account and Suppress Debits by Account are not available in the definition for of summary reports and detail reports.
  If you drill down at the summary level on a summary or detail report, the options are available in the drill down definition dialog

Period Selection

• Click the Current Period Override assist button to filter using a date or period not current for the database.
You can set the Current Period Override value by referencing a worksheet cell.

- Type the cell address into the Current Period Override box.
- Changing the cell value updates the query’s Period filter.

Use the Current Period Override to:

- Apply a user defined period or date
- Add a user defined period or date. Current Period/Date Overrides are stored on the server and are shared
- Delete a user defined period or date

Current Period Override function can define a filter using a period that is not the current period of the database. I.e., this is useful if the period has recently changed, but you need to set up a definition based on or relative to a current period of the month before.

Use the Current Period Override function to filter using Due Dates. I.e., you might want to display the value of a debtor’s account, one week from today. Use the Current Date Override function to modify the date to seven days time.

You can specify a global Period or Date that applies to all query definitions in a worksheet. Use Prompt Period/Date Override.
Apply a User Defined Period or Date

- Click the Current Date Override assist button on the Period Selection or Data Filters dialog
- Click the code of the existing user defined period or date, and
- Click OK
- Click OK to close the Period Selection or Date Filters dialog box
- Perform the extraction to display the updated information.

If you apply a code that is defined for a period and date, only the setting you choose to override, i.e., period or date, is overridden.

Adding a User Defined Period or Date

- Click the Current Date Override assist button to open the Current Period/Date dialog box
- Enter a code in the Code field with which to call the user defined setting
- Click the Current Period Override or the Current Date Override check boxes to activate the relevant fields
- Enter the period or date. Your selections appear to the right of the fields.
- Click Save. The code, period, and date appear in the window. The user id and the date the code was last updated, are displayed in the Details pane.
If adding more than one code, click ADD to clear all fields.
- Click OK to return to the Current Period or Current Date Override dialog box. If you are using either the Current Period Override, or Current Date Override dialog box to add a code, the code and period appear in the window.

Delete User Defined Periods and Dates

Current Period and Current Date Overrides are stored on the server and shared. If the User Defined Period or Date is deleted, it affects any reports using it.

Deleted Current Periods and Dates display in red in the Period Selection or Date Filters dialog box and the Current Period or Date in the database is restored.

To delete a user defined period or date:
- Select the user defined code to delete on the Current Period/Date dialog box
- Click Delete.
- Click Yes to confirm
  - Code and settings are deleted.

Extraction Types

Extraction type of an output item can be changed

So instead of calculating the sum of a number of transactions, calculate the average of the transactions.

Each extraction type has a symbol which is displayed next to the output item in the Output pane.

Available extraction types depend on the type of query and the type of data item to be output by the query.

Changing Extraction Type:
- Open the query
- Click the output item to change the extraction type and click Extraction Type
- Select the extraction type to use
- Select Reverse Sign, if required
- Click OK
• Reverse sign – changes the display of an output item from positive to negative or vice versa
• Scaling Factor – performs a simple arithmetical operation on the extracted value. No rounding is performed. Scaling factor is performed on the final summary result rather than the individual transactions.
• Segment – extracts a subsection of an Output item
  o Only for alphanumeric field
• Offset – the starting point of the segment – previous characters are skipped
• Length – the length of the segment to output
• Example
  o An item has a segment setting of Offset 2 and length 3
  o If the item value is ID235ZA, the string 235 is the output
  o The segment starts at the 3rd characters and is 3 characters long

Relative Dates:

To specify relative dates, use the Days, Weeks, Months, and Year selectors

Example:

DATE d-30 indicates today’s date minus 30 days
DATE d30 indicates today’s plus 30 days
DATE m-2 indicates the current date minus two months
DATE m-2 y1 indicates the current date minus two months, plus one year

➤ Options
➤ Report Style