ALASKA DATA ENTERPRISE REPORTING (ALDER) 2.0

ALDER 101

FOR INTERACTIVE USERS

Presented by: Department of Administration

Division of Finance

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CHAPTER 1: Key Points of Emphasis

Introduction

ALDER is the enterprise reporting system for the State of Alaska.

Every night (except for some weekends and holidays), ALDER imports data from IRIS. Report Developers and Agency Advocates create reports from that data on behalf of department staff (you). Report Developers and Agency Advocates are available to department staff for questions.

This is the second student guide for users to become more familiar with intermediate functionality in ALDER. It is recommended that all ALDER users of IRIS Financial data review this guide. The guide assumes you are already familiar with the ALDER 100 Student Guide; material covered in that guide will not be re-emphasized here.

How to Use This Guide

This guide contains multiple chapters, and each chapter contains multiple sections. Some of the text in the guide has been hyperlinked to websites or other parts of the guide. **Report names** are highlighted in bold text. *Folder names* are italicized. Categories are underlined. “Button and field text” that displays on the screen is enquoted.

For returning users or new users that have already completed the guide, you can use CTRL+F to search for key terminology related to the section describing the tasks you need to learn more about. Check the hyperlinked text if you need more information.

For first-time ALDER users that have not yet completed the guide, start at the beginning and read through each chapter sequentially, without skipping chapters or sections, and ignoring hyperlinks. The hyperlinks will help to dig deeper into topics but should not be used on the first pass through the guide. As you read, follow along with the examples that are presented by keeping ALDER open in your web browser. Use the screenshots provided throughout the guide to identify whether you are correctly following the example.

At the end of each chapter, complete the review questions and practice exercises. Answers to the review questions are provided in the Appendix if you want to make sure that you answered correctly. Practice exercises are guided with numbered steps and screenshots, building off each other from one chapter to another.

After the last chapter, attempt the Final Exam. The Final Exam is structured similarly to practice exercises, with numbered steps and screenshots, but is less detailed than the practice exercises. When you complete the Final Exam, congratulations! You have mastered the material in this guide.

Error message prompts

You may see error message prompts as you use the application; if this happens, please notify your Agency Advocate (see this link to find out who your Agency Advocate is). When you do so, it is helpful to include the error message number and text, a screenshot of the error message, and an explanation of what you were doing when the error occurred.

These errors don’t mean that you did anything wrong. The application needs maintenance over time and ALDER staff may not have identified the cause of the error or even know it exists yet. When you report errors, your Agency Advocate will notify the ALDER support team so that the error can be resolved.

Reporting errors that you see helps to improve the system over time for all ALDER users.

System Timeouts

You will automatically be logged out of the system after 30 minutes of inactivity. You can prevent this by interacting with the site in a variety of ways. Doing any of the following will reset the clock on your automatic logout:

- Closing or opening reports
- Refreshing data
- Saving a report
- Creating or editing a folder

If you do get logged out by the system for inactivity, you can simply log in again. If you forget to save your work before the system forces a logout, you can restore a recovered copy of the document (See ALDER 100 Student Guide for more information).

System Security

User IDs and Passwords

ALDER logins are tied to your state LDAP. These are the same user IDs and passwords that you use for the State of Alaska e-mail system. Do NOT share your user ID or password with anyone. When you update your SOA password, your ALDER password is updated at the same time.

To update your password, use this link: https://oit.alaska.gov/home/employee-dashboard/passwords/.

Role-Based Security

Your security access is based on the level necessary to perform your job duties; ALDER will not display data that exceeds your security level on any report. This security feature only applies on ALDER (Web Intelligence) reports: if a report is downloaded or sent as an Excel or CSV file all data will be displayed regardless of security level.

You are responsible for the security and privacy of data accessed in ALDER (per AS 39.52.140).

Recommended Browsers

To ensure full functionality, the following browsers are recommended for accessing ALDER:

- Chrome (Recommended)
- Mozilla Firefox

These browsers may work but are prone to errors more so than other browsers and are not recommended:

- Microsoft Edge
- Opera

Secure Website

ALDER is protected by the state's firewall and cannot be accessed from outside the state network. If attempting to connect from home Wi-Fi, you will need to use a VPN or RDP to connect to ALDER.

Multiple Ways to Perform Functions

There are multiple ways to perform the same function in ALDER. Some of these include clicking, using buttons and dropdowns, and right clicking. This student guide attempts to show multiple ways to perform each function.

CHAPTER 2: Workspace Panel Toolbar within a Report

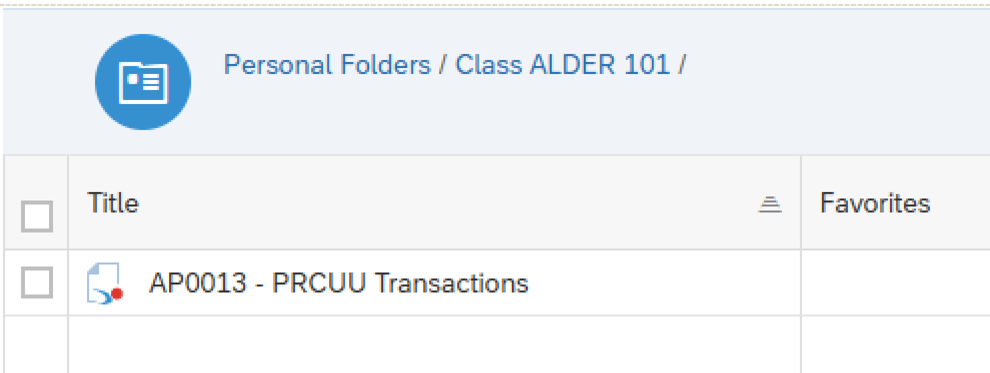
Goals and Objectives

After you complete this chapter, you will be able to:

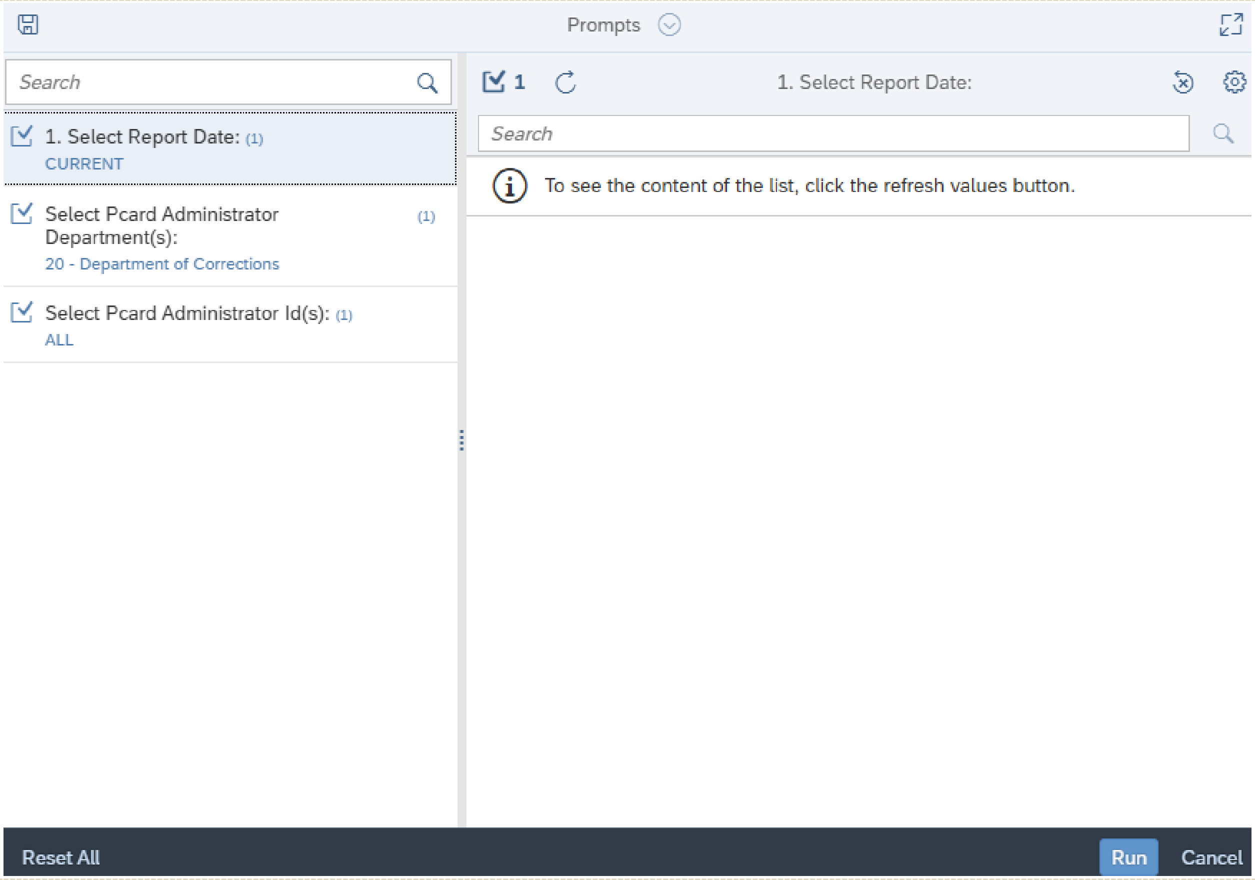
- Define and use buttons
- Change to Design View
- Change to Structure View
- Insert rows and columns
- Delete rows and columns
- Work with an outline

Getting Started

Create a folder in your *Personal Folders* called *Class ALDER 101*. We'll use this folder throughout the guide to store reports. Find the **AP0013 – PRCUU Transactions** report in the *Enterprise* folder and copy it to your *Class ALDER 101* folder.



Open your copy of **AP0013 – PRCUU Transactions**. Refresh with the following prompts:



Button Definitions

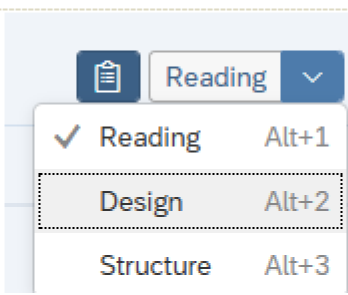
The definitions of the buttons available in the workspace toolbar are included in the table below. Refer to the ALDER 100 Student Guide for more information about buttons that are not covered in this guide.

Button / Dropdown List	Options	Function in ALDER
	Save	Saves your report with the same name and location that you opened it.
	Save As	Saves your report with a different name or location
	Undo/Redo	If there have been edits made in the report, you can undo them, and then redo them with these buttons. These buttons do the same thing as "Control+Z" and "Control+Y" on your keyboard.
	Export	Export a single report tab or the entire document in a variety of formats.
	Print	Print the report to a PDF
	Send to BI Inbox	Sends the report to your BI Inbox, accessible from the home screen.
	Help	Redirects you to SAP Help Portal.
	About	Displays version information regarding Web Intelligence

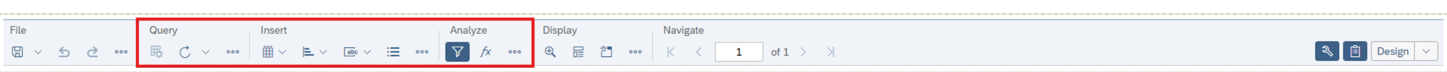
	Refresh	Brings up a prompt box into which specific data elements may be requested and refreshes report data.
	Filter	Shows/hides the filter panel within the report's toolbar.
	Enable Navigation	Enables drill filtering, if it is enabled by the Universe Designer and Report Developer.
	Show Changes	If "Track" is enabled, this will show/hide the changes that have been tracked.
	Track	Activate and deactivate data tracking mode. Data tracking mode highlights differences in report data from one refresh to another refresh.
	Freeze Headers	This will freeze the header row of the table of data, so as you scroll down the page the headers will always show at the top of the column.
	Enable Folding Breaks and Sections	This allows you to show or hide report elements when they contain multiple sections or tables.
	Presentation Mode	Puts the report in full screen view, hiding additional panels and toolbars.
Reading	Reading	The default view of the report. Allows viewing, refreshing, exporting, and interacting with the report.
	Design	For interactive viewers and report developers. Design mode allows you to insert charts and tables, adjust the objects appearing within tables and charts, create variables, and edit the report query.
	Structure	For interactive viewers and report developers. Structure mode allows moving report elements around, creating sections and breaks, etc.

Design View

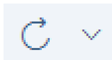
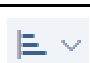
To see the design area, select Design on the Workspace Toolbar.

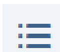
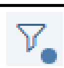


Notice the additional buttons that appear in the toolbar. Some of these buttons can only be used by report developers.



The following table goes over the additional buttons that are not available to viewers. Note that some of these buttons can only be used by report developers.

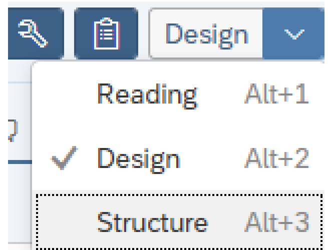
Button / Dropdown List	Options	Function in ALDER
	Query Editor	Allows you to change the business objects available in the report, enable query stripping, and other options. This is only available to report developers.
	Refresh All	Allows you to refresh the report using prompts. This is the same as clicking the refresh button while in reading mode.
	Advanced Refresh	When the report has been created with more than one query, you can choose to refresh only one query at a time instead of all queries at once.
	Change Source	Allows you to change the universe that is used to generate the report. This option is only available to report developers.
	Purge Data	Lets you remove data that exists in the report while preserving its structure and formatting.
	Vertical	Inserts a table with field names in the header row and data displayed in rows going down. This is how most tables in ALDER are presented.
	Horizontal	Inserts a table with field names in the first column and data displayed in columns going left to right. This is a transposition of how ALDER typically displays data.
	Cross	Inserts a cross-sectional table that has field names in both the header row and the first column of the table. Data displayed in the table is the cross-section of the column field and the row field.
	Form	Inserts a form table that shows data for records clustered together. Forms will copy themselves downward as far as they need to display one form for all the data in the report.
	Comparison	Insert a chart to compare measures by category. For example: a Column or Bar chart.
	Trend	Inserts a chart to examine the trend in a measure across time. For example: a Line or an Area chart.
	Proportion	Insert a chart to compare the proportion of a measure across categories. For example: a Pie or Donut chart.
	Distribution	Insert a chart to examine the statistical distribution of measures. For example: a Tree Map or Box Plot.
	Correlation	Inserts a chart to relate categories. For example: a Scatter or Bubble plot.

	Geographic	Inserts a map with data displayed by location. Geographic charts require you to geocode your own data if the report developer or universe designer have not already done so.
	Indicator	Inserts a Key Performance Indicator. For example: a Tile or a Speedometer.
	Blank Cell	Insert a cell to display text or a formula.
	Comment	If comments exist in the report, this option will display them.
	Document Name	The name of the document. This is typically at the top and the bottom of every ALDER report.
	Last Refresh Date	The date the document was last refreshed. This is typically in the top-right of every document.
	Drill Filter	If a drill filter has been used, this displays the value being drilled on.
	Query Summary	A summary of information related to the query used to generate the report including the number of rows retrieved and the objects included.
	Prompt	Displays the value which was previously selected for a prompt.
	Report Filter Summary	A summary of all input controls and drill filters in the report.
	Page Number	The current page number.
	Page Number / Total Pages	The current page number and the total number of pages in the report. This is typically displayed at the bottom of every ALDER report.
	Total Number of Pages	The total number of pages in the report.
	Insert Section	Inserts sections into the report which break data down into clumps by a particular field.
	Shared Element	Shared elements are not currently supported.
	Custom Element	Custom elements are not currently supported.
	Show Filter Bar	Shows or hides the filter bar. This works the same way it does in reading mode.
	Show Formula Bar	Shows or hides the formula bar.
	Drill	Enables or disables drill filtering
	Show Changes	If tracking data changes, this will show or hide the changed data. This works the same way it does in

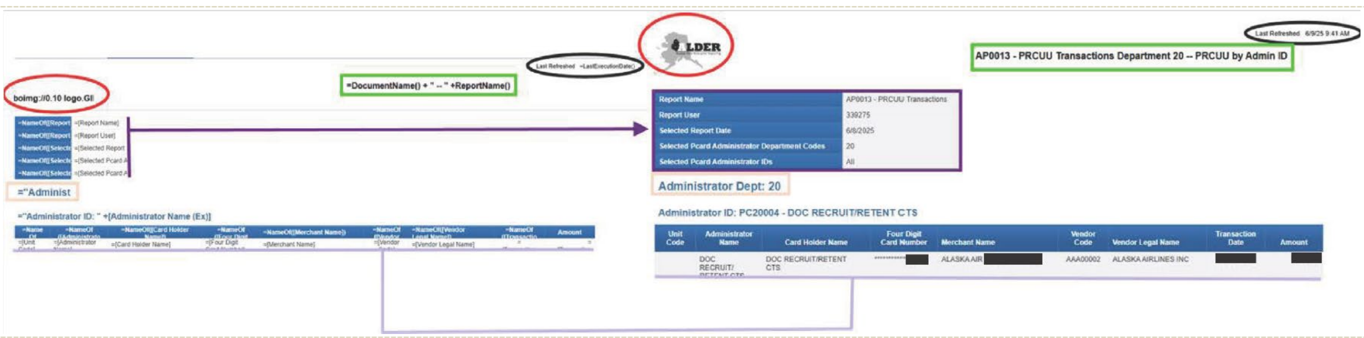
		Reading Mode.
	Track Data Changes	Brings up the “Track Data Changes” popup wizard. This works the same way it does in Reading Mode.
	Formatting Rules	Allows you to set Conditional Formatting rules.

Structure View

Click on the down arrow next to Design and select Structure.



Notice that the toolbar looks the same as it does in Design Mode. However, the data in the report is removed and replaced with formulas. There is only one row in the table where data used to be, and only one section of data, even though there were multiple rows in multiple sections when the report was first refreshed.



Inserting New Rows and Columns

ALDER automatically adds rows in tables to encompass all the data in the report that is available for the selected business objects. But when new fields are needed, you can add columns and rows to the tables in your reports. Typically, you’ll only insert rows into a “horizontal” table, which is a table that has a header column containing field names. Conversely, you’ll add columns to “vertical” tables, which are tables with a header row defining the fields.

Let’s add an additional row to the Heading table. Currently, the fields in the table are

- Report Name
- Report User
- Selected Report Date
- Selected PCard Administrator Department Codes
- Selected PCard Administrator IDs

Report Name	AP0013 - PRCUU Transactions
Report User	339275
Selected Report Date	6/8/2025
Selected Pcard Administrator Department Codes	20
Selected Pcard Administrator IDs	All

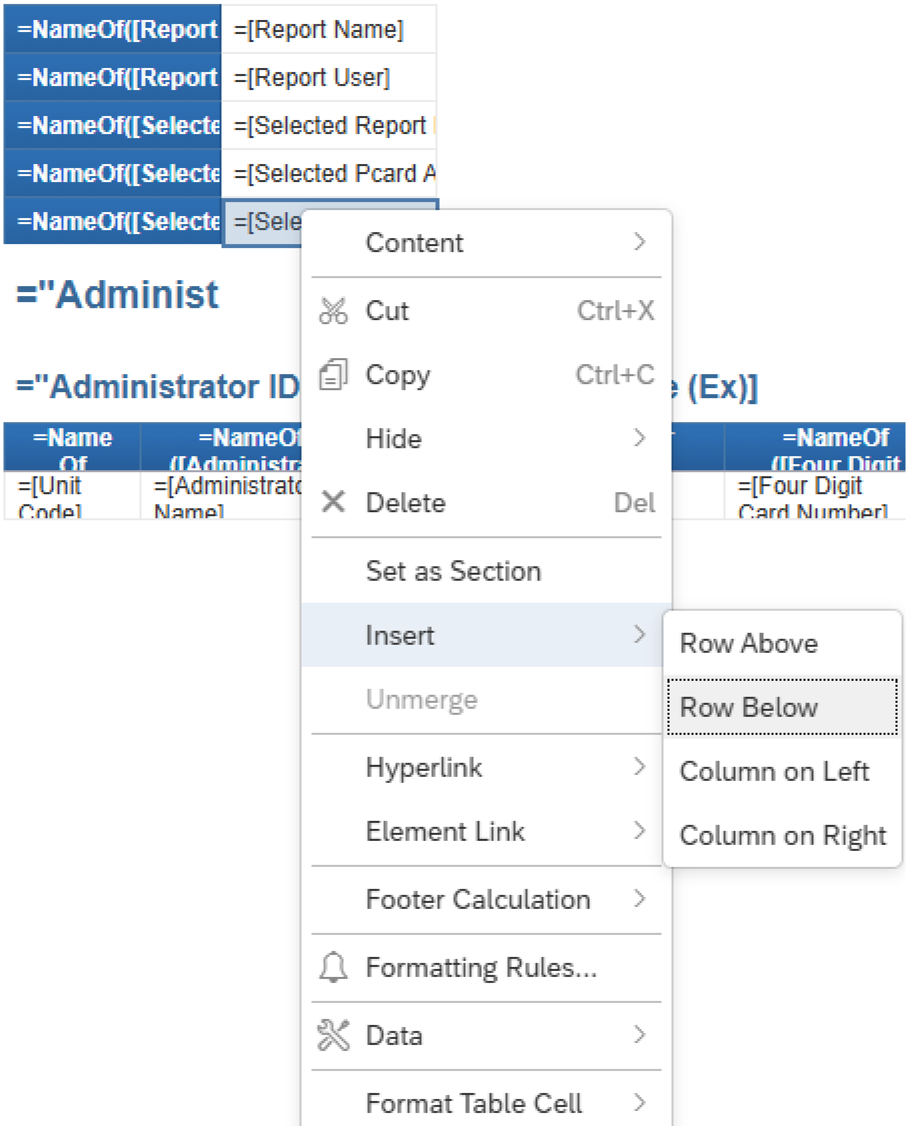
We'll add a new row to this table with the "Document Owner" property. In Structure Mode, click the Heading table to highlight it with a blue border.

=NameOf([Report	=[Report Name]
=NameOf([Report	=[Report User]
=NameOf([Selecte	=[Selected Report
=NameOf([Selecte	=[Selected Pcard A
=NameOf([Selecte	=[Selected Pcard A

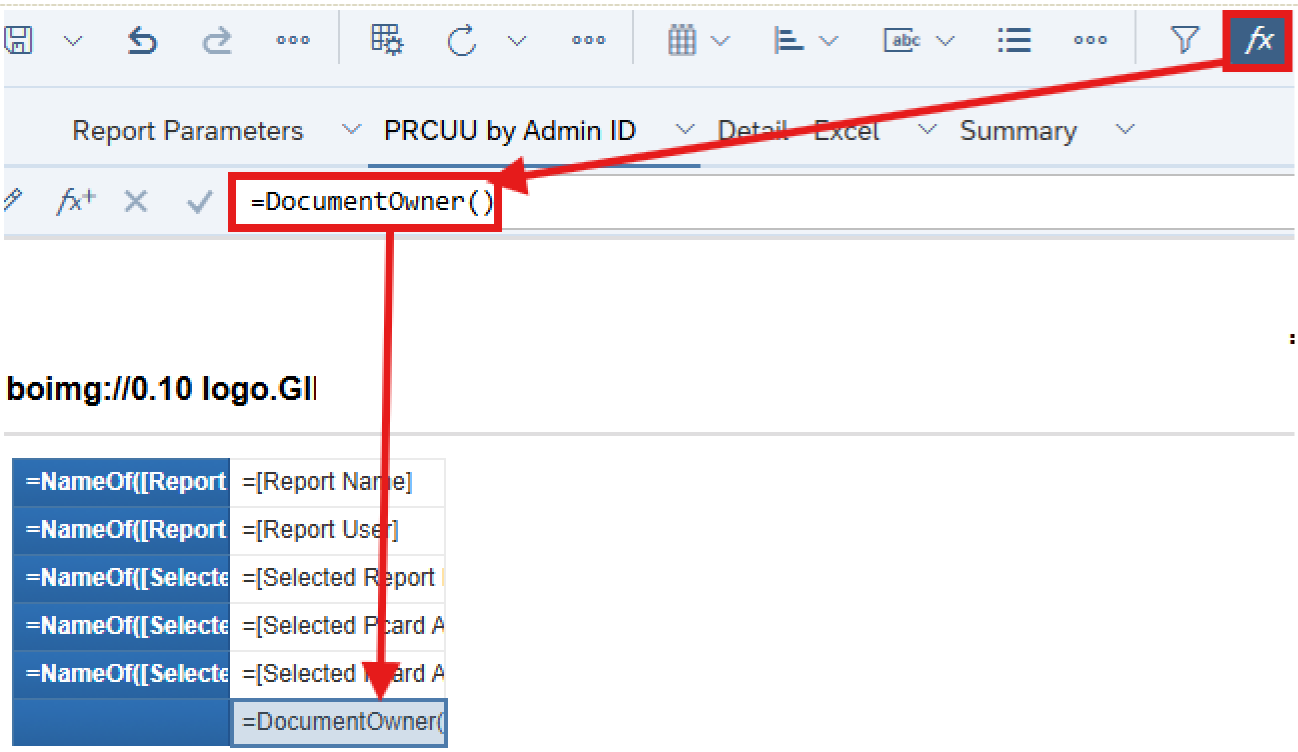
Then click the last cell to select just that cell.

=NameOf([Report	=[Report Name]
=NameOf([Report	=[Report User]
=NameOf([Selecte	=[Selected Report
=NameOf([Selecte	=[Selected Pcard A
=NameOf([Selecte	=[Selected Pcard A

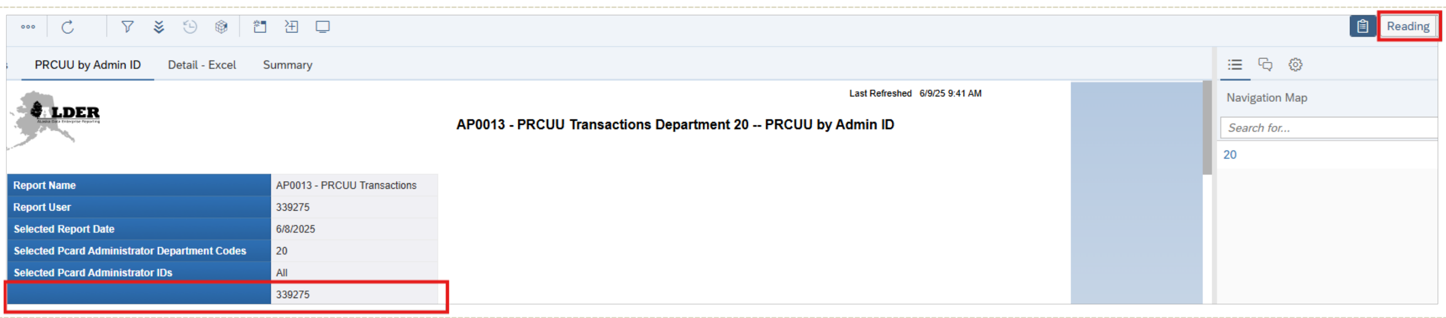
Now right-click the cell you have selected to open the Options menu. In the Options menu, choose Insert-> Row Below



A blank cell will appear. Click on the blank cell in the new row to highlight it and open the formula bar by clicking the *fx* button in the workspace toolbar. Type “=DocumentOwner()” into the toolbar and press enter.

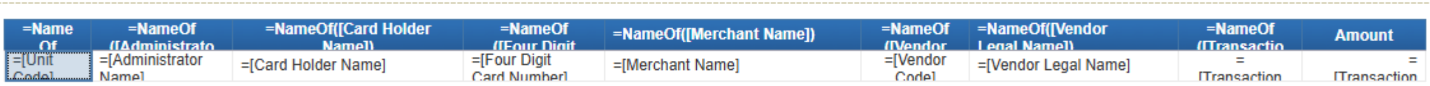


Change back to Reading Mode to observe how the Heading table looks now. Notice that the formula you added will fill in with your user id.

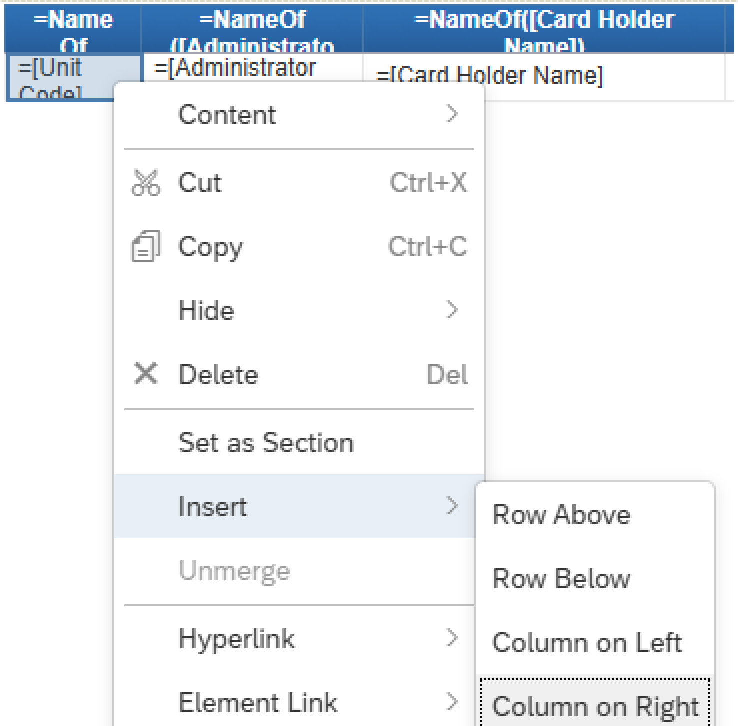


Now we'll add a column to the data in the report. Switch back to Structure Mode, then click on the table of data to highlight it in blue.

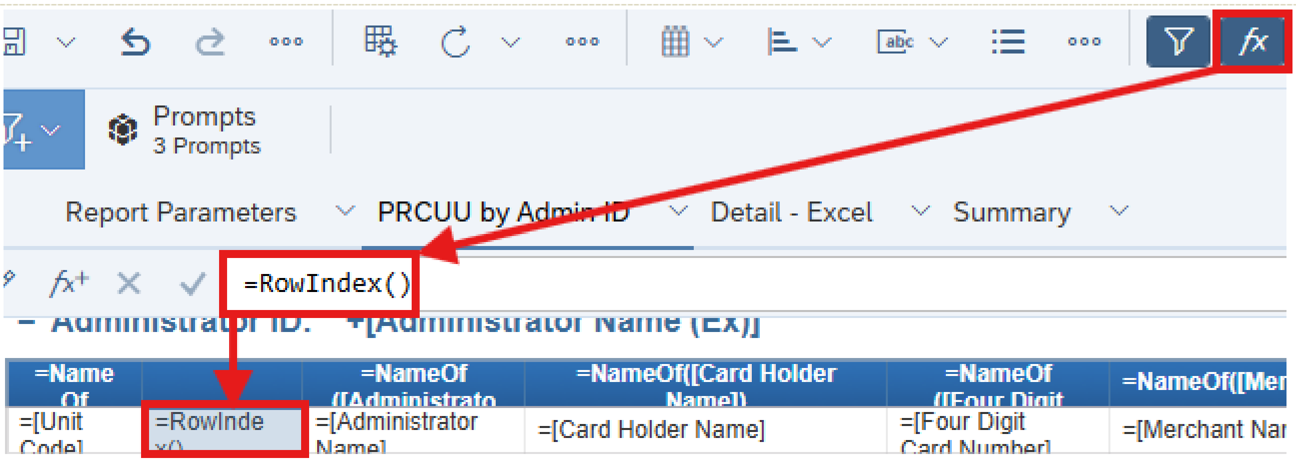
Then click the cell in the first column to select just that cell.



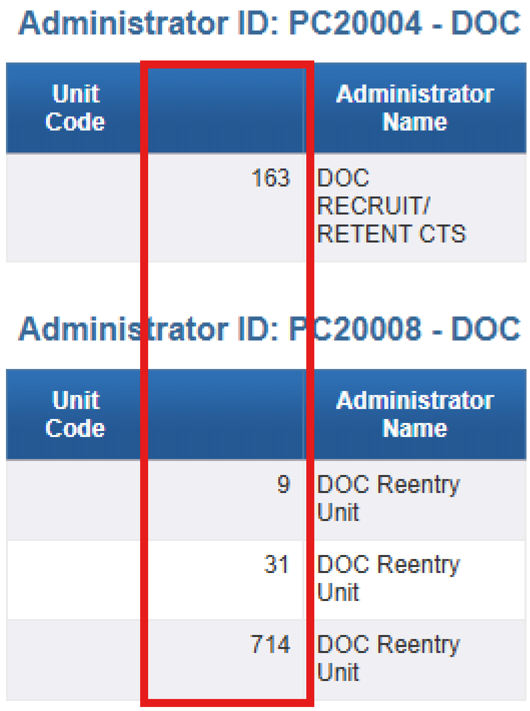
Right-click the cell you highlighted to open the Options menu, then choose Insert-> Column on Right.



A new column will be added to the table, and you can add text or formulas to the column header or column field. Try typing "=RowIndex()" into the formula bar while the new cell is highlighted.



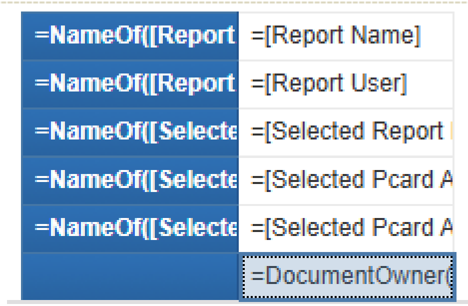
Change back to Reading Mode to see the effect of the new column. Notice that there is an index in the new column you inserted that automatically populates in every row of the table.



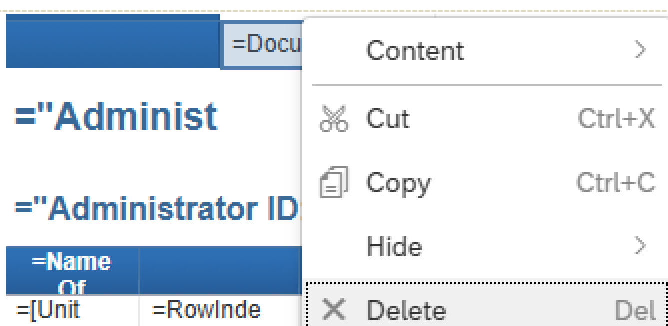
We'll discuss adding business objects or other formulae into tables later in [Chapter 3](#).

Deleting Rows and Columns

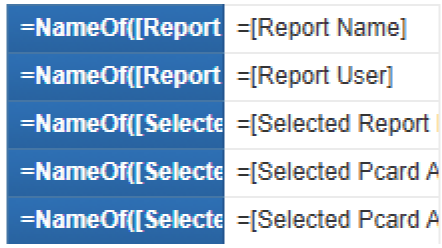
Change the report back to Structure Mode and highlight the new row you added to the heading table in the last section.



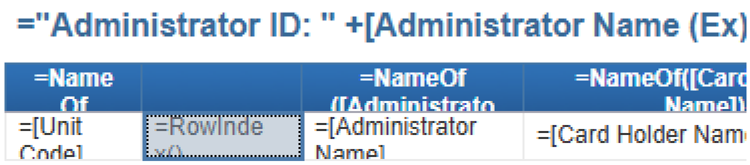
Right-click to open the Options menu, then select the "Delete" option.



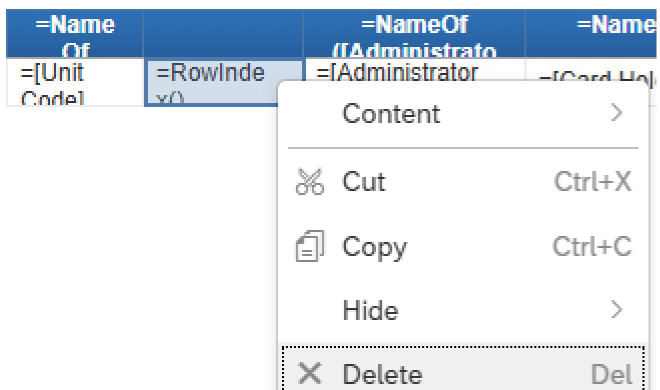
The entire row is now gone. Notice that you don't have to delete cells individually; deleting the cell removed the whole row.



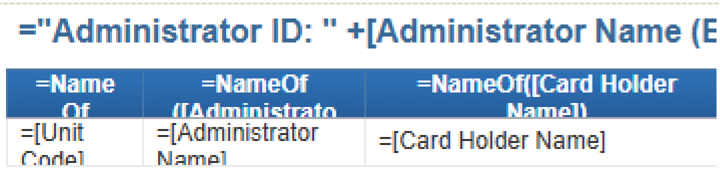
Similarly, we can delete the entire column of a report by deleting one cell in that column. Highlight the cell in the table that you added in the last section.



Right-click to open the Options menu, then click “Delete”.



Notice that the entire column is now gone, including the blank cell in the header row.

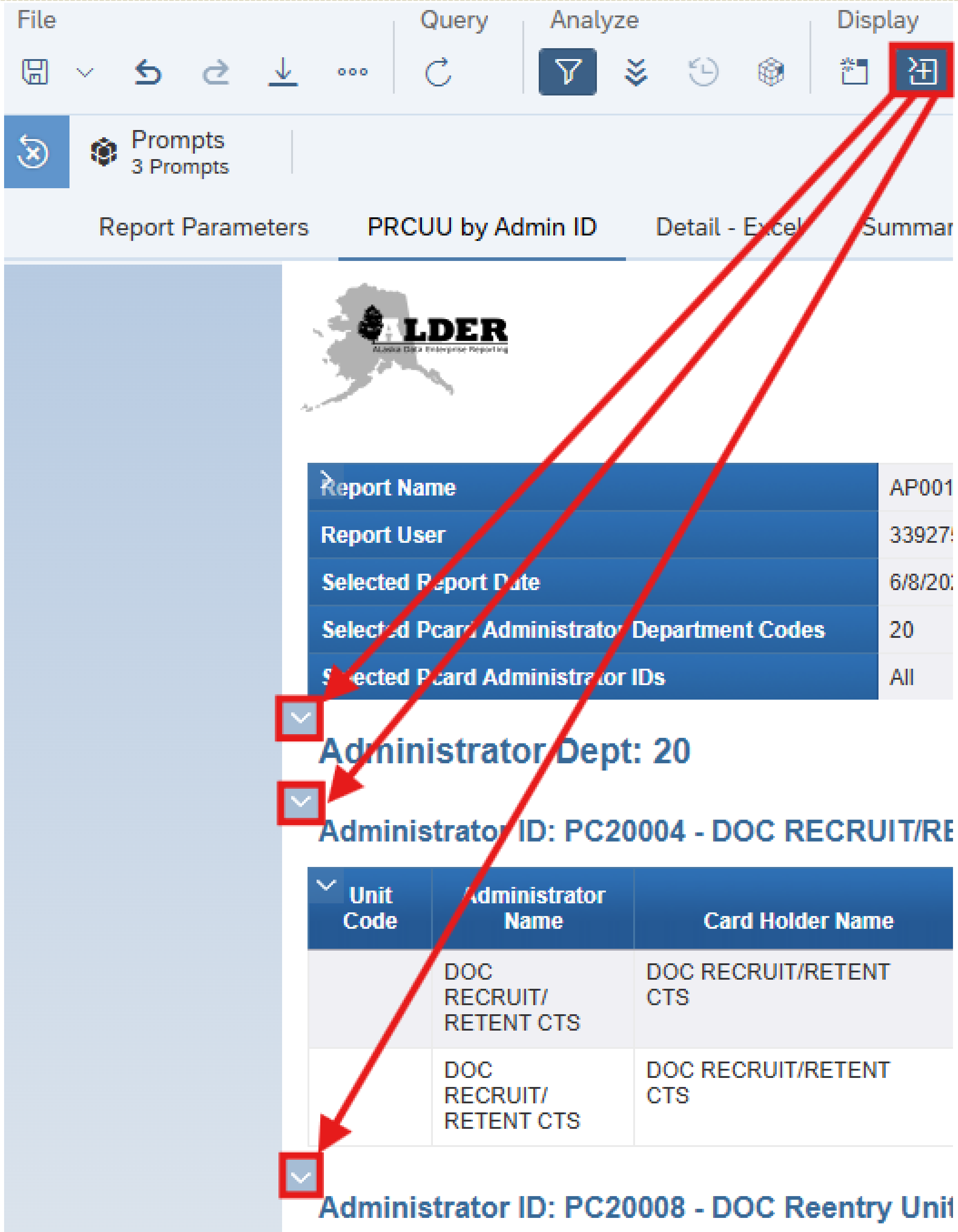


For reference, you can also delete columns and rows by highlighting a cell and pressing the “Delete” key on your keyboard without opening the Options menu.

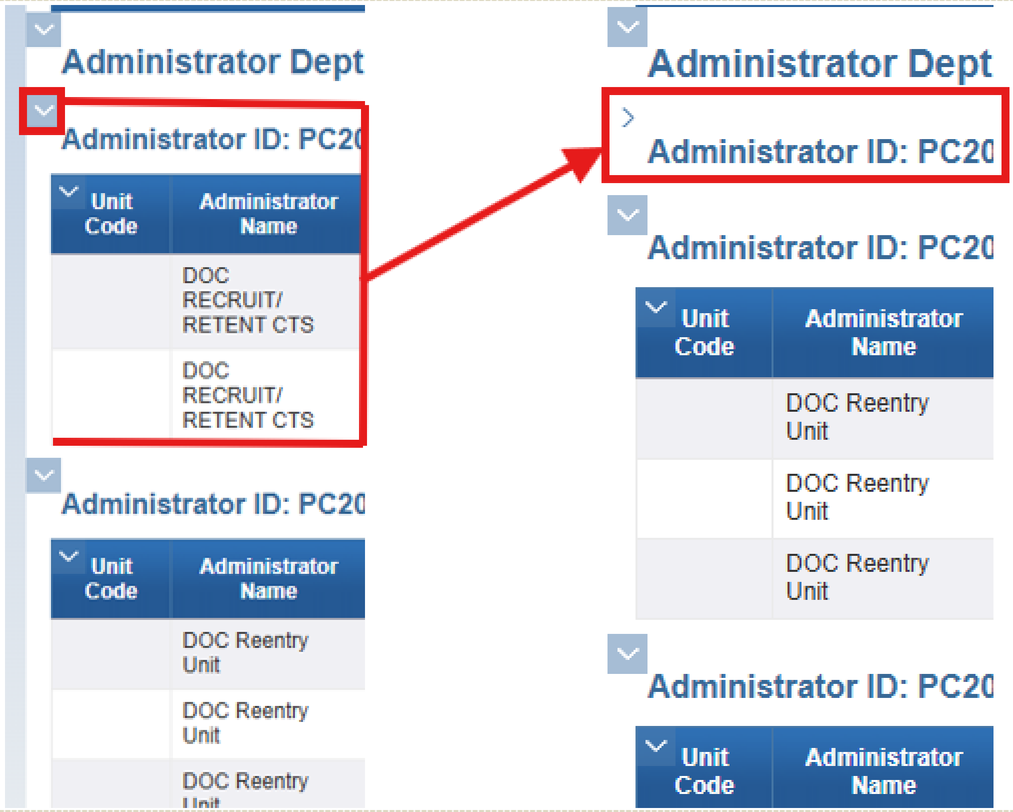
Working With An Outline

You can hide or display sections of report data by folding or unfolding the display of different report elements. You can fold and unfold sections, breaks and tables.

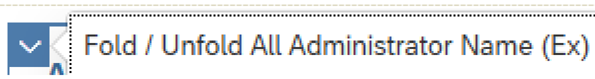
In the Workspace Toolbar, under “Display” select the “Enable folding/unfolding breaks and sections”  button. Arrows will appear on the left side of the report.



Click on the down arrow next to the first administrator ID. Notice the section, including the table with data, is now hidden, and the down arrow has changed to a right arrow. You can unfold the section by clicking the .



You can fold more than one section at a time as well. Try right-clicking the down arrow  next to one of the Administrator IDs to open an additional option to “Fold / Unfold All Administrator Name (Ex)”. Click the option.



Notice how all the Administrator ID sections are now visible, but none of the tables are visible. You can click any of the right arrows › to expand the sections individually, or right-click one of them to expand all at once.

Administrator Dept: 20

Administrator ID: PC20004 - DOC RECRUIT/RETENT CTS

Administrator ID: PC20008 - DOC Reentry Unit

Administrator ID: PC20009 - DOC Reentry Unit CTS

Administrator ID: PC20010 - DOC ACO DCOM CTS

Administrator ID: PC20012 - DOC ACO DCOM

Administrator ID: PC20013 - DOC Point MacKenzie CC

Administrator ID: PC20030 - DOC CAR RENTAL CTS

Administrator ID: PC20031 - DOC BUDGET & FINANCE CTS

Administrator ID: PC20033 - DOC BUDGET & FINANCE

For information on creating sections for an outline, see Chapter 5.

Save the report as **AP0013 – PRCUU Transactions - Department 20** in your *Class ALDER 101* folder.

Review

1. What are the names of the modes in which you can view a document?
   a. Viewing, Data, Structure
   b. Reading, Design, Structure
   c. Default, Reporting, Auditing
   d. Reading, Data, Structure
2. What is the difference between viewing a report in Design mode versus Structure mode?
   a. Design mode shows the data in the report, but Structure mode does not show data.
   b. Design mode allows you to change where the header is located, Structure does not.
   c. Interactive Viewers can use Design mode but cannot use Structure mode.
   d. There are no differences between the two methods.

3. True or false: You can insert new rows into the heading table.

    a. True

    b. False

4. True or false: When you want to delete a column from a table, you must delete each cell of the column individually.

    a. True

    b. False

5. When would you use the Outline button?

    a. When you want to show or hide specific sections of data.

    b. When you want to format specific sections of data.

    c. When you want to create new sections of data.

    d. When you want to see totals aggregated across all your data.

CHAPTER 3: Report Panel – Design Mode

Goals and Objectives

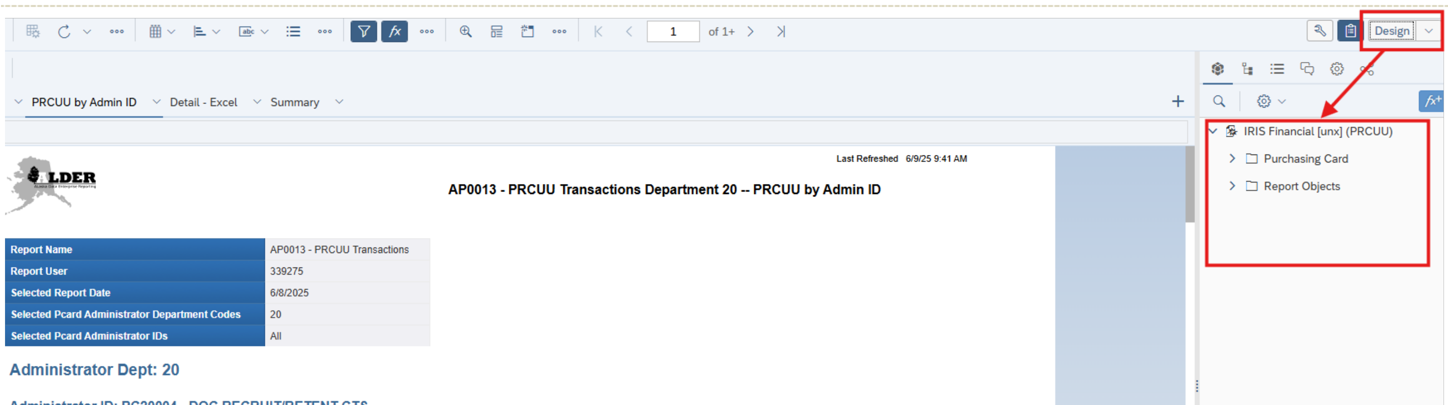
After you complete this chapter, you will be able to:

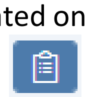
- Identify and navigate report panel icons
    - Document Objects
    - Report Structure
    - Document Properties

Report Panel Icons

Note there are more elements of the Report Panel not discussed in this chapter. These elements are discussed in the ALDER 100 Student Guide and are not reviewed here except insofar as their function is different from Reading mode. Make sure you have completed the ALDER 100 Student Guide before proceeding.

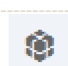
We are first going to review the new icons that are available in the Report Panel while in Design mode. To get started, open the **AP0013 – PRCUU Transactions Department 20** report that you saved to your *Class ALDER 101* folder in the previous chapter. Open the report and change to "Design" mode.



Notice the report panel located on the right side of your report (if you don't see the panel, try clicking the report panel button  in the top right.

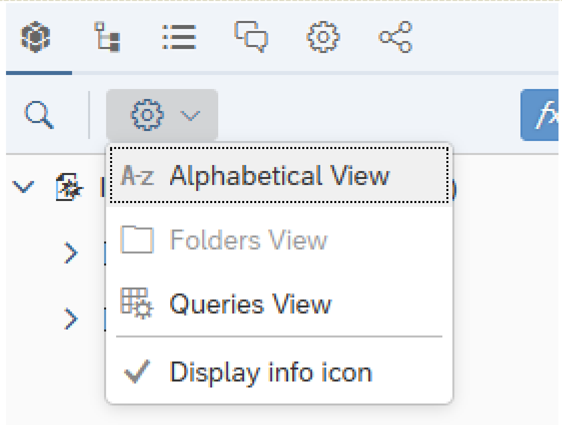
The icons along the top side of the report panel, as shown below, move to different tabs of the panel.

Document Objects



The document objects tab shows the business objects that have been made available to you. You can include additional objects from here to the report if you wish.

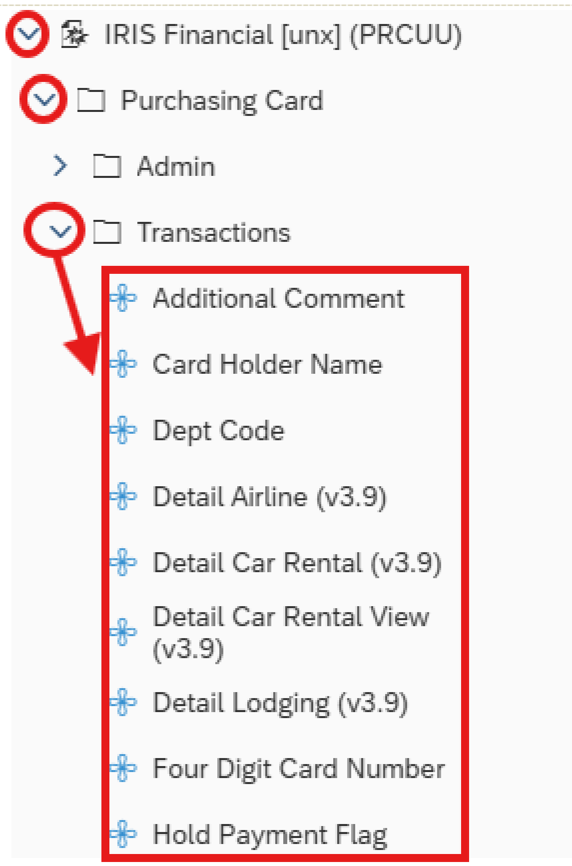
There are three different available views for the document objects panel.



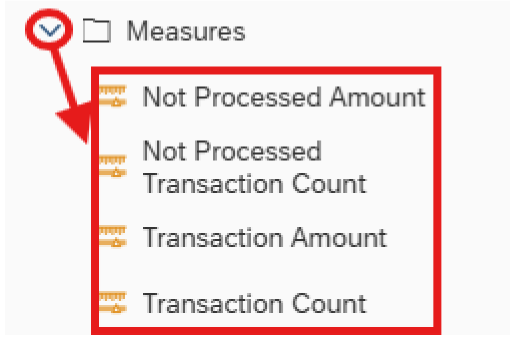
- Alphabetical View displays the available objects in alphabetical order.
- Folders View displays the objects in a directory structure set by the Universe Designer. This is the default view of the objects tab and will be the view used in this guide.
- Queries View displays the objects separated by query. This can be useful when a report is created with multiple queries.

Leave the tab on “Folders View” and open the *Purchasing Card/Transactions* folder. The information is categorized into three different types of objects:

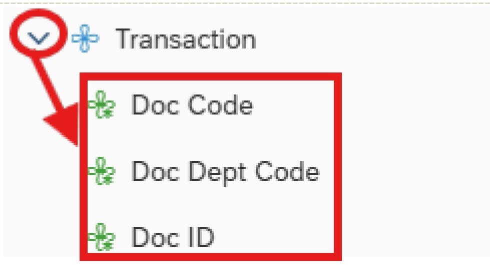
Dimensions contain information by which data is aggregated.



Open the *Measures* folder at the bottom of the Transactions folder. Measures contain aggregated data which is calculated for the dimensions which have been selected.



Click the arrow next to the "Transaction" dimension to see attributes associated with it. Attributes  Function similarly to Dimensions but are grouped together underneath their associated dimension.



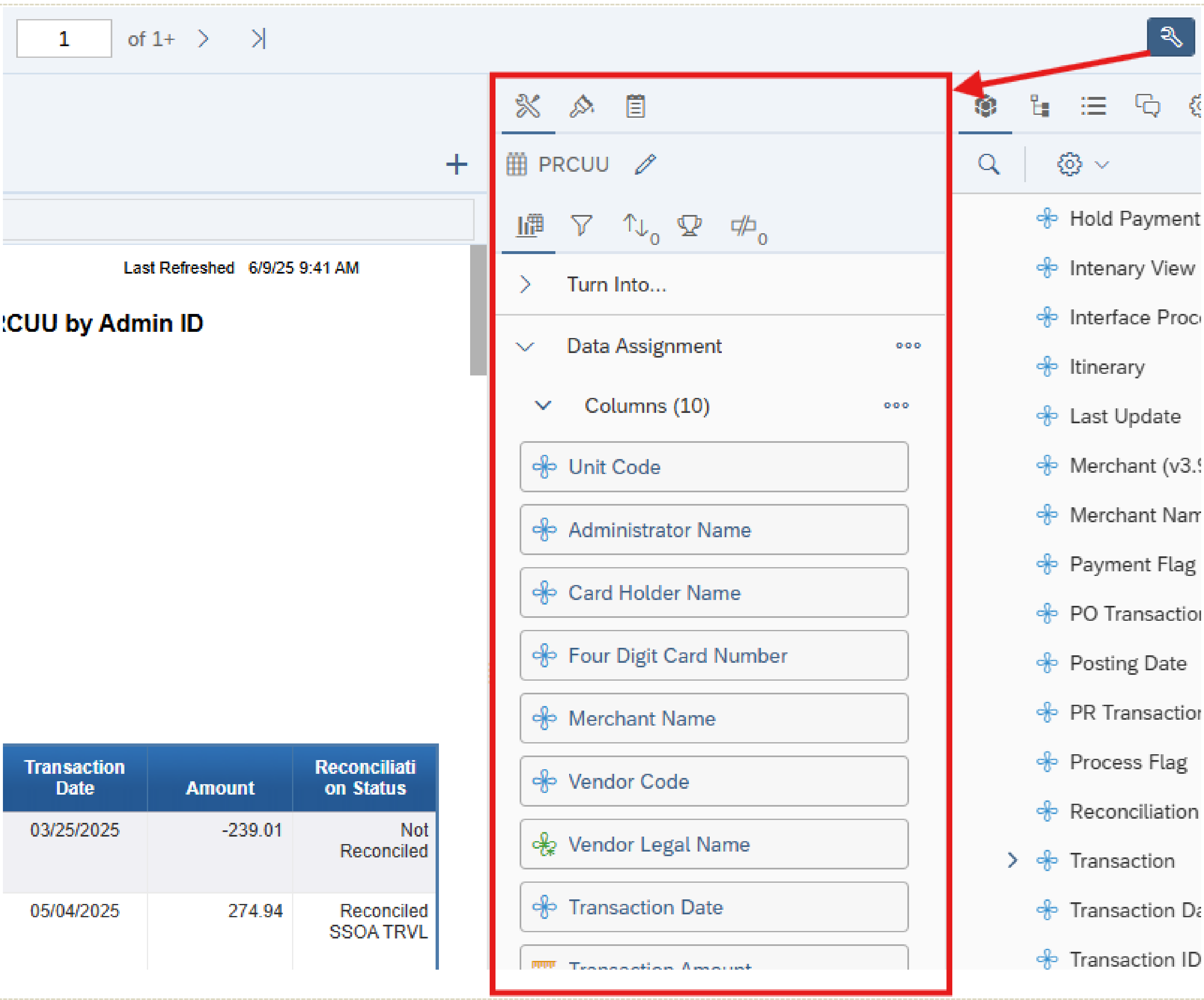
Objects in the report panel are available to be added to the report but may not be included in the report by default.

The simplest way to add objects to a report is to drag the object from the main panel into the tables on the report. Click and drag the "Reconciliation Status" object to the right side of the table on the screen until you see an orange bar , then let go of the mouse button.

The object will appear as a new column.

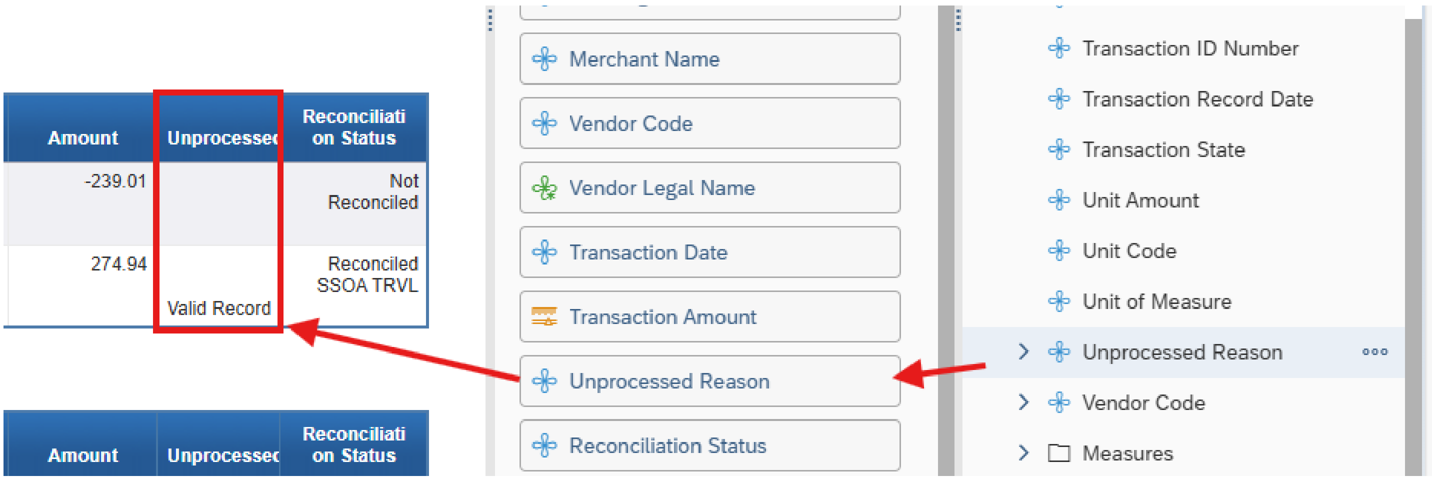
Transaction Date	Amount	Reconciliation Status
03/25/2025	-239.01	Not Reconciled
05/04/2025	274.94	Reconciled SSOA TRVL

You can also open the table's object properties and add the object from there. Left-click the table in the report to select it, and then click the properties panel button in the top right.

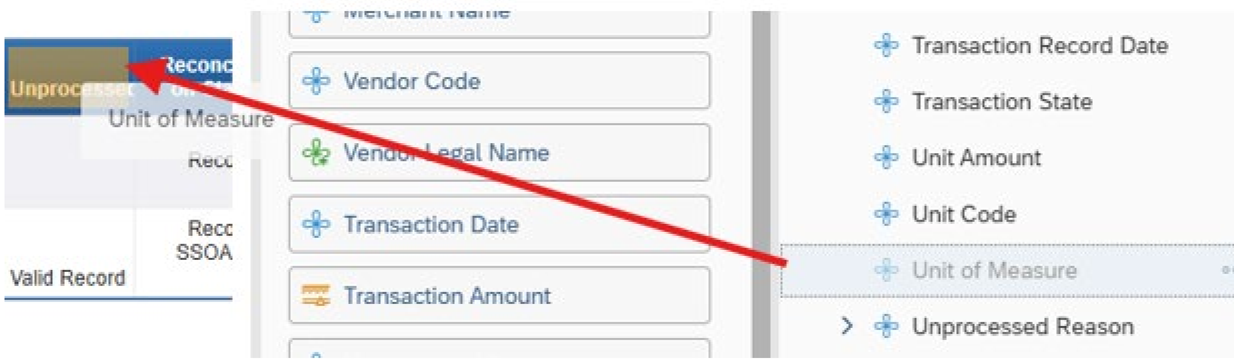


In the properties panel, you can see the "columns" of the report. Try dragging and dropping the

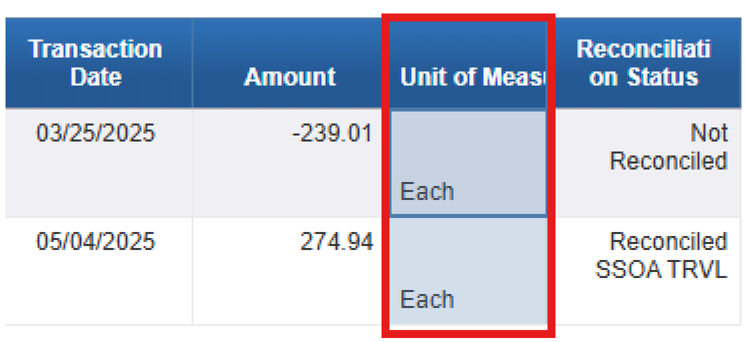
"Unprocessed Reason" object in between "Transaction Amount" and "Reconciliation Status". You'll see the object appear as a new column in between the two existing columns.



You can replace a column in a table with a different available object in a similar way. Try dragging the "Unit of Measure" object to the "Unprocessed Reason" column.

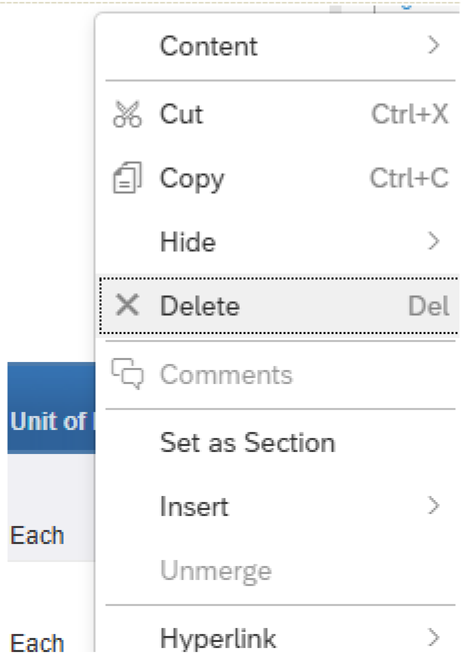


Notice the column has changed to show the "Unit of Measure" object.



You can do the same thing by dropping objects on top of columns in the table properties panel. To delete an object from a table, simply click the  in the properties panel.

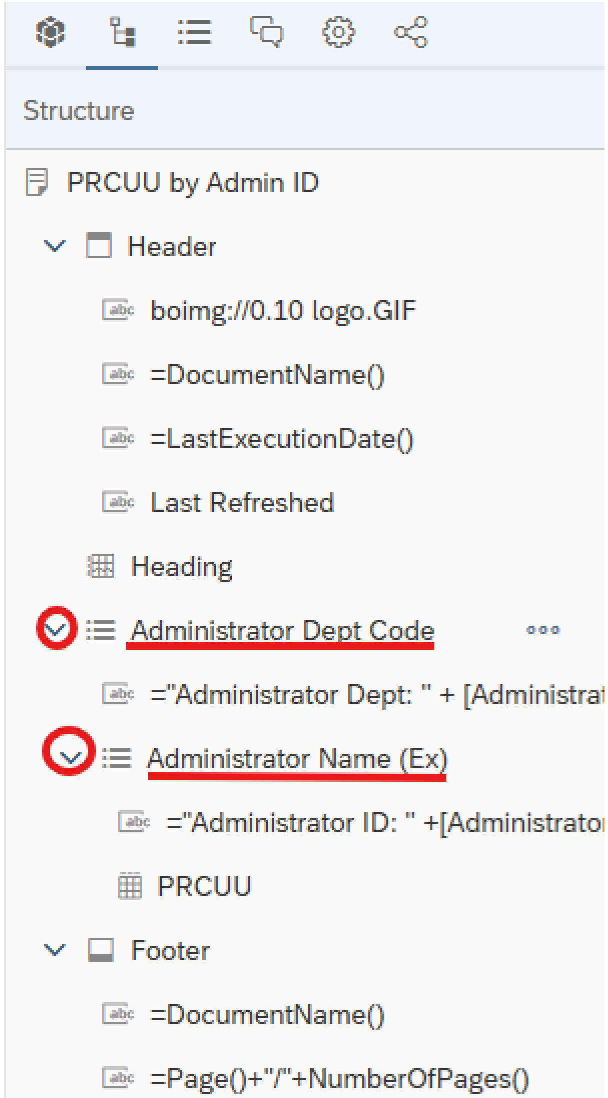
Alternatively, you can right-click the column you want to delete and select "Delete"



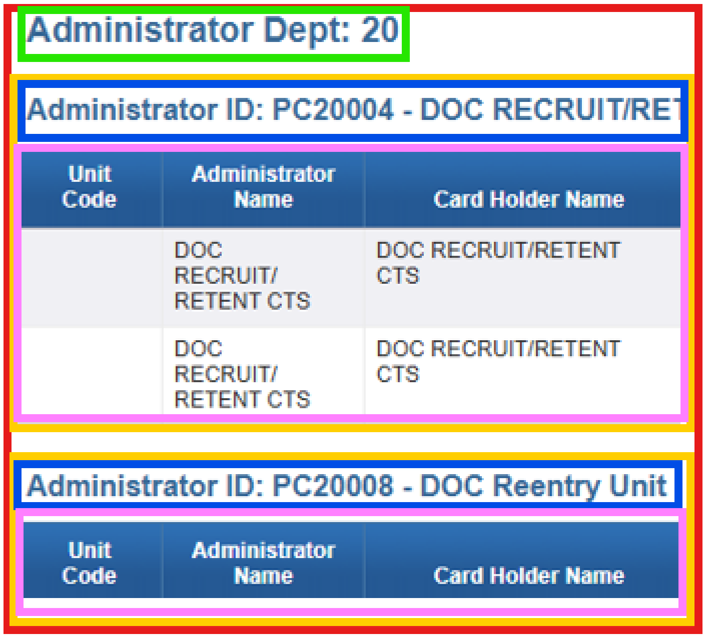
Try deleting the "Unit of Measure" column from the report. If successful, the columns should look like this:

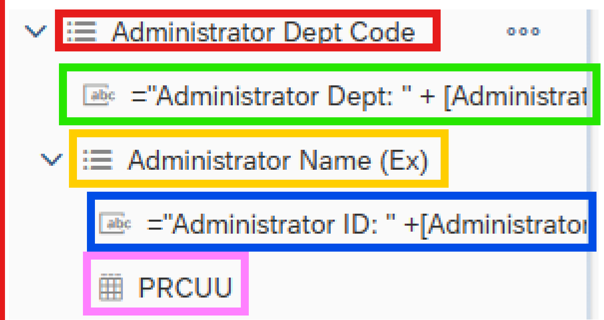
Report Structure

The structure allows you to see how the developer has structured the report's sections. Open the structure and observe that there are two sections nested together, symbolized by .



This means the report's data is broken up by "Administrator Dept Code". Then within each "Administrator Dept Code", the report is broken up further by "Administrator Name (Ex)". Each section has a text field and a table (denoted "PRCUU") with the data for that section and sub-section.



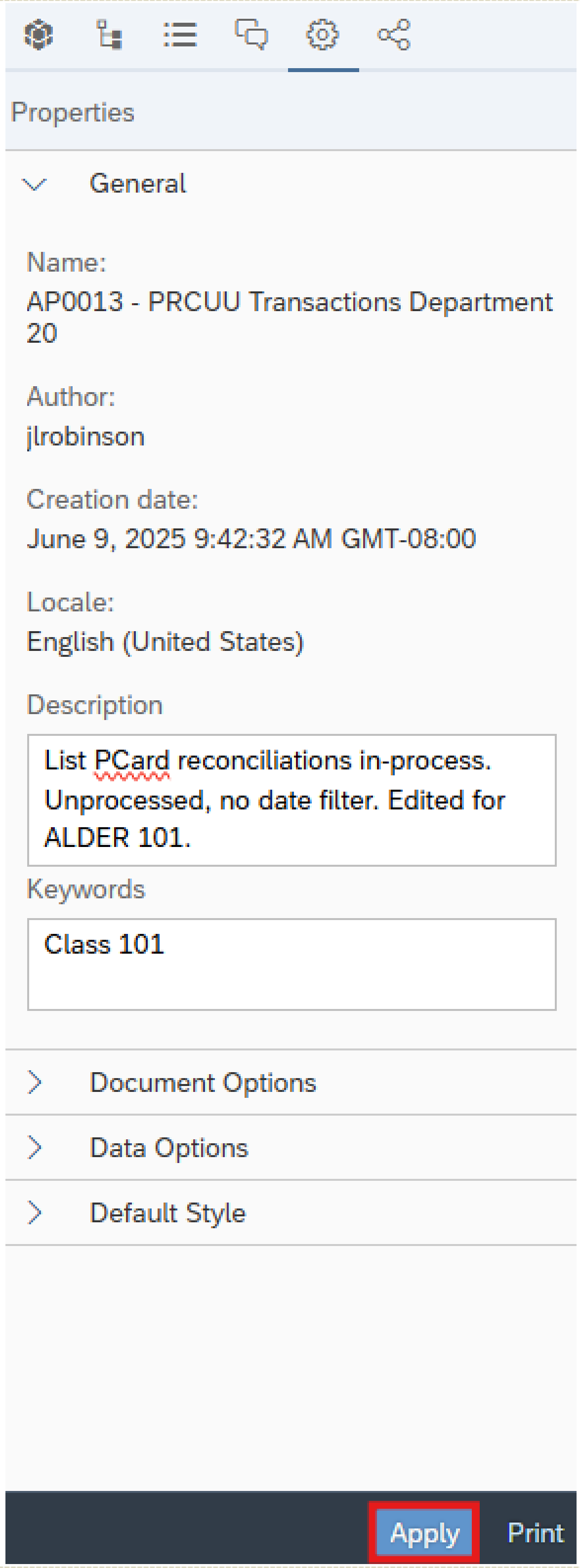


The report's navigation map is a derivative of the reports structure map. In this report's navigation map, you can navigate to different Administrator Dept Codes or different Administrator Name (Ex)'s because those fields are sections in the report structure.

Document Properties

Additional information about document properties can be found in the ALDER 100 Student Guide.

In the "General" tab, you can change a report's description and keywords. Edit the description to say "List PCard reconciliations in-process. Unprocessed, no date filter. Edited for ALDER 101." Edit the Keywords to say "Class 101". Click the "Apply" button at the bottom to save those changes.

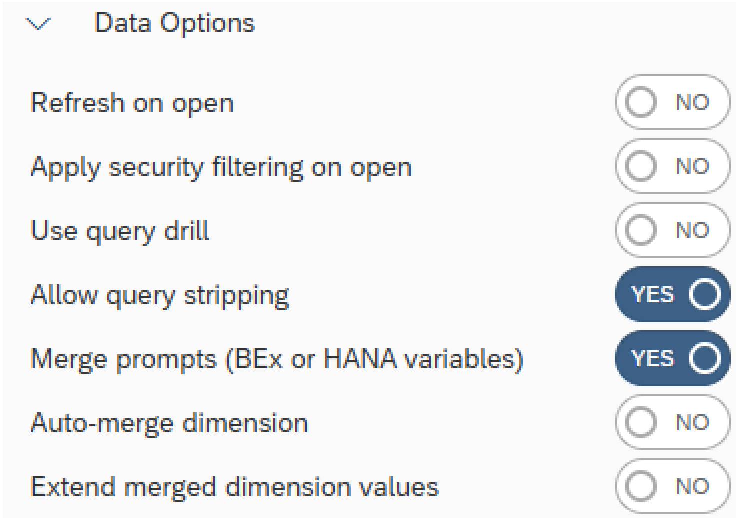


The "Document Options" tab has additional options not available in "Reading" mode:

- Hide warning icons in chart
- Update shared element(s) on open
- Right to Left content alignment

- Permanent Regional Formatting

The “Data Options” tab has options available that are not available in Reading mode.



1. Refresh on open – If set to “Yes” the report’s data will refresh whenever you open the report. It is recommended to leave this off unless you only intend to open the report once per day (refreshing more often than that will *not* produce new data) and do not want to forget refreshing the report. By default, this option is off.
2. Apply security filtering on open – Not currently supported in ALDER.
3. Use query drill – Not currently supported in ALDER.
4. Allow query stripping – Normally, if a report has 30 available objects, but only 10 are used in the report, the document will still pull all 30 available objects into the document. If query stripping is enabled, only the 10 objects used in the report are returned to the document. This can dramatically improve the performance of some queries. Setting this value to “Yes” allows query stripping to be enabled, but **the report developer will still need to enable query stripping** to effect performance.
5. Merge Prompts (BEx or HANA variables) – Not currently supported by ALDER.
6. Auto-merge dimension – If a report has two queries with the same dimension name, this option will automatically “merge” the dimensions so that objects from the two queries can be used together. **Don’t change** the default; a report developer will enable this option if it is useful for a report.
7. Extend merged dimension values – Not currently supported by ALDER.

The “Default Style” tab is for advanced CSS users and can be used to edit the default styles in a report. You can read more about that here: Web Intelligence CSS syntax | SAP Help Portal. Using the default CSS styling is not required; later in this guide, you will learn how to format your reports without using CSS.

Shared Elements

Shared elements are not currently used in ALDER.

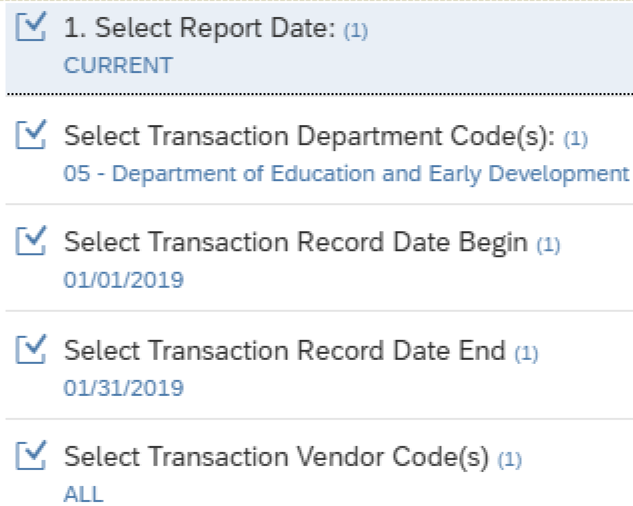
Review

1. What are the kinds of document objects?
    a. Object, Variable, Measure
    b. Chart, Table, Cell
    c. Dimension, Measure, Attribute
    d. Reading, Design, Structure
2. Which of the following is derived from the report's structure map?
    a. The name of the report
    b. The list of available objects
    c. Query stripping
    d. The navigation map
3. What is a downside of the document property "Refresh on Open"?
    a. The data might be stale if you open it again.
    b. Every time you open the report, you will have to wait for the report to refresh, even if no new data is available in ALDER.
    c. If you send the report to someone else's inbox, the report will no longer work.
    d. Both a and c are correct.

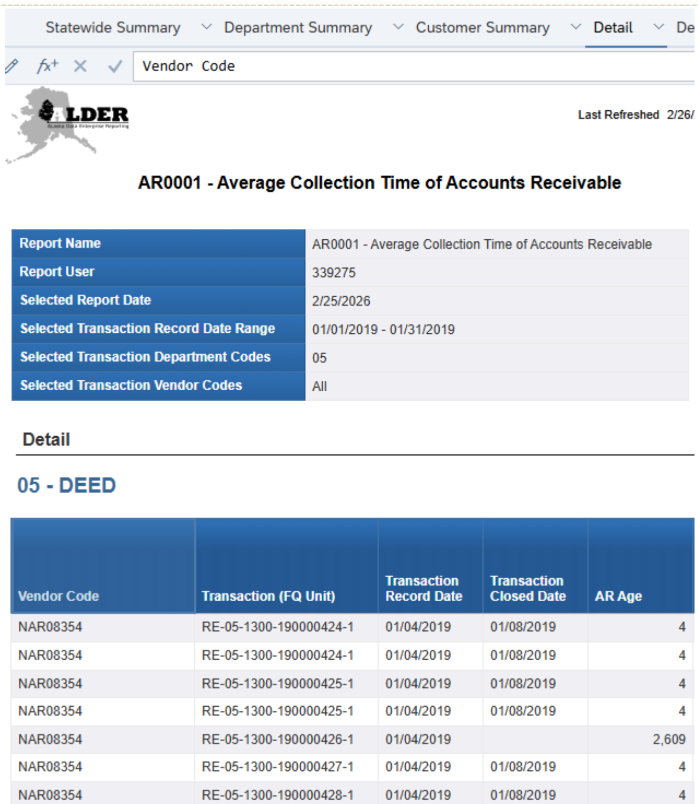
Exercise

You are working for the Department of Education and Early Development and you've been asked for a report demonstrating the average collection time for accounts receivable transactions recorded in January 2019. Your supervisor does not need to see the Fiscal Year for the transactions but does want to see the vendor code for each transaction.

Create a new folder in your *Class ALDER 101* folder called *Class Exercises*. From the *Public Folders / Enterprise / Financial (IRIS) / Accounts Receivable (AR)* folder, copy the report **AR0001 – Average Collection Time of Accounts Receivable** to your *Class Exercises* folder. Open the report and refresh its data using the following prompts:



On the Detail report tab and remove the column "AL Fiscal Year". Then insert "AL Vendor Code" in the data before the "Transaction (FQ Unit)" column. Rename the new column you added "Vendor Code". Your report's "Detail" tab should look like this:



AR0001 - Average Collection Time of Accounts Receivable

Report Name	AR0001 - Average Collection Time of Accounts Receivable
Report User	339275
Selected Report Date	2/25/2026
Selected Transaction Record Date Range	01/01/2019 - 01/31/2019
Selected Transaction Department Codes	05
Selected Transaction Vendor Codes	All

Detail

05 - DEED

Vendor Code	Transaction (FQ Unit)	Transaction Record Date	Transaction Closed Date	AR Age
NAR08354	RE-05-1300-190000424-1	01/04/2019	01/08/2019	4
NAR08354	RE-05-1300-190000424-1	01/04/2019	01/08/2019	4
NAR08354	RE-05-1300-190000425-1	01/04/2019	01/08/2019	4
NAR08354	RE-05-1300-190000425-1	01/04/2019	01/08/2019	4
NAR08354	RE-05-1300-190000426-1	01/04/2019		2,609
NAR08354	RE-05-1300-190000427-1	01/04/2019	01/08/2019	4
NAR08354	RE-05-1300-190000428-1	01/04/2019	01/08/2019	4

Save the report in your *Class Exercises* folder as **Chapter 3 Exercise.**

Chapter 4: Report Elements

Goals and Objectives

After you complete this chapter, you will be able to:

- Identify the basic types of report elements
- Identify the existing tables on most ALDER reports
- Add new tables to reports
- Add new charts to reports
- Add new cells to reports
- Rename elements

Types of Report Elements

There are three basic kinds of elements that you will see in reports.

Tables

Tables display sets of structured data. There are four kinds of tables:

- Vertical – The most common type of table. Has a header row on top, with data in rows beneath the header.
- Horizontal – Most commonly used to display prompt values in ALDER. Has a header column on the left, with data in columns to the right of the header.
- Cross – Displays cross-sectional data, with both a header row and a header column, with data displayed in cells at the cross-section of its two associated headers.
- Form – Similar to a horizontal table, but additional columns of data are displayed beneath the first set of data, with the header column repeating vertically down the report page.

Charts

Charts graphically display aggregations and slices of data. Charts are categorized by type:

- Comparison – Used to compare a measure across categories; e.g., a column chart displaying the number of records for each department.
- Trend – Used to compare a measure across a time axis; e.g., a line chart displaying expenditures across fiscal years.
- Proportion – Used to display the relative size of sections of data; e.g., a pie chart displaying the percentage of documents per document type.
- Distribution – Used to display the total size of sections of data; e.g., a tree map chart displaying the total number of employees per division.
- Correlation – Used to display relationships between two measures; e.g., a scatter plot of budgets by both obligated amount and total budget amount.
- Geographic – Used to display geo-spatial data; e.g., a geo bubble chart displaying active employees by work location.
- Indicator – Used to display a single measure value; e.g., a tile with the total expenditure budget.

Cells

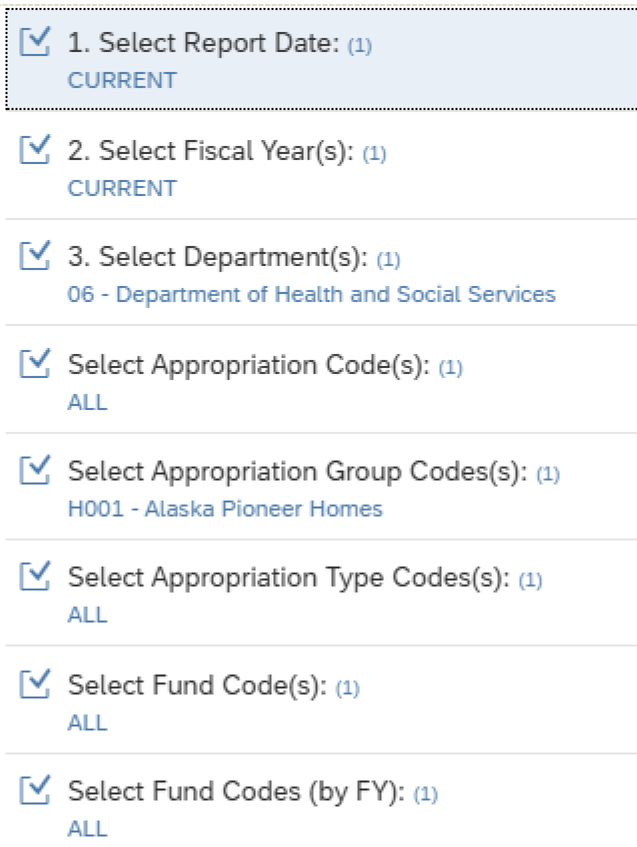
Cells display a single piece of information at a time, such as:

- Text comments
- Formulas or calculations
- Page numbers
- Document name

Note: If a report has sections, then tables, charts, and cells within that section will display information relevant to that section. For example, a tile indicator displaying a total measure which is placed inside of a section will calculate the total per section, not the total for the whole report. A table within a section displays rows relevant to its section, which may not be all the rows available in the report.

Existing Tables

From the *Public Folders / Enterprise / Financial (IRIS) / Budget (BD)* folder, copy the report **BD0010 - Expenditure Budget and Actual** to your *Class ALDER 101* folder and open the report. Refresh the data with the following prompts:



Most reports in ALDER have two existing tables on them. The one on top is the “Heading” table, which displays prompt values and the report’s name. This is called a “Horizontal Table” since the headings for the table are in a column to the left of the table, with data displayed in columns horizontally from the heading column.

Report Name	BD0010 - Expenditure Budget and Actual
Report User	339275
Report Date	2/25/2026
Selected Fund Codes	All
Selected Appropriation Group Codes	H001
Selected Appropriation Type Codes	All
Selected Appropriation Codes	All

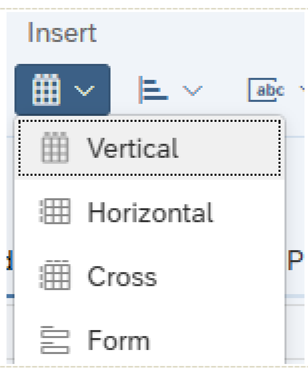
The second table is the "Data" table which displays the actual data for the report. This is called a "Vertical Table" since the headings are in a row on top of the table, with data displayed in rows vertically from the heading row.

PL Fiscal Year	Fund Name (Ex)	AR Group	Appropriation Group Name	AR Type	Appropriation Type Name	AR Code	Expenditure Budget	Budgetary Expenditures
2016	1004 - General Fund	H001	Alaska Pioneer Homes	H016	Alaska Pioneer Homes Management	062300501	63,300.00	0.00
2016	1004 - General Fund	H001	Alaska Pioneer Homes	H016	Alaska Pioneer Homes Management	062300503	1,090,867.45	0.00
2016	1004 - General Fund	H001	Alaska Pioneer Homes	H016	Alaska Pioneer Homes Management	062300507	64,200.00	0.00

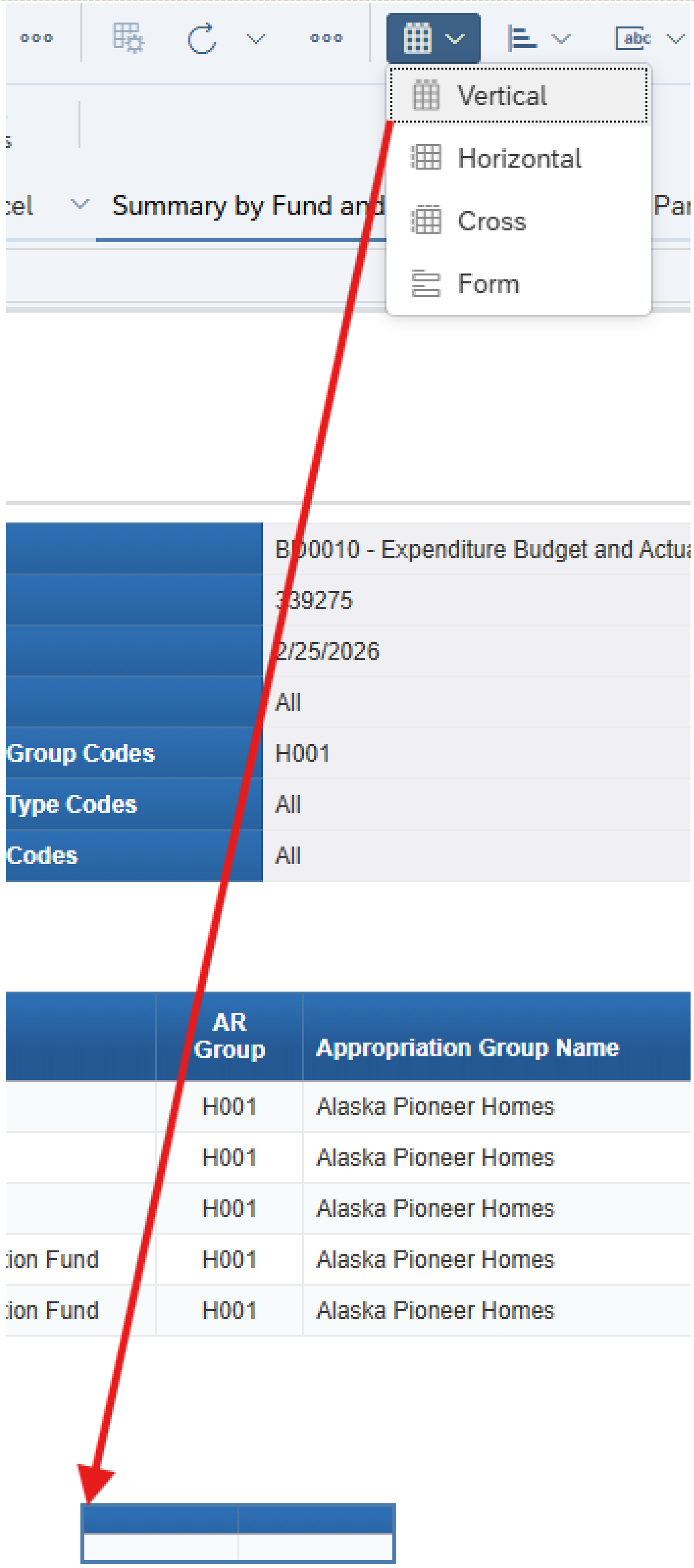
Navigate to the "Summary by Fund and AR Group" report tab.

Adding a Table

In the workspace toolbar, in the "Insert" section, click the table icon to open the table dropdown.



Select "Vertical" and click beneath the existing vertical table. You'll see the new table.



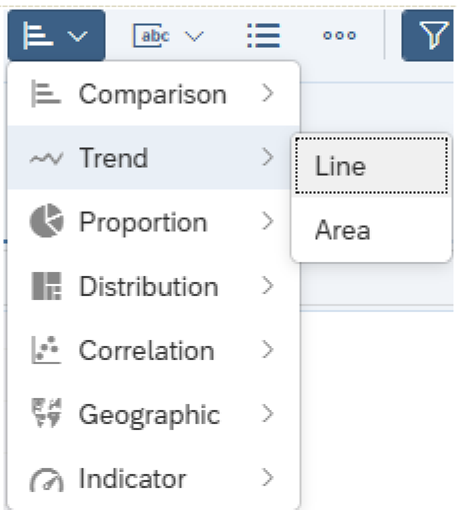
Add "PL Budget Fiscal Year", "Object Type Name (Ex)", and "Expend Current Budget" to the new table. Notice the table expands in size once data is added to it.

1246 - Recidivism Reduction Fund	H001	Alaska Pioneer Homes

PL Budget Fi	Object Grouj	Expend Curr
2016	1000 - Group	##########
2016	2000 - Group	##########
2016	7000 - Group	52,000.00
2016		0.00
2017	1000 - Group	##########
2017	2000 - Group	##########
2017	7000 - Group	52,000.00

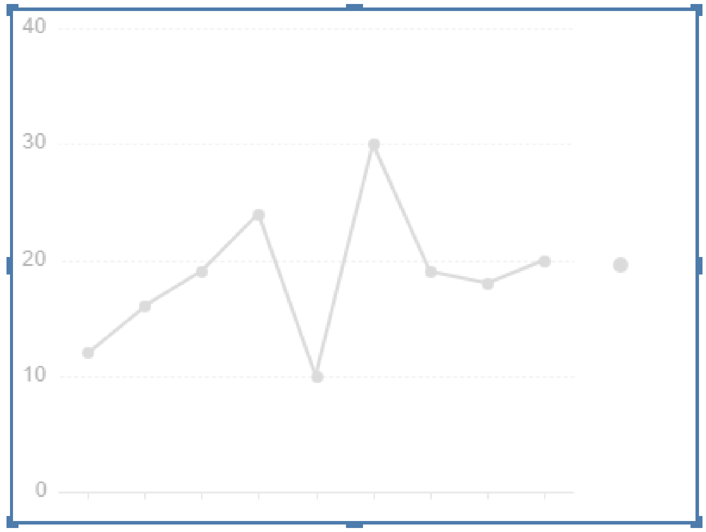
Adding a Chart

Hover over the Chart icon in the insert section, and select the “Trend” category, then “Line” chart.

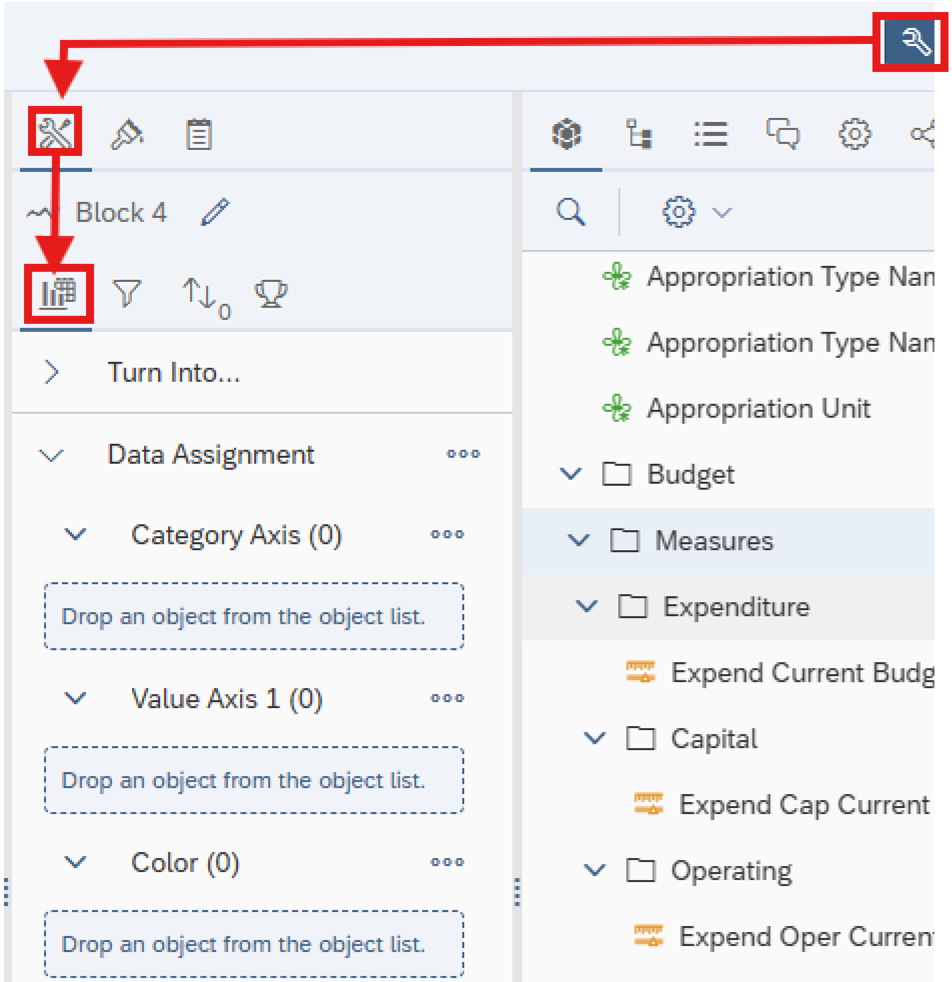


Click next to the table you previously added to create the chart next to it. Initially, the chart will just be an outline until you add some objects to it.

PL Budget Fi	Object Grou	Expend Curr
2016	1000 - Group	#########
2016	2000 - Group	#########
2016	7000 - Group	52,000.00
2016		0.00
2017	1000 - Group	#########
2017	2000 - Group	#########
2017	7000 - Group	52,000.00
2017		0.00
2018	1000 - Group	#########
2018	2000 - Group	#########
2018	7000 - Group	3,000.00
2018		0.00



Select the chart and open the chart's properties . Make sure the objects  tab, feeding pane  is open. There you will see three places to put objects: "Category Axis", "Value Axis", and "Color".



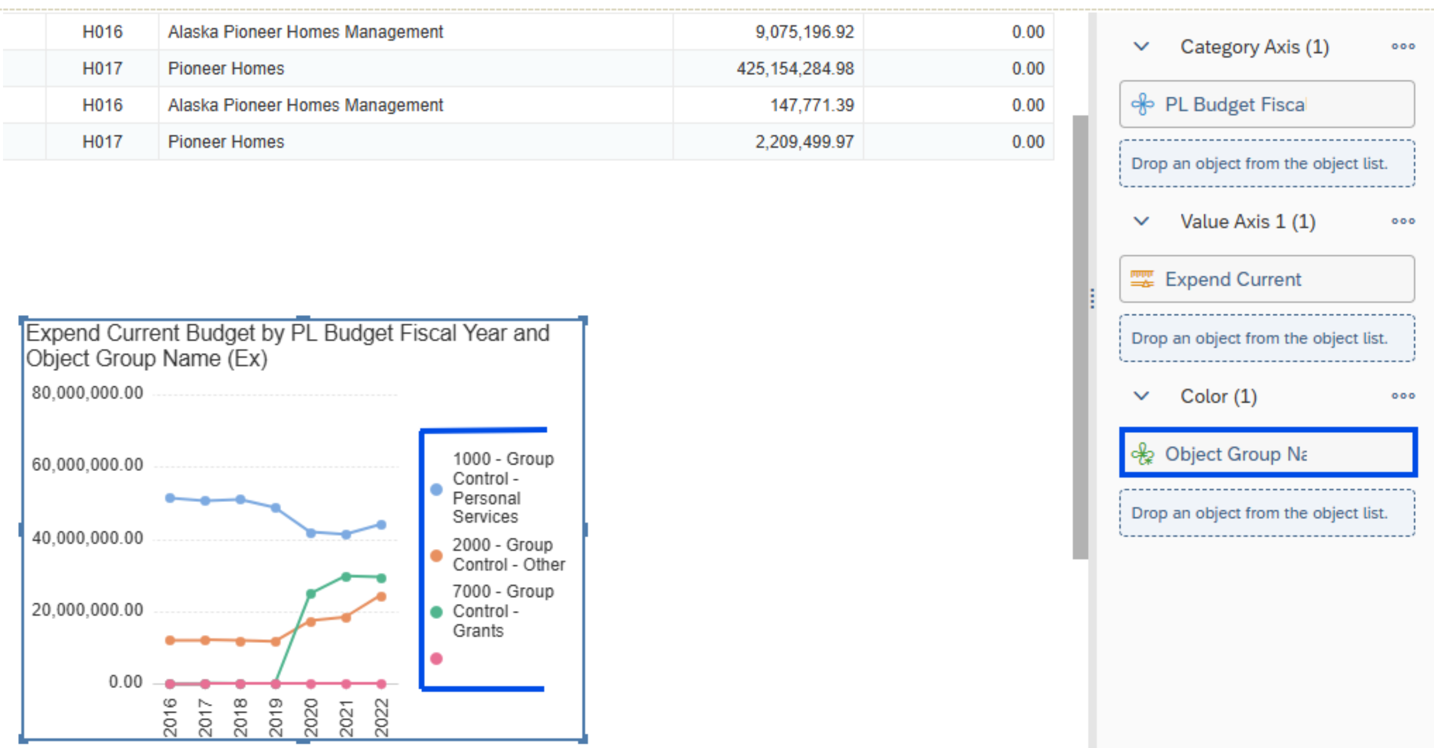
Note: Not all charts will display the same "Category Axis", "Value Axis", or "Color" sections; some charts will have different sections, and some charts have more or fewer sections than others.

These sections are how you add objects to a chart. You can add objects to the chart in the same way that you can add objects to a table's columns (drag and drop). Try adding PL Budget Fiscal Year to "Category Axis" and "Expend Current Budget" to "Value Axis".

Note: Without the color section filled, the chart will still display data. Depending on the chart you are creating, you may only need to fill certain sections with objects.

The measure "Expend Current Budget" displays on the vertical axis because it was placed into the "Value Axis" section, and the PL Budget Fiscal Year displays on the horizontal axis because it was placed into the "Category Axis" section. These are the default settings for line charts.

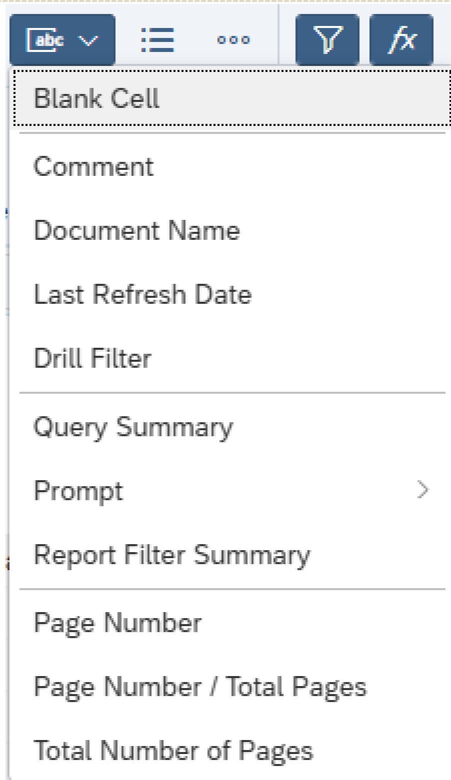
Try adding the "Object Group Name (Ex)" object to the "Color" section now.



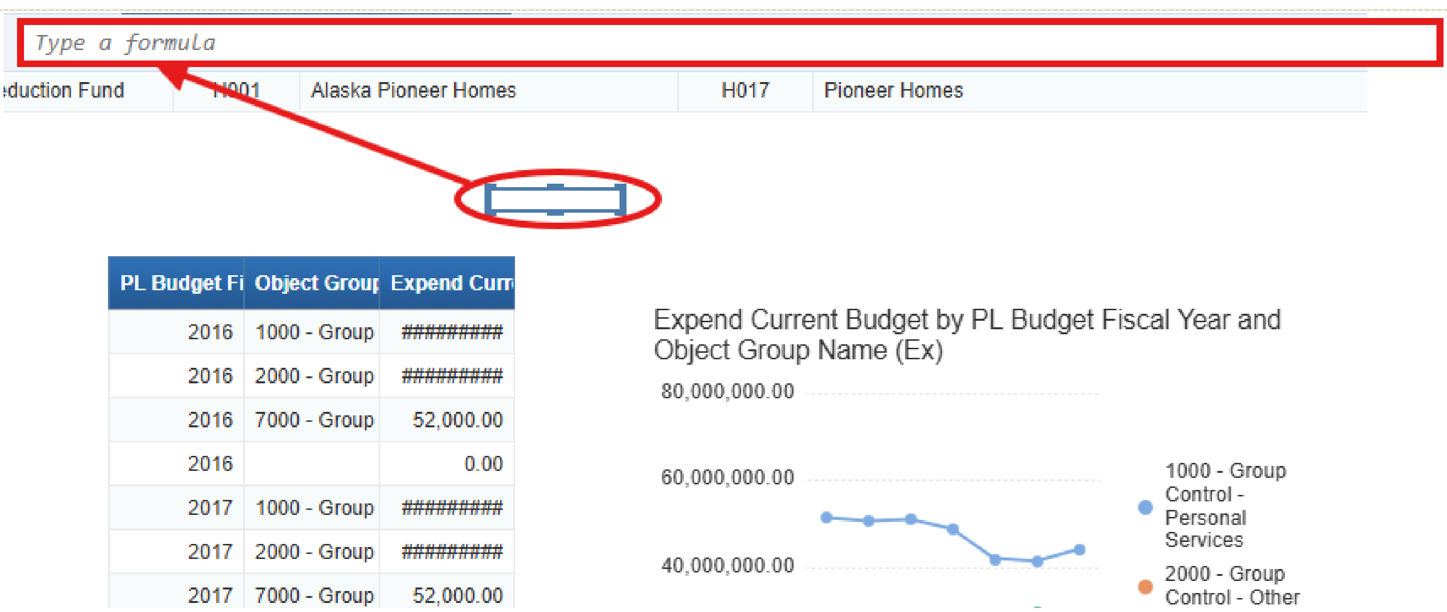
Notice how the chart has changed again. By adding the object to the "color" section, the chart now displays four lines, one for each object group in the result set, and differentiated by color. A legend on the right provides you with information regarding which color corresponds to which object group.

Adding a Cell

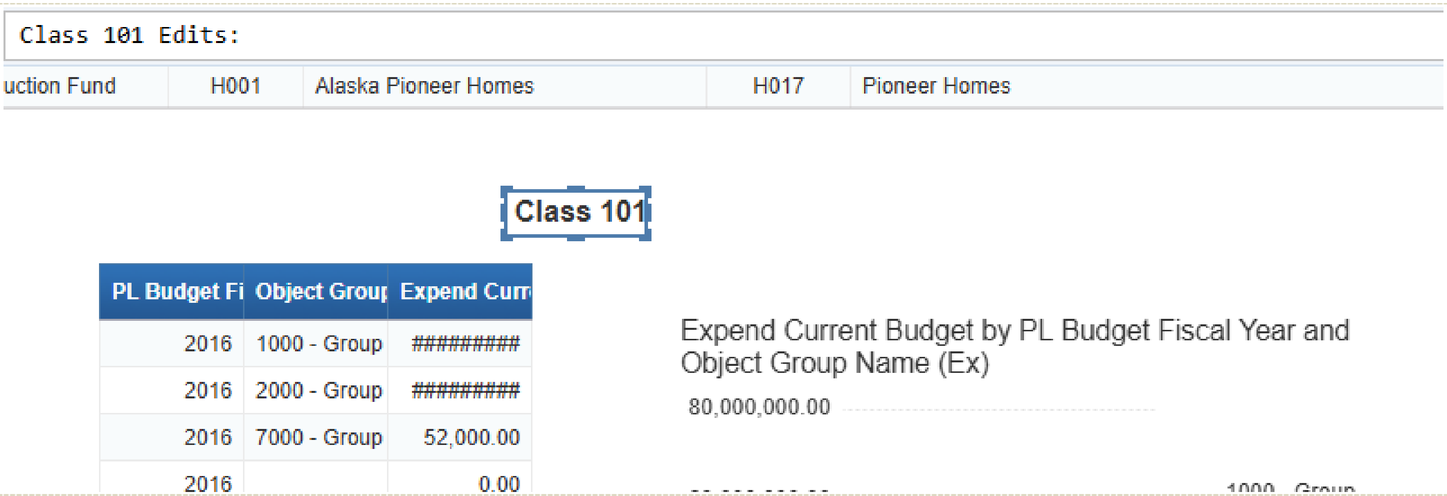
Click on the cell icon and choose "Blank Cell"



Create the blank cell just above the table and chart that you placed down previously. You'll notice a small rectangle is now selected (that's the cell), and towards the top of the workspace a formula bar will appear:



This formula bar functions similarly to other formula bars you've probably seen in other applications, like Excel. We'll discuss more about working in the formula bar in Chapter 6. Try typing "Class 101 Edits:" into the formula bar and hit enter.



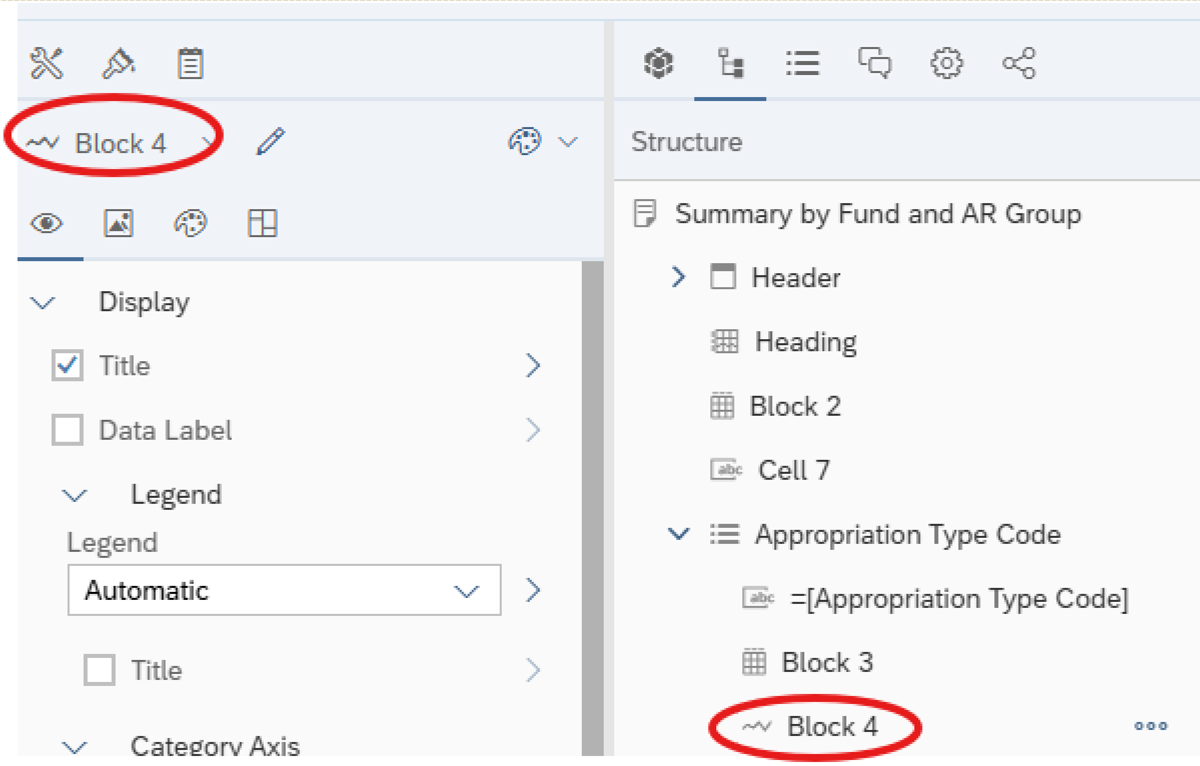
Notice that the cell does *not* automatically wrap the text inside. If the text of the cell is too long for the cell's default length and width, the cell will need to be resized. Open the Cell's properties navigate to the Format tab in the Layout pane. Check the box next to "Width" that says "Autofit".

We'll discuss formatting elements in more detail in Chapter 8. You can add objects, mathematical calculations, and other formulas into a cell's contents.

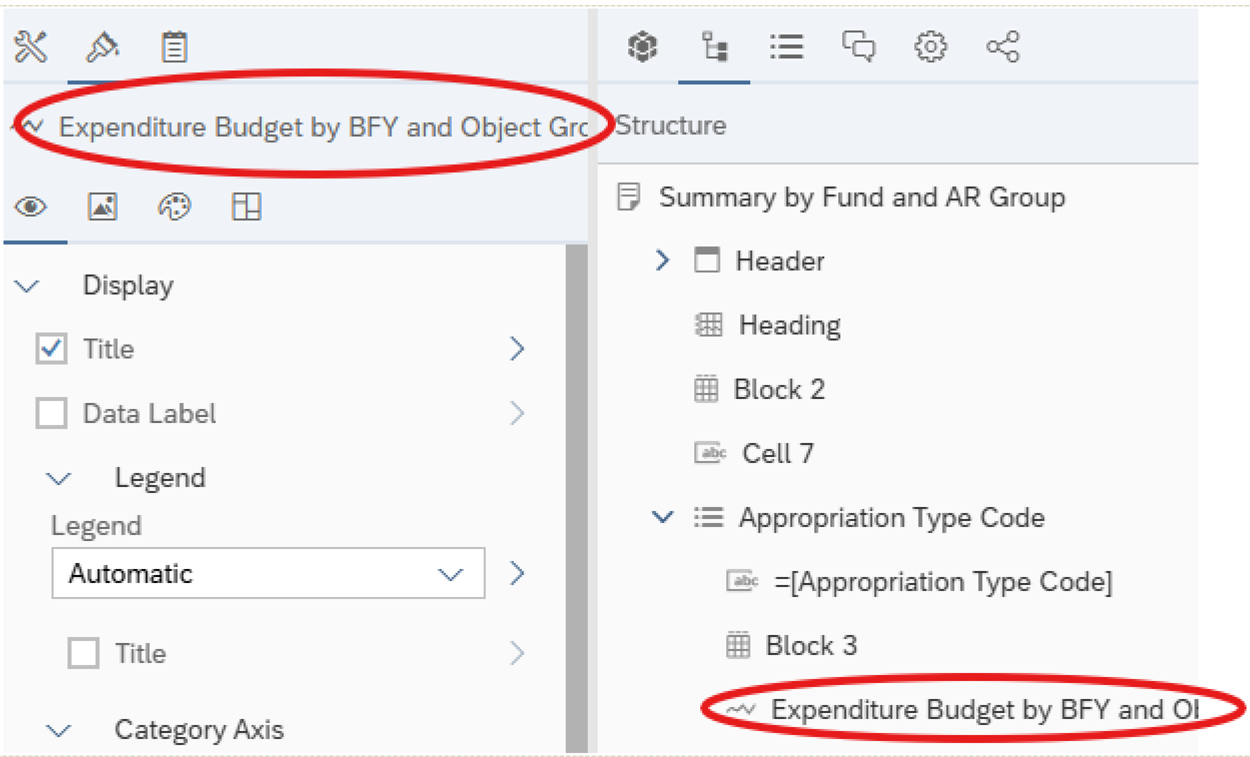
Renaming Elements

Elements should be given names which make it easier to identify them when looking at the report structure. Giving elements descriptive names will be essential when managing the layout and structure of a report.

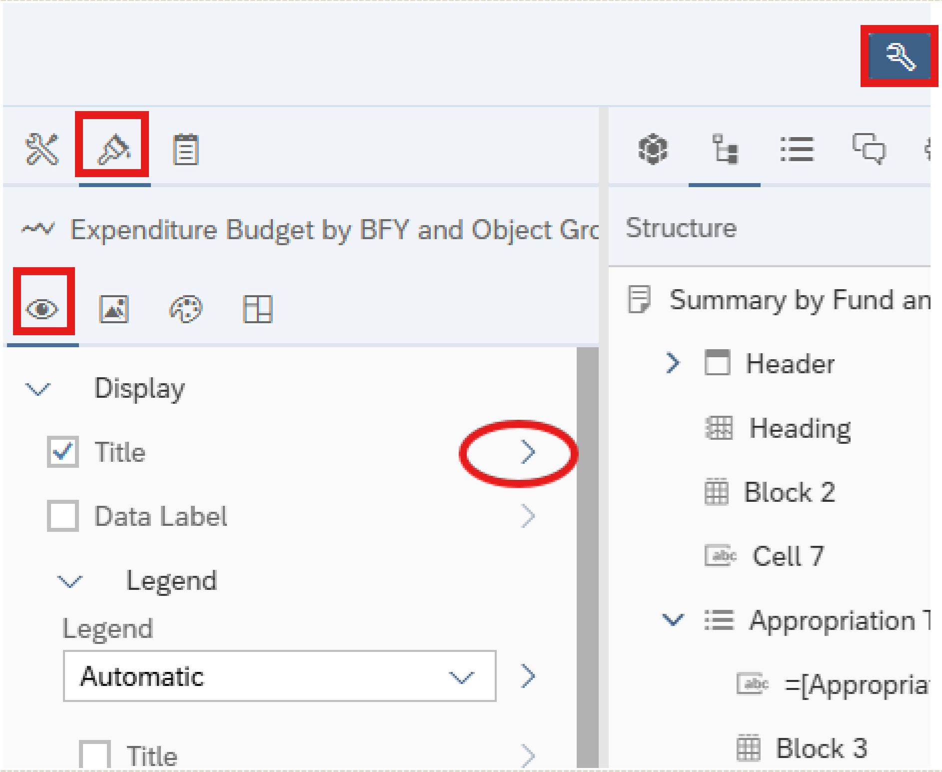
Select the chart that you created. In the chart properties, up at the top of the properties panel, you'll see it named "Block X" by default.



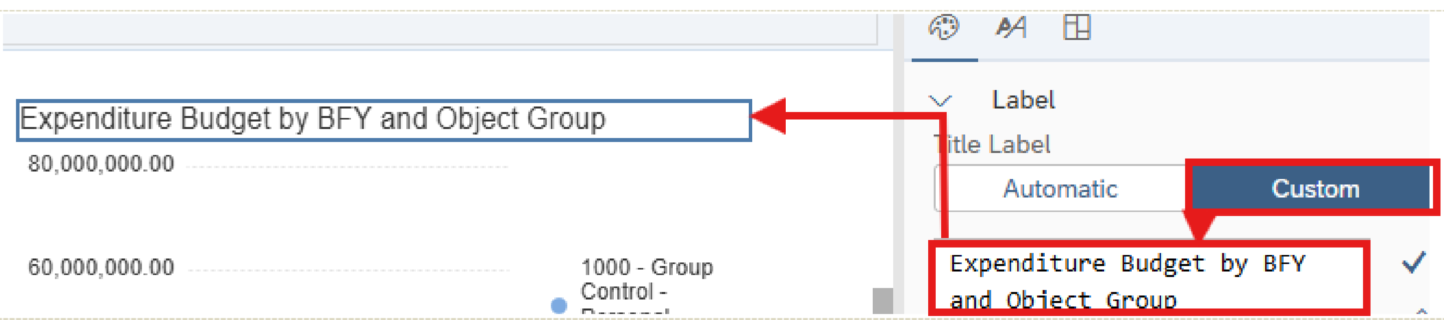
Rename the chart “Expenditure Budget by BFY and Object Group”. Notice the name of the chart changed in the report structure as well, making it easier to identify.



For elements that have titles (i.e., charts), it is usually a good idea to make the name and title match. In the chart’s properties, in the Style tab, in the Display pane, click on the right arrow next to “Title”.



Elements with titles will have a title automatically assigned to them by default. Now that we renamed the chart, click "Custom" under the "Title Label" section to give it a custom title. Make the title the same name as the chart itself.



We'll examine more information about formatting and layout in [Chapter 8](). Save the document as **BD0010 – Expenditure Budget and Actual with Chart**.

Review

1. What are some examples of report elements?
   a. Horizontal table, Line Chart, Blank Cell
   b. Mega Table, Colorful Chart, T Cell
   c. Workspace toolbar, Design mode, Blank Cell
   d. Available Objects, Report Structure, Navigation Map
2. True or false: most ALDER reports have both a horizontal table and a vertical table

   a. True

   b. False

3. True or false: When you add a new table to a report, the original data table is replaced.

   a. True

   b. False

4. When would you use a Trend chart?

   a. When you want to graphically show the relative size of sections of data

   b. When you want to show how the data is geo-spatially dispersed

   c. When you want to show how a measure changes over time

   d. When you want to show a single measure for the whole dataset

5. Which of the following statements are true about cells?

   a. You can add a blank cell anywhere in the report.

   b. You can add text to cells.

   c. When a cell is added to a report, its formatting needs to be adjusted to guarantee that any text inside it will not be cut off.

   d. All of the above

6. What is a reason why you would rename a report element?

   a. To make it easy to find in the structure map

   b. To edit the text that displays in the element

   c. The element will not display data until it is renamed

   d. To enable additional formatting options for the element

Exercise

Your supervisor is interested in procurement cycle times in January 2025. You've been asked to create a report with a chart showing the number of procurements completed by type. You've also been asked to calculate on average how much longer than estimated it takes to close procurements.

From the *Enterprise/Financial (IRIS)/Procurement (PR)* folder, copy the report **PR0006 - Procurement Cycle Time** to your *Class Exercises* folder. Refresh the document with the following prompts:

1. Select Report Date: (1)
CURRENT

Select Estimated Completion Date Begin (1)
1/1/2025

Select Estimated Completion Date End (1)
1/31/2025

Select Procurement Type(s): (1)
ALL

Navigate to the “Procurement Detail” report tab. Add a pie chart (under “Proportion” charts) next to the header box at the top of the report. Add “Procurements with Cycle Times within Estimate” to the “Pie Sector Size” section, and add “Procurement Type Name (Ex)” to the “Pie Chart Sector Color” section. Change the chart’s name and title to “Procurement Completed by Type”

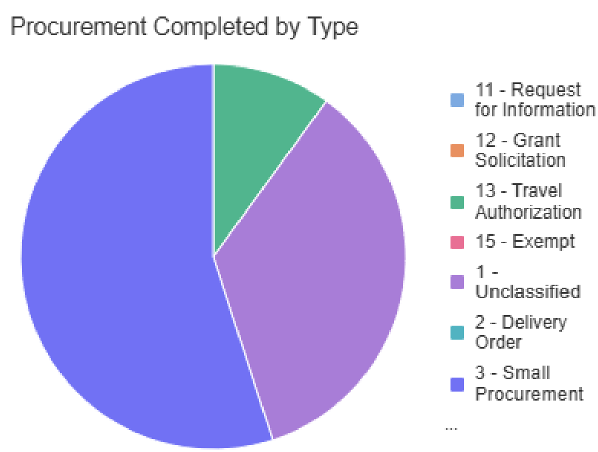
Now add a Tile chart (under the “Indicator” charts) to the report next to the vertical data table. Add “Average Excess (Early) Days” to the “KPI” section. Change the indicator’s name and title to “Excess Days”.

If successful, your report should look like this:

PR0006 - Procurement Cycle Time

PR0006 - Procurement Cycle Time
339275
2/26/2026
All
01/01/2025 - 01/31/2025

Procurement Detail



Complexity Description (Ex)	Closed Date	Estimated Completion Date	Percentage of Cycle Times within Estimate	Average Excess (Early) Days
3 - Average		01/09/2025	0.00%	414
3 - Average		01/04/2025	0.00%	419
3 - Average		01/08/2025	0.00%	415
3 - Average		01/11/2025	0.00%	412
3 - Average		01/26/2025	0.00%	397

Excess Days

390

Switch to “Reading” mode. Use the Navigation Map jump down to some other sections. Did you notice how the indicator’s value changes in accordance with the data in each section?

Save the report to the *Class Exercises* folder as **Chapter 4 Exercise**.

CHAPTER 5: Table Sorts, Breaks, and Sections

Goals and Objectives

After you complete this chapter, you will be able to:

- Add sections to your report
- Add breaks to data in a table
- Apply table sorts
- Make custom sort orders

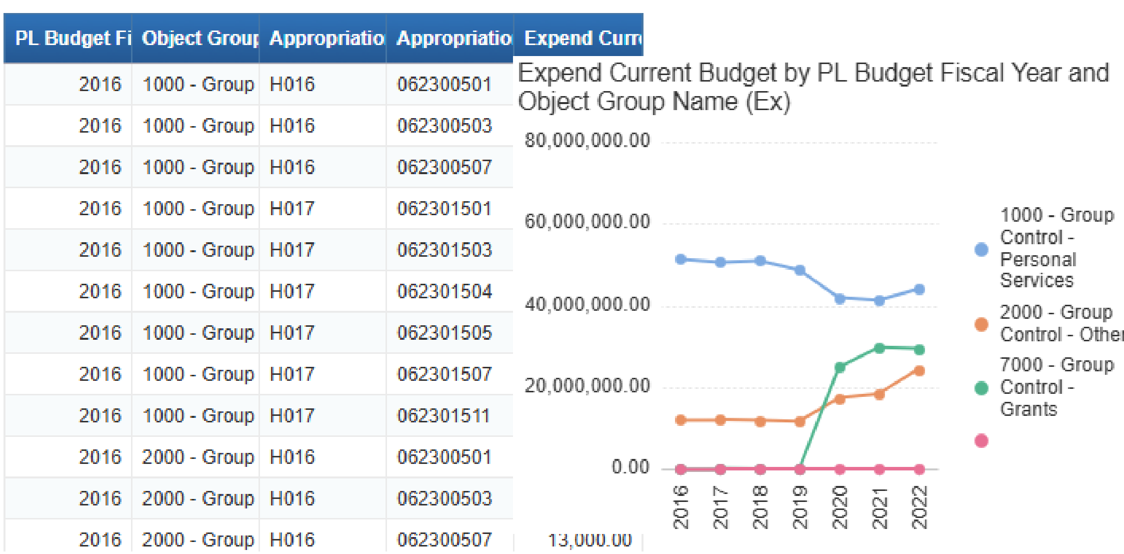
Types of Sorts

There are three different types of sorts. By default, they are applied in the following order:

1. Sections
2. Breaks
3. Table Sorts (from the first column to the last column)

Open the **BD0010 – Expenditure Budget and Actual With Chart** report that you saved in your *Class ALDER 101* folder in the previous chapter. On the “Summary by FUND and AR Group” report tab, add the “Appropriation Type Code” and the “Appropriation Unit” objects to the data table you previously created just before “Expend Current Budget”.

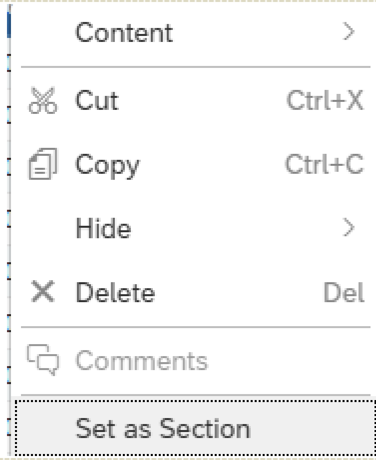
Class 101 Edits:



PL Budget Fi	Object Grou	Appropriatio	Appropriatio	Expend Curr
2016	1000 - Group	H016	062300501	
2016	1000 - Group	H016	062300503	
2016	1000 - Group	H016	062300507	
2016	1000 - Group	H017	062301501	
2016	1000 - Group	H017	062301503	
2016	1000 - Group	H017	062301504	
2016	1000 - Group	H017	062301505	
2016	1000 - Group	H017	062301507	
2016	1000 - Group	H017	062301511	
2016	2000 - Group	H016	062300501	
2016	2000 - Group	H016	062300503	
2016	2000 - Group	H016	062300507	13,000.00

Sections

Sections allow you to group data for the entire report. A report includes any tables or charts that are sitting next to each other within a report tab. When the data is set as a section, the unique value is removed from the data table and placed in a cell at the top of the section. You can easily create sections in your reports by selecting a data column, right-clicking and selecting “Set as Section”.

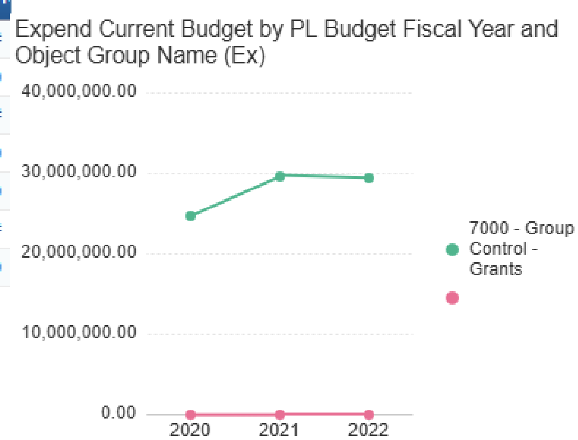


Try selecting the “Appropriation Type Code” column that you just added, right-click it and set it as a section. You’ll see the report now broken out into multiple sections. Your data table and chart will automatically populate in each section, filtered for that specific Appropriation Type.

Class 101 Edits:

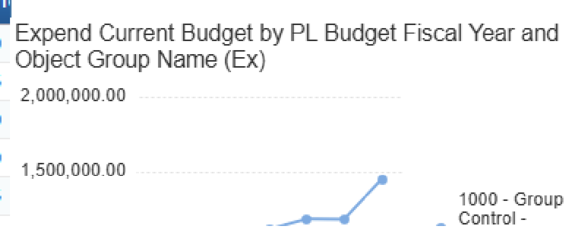
H015

PL Budget Fi	Object Grou	Appropriatio	Expend Curr
2020	7000 - Group	062302503	#########
2020			0.00
2021	7000 - Group	062302503	#########
2021			0.00
2022	7000 - Group	062302503	0.00
2022	7000 - Group	062302571	#########
2022			0.00

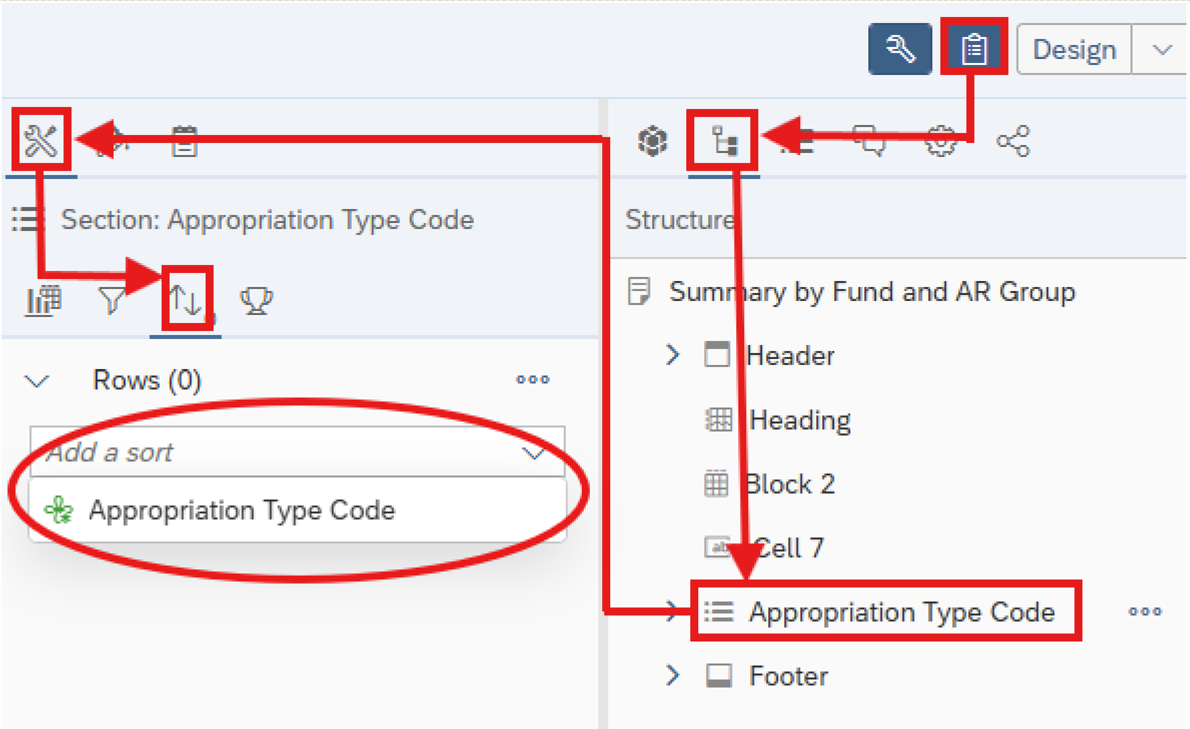


H016

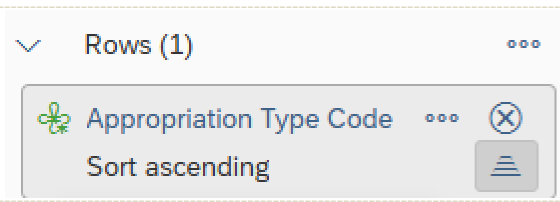
PL Budget Fi	Object Grou	Appropriatio	Expend Curr
2016	1000 - Group	062300501	50,800.00
2016	1000 - Group	062300503	990,320.95
2016	1000 - Group	062300507	51,200.00
2016	2000 - Group	062300501	12,500.00
2016	2000 - Group	062300503	116,449.15



Notice that the sections are sorted alphabetically, with Appropriation Type “H015” coming before “H016”. This is the default sort, but it can be changed. Navigate to the the Structure Map tab and select the “Appropriation Type Code” section. In the section’s properties, in the data tab, on the sort pane, click the “Add a sort” dropdown and select “Appropriation Type Code”.



The "sort ascending" option is still the default. But if you click the icon you can switch to a descending order. Try clicking it now.

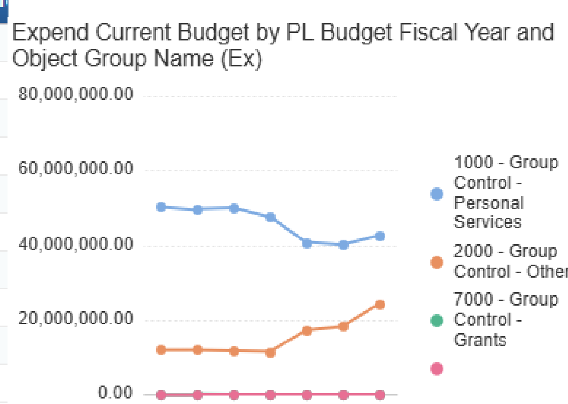


Observe that H017 is now at the top of the report.

Class 101 Edits:

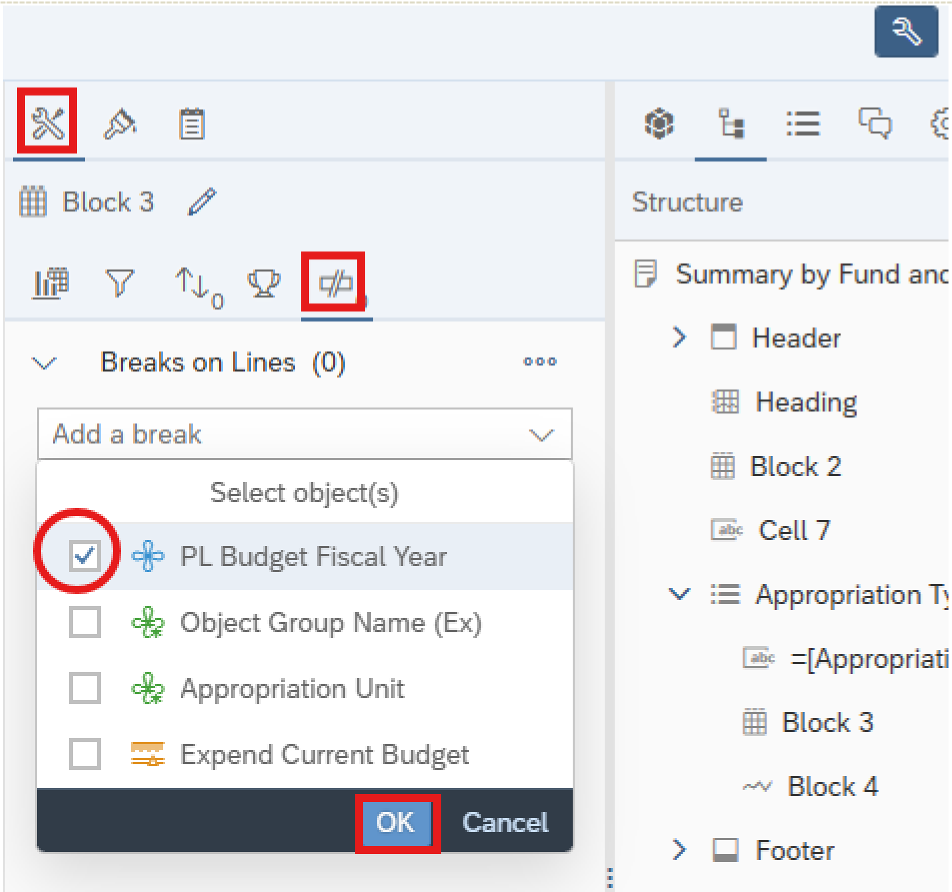
H017

PL Budget Fi	Object Grouן	Appropriatio	Expend Curr
2016	1000 - Group	062301501	515,000.00
2016	1000 - Group	062301503	#########
2016	1000 - Group	062301504	#########
2016	1000 - Group	062301505	#########
2016	1000 - Group	062301507	#########
2016	1000 - Group	062301511	703,600.00
2016	2000 - Group	062301501	116,000.00
2016	2000 - Group	062301503	#########
2016	2000 - Group	062301504	#########
2016	2000 - Group	062301505	#########



Breaks

Next we'll add a break to the table. Breaks group data based on the selected column's values and add subtotal rows within the table. Select the data table, and in its properties, in the data tab, select the breaks pane to see options for table breaks. In the “Add a break” dropdown, select “PL Budget Fiscal Year” and then click “OK”.



You’ll see the tables within each section are now broken up by Fiscal Year, with the measure column “Expend Current Budget” automatically producing a subtotal at the bottom of each break. Select the measure column, and in the formatting tab, in the layout pane, click “Autofit” next to Width so that you can see the total number more easily.

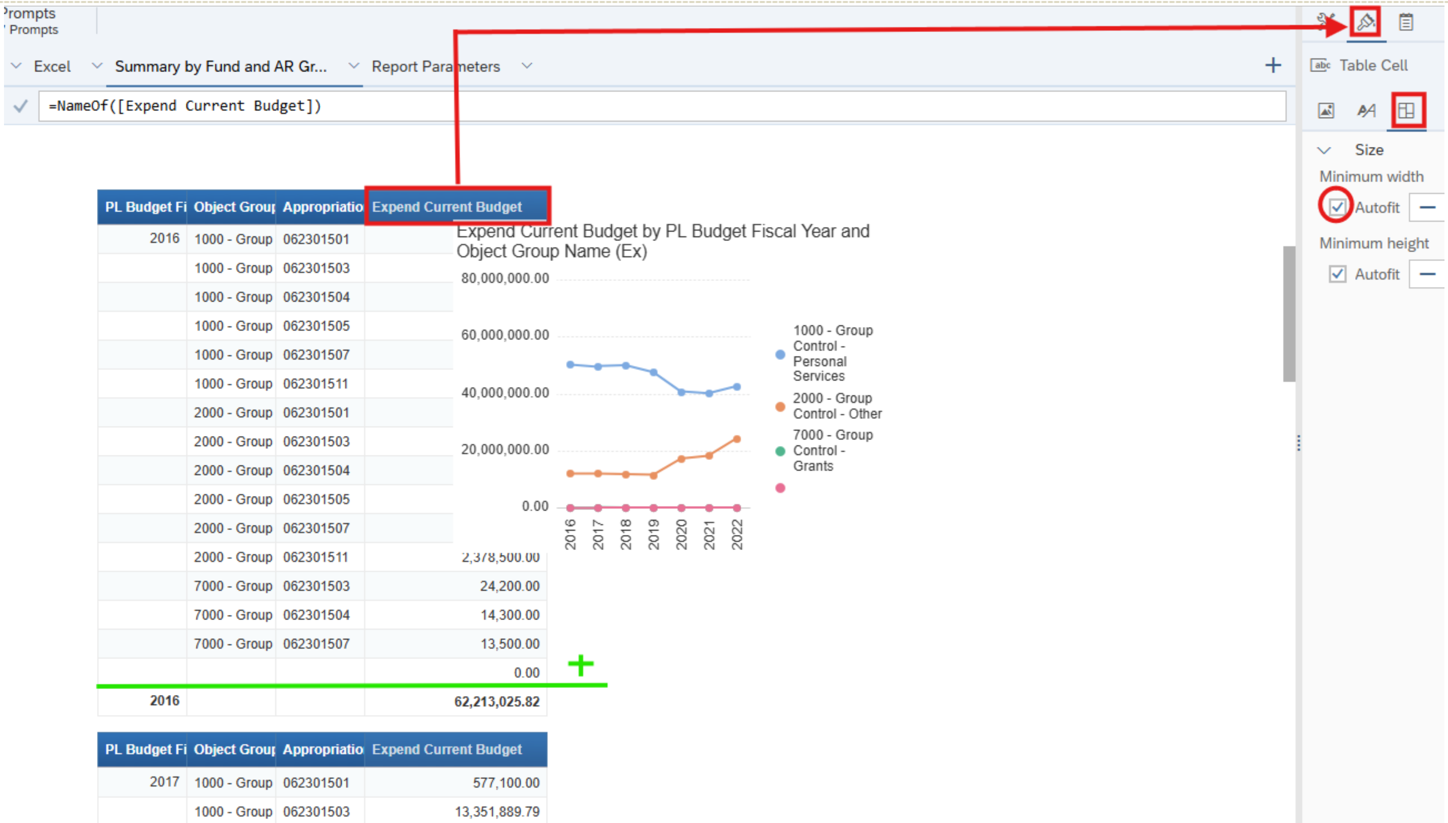
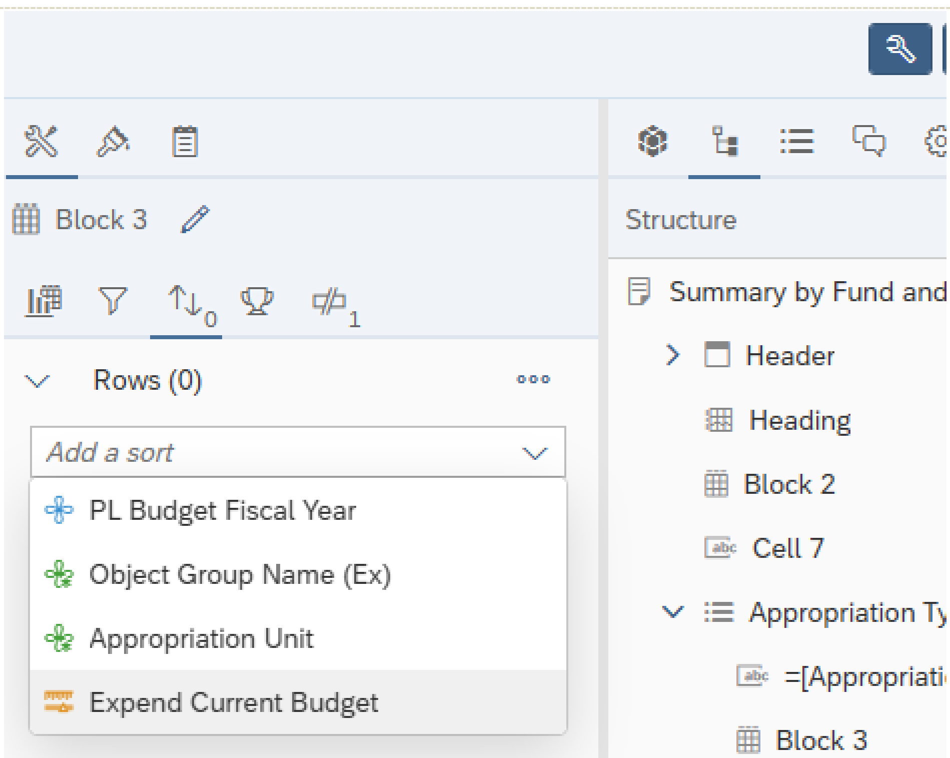
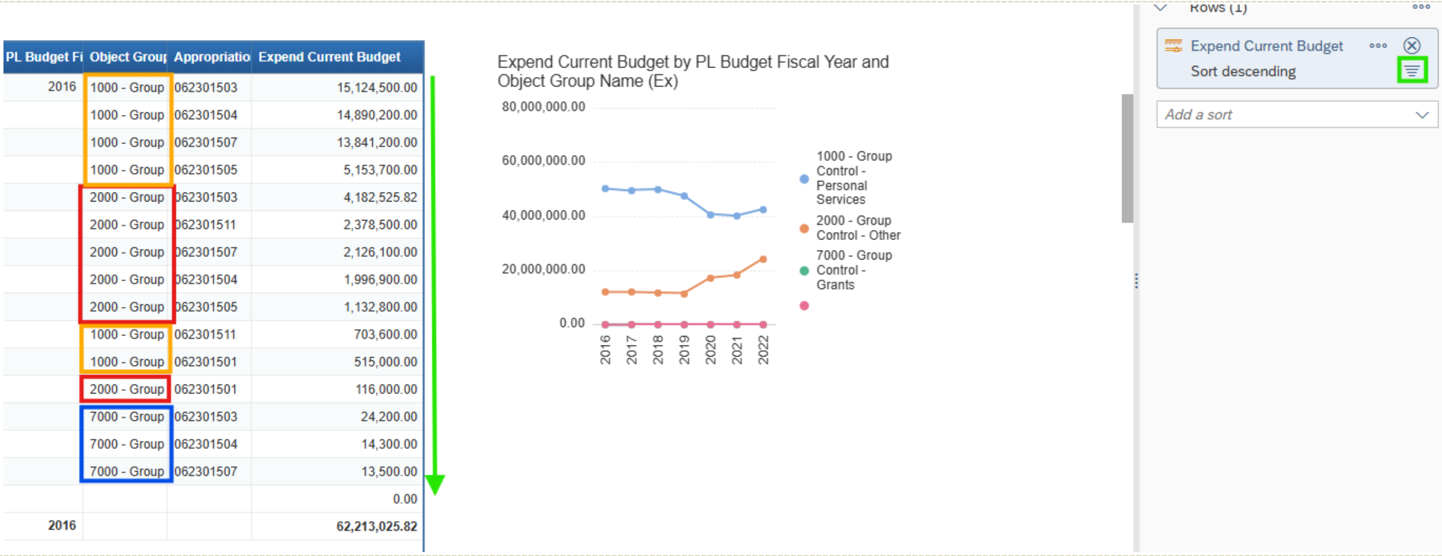


Table Sorts

Table sorts apply ascending, descending or custom sorts to specific columns within a data table. The data is then sorted based on the first column in which you applied a sort. In the table's properties, in the data tab, the sort pane, open the "Add a sort" dropdown and select "Expend Current Budget".



Click the icon so it sorts descending:

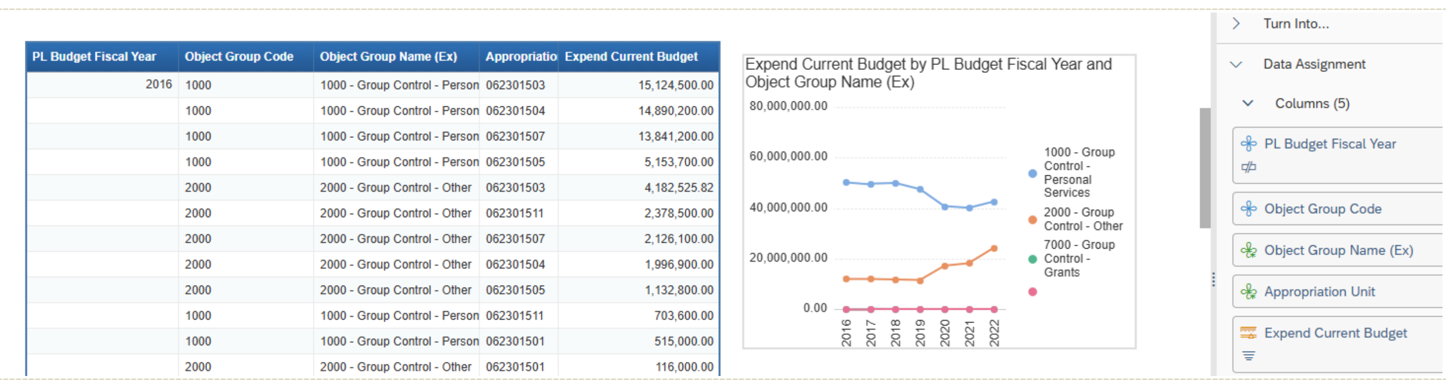


Notice that the object group and appropriation unit columns are no longer sorted in any order, since the only sort on the table is the “Expend Current Budget” column.

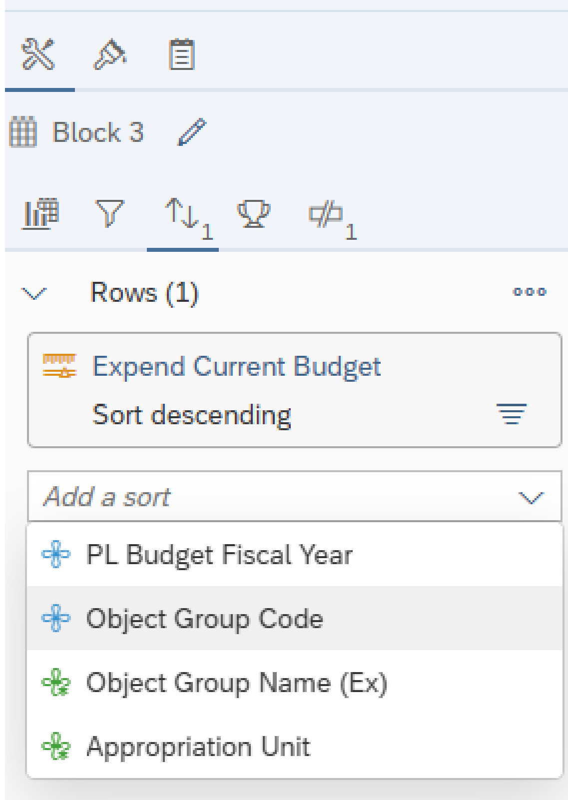
However, the Appropriation Unit sections are still grouped together and sorted descending. Within each section, the Fiscal Year breaks are grouped together and sorted ascending. Then within each break, the table is sorted descending on the “Expend Current Budget Column” with a subtotal at the bottom of the break.

Custom Sorts

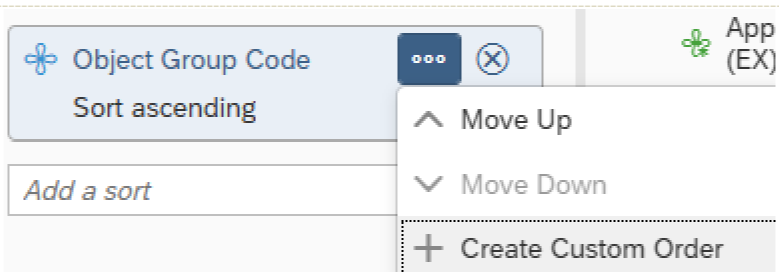
In addition to sorting in ascending or descending order, you can sort sections, breaks, and table sorts based on a custom order. Add the “Object Group Code” to the table just before the “Object Group Name (Ex)” column.



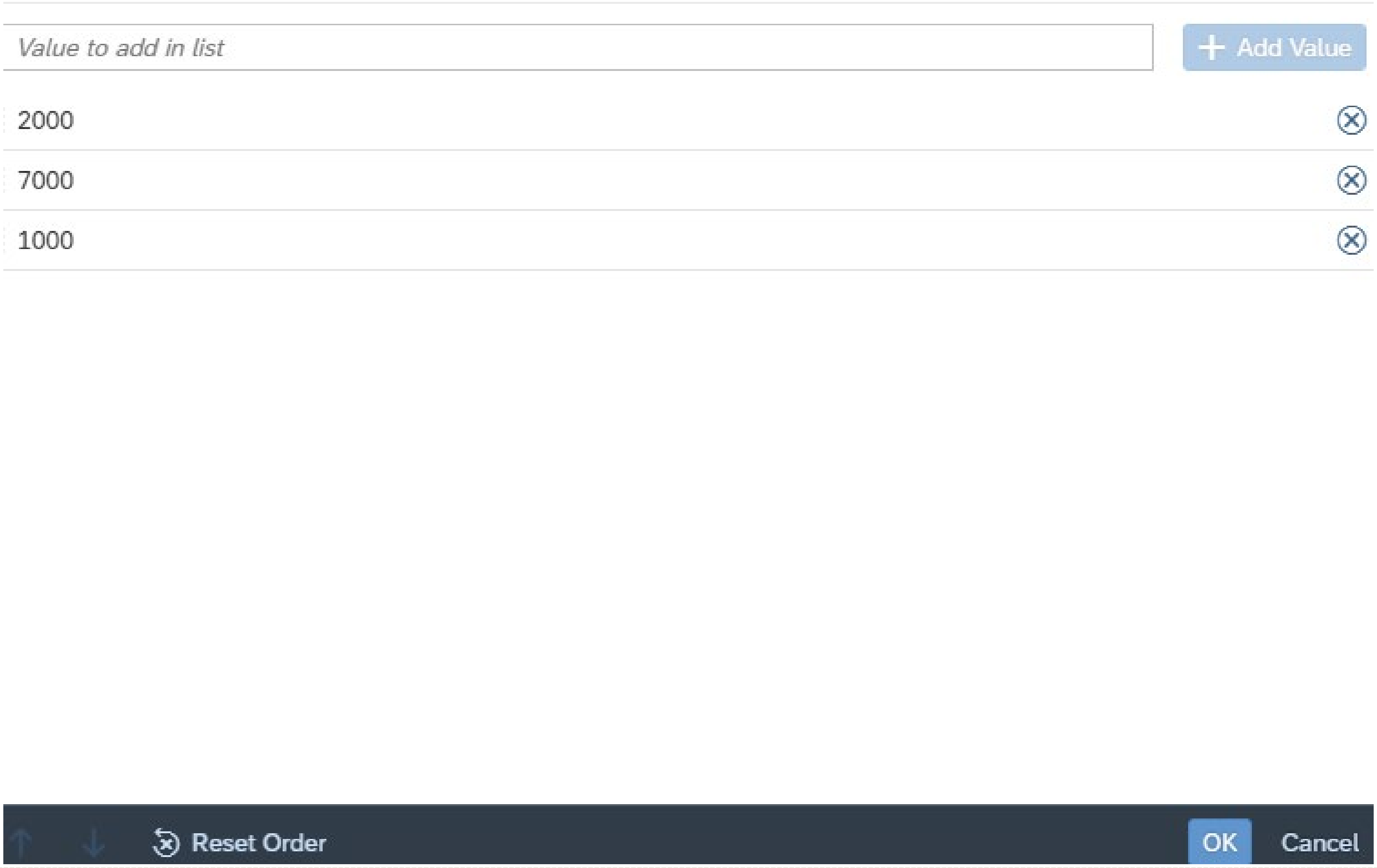
With the table selected, click the “Add a sort” dropdown again, and select “Object Group Code”



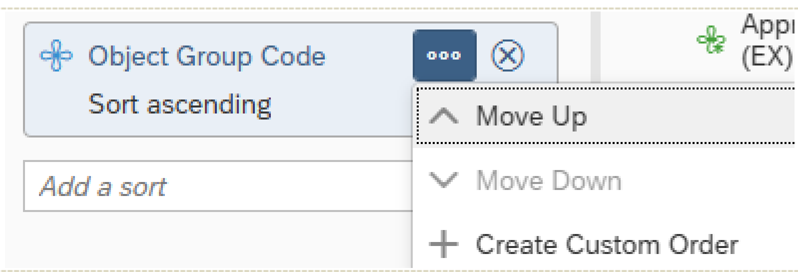
Click the more icon on the new sort and select “Create Custom Order”



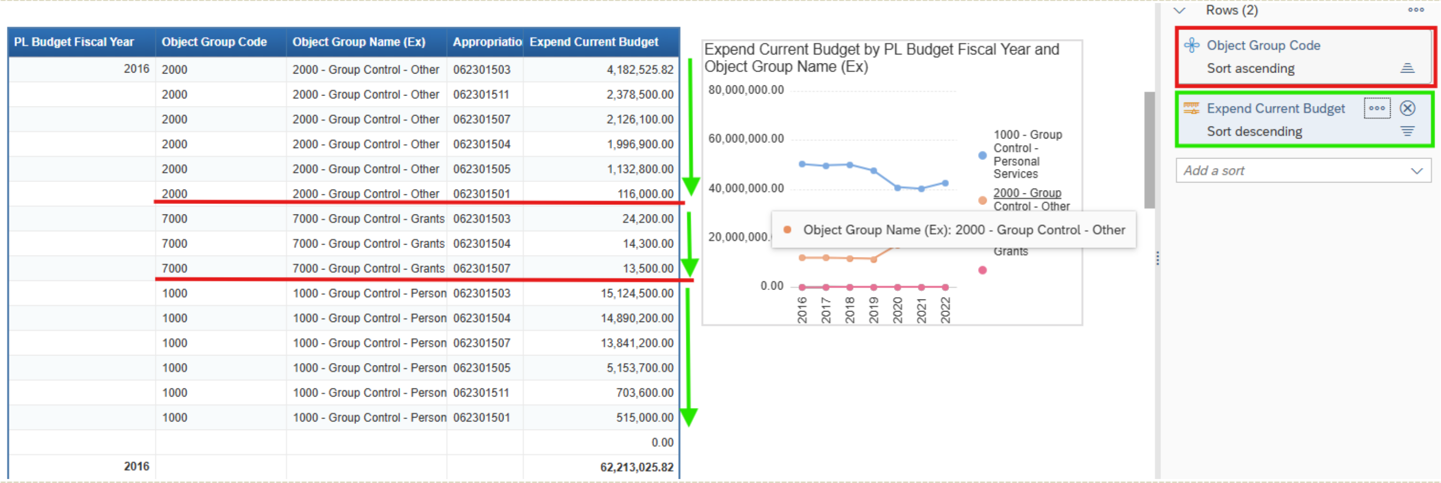
Add 1000, then 7000, then 2000 to the list. Then click “OK”



Click the more options icon again, and click "Move Up"



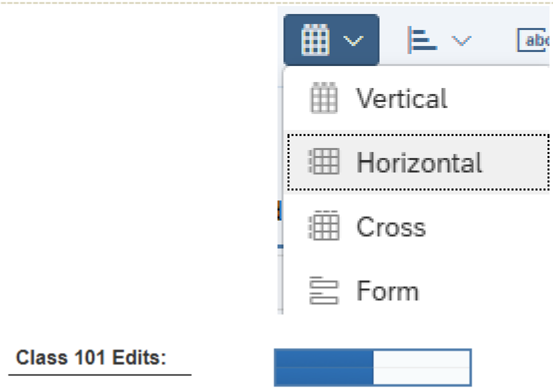
Observe that now the table is sorted according to the custom order that you set on the"Object Group Code", then by the "Expend Current Budget" column.



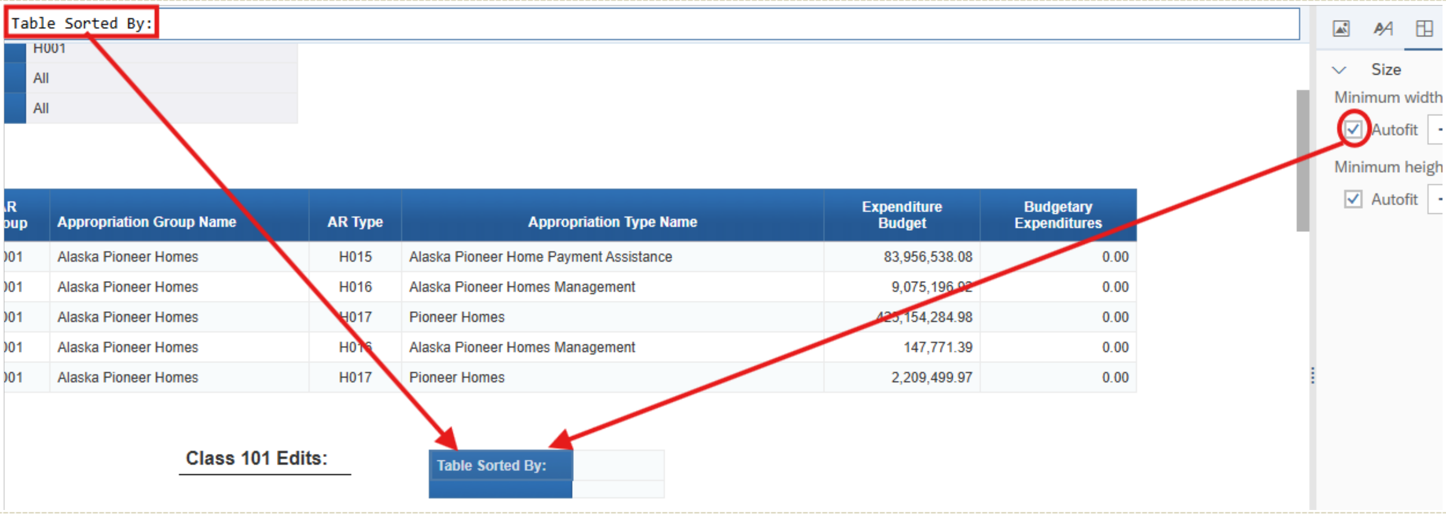
PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2016	2000	2000 - Group Control - Other	062301503	4,182,525.82
	2000	2000 - Group Control - Other	062301511	2,378,500.00
	2000	2000 - Group Control - Other	062301507	2,126,100.00
	2000	2000 - Group Control - Other	062301504	1,996,900.00
	2000	2000 - Group Control - Other	062301505	1,132,800.00
	2000	2000 - Group Control - Other	062301501	116,000.00
	7000	7000 - Group Control - Grants	062301503	24,200.00
	7000	7000 - Group Control - Grants	062301504	14,300.00
	7000	7000 - Group Control - Grants	062301507	13,500.00
	1000	1000 - Group Control - Person	062301503	15,124,500.00
	1000	1000 - Group Control - Person	062301504	14,890,200.00
	1000	1000 - Group Control - Person	062301507	13,841,200.00
	1000	1000 - Group Control - Person	062301505	5,153,700.00
	1000	1000 - Group Control - Person	062301511	703,600.00
	1000	1000 - Group Control - Person	062301501	515,000.00
				0.00
2016				62,213,025.82

Sort Annotation

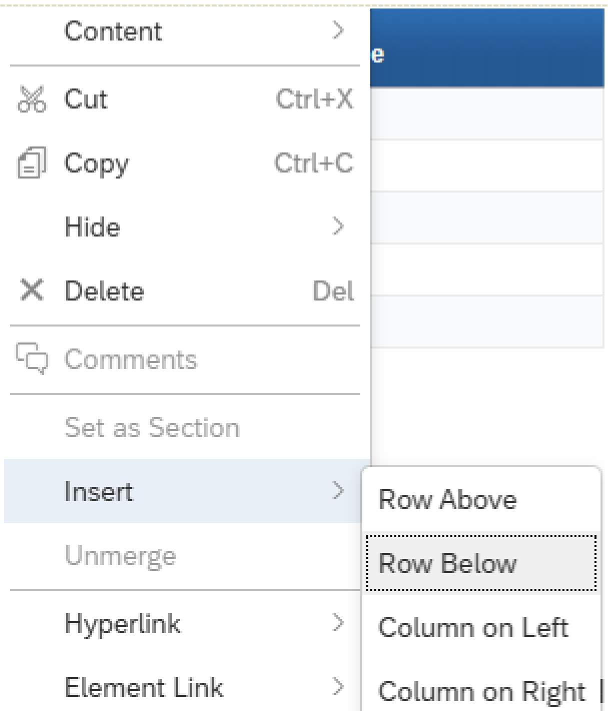
It is polite to other report-viewers to notify them when you have introduced custom sorting in an enterprise report. We will add that information into a header box. Insert a new "Horizontal" table just to the right of your "Class 101 Edits" text box



In the top left cell of the table, enter the text "Table Sorted By:". Set the width of the cell to "Autofit"



Select the bottom cell of the header table, right-click and select insert-> Row Below. Then insert another row, so there are four total rows in the table.



In the data column, set the width of the cells to autofit and enter the names of the sorted objects as follows:

Class 101 Edits:

Table Sorted By:	Appropriation Type Name
	PL budget Fiscal Year
	Object Group Code
	Expend Current Budget

If you are editing a table that already exists in an enterprise report, adding this information to the header table above the report is recommended for the benefit of any of the viewers of your report.

While not required, this is considered polite. Save the report as **BD0010 - Expenditure Budget and Actual With Chart, Section, Break, and Sort**.

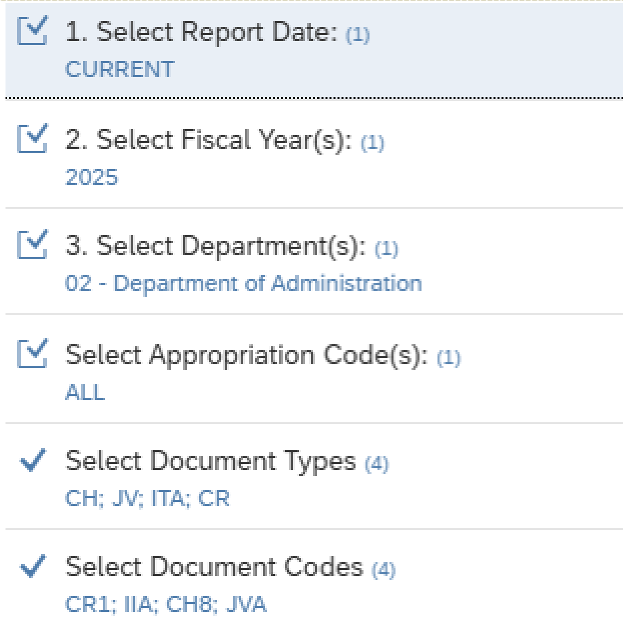
Review

1. In what order are sorts applied?
   a. Sections, table sorts, and then breaks
   b. Sections, breaks, and then table sorts
   c. Table sorts, ascending or descending, and then custom
   d. Breaks, table sorts, and then sections
2. True or false: You can take an existing column in a data table and turn it into a section.
   a. True
   b. False
3. Which of the following is **not** true about breaks?
   a. A break groups data on a column.
   b. Breaks can be added to more than one column at a time.
   c. After you add a break, a subtotal row is automatically added to the table.
   d. You cannot sort a break.
4. Which of the following are true about table sorts?
   a. You can add table sorts on multiple columns at a time.
   b. You can adjust the table sort’s column order.
   c. Both a and b
   d. None of the above
5. What is a custom sort?
   a. A specific order created by you that determines the order data is displayed
   b. An option to the report viewer to enable or disable the sort
   c. Whenever ALDER sets an automatic order on a column
   d. When you name a column “custom” and then sort on that column

Exercise

While working for the Department of Administration, your supervisor has asked for a detailed transaction report showing posting-level data for FY 2025 CR1, IIA, CH8, and JVA documents. You've been asked to make it easy to jump between transaction codes in the navigation map, and to make sure each transaction's accounting and posting lines are grouped together.

Make a copy of the **GA0010 – Detail Transaction** found in *Public Folders / Enterprise / Financial (IRIS) / General Accounting (GA)* folder. Copy it to your *Class Exercises* folder and rename it **Chapter 5 Exercise**. Refresh it with the following prompts:



Add "PL Transaction Code" to the table, then set that column as a section. Add a break on "PL Transaction (FQ Most Recent version)", and then sort the table by

1. PL Document Accounting Line Number (ascending)
2. PL Document Posting Line Number (ascending)
3. PL Account Code (descending)

Add a note to the header table about how the data is sorted.

If successful, the report should look like this:

Chapter 5 Exercise

Report Name	GA0010 - Detail Transaction
Report User	jlrobinson_admin
Report Date	6/2/2020
Selected Department Codes	02
Selected Fiscal Years	2020
Selected AR Code(s)	All
Report Sorted By:	PL Document Code
	PL Document (FQ Most Recent Version)
	PL Document Accounting Line Number
	PL Account Code

CH8

PL Document (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code	Fund Name	PL Account Code	PL Account Name	Unit Code	PL	Posting Amount
CH8-02-190029380-1	1	TAPRC 190023457	021168001	1004	General Fund	1498	Prepaid Expense	1600	1	-552.00
	1	TAPRC 190023457	021168001	1004	General Fund	1000	Treasurer's Cash	1600	1	552.00
	2	TAPRC 190023457	021168001	1004	General Fund	3104	Reserve For Encumbrance	1600	1	552.00
	2	TAPRC 190023457	021168001	1004	General Fund	2003	In-State Employee Meals and Ir	1600	1	-552.00
	2	TAPRC 190023457	021168001	1004	General Fund	2003	In-State Employee Meals and Ir	1600	2	552.00
	2	TAPRC 190023457	021168001	1004	General Fund	1000	Treasurer's Cash	1600	2	-552.00
CH8-02-190029380-1										**0.00**

PL Document (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code	Fund Name	PL Account Code	PL Account Name	Unit Code	PL	Posting Amount
CH8-02-200000008-2	1	ACH Direct Deposits For Risk N	021057405	1004	General Fund	3011	Insurance Claims	0500	1	83,448.10
	1	ACH Direct Deposits For Risk N	021057405	1004	General Fund	1000	Treasurer's Cash	0500	1	-83,448.10
	2	ACH Direct Deposits for Risk M	029991004	1004	General Fund	2681	Pending Wire Transfers Risk Ma	0500	1	-83,448.10
	2	ACH Direct Deposits for Risk M	029991004	1004	General Fund	1000	Treasurer's Cash	0500	1	83,448.10
CH8-02-200000008-2										**0.00**

PL Document (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code	Fund Name	PL Account Code	PL Account Name	Unit Code	PL	Posting Amount
CH8-02-200000015-1	1	PERS Empower Contribution Ti	029991017	1004	General Fund	2019	Accrued Payable	8010	1	345,442.71

Save the report as **Chapter 5 Exercise** to your *Class Exercises* folder.

CHAPTER 6: Formulas and Variables

Goals and Objectives

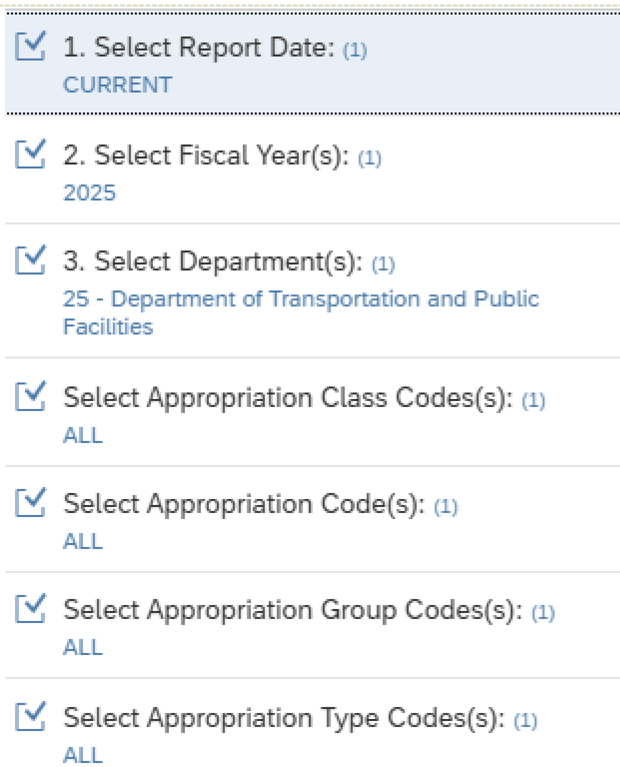
After you complete this chapter, you will be able to:

- Create simple formulas
- Use objects in formulas
- Use functions in formulas
- Turn formulas into variables
- Create variables directly
- Use the "If" function

Formulas

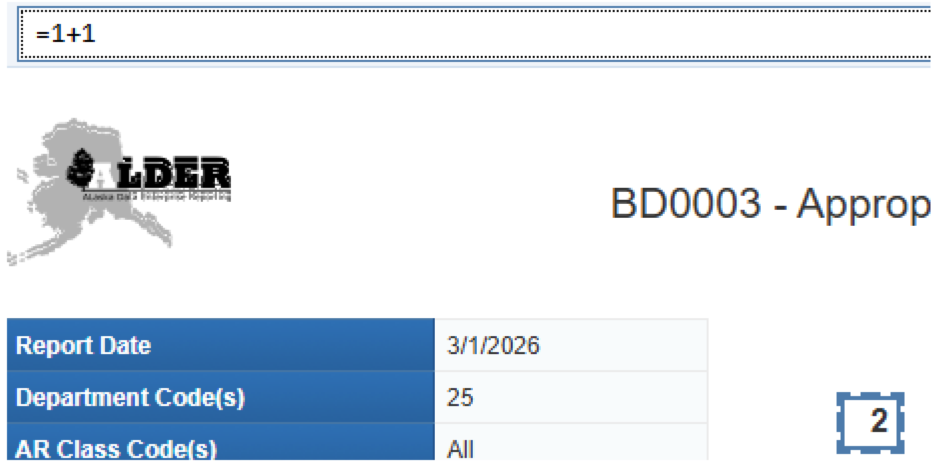
Formulas in ALDER can perform mathematical computation, manipulate strings, or display information about a document. If you already know the formula you want to create, you can type it into the formula toolbar directly. If you are not sure how to make the formula, you can open the formula editor to open the formula wizard.

Find the **BD0003 – Appropriation with budget** report in *Public Folders / Enterprise (IRIS) / Budget (BD)* and copy it to your *Class ALDER 101* folder. Refresh it with the following prompts:



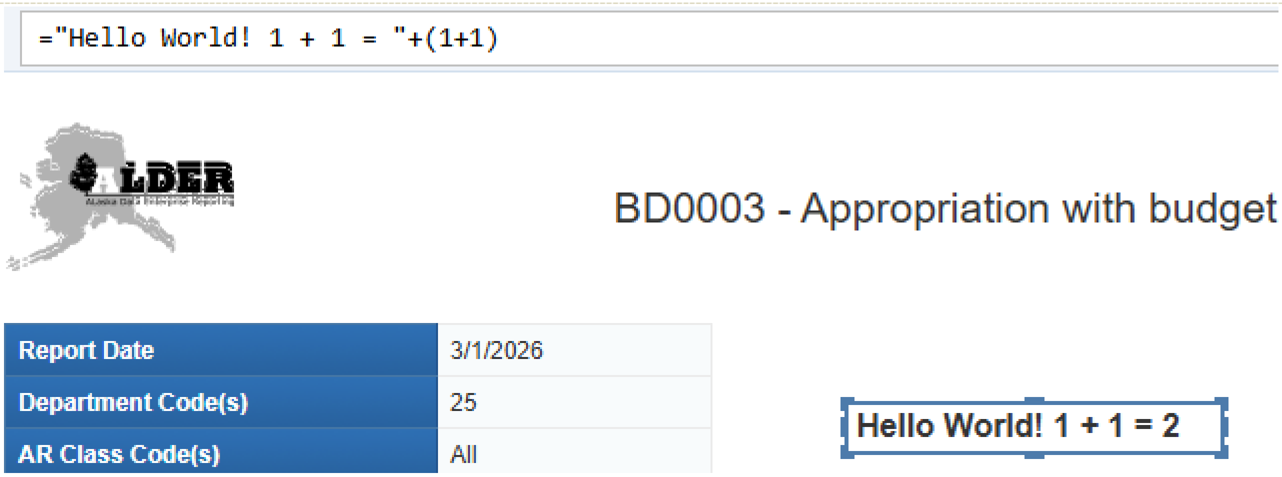
Simple Formulas

Add a blank cell to the report next to the header table and set the cell's width to auto-fit. In the formula toolbar, type "=1+1".



Notice that the formula toolbar continues to display “=1+1” while the cell in the report itself displays the answer “2”.

Now type the formula “="Hello World! 1 + 1 = "+(1+1)”

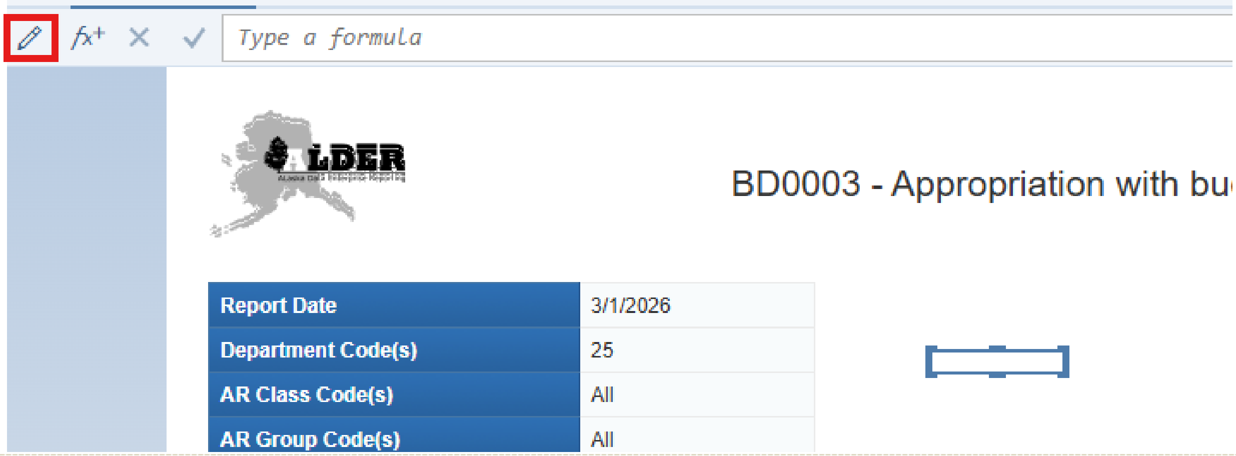


Notice that all the text that is enquoted in the formula bar, “Hello World! 1 + 1 = “, is displayed exactly as typed in the cell, and 1 + 1 displays as 1 + 1, instead of as 2. Meanwhile, the math formula which is not enquoted “(1+1)” at the end of the formula is processed like the math calculation from before, and displays as “2” instead of as “1+1”.

In general: If you want to display text in a formula, make sure to surround the text in quotes. Use the “+” operator to concatenate strings of text with numbers, dates, or values from functions.

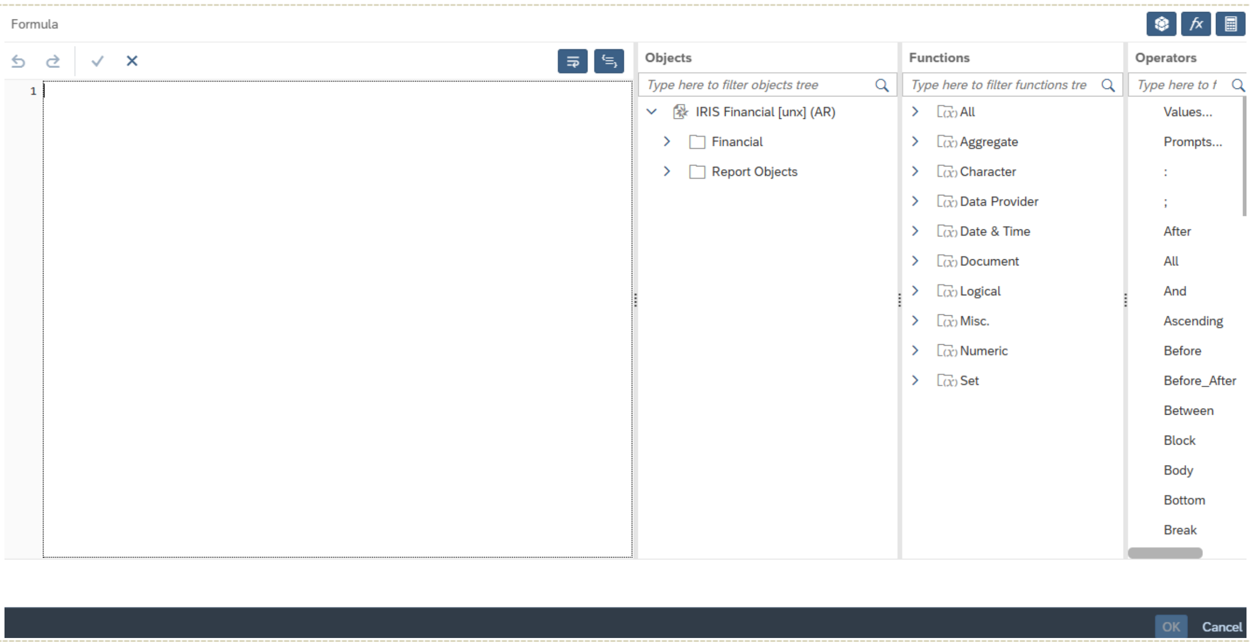
Using Objects in Formulas

Delete the cell you created in the previous section, and add another blank cell to the report next to the header table. With the cell selected, click the Edit icon in the top left to open the editor.

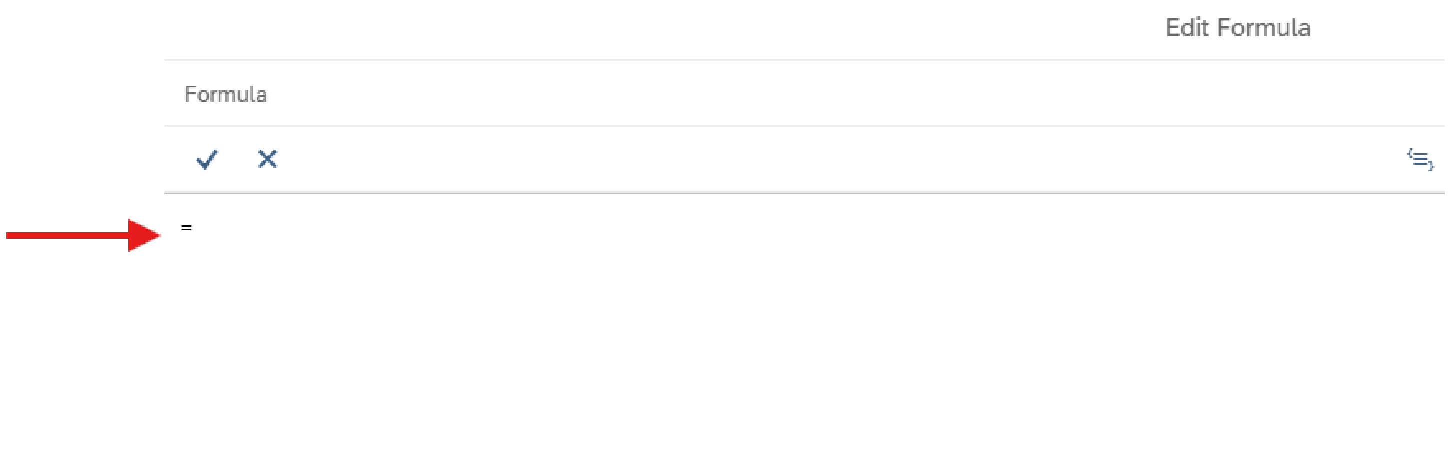


In the "Edit Formula" wizard, there are four panels (ordered from left-to-right):

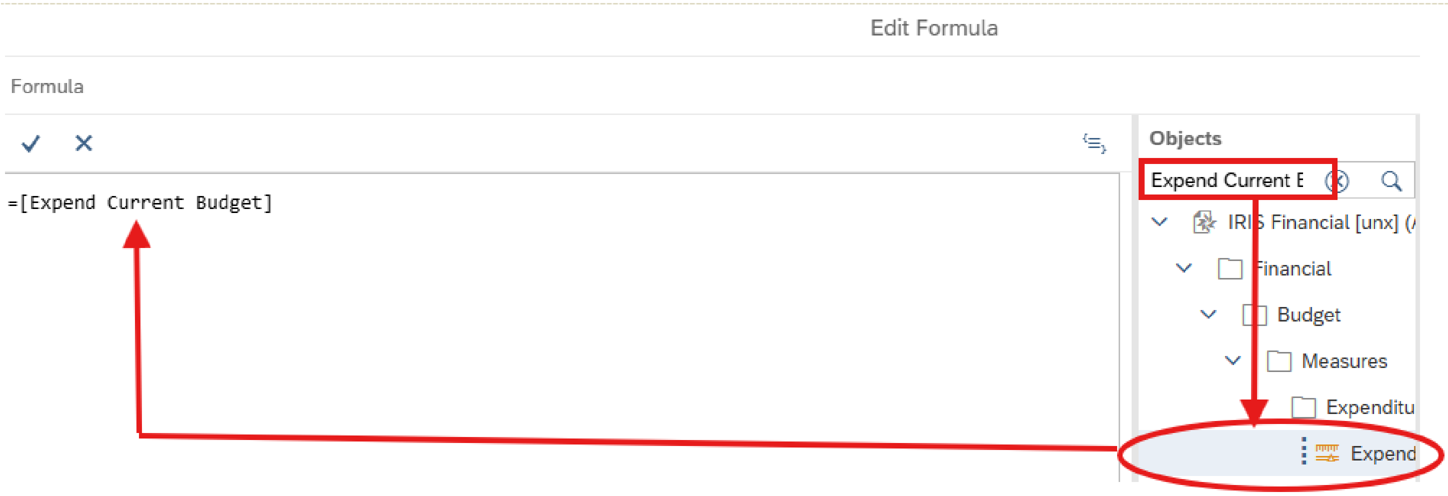
- The Formula Panel
- The Objects Panel
- The Functions Panel
- The Operators Panel



Let's calculate a formula that will display the difference between expenditure budget and revenue budget. In the Formula panel, type an "=" (all formulas should begin with that).

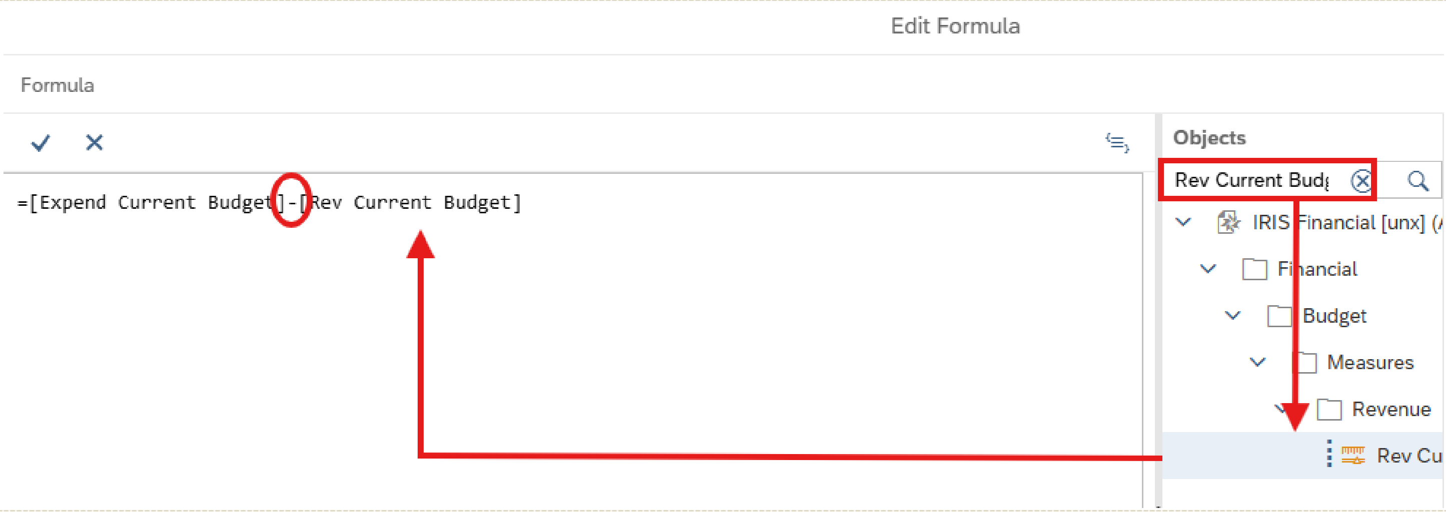


Then in the Objects panel, search for "Expend Current Budget. Double click the measure and it will automatically add to the formula.

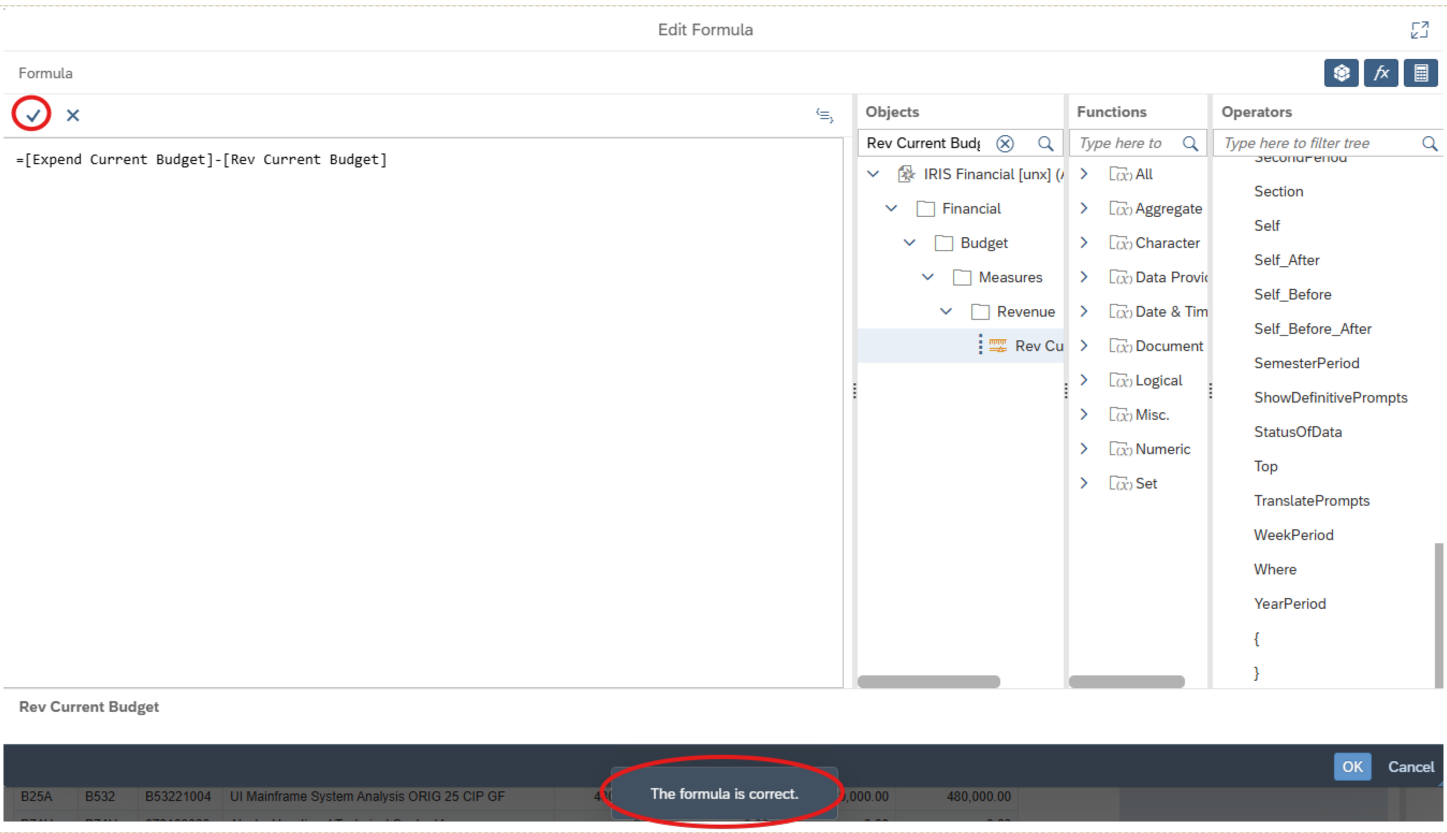


Notice that the name of the object is surrounded by square brackets. **In general**, to reference an object in a formula, simply type its name and surround the name in the square brackets.

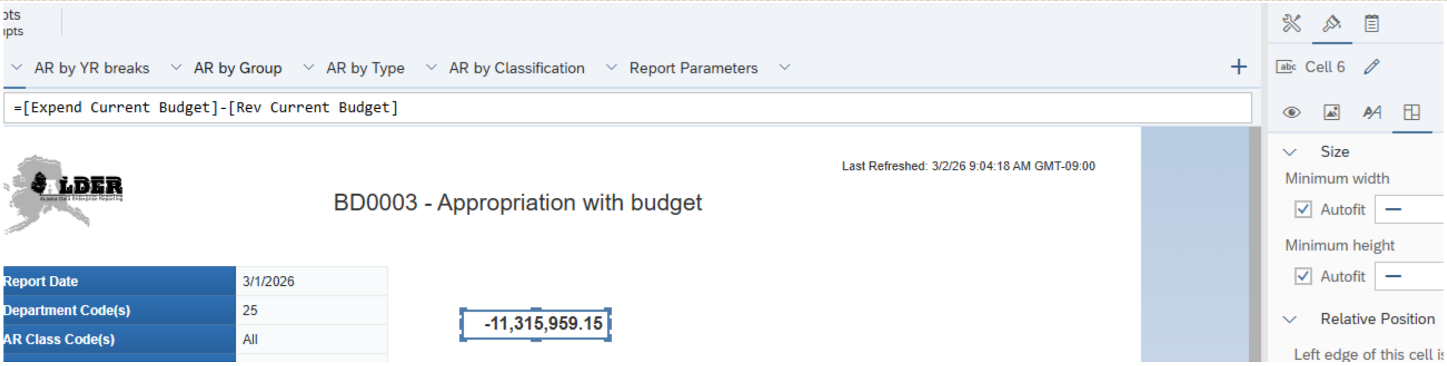
Type a minus sign "-" in the formula after the object reference, then in the objects panel search for "Rev Current Budget". Double-click the measure (or drag it to the Formula panel) to add it to the formula.



Above the Formula text box, click the "Validate" button. This will double-check the formula that you entered to make sure it is syntactically valid. If it is, you will see a popup that says "The formula is correct".

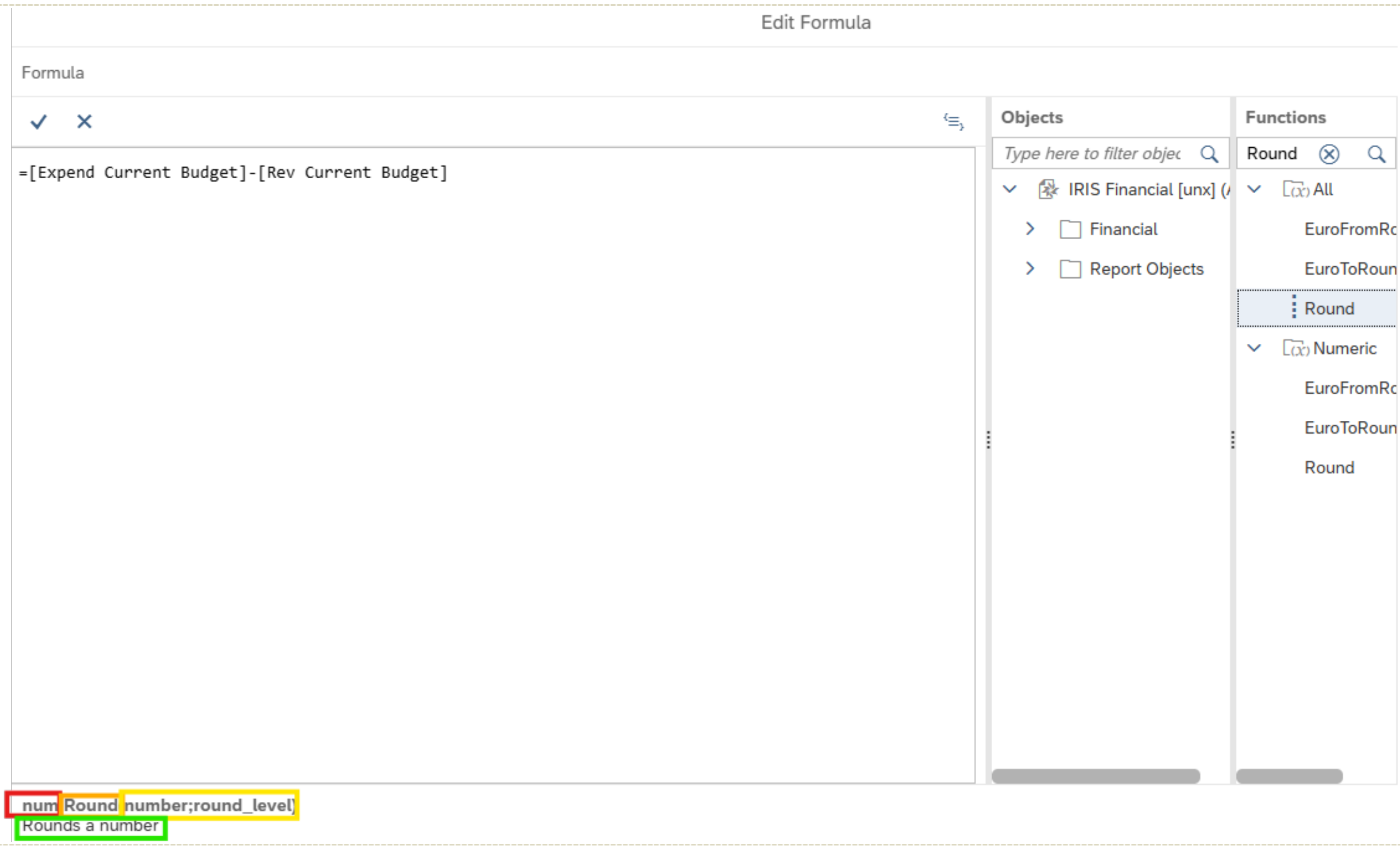


Click "OK" at the bottom of the Edit Formula popup to add the formula to the cell. Set the cell's width to autofit so you can see the number displayed.



Using Functions in Formulas

Let's try adjusting the formula so that the number is rounded to the nearest $1,000. With the cell selected, click the Edit icon to open the Edit Formula popup again. In the "Functions" panel, search for the function "Round". Click on it and you will see a description of the function at the bottom of the popup.

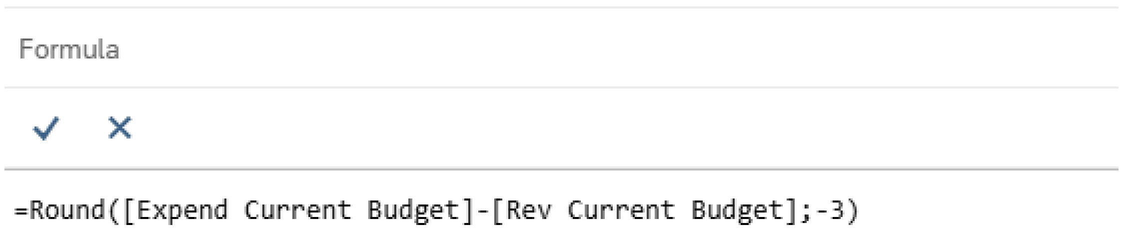


In the above screenshot,

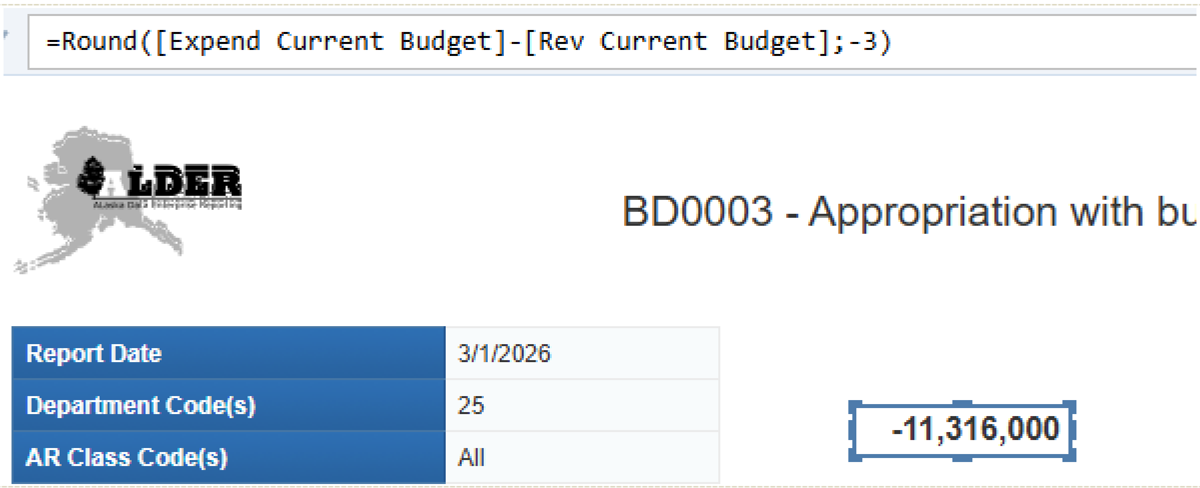
- "num" (in the red box) is the "return type" of the function. This function returns a number (as opposed to a date or an alpha-numeric string of text).
- "Round" (in the orange box) is the name of the function.
- "(number;round_level)" (in the yellow box) are the "parameters" of the function. When a function has more than one parameter, they are separated by a semi-colon ";". This function has two parameters, named "number" and "round_level", respectively.

- “Rounds a number” (in the green box) is a description of what the function does.

Putting that all together: The “Round” function takes a number as its first parameter, and rounds it according to the round level set by the second parameter, and displays the rounded result. Rewrite the formula in the formula bar so that it says “=Round([Expend Current Budget]-[Rev Current Budget];-3)”



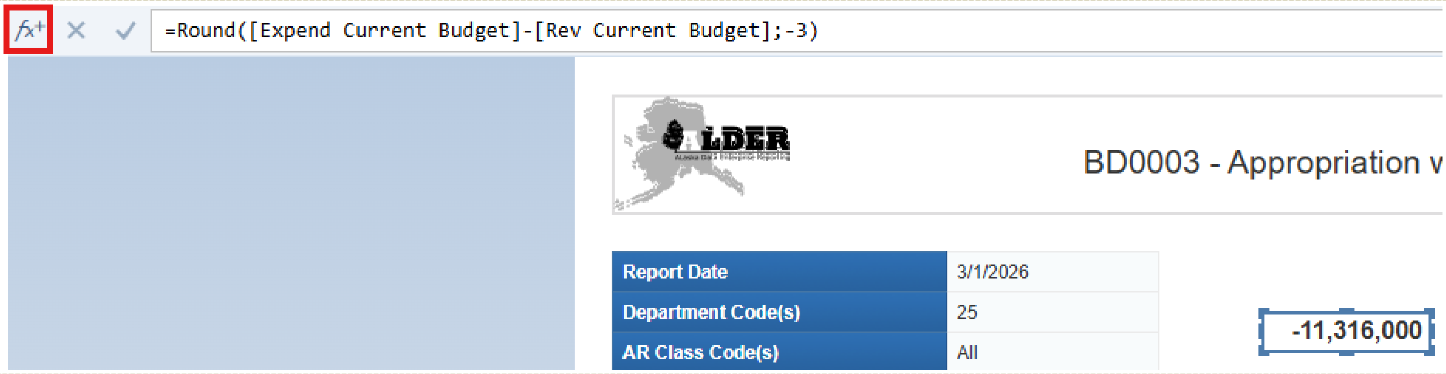
Our new formula passes the object expression “[Expend Current Budget]-[Rev Current Budget]” to the “Round” function as the first parameter (the number to be rounded), and rounds that number 3 digits before the decimal (or, to put it another way, it rounds -3 digits “after” the decimal). Click “OK” and your cell should update to round to the nearest thousand.



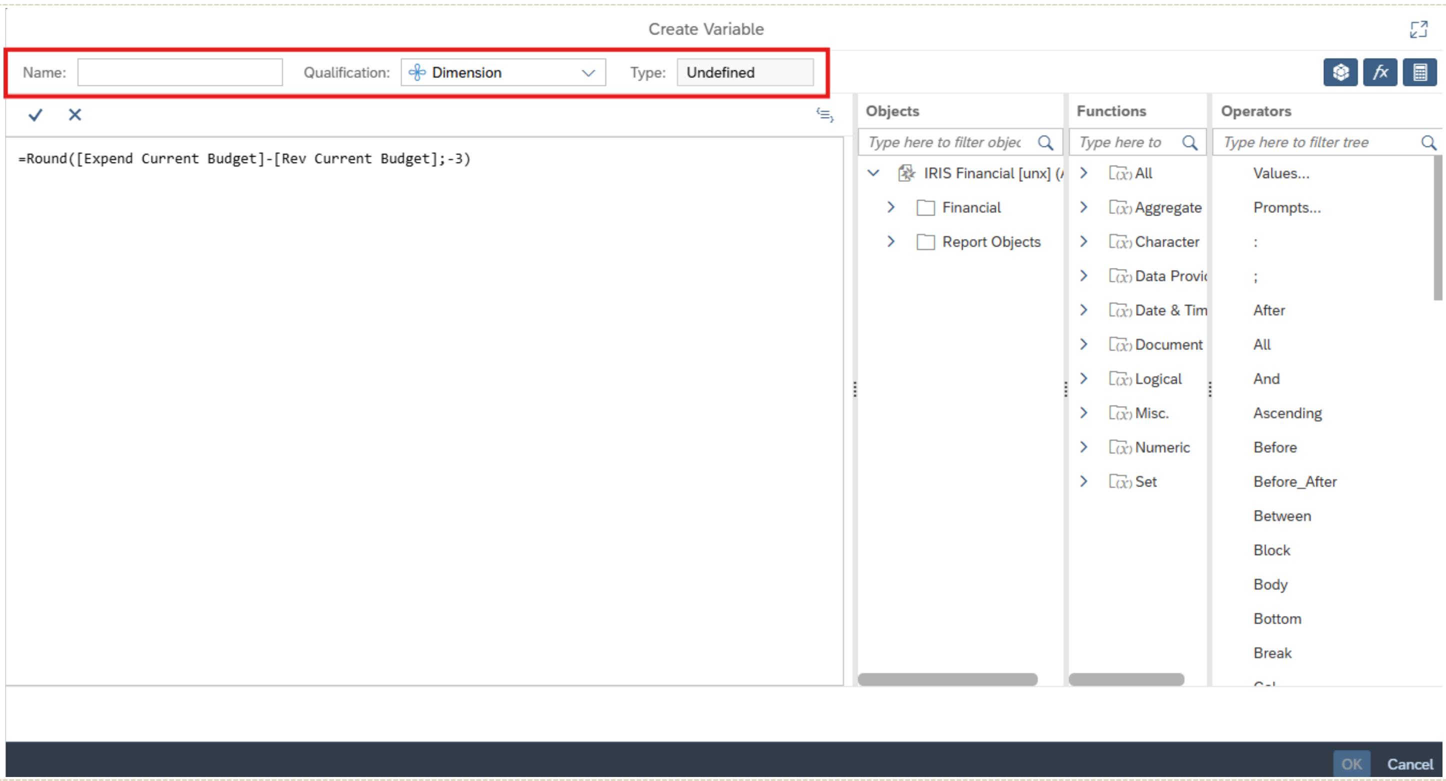
Variables

Converting a Formula to a Variable

Now that you have a formula, you can turn that formula into a variable to reuse it in other parts of a report. To create a variable, with the cell highlighted, click the Create Variable icon fx^+ in the formula toolbar.

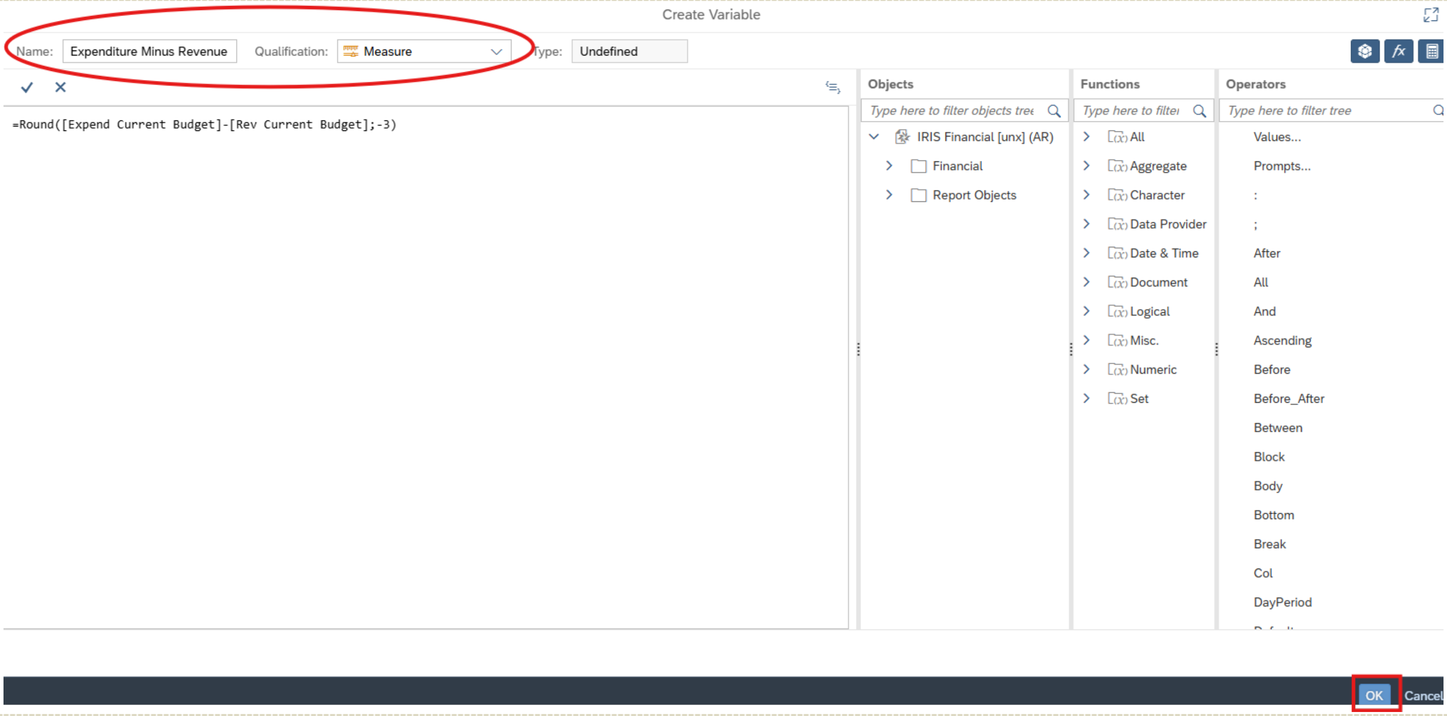


The “Create Variable” popup wizard will open. You’ll see this popup is very similar to the “Edit Formula” popup from before. The only difference are the additional fields “Name”, “Qualification”, and “Type” at the top.

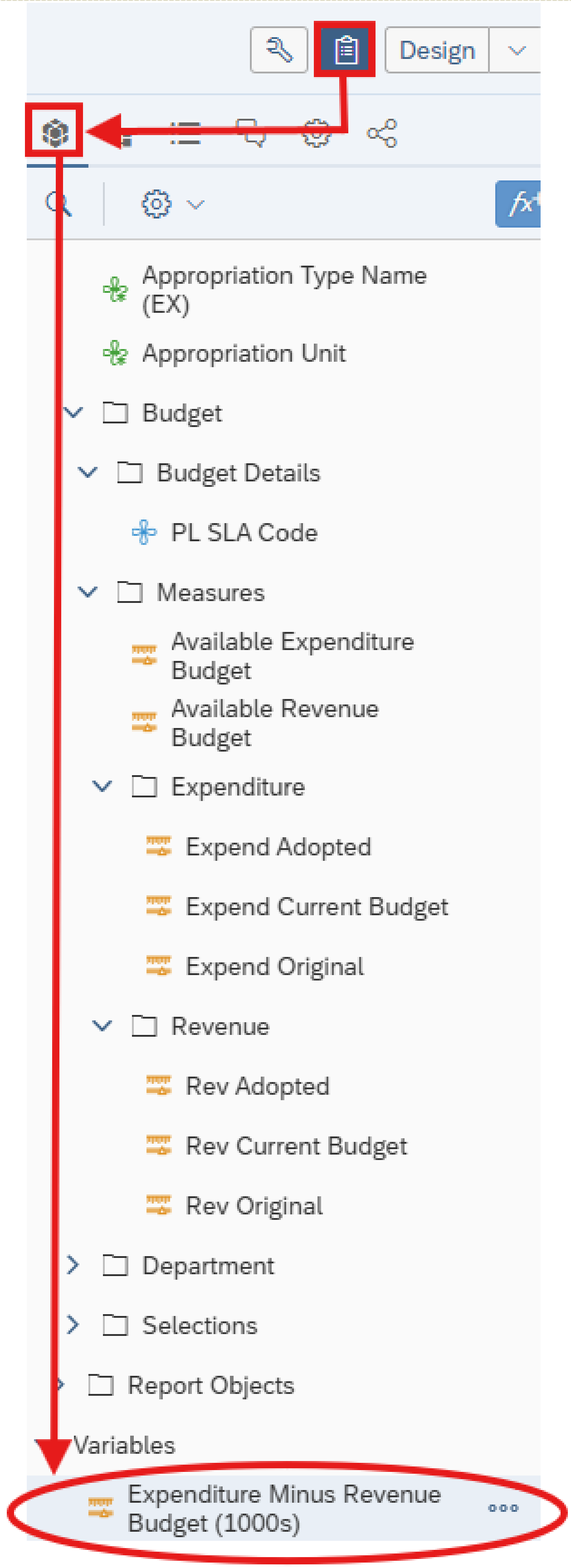


- Name – The name of the formula that will display in the Available Objects panel.
- Qualification – The variable can be a Dimension, Attribute, or Measure. In general, if you want the variable to re-calculate an aggregate from an entire data set (including filters), choose Measure. If you want the variable to add additional detail to the dataset without re-calculating its value based on filters, choose Dimension.
- Type – ALDER will automatically infer the “type” of the variable (numeric, string, date, etc.). You don’t need to do anything with this field as it is display-only.

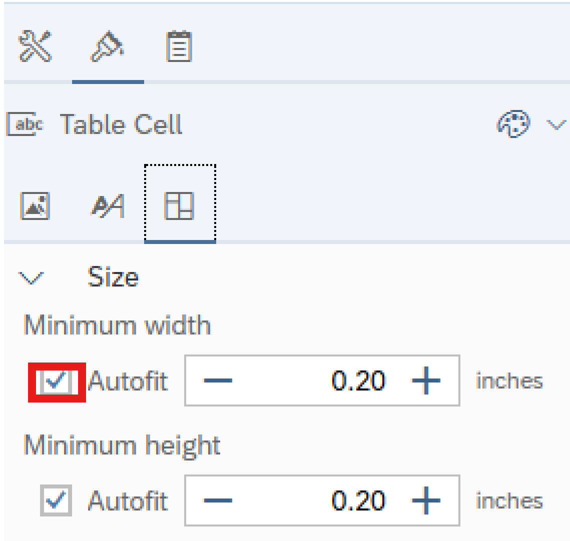
Name the variable “Expenditure Minus Revenue Budget (1000s)” and choose the Measure Qualification. Then click “OK”.

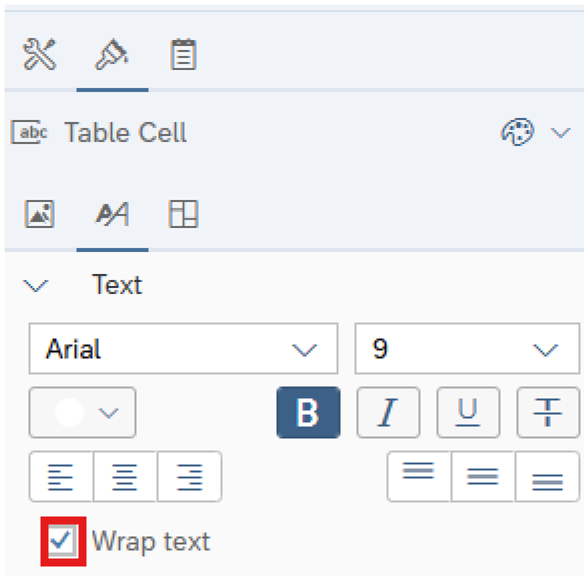


In the main panel's available objects tab , you should now see your new variable at the bottom in the "Variables" section.



This variable can now be used the same way you would use any other object in a report. Try adding the new variable to the document in the data table just before the “Expenditure” column. Select the new header and set its width to autofit and enable “Wrap text” to make it a little easier to see.





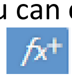
Report Date	3/1/2026
Department Code(s)	25
AR Class Code(s)	All
AR Group Code(s)	All
AR Type Code(s)	All
AR Code(s)	All

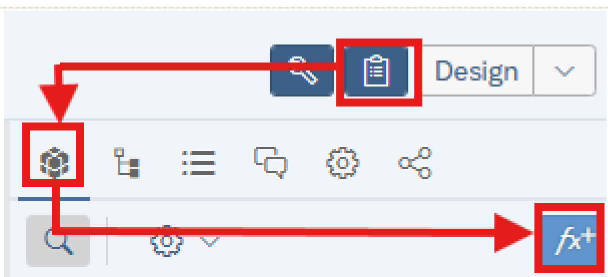
-11,316,000

Fiscal Year 2025

AR Group	AR Type	AR Unit	Appropriation Name	Expenditure Minus Revenue Budget (1000s)	Expenditure	Revenue	Expenditure	Rever
					Current Budget			
T002	T02A	T02A01004	Commissioner's Office GF	0	922,300.00	922,300.00	216.34	916
T002	T02A	T02A01007	Commissioner's Office IA	0	45,000.00	45,000.00	39,063.68	39
T002	T02A	T02A01026	Commissioner's Office HEWCF	0	74,600.00	74,600.00	0.11	74
T002	T02A	T02A01027	Commissioner's Office IARF	0	233,800.00	233,800.00	2.97	219
T002	T02A	T02A01061	Commissioner's Office CIP IA	0	2,167,900.00	2,167,900.00	408,140.22	435
T002	T02A	T02A01076	Commissioner's Office MHSF	0	267,000.00	267,000.00	82.34	267
T002	T02A	T02A01244	Commissioner's Office AirptLease RALR	0	53,200.00	53,200.00	705.66	
T002	T02A	T02A01ALL	Front End Split Allocation - OOC	0	0.00	0.00	-340.00	
T002	T02A	T02A0P061	Commissioner's Office Allocated Payroll CIP IA	0	130,505.07	130,505.07	-63,600.00	-112
T002	T02B	T02B01004	Contract & Appeals GF	0	56,800.00	56,800.00	94.78	56

Creating a Variable Directly

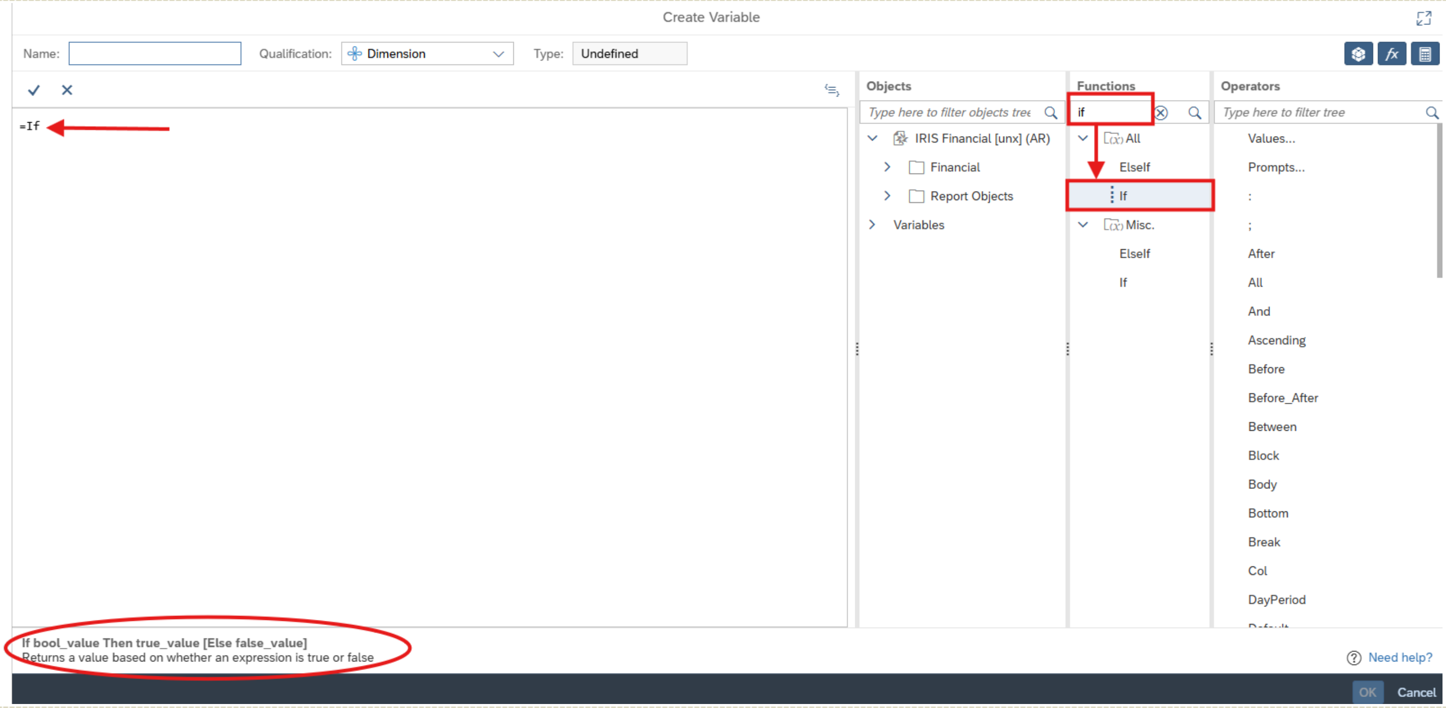
You can create a variable directly without first creating a formula by clicking the Create Variable button  in the Available Objects panel.



This brings up the same "Create Variable" popup wizard you saw before.

Conditional Formulas

Conditional formulas are powerful tools for creating insightful reports. With the "Create Variable" wizard open, we'll add a conditional formula using the "If" function. Search for "if" in the Functions panel and double click "If" to add it to the formula panel.

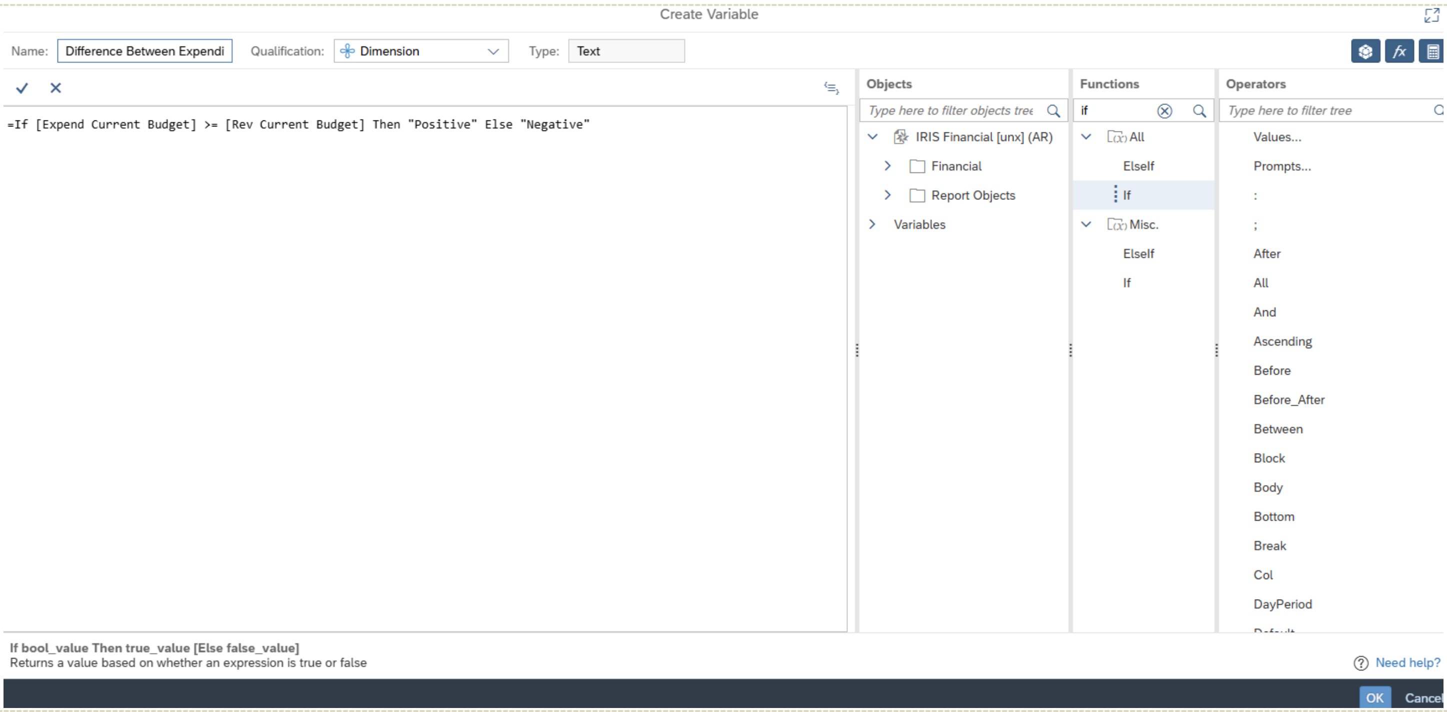


Notice the description at the bottom of the popup.

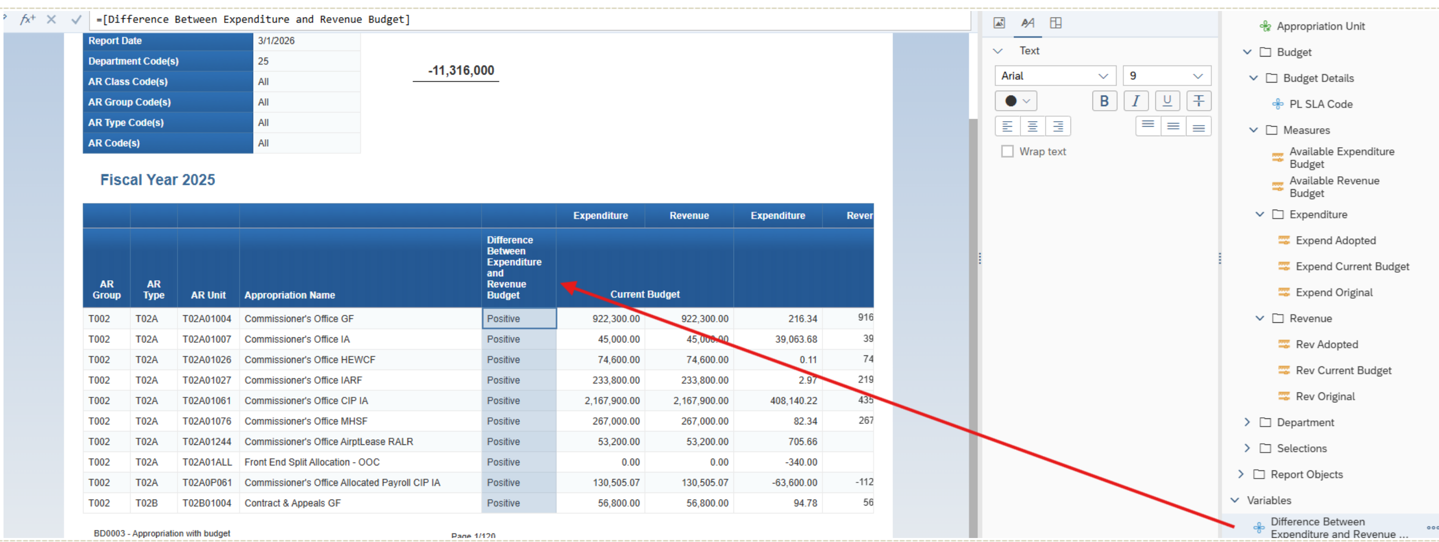
- If – The name of the function
- bool_value – Any expression which is either true or false
- Then – Another function, which will be added later in this section. Then displays a value when the bool_value condition is true
- true_value – The expression to display when the bool_value condition is true
- [Else …] – Another function which will be added later in this section. Else displays a value when the bool_value condition is false.
- [… false_value] – The value to display when the bool_value is false.

Notice that [Else false_value] is enclosed in square brackets. **In general**, square brackets denote optional parameters or optional functions. In this case, the part of the If function denoted “Else false_value” is optional.

We’ll use this to create a nicer display that shows “Positive” when the expenditure budget is greater than the revenue budget, and “Negative” when the revenue budget is greater than the expenditure budget. Type the following into the formula box: “=If [Expend Current Budget] >= [Rev Current Budget] Then "Positive" Else "Negative"”. Name the variable “Difference Between Expenditure and Revenue Budget” and click OK.



Replace the “Expenditure Minus Revenue Budget (1000s)” column with the new variable you just created.



This column now easily allows the viewer to tell which appropriations have a revenue budget greater than the expenditure budget, as the column will say “Negative” whenever this happens.

TZ2F	TZ2L	2512SEW75	Seward Highway - Milepost 75-90 Bridge Replacements	Negative	-3,903,207.76	-2,903,207.76

Save the report as **BD0003 – Appropriation with budget With Variables** to your *Class ALDER 101* folder.

Review

1. What does every formula begin with?

   a. ;

   b. =

   c. formula

   d. .

2. How do you reference an object in a formula without using the formula editor?

   a. Type the name of the object, surrounded by double-quotes

   b. Look at the data table to identify the object’s value, then type that value into the formula

   c. Type the name of the object, surrounded by square brackets

   d. None of the above

3. What are the names of the “Round” function’s parameters?

   a. Num and round

   b. Rounds a number

   c. Round_level

   d. Number and round_level

4. Why would you turn a formula into a variable?

   a. Formulas must be turned into variables to be used in reports

   b. To reuse the formula in multiple places in a report

   c. To use the formula editor

   d. All of the above

5. True or false: When creating a variable directly, you begin by typing the variable’s formula into the formula toolbar.

   a. True

   b. False

6. What are the names of the functions in the Functions panel that you use to create a conditional formula?

   a. If, Then, Else

   b. If, ElseIf, Return

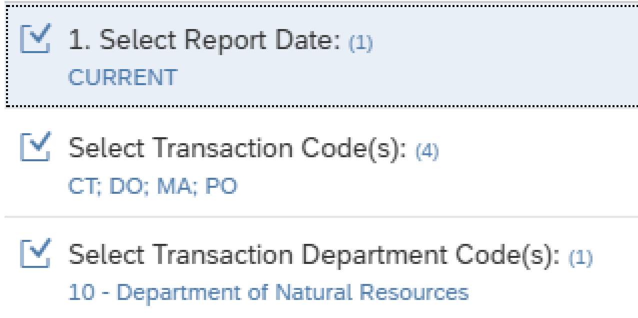
   c. Switch, Case, Break

   d. Do, While, True

Exercise

You work for the Department of Natural Resources. Your supervisor is interested in contract transaction codes CT, DO, MA, and PO. Your supervisor would like you to investigate any transactions that are still open 365 days since the contract end date, and maybe later to look at the others.

Copy **PR0002 – Expiring Contracts** from *Public Folders / Enterprise / Financial (IRIS) / Procurement (PR)* to your *Class Exercises* folder. Refresh the report with the following prompts:



Create a variable called “Days Since End of Contract” with the Dimension qualification.

```
=DaysBetween([Contract End Date];CurrentDate())
```

Create another variable called “Research” with the dimension qualification. Use a conditional formula to have the variable display “Investigate” when the “Days Since End of Contract” variable is greater than 365, and display “Maybe Later” otherwise.

```
=If [Days Since End of Contract]>365 Then "Investigate" Else "Maybe Later"
```

Add the “Research” variable to the table before the first column. Set the “Research” column as a section. If successful, the report should look something like this:

Selected Transaction Codes	CT, DO, MA, PO
Selected Transaction Department Codes	10
Report Filter	Most Recent Final Phase
Report Filter	Open Documents
Table Filtered By	Document Code = CT
Table Sort One - Ascending	Document Unit Code
Table Sort Two - Descending	Contract End Date
Table Sort Three - Ascending	Document FQ

Investigate

Transaction Unit Code	Transaction FQ	Transaction Description
4000	CT-10-180000796-2	North Slope Development
4060	CT-10-160001927-2	Alaska State Lands Advisory Group (ASLAG) Report
4103	CT-10-160000797-4	Sharp MX 3640N B/W Color Copier

Save the report as **Chapter 6 Exercise** to your *Class Exercises* folder.

CHAPTER 7: Report and Table Filters

Goals and Objectives

After you complete this chapter, you will be able to:

- Place a filter on a report
- Place a filter on a table
- Place a filter on a chart
- Know the effects of filters on calculations within the report
- Know how to find filters within the document structure and filters menu
- Know how to remove filters
- Know how to nest a filter
- Know how to use a variable in a filter

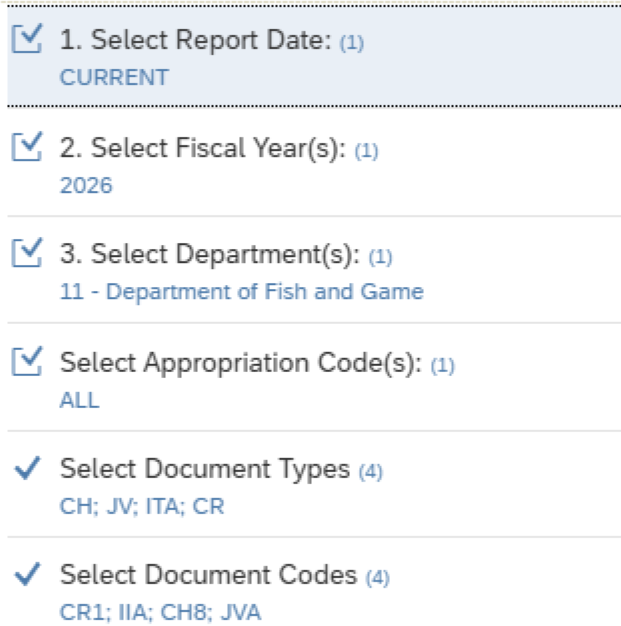
Introduction to Filters

In ALDER, there are three different types of filters:

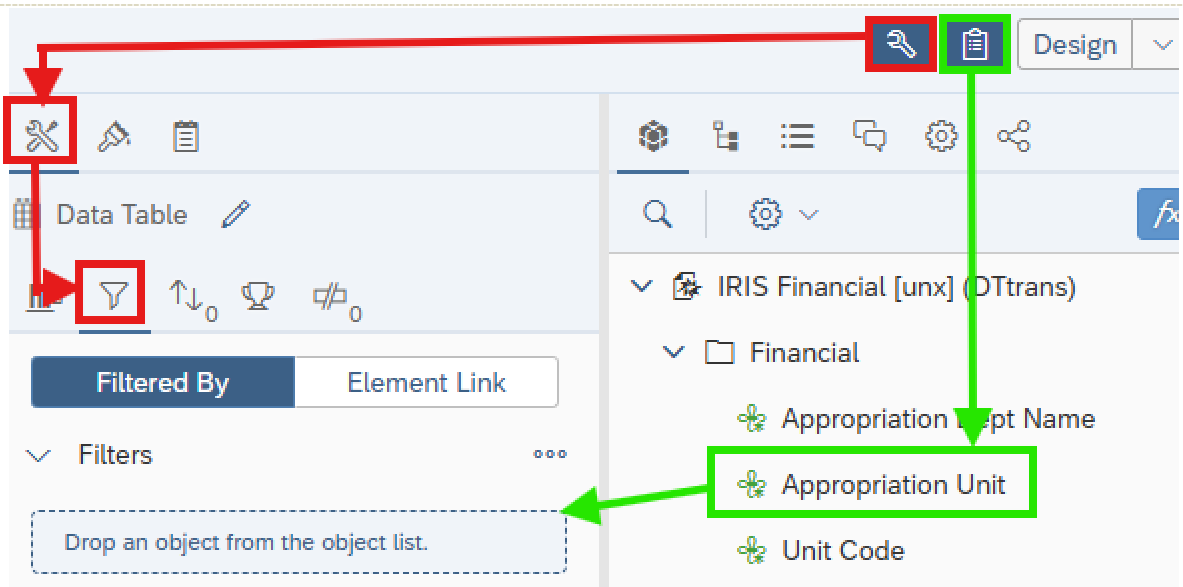
- Query Filters: Allow the user to limit the amount of data retrieved from the data warehouse. These types of filters are built by report developers and designed to make the report refresh quickly and with relevant information. Query filters are covered in the ALDER 201 guide and are out of scope for this document.
- Report Filters: Allow the user to restrict the data displayed on the entire report. These types of filters are applied to all tables and charts within a report and are built by interactive users and used by report viewers to adjust the view of data to the information they desire.
- Table/Chart Filters: Allow the user to limit the data displayed on individual tables or charts. These types of filters are built by interactive users to make report elements display relevant information.

Table Filters

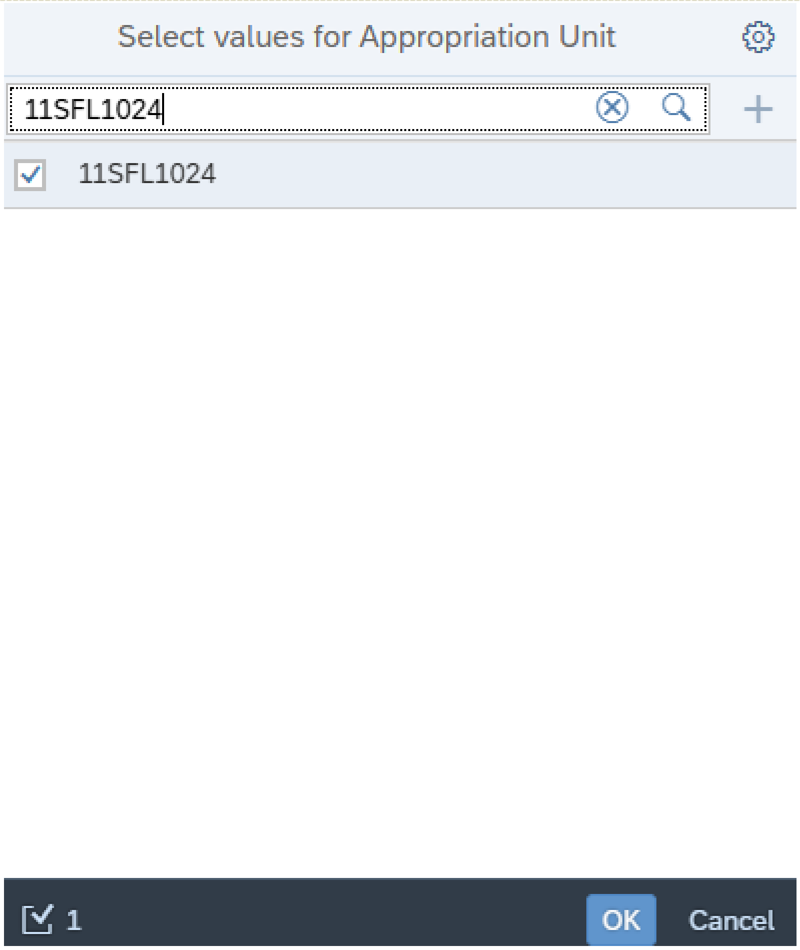
Copy the **GA0010 – Detail Transaction** report from *Public Folders / Enterprise / Financial (IRIS) / General Accounting (GA)* to your *Class ALDER 101* folder. Refresh the report with the following prompts:



Select the table and open its properties. In the data tab, open the filter pane. You can add filters by dropping them in from the available objects. Try adding the "Appropriation Unit" object to the filters list.



A popup will open with a list of available values that can be filtered for appropriation unit. Search for 11SFL1024, select it, and click "OK"



Examine the "Appropriation Unit" column and observe that the only appropriation that displays in the table is the one you just selected.

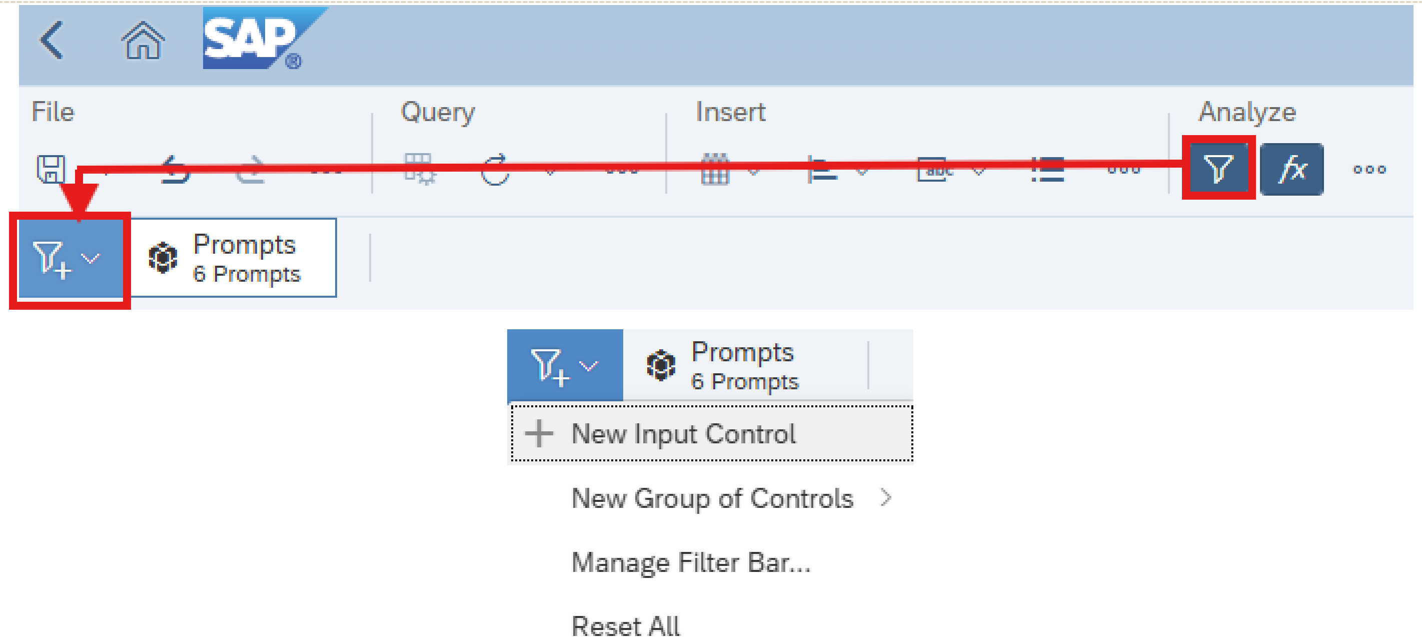
PL Transaction (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code
CH8-11-260004271-1	7	Chitina Dip Fish Permit	11SFL1024	1024
CH8-11-260004271-1	7	Chitina Dip Fish Permit	11SFL1024	1024
CH8-11-260004277-1	7	Chitinia Dip Fish Permit	11SFL1024	1024
CH8-11-260004277-1	7	Chitinia Dip Fish Permit	11SFL1024	1024
CH8-11-260005310-1	10	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005310-1	10	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005310-1	13	KING STAMP REV	11SFL1024	1024
CH8-11-260005310-1	13	KING STAMP REV	11SFL1024	1024
CH8-11-260005310-1	18	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005310-1	18	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005322-1	9	CHITINA PU PERMIT	11SFL1024	1024
CH8-11-260005322-1	9	CHITINA PU PERMIT	11SFL1024	1024
CH8-11-260005322-1	13	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005322-1	13	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005322-1	17	KING STAMP REV	11SFL1024	1024
CH8-11-260005322-1	17	KING STAMP REV	11SFL1024	1024
CH8-11-260005322-1	25	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260005322-1	25	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260006585-1	7	Chitina Dip Fish Permit	11SFL1024	1024
CH8-11-260006585-1	7	Chitina Dip Fish Permit	11SFL1024	1024
CH8-11-260006587-1	7	Chitinia Dip Fish Permit	11SFL1024	1024
CH8-11-260006587-1	7	Chitinia Dip Fish Permit	11SFL1024	1024
CH8-11-260006888-1	12	SPORT FISH LIC REV	11SFL1024	1024
CH8-11-260006888-1	12	SPORT FISH LIC REV	11SFL1024	1024

Note that a report viewer will not be able to adjust this filter if they need to examine another appropriation. As such, it is polite to add a message in the header box about the filters that you applied (like what you would do for a custom sort):

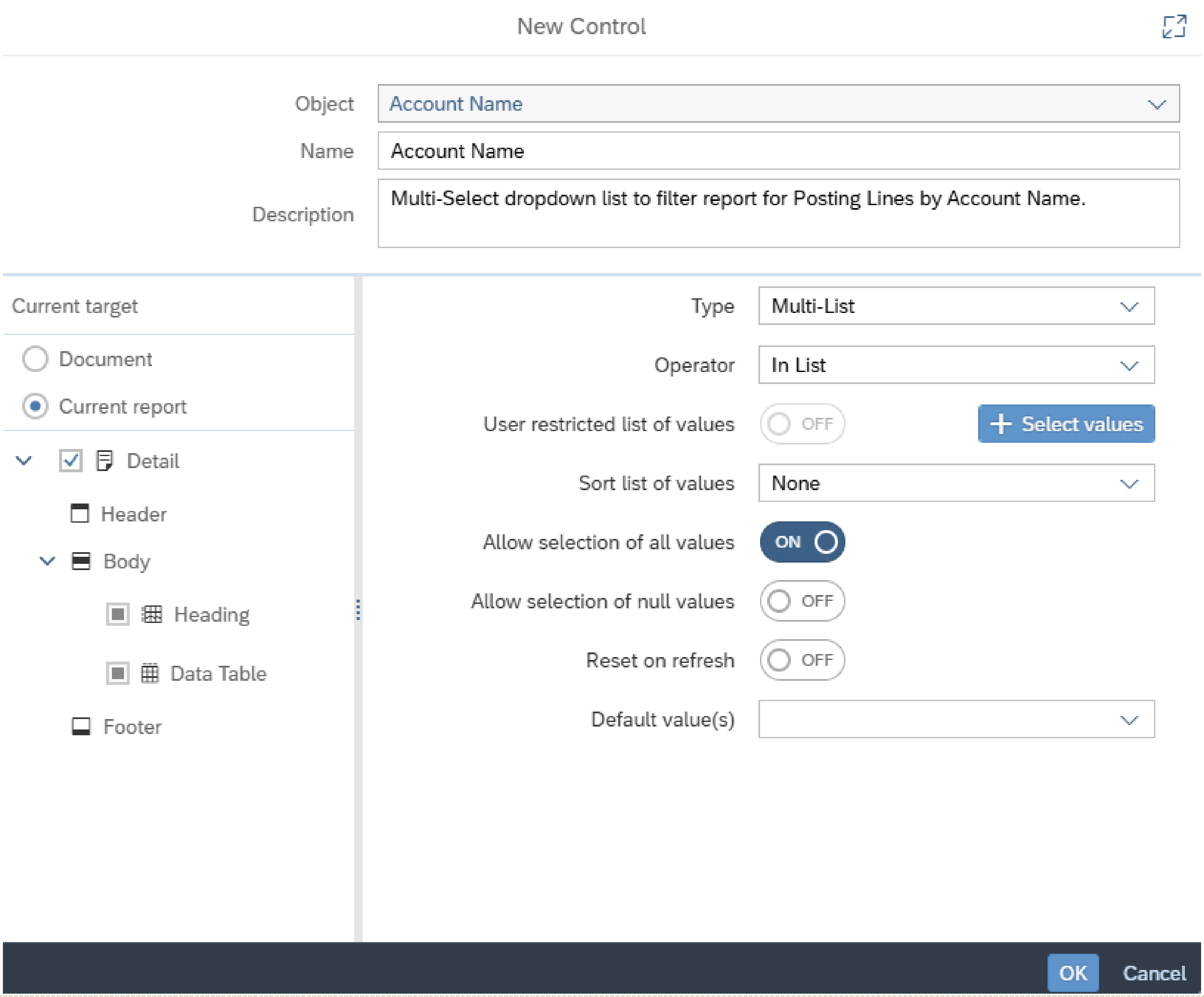
Report Name	GA0010 - Detail Transaction
Report User	339275
Report Date	3/1/2026
Selected Department Codes	11
Selected Fiscal Years	2026
Selected AR Code(s)	All
Filter - Appropriation Unit	11SFL1024

Report Filters

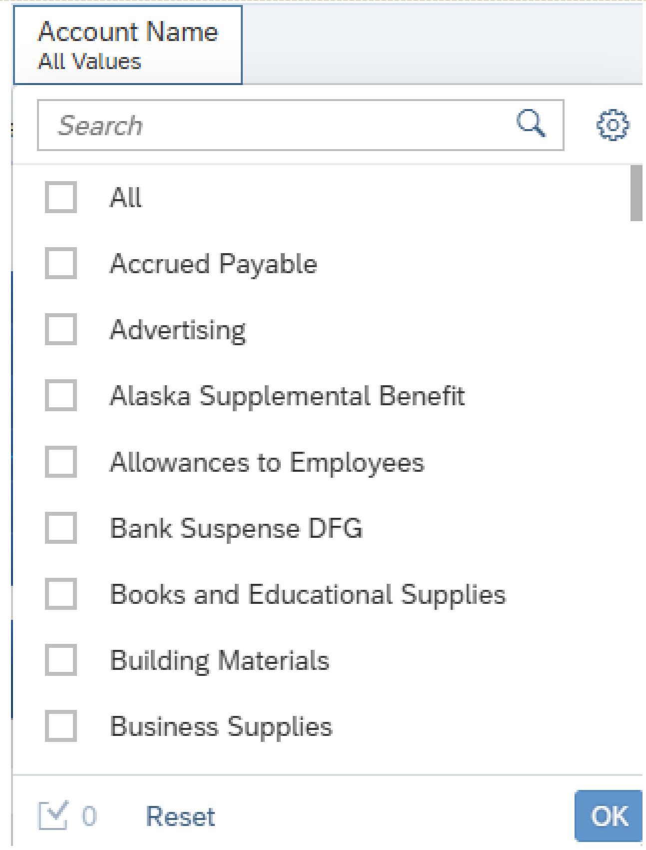
Next we'll add a filter that a viewer will be able to edit as desired. In the report toolbar, make sure the filter toolbar is enabled, then click the add filter button, and finally select "New Input control".

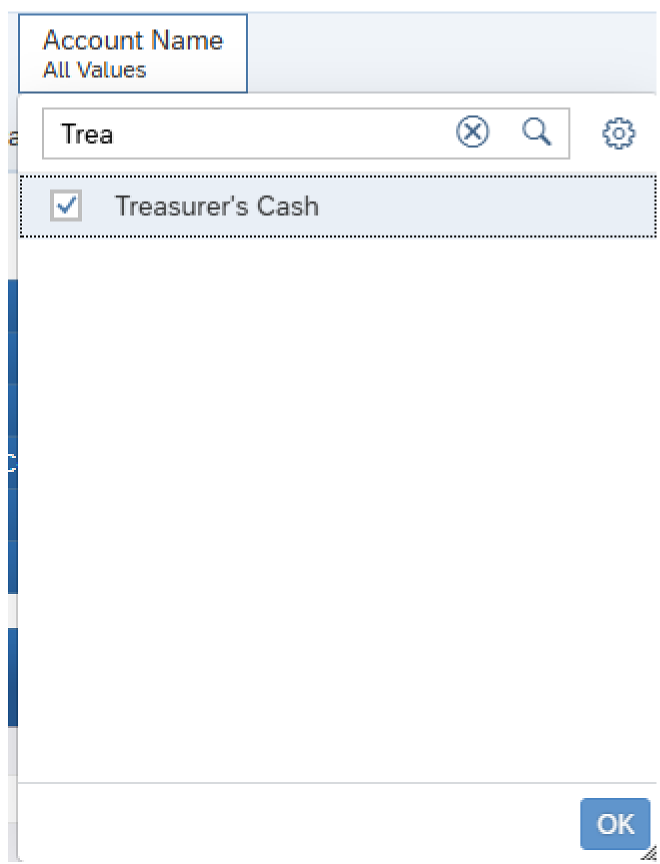


The "New Control" popup wizard will open. This wizard allows you to make input controls that can affect entire reports all at once, and can be used by viewers of the reports. In the "Object" dropdown, select "Account Name". Enter "Account Name Filter" for the name of the new control, and for a description enter "Multi-Select dropdown list to filter report for Posting Lines by Account Name." Then click "OK".



Change to "Reading" mode. You'll notice the filter can still be used. Click the filter to open the multi-select list. Uncheck "All", then search for "Treasurer's Cash" and select it. Then click "OK".

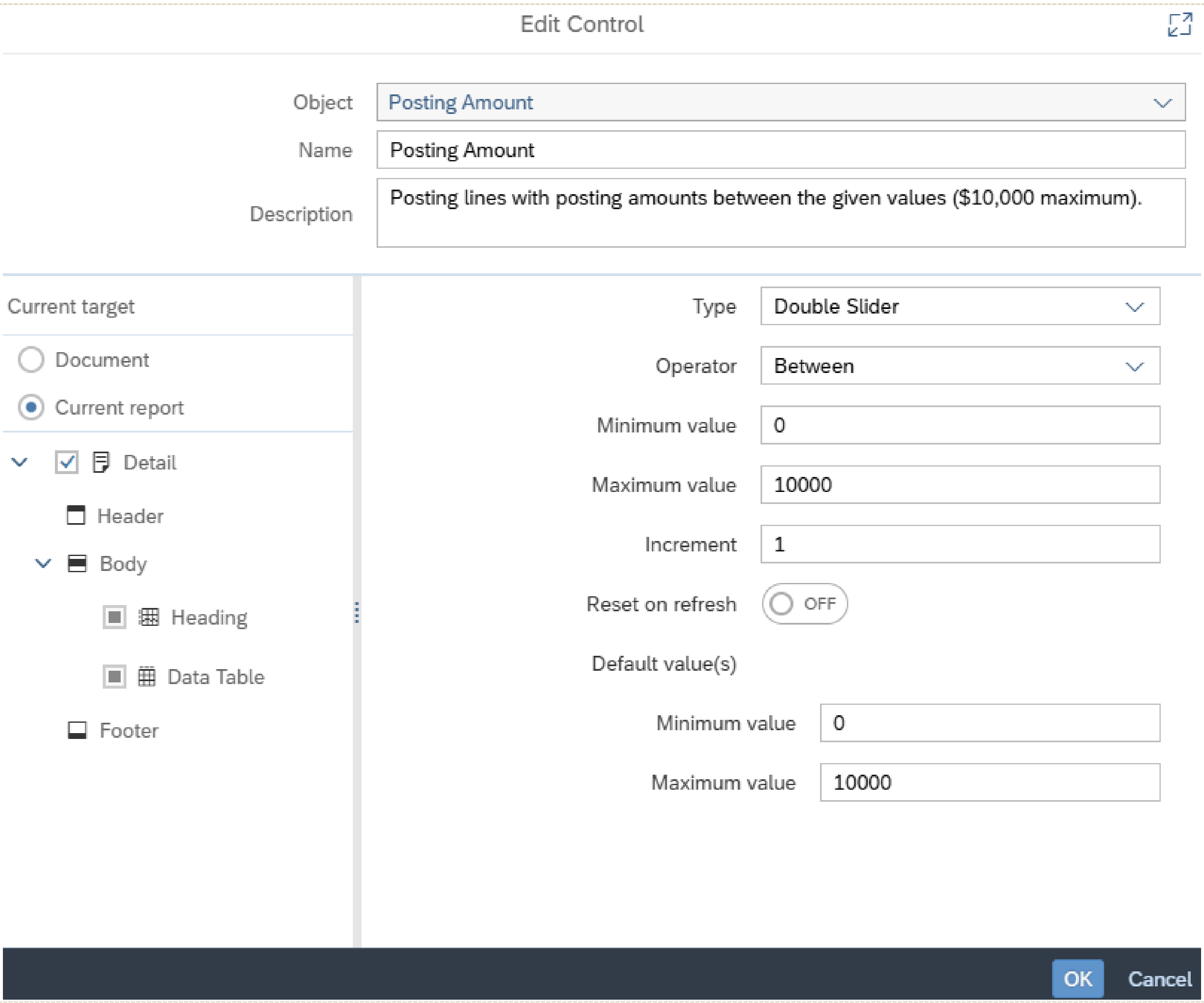




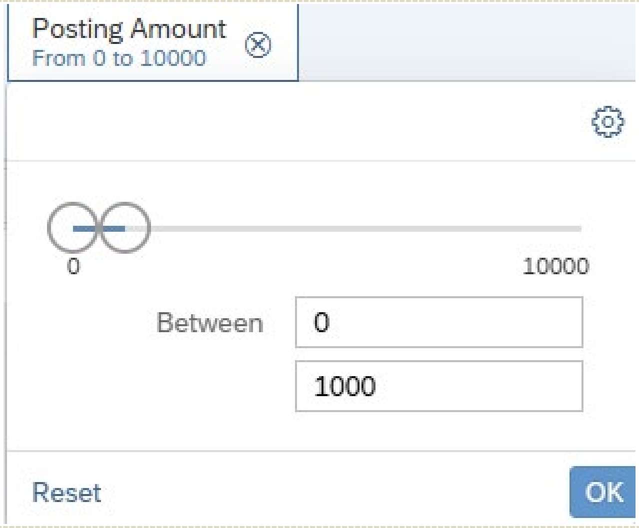
Notice that your report has been filtered again, so only “Treasurer’s Cash” appears in the report. This time, however, a report viewer can take this same report and adjust the filter to see postings for other account names.

PL Transaction (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code	Fund Name	PL Account Code	Account Name
CH8-11-260004271-1	7	Chitina Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260004277-1	7	Chitinia Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005310-1	10	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005310-1	13	KING STAMP REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005310-1	18	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005322-1	9	CHITINA PU PERMIT	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005322-1	13	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005322-1	17	KING STAMP REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260005322-1	25	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260006585-1	7	Chitina Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260006587-1	7	Chitinia Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260006888-1	12	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260006888-1	16	KING STAMP REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260006888-1	23	SPORT FISH LIC REV	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260007991-1	7	Chitina Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash
CH8-11-260007995-1	7	Chitinia Dip Fish Permit	11SFL1024	1024	Fish and Game Fund	1000	Treasurer's Cash

Switch back to "Design" mode and add another filter. This time use "Posting Amount" for the object, "Posting Amount" for the name, and description "Posting lines with posting amounts between the given values ($10,000 maximum)." Change the Type to "Double Slider" and the "Operator" to "Between". Enter 0 for the Minimum and Default minimum and 10000 for the Maximum and Default Maximum. Then click OK.



Click the “Posting Amount” filter. Notice that this filter looks very different than the multi-select list from earlier. Different objects can have different “Types” associated with them when used as a filter, which will affect how the filter is interacted with by you and other report viewers. Use the slider to select postings between $10 and $1,000 (or enter 0 and 1000 into the appropriate fields).



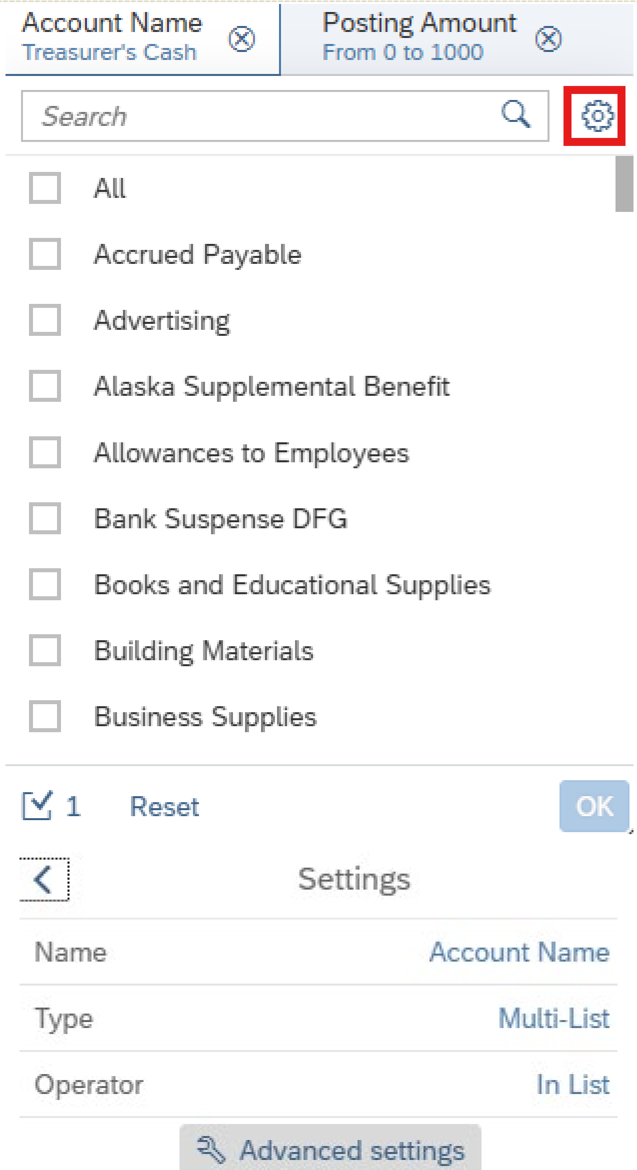
Notice the filter has been applied to the table again.

Posting Amount
514.00
776.95
165.00
177.80
20.00
705.90
105.00
0.00
0.00
0.00
0.00
0.00
0.00
335.42
137.63
187.30
95.00
18.75

Note: when you save this report, whatever report filters that you have selected will be the defaults set for the next person (including you) who opens the report. You can have the report filters reset to default values on each refresh.

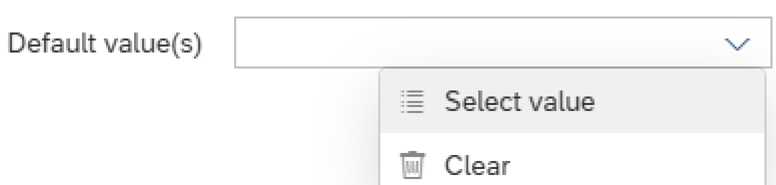
Updating an Existing Report Filter

Let's change the way the Account Name filter works. Click "Account Name" and click the settings icon in the top right. Then click “Advanced Settings”.

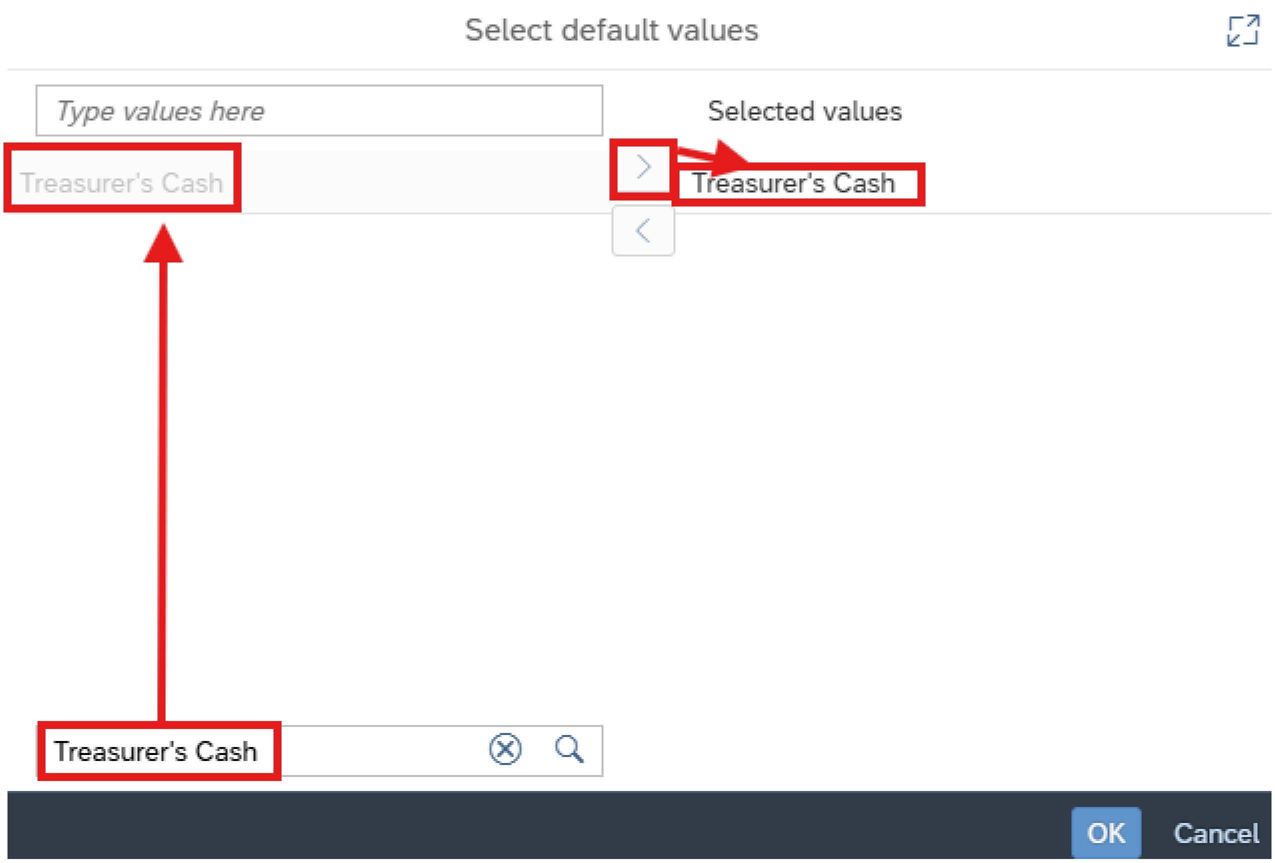


This reopens the original control popup wizard, where you can change any settings for the control that you like. We’ll try adding a default value to this dropdown now.

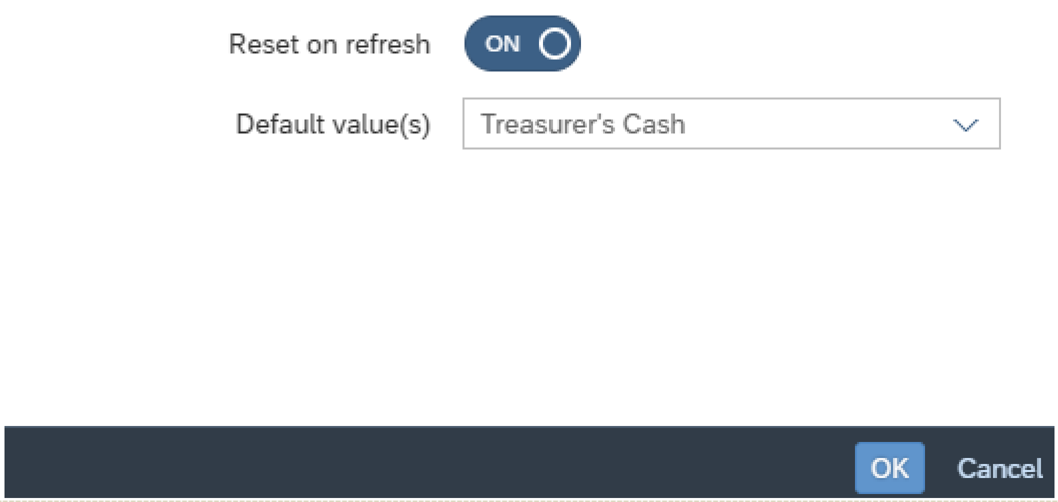
Click the “Default value(s)” dropdown, and click “Select Values”



The “Select default values” picker now opens. Search for “Treasurer’s Cash”, select the text, and then click the “Add” arrow . The value will appear on the right, in the “Selected values” list. Then click “OK”.



Back in the “Edit Control” popup, you’ll see the value displaying in the “Default value(s)” field. Enable “Reset on refresh” and then click “OK”



Now a viewer can change the control as desired, but when the report is refreshed, it will always default to displaying only the posting lines with the account code for Treasurer’s Cash.

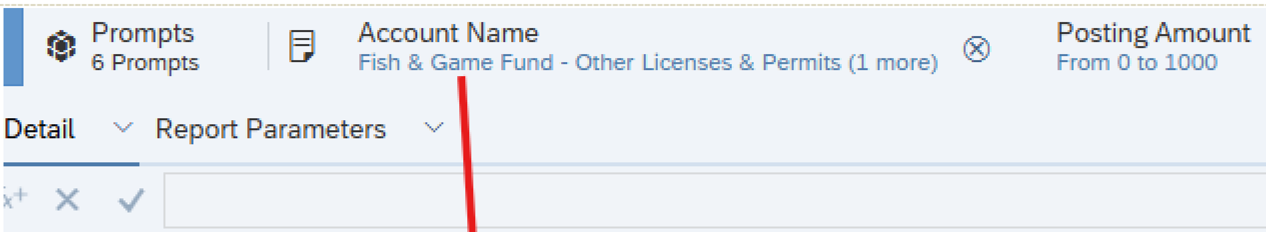
Although a viewer can see the current filters in the toolbar at the top, you can add the report filters to the header table if you wish. Add another row to the header labelled “Filter – Account Name”. In the second column, add the formula

```
=ReportFilter([Account Name])
```

Notice that the formula displays the actual filtered account name in the header now:

Report Name	GA0010 - Detail Transaction
Report User	339275
Report Date	3/1/2026
Selected Department Codes	11
Selected Fiscal Years	2026
Selected AR Code(s)	All
Filter - Appropriation Unit	11SFL1024
Filter - Account Name	Treasurer's Cash

Try changing the "Account Name" filter to display both "Treasurer's Cash" and "Fish & Game Fund – Other Licenses & Permits". You'll notice the formula pulls in all the options used in the filter, separated by a semi-colon.



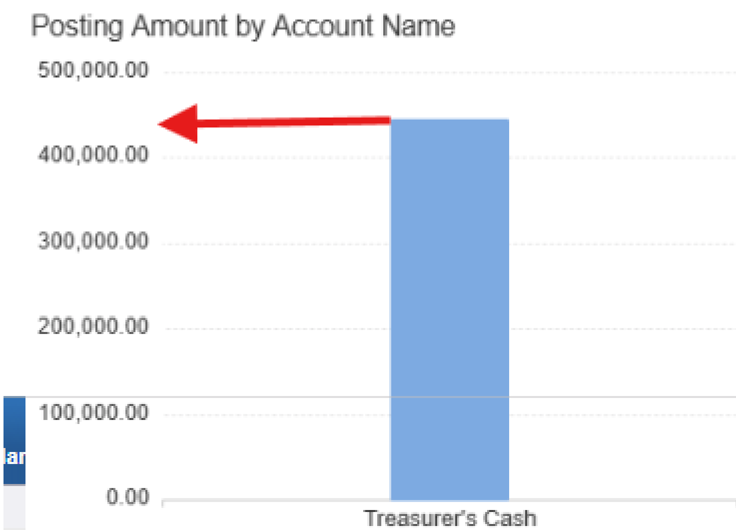
Report Name	GA0010 - Detail Transaction
Report User	339275
Report Date	3/1/2026
Selected Department Codes	11
Selected Fiscal Years	2026
Selected AR Code(s)	All
Filter - Appropriation Unit	11SFL1024
Filter - Account Name	Fish & Game Fund - Other Licenses & Permits;Treasurer's Cash

Change the Account Name filter back to only display "Treasurer's Cash".

Mixing Table and Report Filters – A Pitfall

Add a Column chart to the report to the right of the header table. Add Posting Amount to the

"Value Axis 1" section and "Account Name" to the "Category Axis".

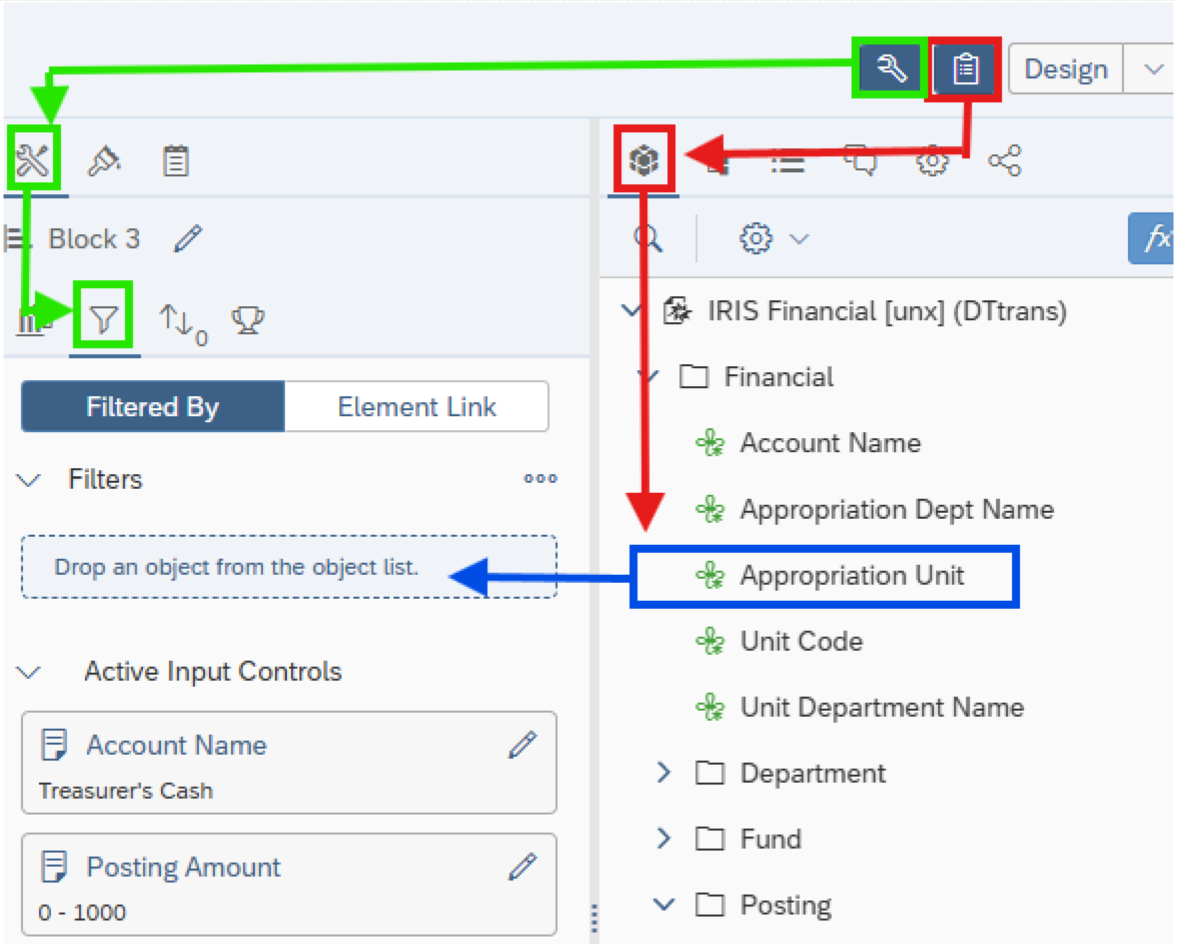


				P L	Posting Amount
				1	514.00
	1000	Treasurer's Cash	2001	1	776.95
	1000	Treasurer's Cash	2001	1	165.00
	1000	Treasurer's Cash	2001	1	177.80
	1000	Treasurer's Cash	2001	1	20.00
	1000	Treasurer's Cash	2001	1	705.90
	1000	Treasurer's Cash	2001	1	105.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	0.00
	1000	Treasurer's Cash	2001	1	335.42
	1000	Treasurer's Cash	2001	1	137.63
	1000	Treasurer's Cash	2001	1	187.30
	1000	Treasurer's Cash	2001	1	95.00
	1000	Treasurer's Cash	2001	1	18.75
					3,238.75

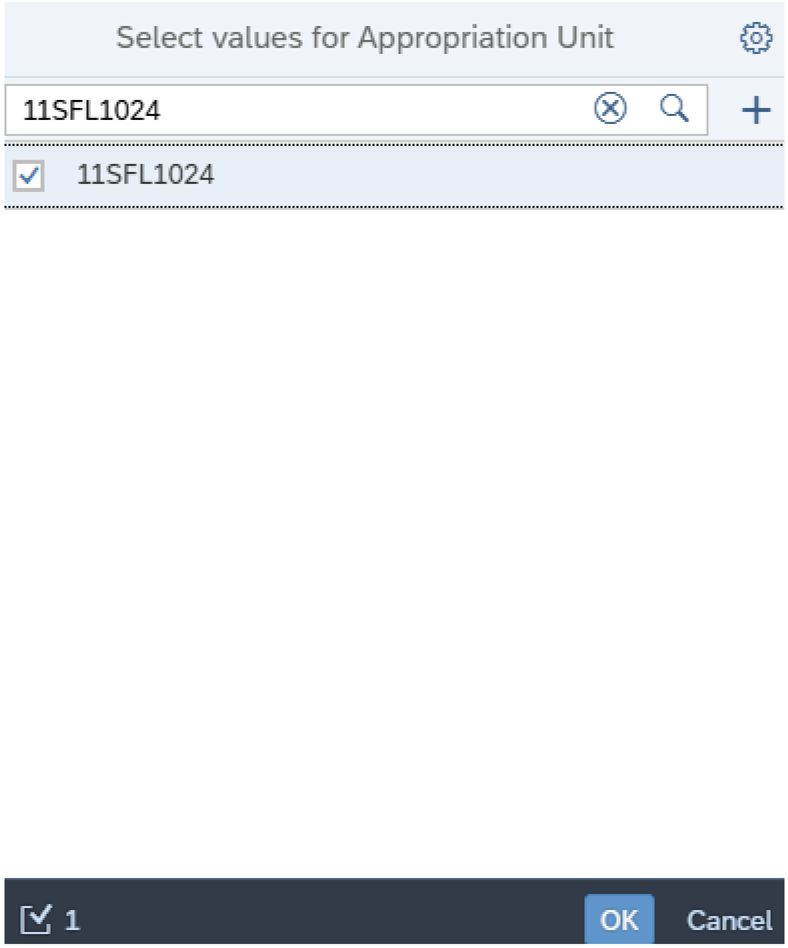
If you look closely, you'll see something confusing about this picture: the total amount displayed in the chart is much larger than the total displayed in the data table. This is because the table filter created earlier for appropriation unit 11SFL1024 is not applying to the chart. Be careful when mixing report filters and table filters in a report that will have multiple tables and charts; while the report filters will apply to new tables and charts by default, table filters will not. When two elements have different filters, it can confuse the viewer of the report unless they are made aware that the two elements are displaying different sets of data.

Creating Chart Filters

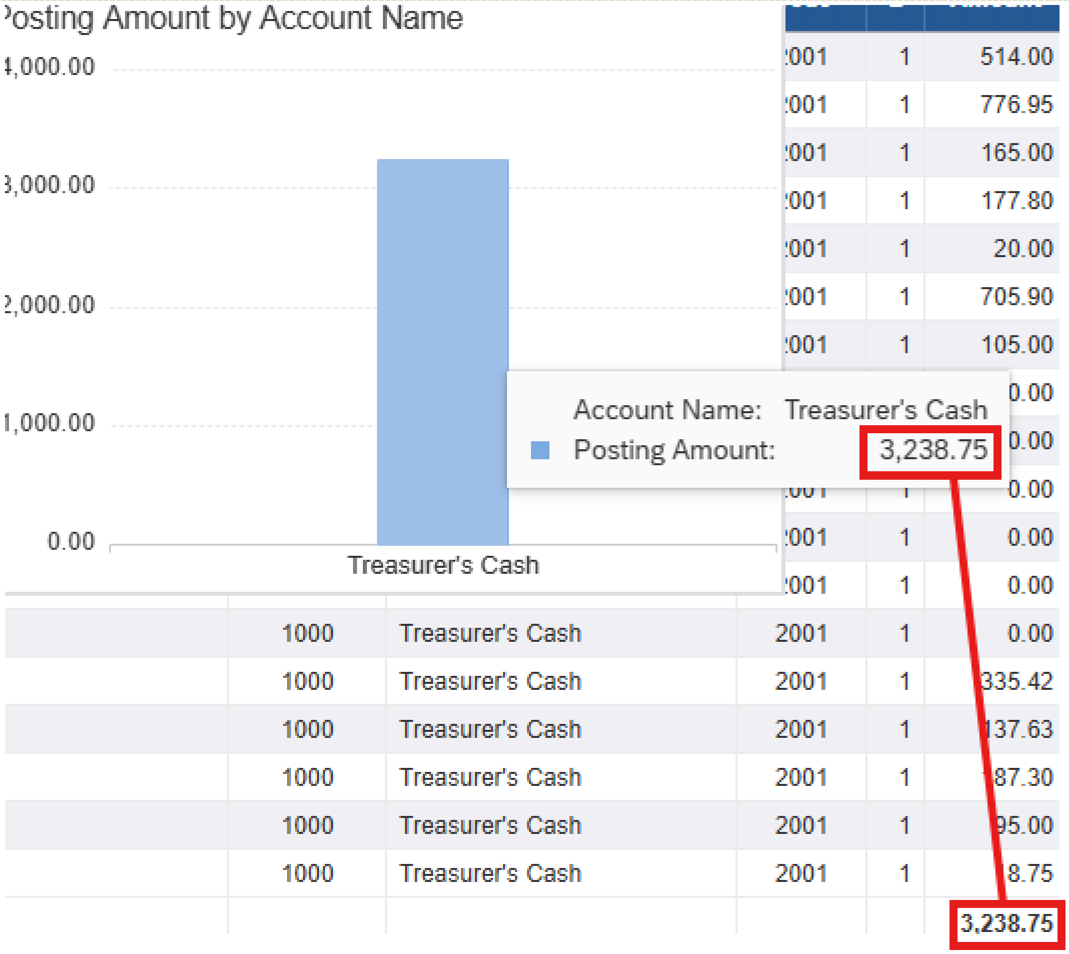
Let's add the appropriation unit filter to the chart to align the totals. With the chart selected, open its properties, then in the data tab, in the filter pane, add “Appropriation Unit” to the Filters section.



The Select values for Appropriation Unit popup will open. Search for 11SFL1024 and select it just as you did with the table.



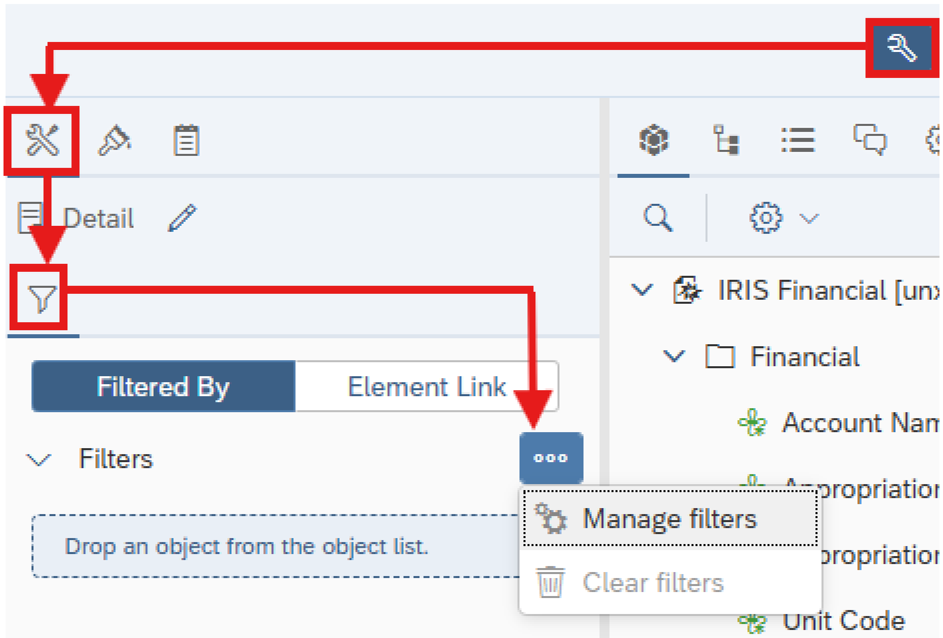
Hover over the column to display the Posting Amount for Treasurer's Cash. You'll see the totals now align since the chart's filters now align with the table's filters.



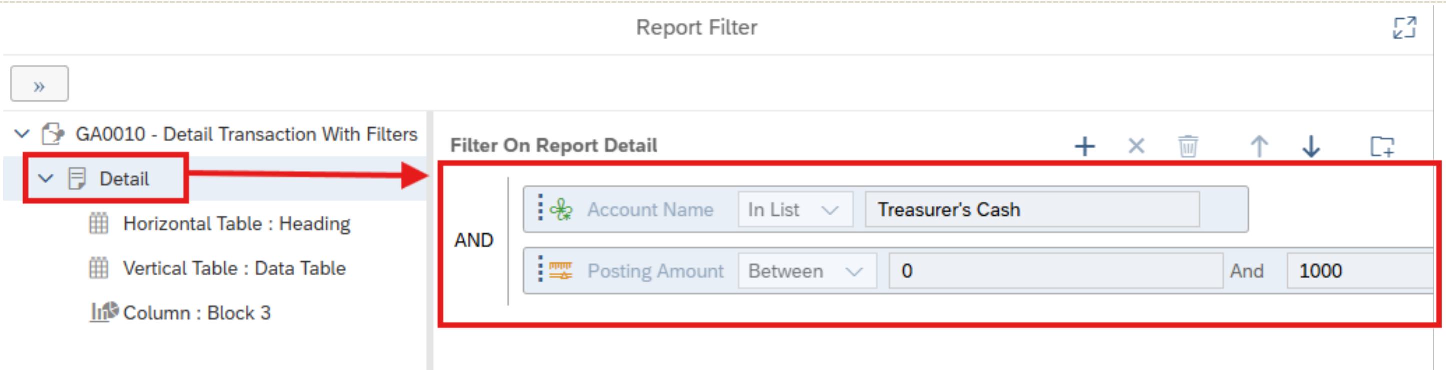
Nested Filters

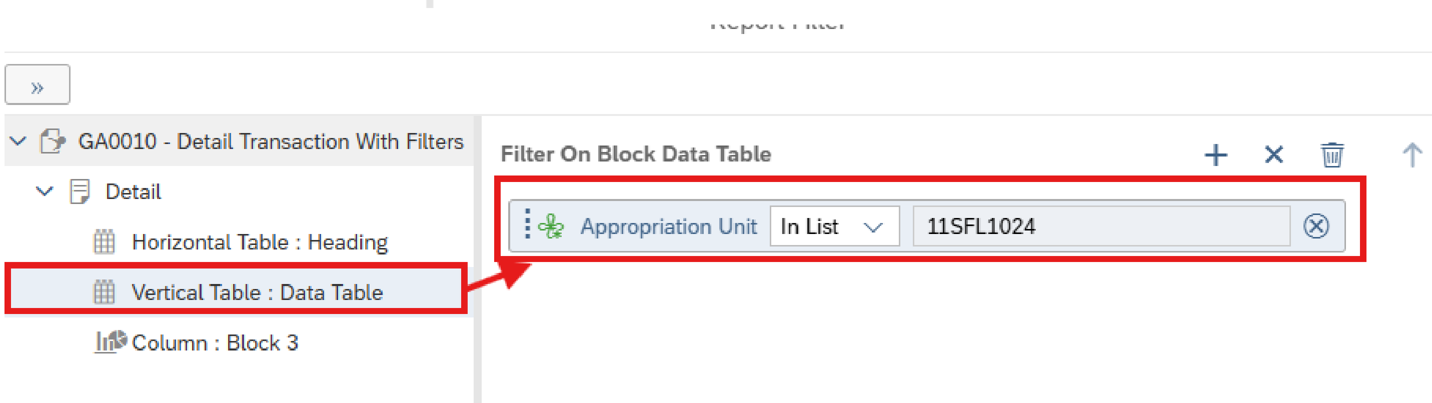
Nested filters are advanced and complex restrictions on data displayed in a report incorporating multiple sets of criteria. Creating a nested filter requires Boolean operators (and/or), allowing very fine control of the display of data.

Click anywhere in the report, then in the properties panel, in the data tab, in the filters pane, click the Edit Filters button, then select “Manage filters”

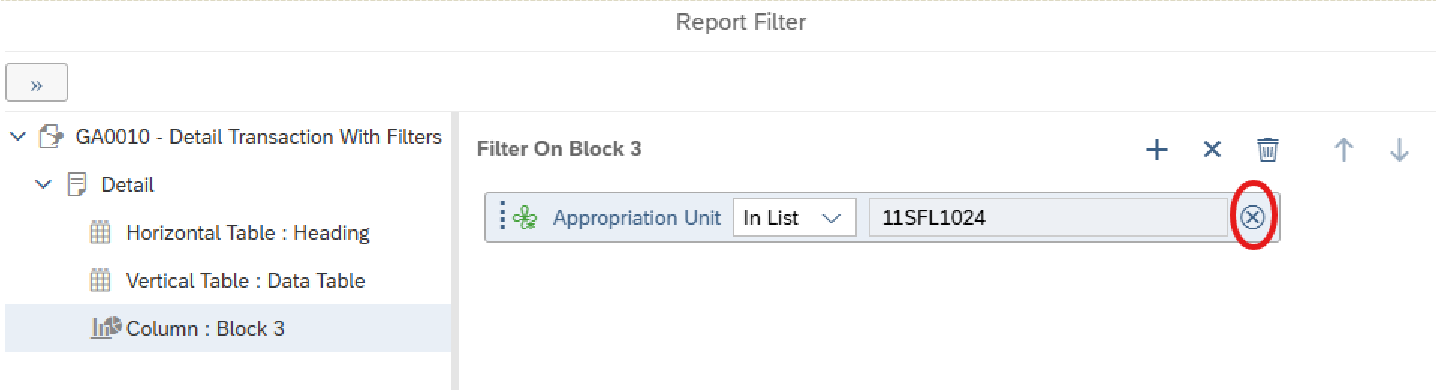


This opens the more advanced "Report Filter" popup wizard. You'll see the existing input control report filters on the screen. Click the "Vertical Table : Data Table" report element on the left and you'll see the table filter you added previously.

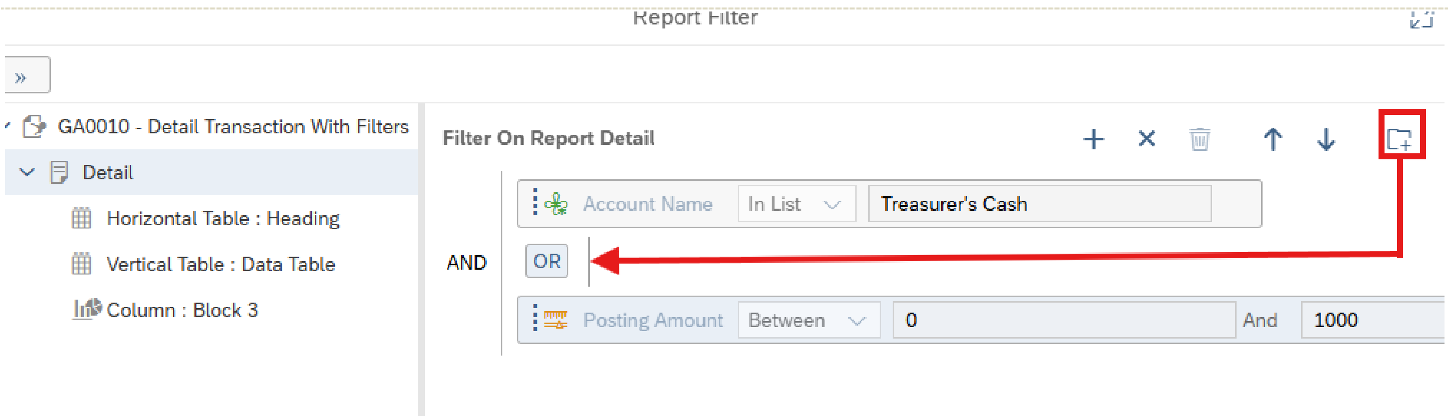




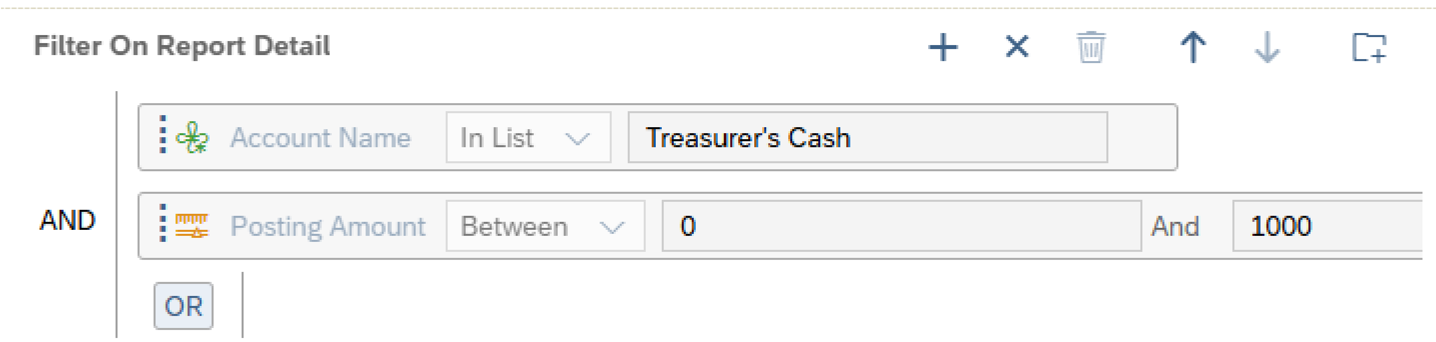
Click the "Delete" icon to remove the table filter. Then click on "Column : Block 3" (the column chart you added) and remove the chart filter as well.



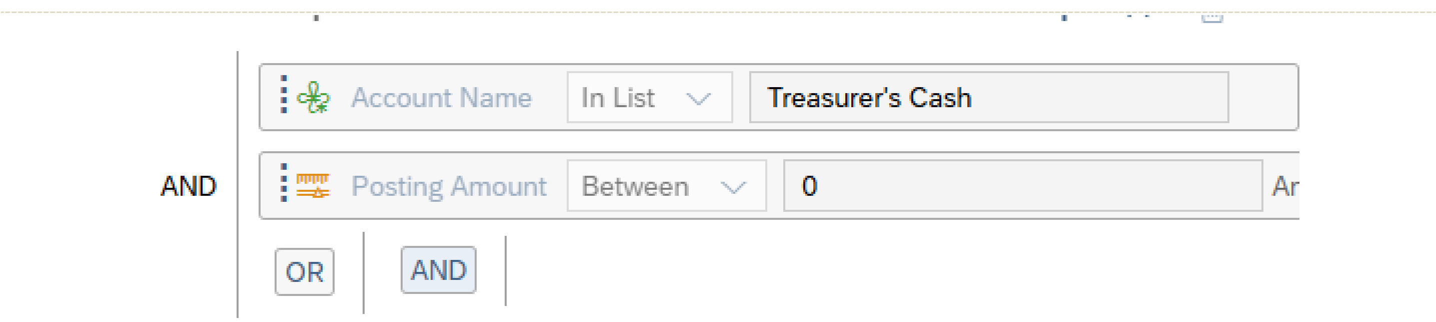
Click back on the “Detail” tab to open the filters for the whole report, then click the “Nested Filter” icon to begin adding a new nested filter. You’ll see a little OR icon in the popup.



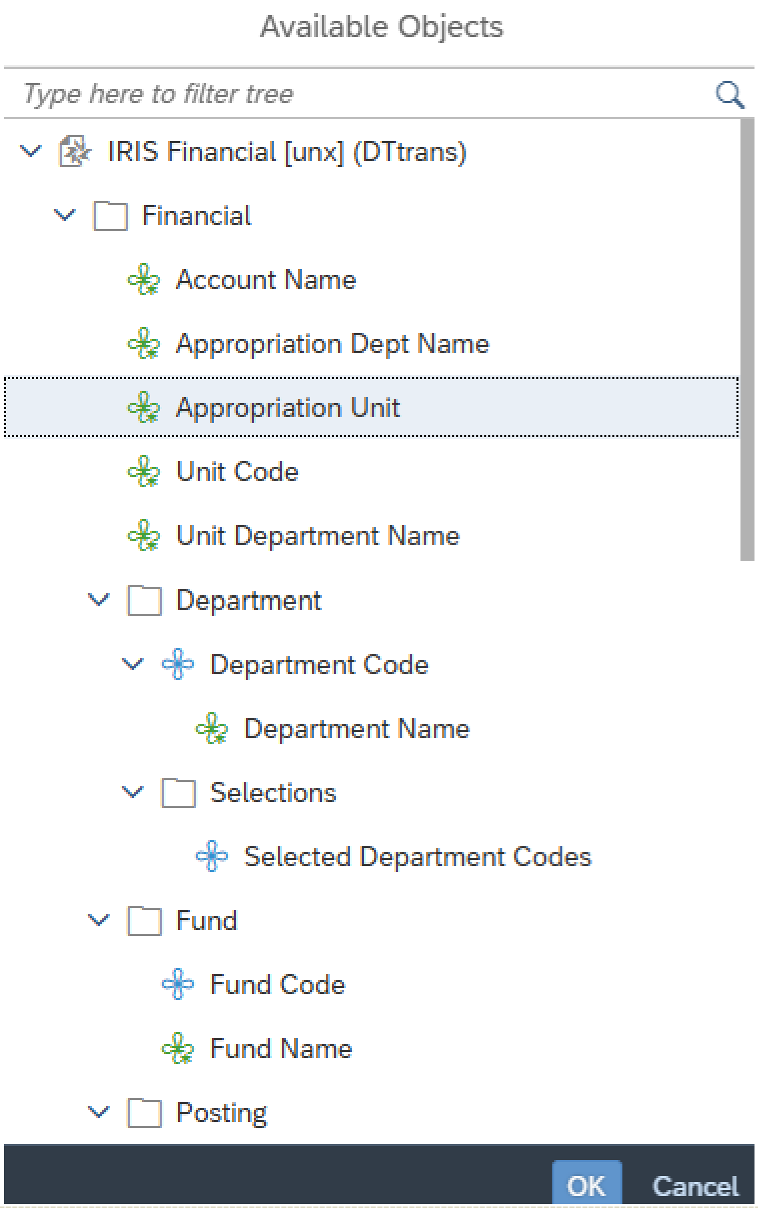
Click and drag the OR so that it’s at the bottom of the list.



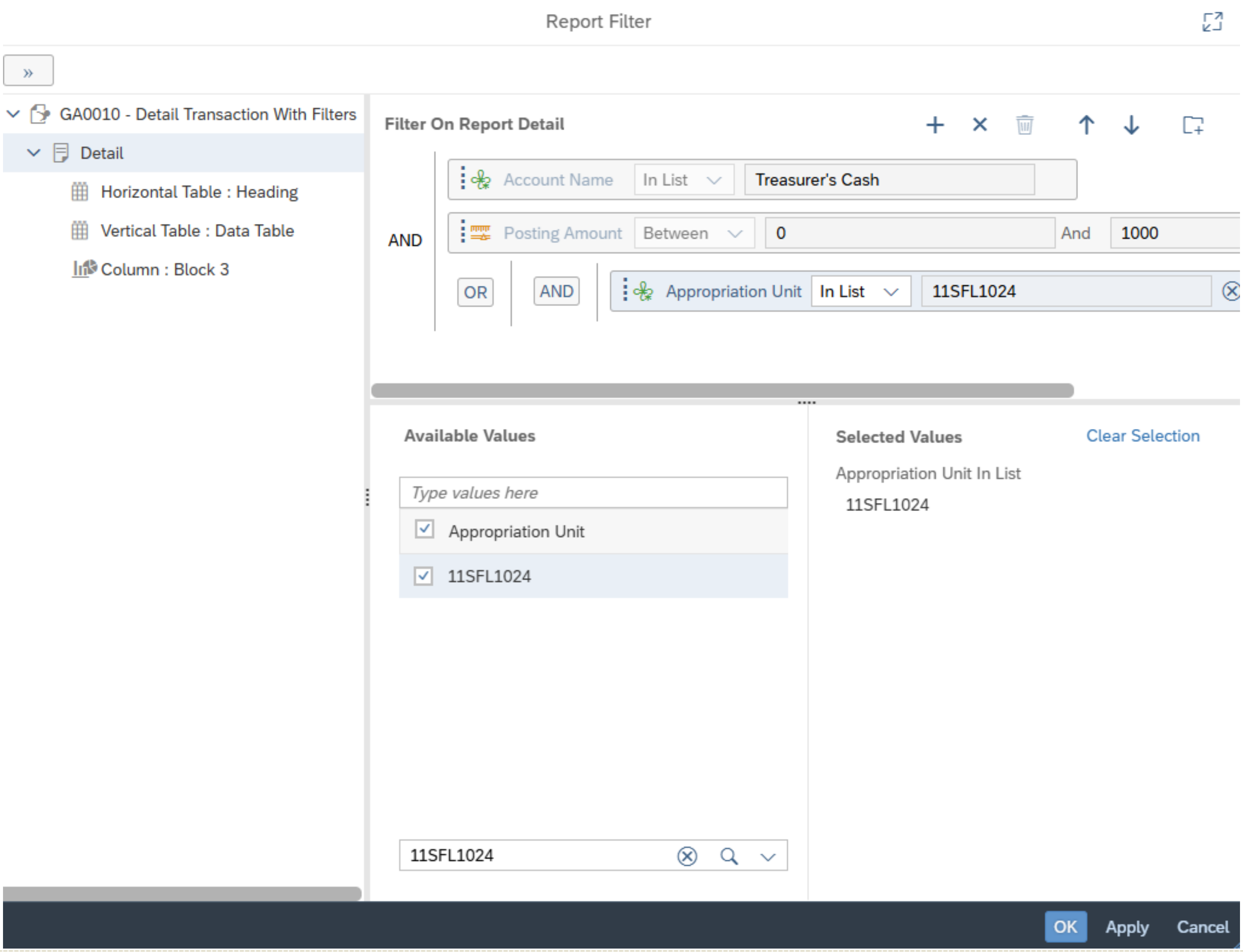
With the OR selected, click the Nested Filter icon again. An “AND” AND will appear.



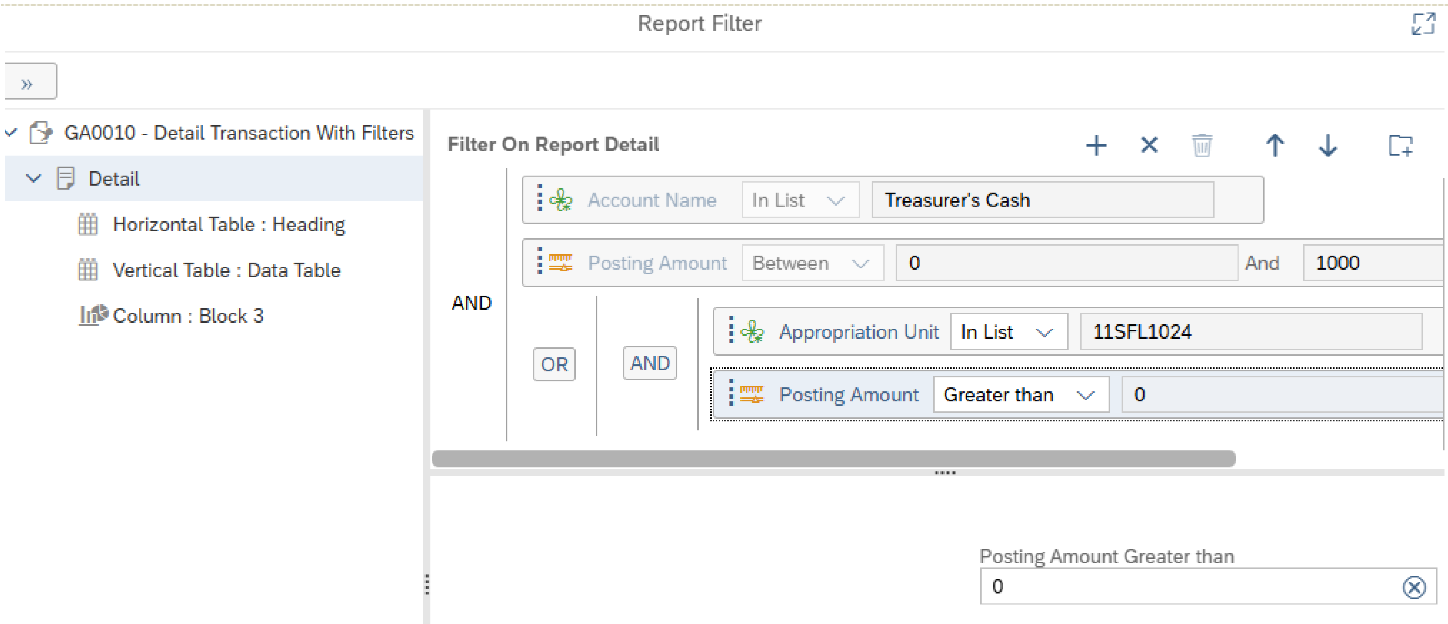
Add Filter icon  to open the “Available Objects” popup. Click “Appropriation Unit” and click “OK”



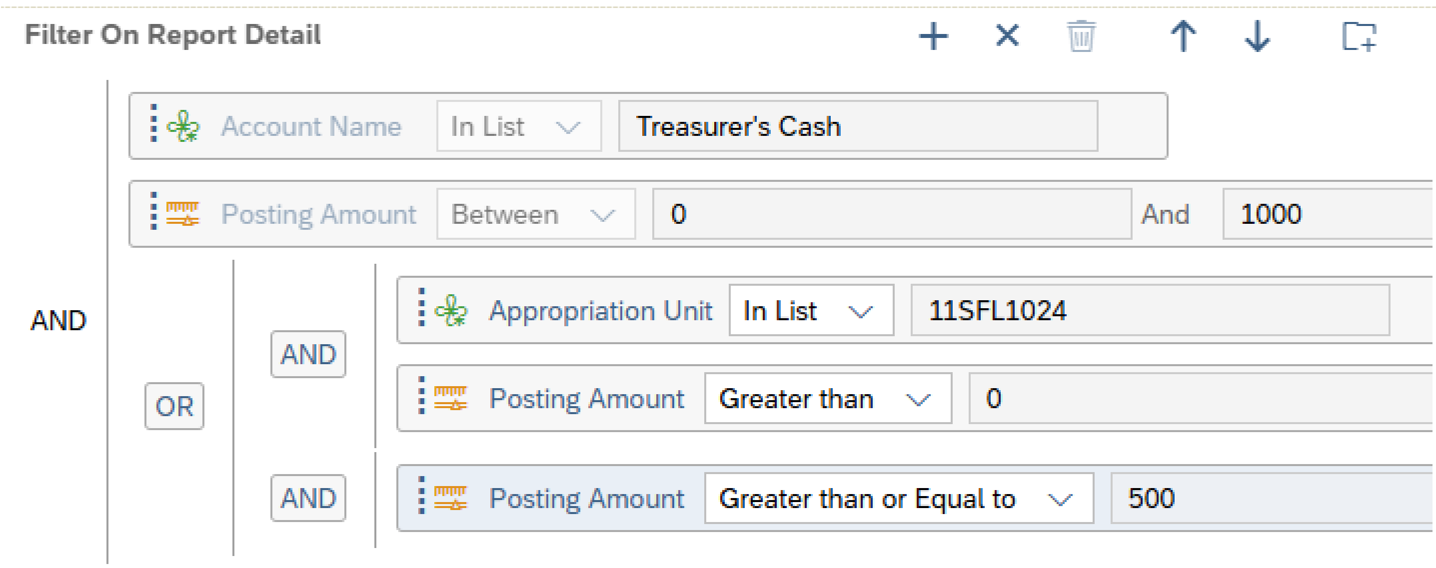
The Appropriation Unit has now been added as a filter on the report within the nested filter. Down in the “Available Values” section, Select 11SFL1024.



Click Add Filter  again, and this time add posting amount. Change the operator to “Greater than” and enter 0



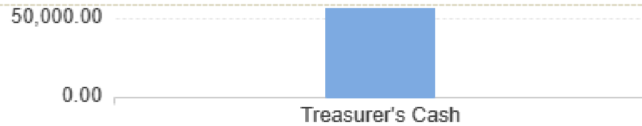
Click on the OR one more time and add another nested filter . Then add filter again and add another Posting Amount filter, with operator "Greater than or Equal to" and value 500.



In summary: data in the report will display if

- The Account Name is "Treasurer's Cash", AND
- The Posting Amount is between 0 and 1000, AND
  - EITHER
    - Appropriation Unit is "11SFL1024", AND
    - Posting Amount is greater than 0,
  - OR
    - Posting Amount is greater than or equal to 500.

Click “OK” to save the new filters. You’ll now see that Account Name is still “Treasurer’s Cash” for all rows in the report, but there are now more than one Appropriation Unit. Specifically, any line with an appropriation Unit other than 11SFL1024 is guaranteed to show a posting amount between 500 and 1000, while 11SFL1024 will show posting amounts between 0 and 1000.



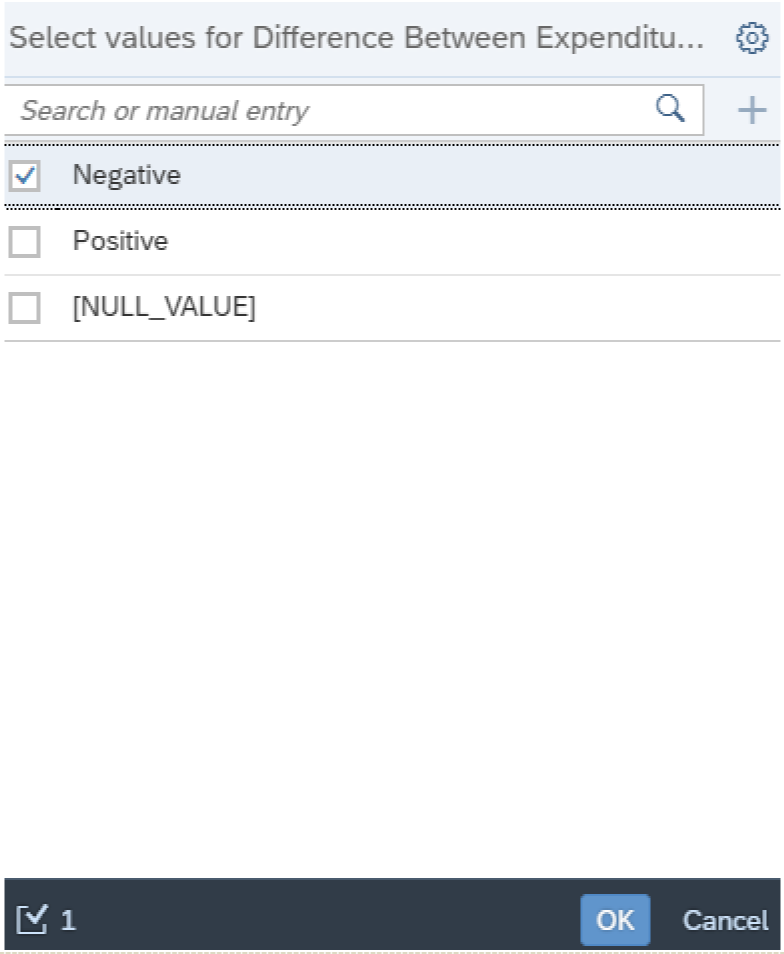
Appropriation Unit	Fund Code	Fund Nar				P L	Posting Amount
FCFS01007	1004	General Fund				1	710.37
FCF401004	1004	General Fund	1000	Treasurer's Cash	1040	1	862.21
FCF101002	1004	General Fund	1000	Treasurer's Cash	1010	1	774.08
110122002	1004	General Fund	1000	Treasurer's Cash	1040	1	627.70
FSFO01007	1004	General Fund	1000	Treasurer's Cash	2022	1	983.16
FCF201108	1004	General Fund	1000	Treasurer's Cash	1020	1	725.00
11SUS1024	1024	Fish and Game Fund	1000	Treasurer's Cash	3001	1	820.00
FCFS01005	1004	General Fund	1000	Treasurer's Cash	1001	1	900.00
11WCL1024	1024	Fish and Game Fund	1000	Treasurer's Cash	5030	1	782.00
11WCL1024	1024	Fish and Game Fund	1000	Treasurer's Cash	5010	1	621.75
FCFS01004	1004	General Fund	1000	Treasurer's Cash	1001	1	609.00
F00301007	1004	General Fund	1000	Treasurer's Cash	3001	1	881.00
FCF101004	1004	General Fund	1000	Treasurer's Cash	1010	1	669.20
FCF301004	1004	General Fund	1000	Treasurer's Cash	1030	1	912.00
FSFO01024	1024	Fish and Game Fund	1000	Treasurer's Cash	2030	1	810.00
FWCO01002	1004	General Fund	1000	Treasurer's Cash	5040	1	585.00
FWCO01004	1004	General Fund	1000	Treasurer's Cash	5080	1	739.00
FSU001004	1004	General Fund	1000	Treasurer's Cash	7001	1	698.04
FSU001002	1004	General Fund	1000	Treasurer's Cash	7020	1	691.70
FSU001007	1004	General Fund	1000	Treasurer's Cash	7030	1	558.10
FHB001007	1004	General Fund	1000	Treasurer's Cash	8010	1	510.96
FCF101004	1004	General Fund	1000	Treasurer's Cash	1010	1	548.85

Save the report as **GA0010 – Detail Transaction With Filters**.

Using a Variable as a Filter

From your *Class ALDER 101* folder, open **BD0003 - Appropriation with budget With Variables**. Recall that you made a variable previously called “Difference Between Expenditure and Revenue Budget” to easily identify when a particular row had an expenditure budget that was less than the revenue budget.

Click on the data table and add your variable as a filter, the same way you would add any other filter. In the “Select values” popup, check “Negative” and click “OK”



Notice the report now shows only those rows, without needing to page through the report to find them.

Fiscal Year 2025

					Expenditure	Revenue
AR Group	AR Type	AR Unit	Appropriation Name	Difference Between Expenditure and Revenue Budget	Current Budget	
TB27	TB3E	2515SWNHS	National Highway System Modernization FED	Negative	0.00	19,898,553.91
TM25	T1EM	T1EM61004	AMHS Marine Vessel Operations CY25 ORIG25 GF	Negative	0.00	46,983,750.00
TM25	T1EP	T1EP61004	AMHS Overhaul CY25 ORIG25 GF	Negative	637,100.00	1,699,600.00
TM25	T1EQ	T1EQ61002	AMHS Reservations and Marketing CY25 ORIG25 FED	Negative	0.00	650,000.00
TM25	T1EQ	T1EQ61004	AMHS Reservations and Marketing CY25 ORIG25 GF	Negative	0.00	881,300.00
TM25	T1ER	T1ER61002	AMHS Marine Shore Operations CY25 ORIG25 FED	Negative	0.00	2,785,850.00
TM25	T1ER	T1ER61004	AMHS Marine Shore Operations CY25 ORIG25 GF	Negative	0.00	5,446,250.00
TM25	T1ES	T1ES61002	AMHS Vessel Operations Management CY25 ORIG25 FI	Negative	0.00	2,857,100.00
TM25	T1ES	T1ES61004	AMHS Vessel Operations Management CY25 ORIG25 G	Negative	0.00	3,372,100.00
TM25	T1ES	T1ES61061	AMHS Vessel Ops Management CY25 ORIG 25 CIP IA	Negative	0.00	163,000.00

Save the report as **BD0003 - Appropriation with budget With Variable Filter**.

Review

1. What is the difference between a report filter and a table filter?
   a. A report developer has to add report filters, a report viewer can add table filters
   b. A report filter filters the whole report, the table filter only applies to the table
   c. Report filters do not affect charts, table filters affect charts
   d. Report viewers can change a table filter but cannot interact with report filters
2. True or false: Report viewers can interact with your table filters
   a. True
   b. False
3. Can a report viewer interact with report filters?
   a. No, never
   b. Yes, if they are in the same department as you
   c. Yes, if you create them as input controls from the workspace toolbar
   d. Yes, if you create them as a nested filter

4. Which of the following are types of report filters that you can make as an input control?
   a. List
   b. Multi-List
   c. Double-Slider
   d. All of the above
5. Why is it sometimes confusing to use table filters?
   a. You can forget to apply table filters to other elements, in which case the totals will be out of sync
   b. When you add a note in the heading box about how the report is filtered, it clutters the report
   c. Sometimes the table filter does not apply correctly
   d. When you refresh the document, the filter will reset
6. True or false: Chart filters work just like table filters
   a. True
   b. False
7. Which of the following operators are used to create a nested filter?
   a. And
   b. Or
   c. Both a and b
   d. None of the above
8. True or false: You can use variables in filters the same way you use objects in filters.
   a. True
   b. False

Exercise

You work for the Department of Military and Veterans Affairs. The management team has asked to see a detailed report of inventory on hand at the end of FY 2025. Within this report, they want a chart that shows the inventory on hand with a value over $7,500.

Copy **NV0006 – Inventory Value Analysis** from *Public Folders / Enterprise / Financial (IRIS) / Inventory (IN)* to your *Class Exercises* folder. Refresh the report with the following prompts:

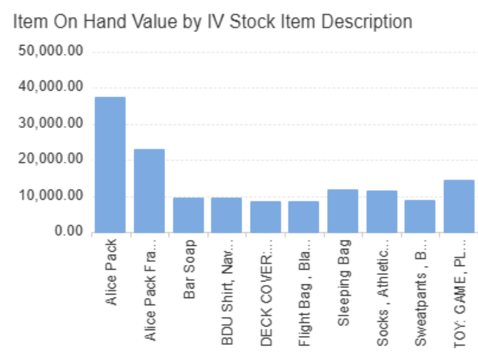
1. Select Report Date: (1)
06/30/2025

Select Inventory Warehouse Code(s): (1)
ALL

Add a column chart that displays “Item On Hand Value” on the Value Axis and “IV Stock Item Description” on the Category Axis. Add a filter to the chart for “Item On Hand Value” “Greater than or Equal to” 7500.

If successful, the report should look like this:

Report Name	NV0006 - Inventory Value Analysis
Report User	339275
Selected Report Date	6/30/2025
Selected Inventory Warehouse Codes	All



AMYAS - DMVA Alaska Military Youth Academy Supply Warehouse

IV Stock Item	IV Stock Item Description	Unit Cost	IV ABC Class	Active Flag	Last Issue Date	On Hand Quantity	Issue UOM Code	Total Value	Marked for Future Deletion Flag
1924642 625	Ice Melt	0.0000	A	Yes	03/13/2024	13	EA	0.00	No
2001065 145	DO NOT USE	6.8431	D	Yes	10/12/2016	0	EA	0.00	No
2001065 146	DO NOT USE	10.3926	D	Yes	10/12/2016	0	EA	0.00	No
2001065 147	DO NOT USE	0.0000	D	Yes	02/14/2023	0	EA	0.00	No
2001065 148	DO NOT USE	10.1329	D	Yes	09/19/2016	0	EA	0.00	No

Save the report as **Chapter 7 Exercise**.

CHAPTER 8: Formatting

Goals and Objectives

After you complete this chapter, you will be able to:

- Format individual cells or columns
- Apply consistent formatting to an entire table
- Format a chart
- Format the report
- Edit an object's display format
- Conditionally format a data table

Introduction

This chapter focuses on formatting cells, columns, tables and the entire report. From the *Class ALDER 101* folder, open the report **GA0010 – Detail Transaction With Filters**

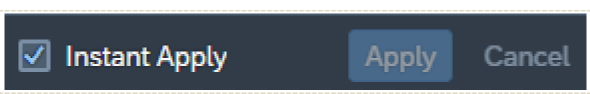
Formatting a Cell

Find the cell in the top right that says "Last Refreshed" and select it. Open the Properties panel and open the Format tab . Up at the top, you'll see the name of the cell "Last Refreshed". The Edit button will allow you to change the name of the cell, which can make it easier to find in the Structure Map.

There are four panes you can use to adjust the formatting of the cell:

- Display
- Appearance
- Text
- Layout

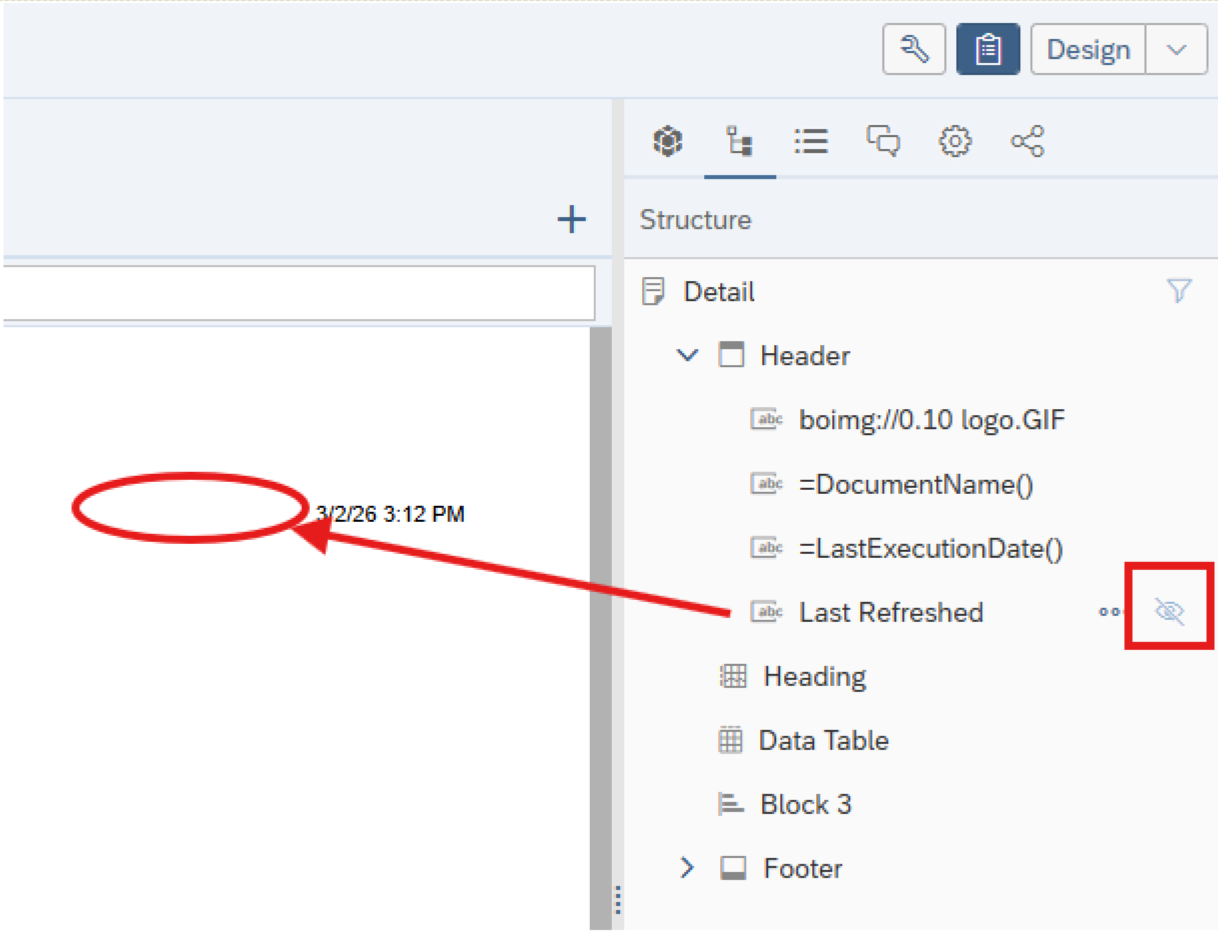
At the bottom of the panel you'll see an "Instant Apply" checkbox next to "Apply" and "Cancel" buttons.



By default, Instant Apply is enabled. With this option, as you change the cell's formatting, your changes are applied to the cell. If you disable this option, your changes will not be applied unless you click the "Apply" button.

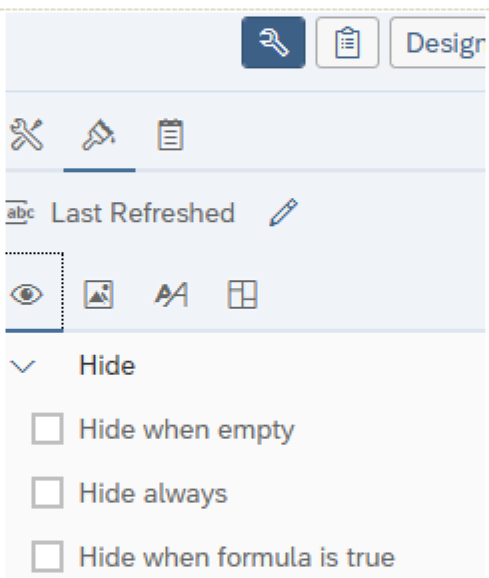
Display

Click on the Display tab and you'll see three options for hiding the cell. If you hide a cell and want to unhide it, you can always select it in the structure map to adjust its settings. Hidden elements are indicated with a



Note that a cell in a table cannot have these display options set. When you change the formatting for a cell in a table, the entire column (for a vertical table) or row (for a horizontal table) will be updated.

Leave all the options here unchecked.



Appearance

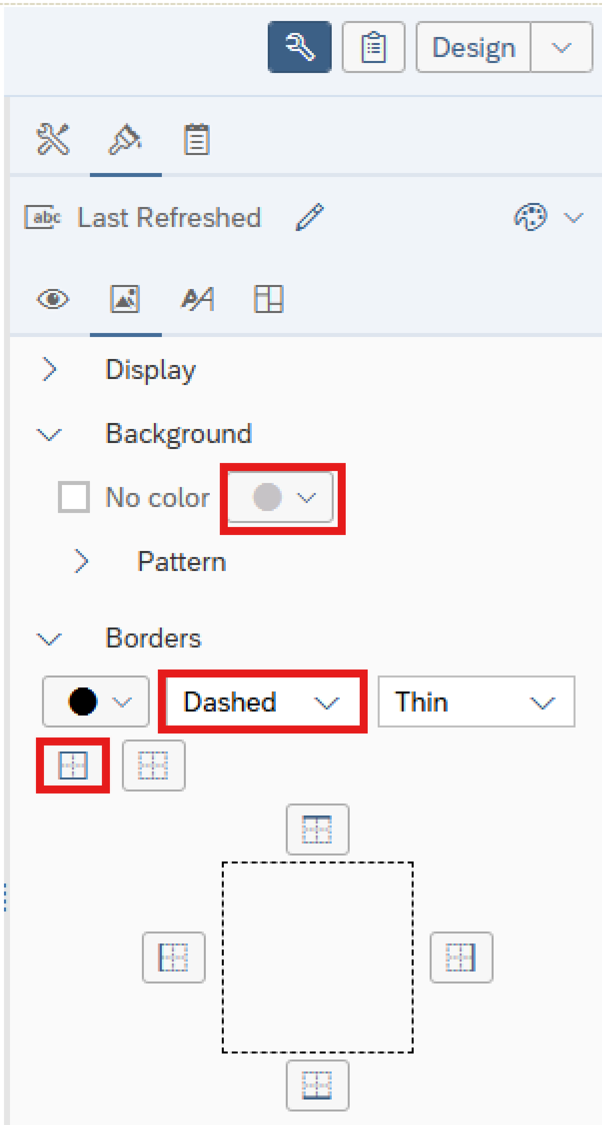
Click on the Appearance tab and you'll see options for display, background and borders.

Display options are primarily for adding padding to the cell if you want it to display its text farther from the cell's borders. Advanced users can also change the "Read content as" dropdown to create hyperlinks, display an image from a URL, or display HTML snippets.

The Background section allows you to set background colors or images for the cell. Basic backgrounds are set by unchecking the "No color" checkbox and using the dropdown to select a background color. More advanced backgrounds are available by opening the "Pattern" section.

You can add Borders to the cell similarly to the way you would add a border to a cell in Excel. You can select which sides of the cell will display the border, what color the border will be, the border's thickness, and choose a style for the border (plain line, dotted, dashed, or double line).

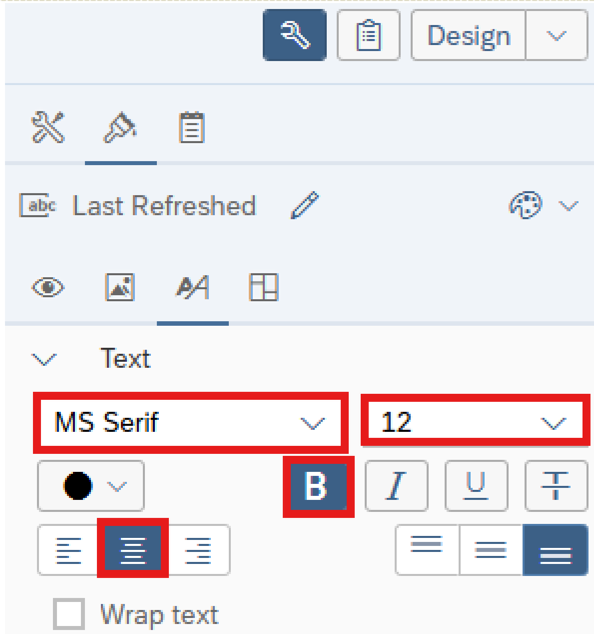
Add a black, dashed, thin border around the cell, and give it a gray background.



Text

Click on the Text tab for options to adjust the font, font size, font color, alignment, and other text options for the cell.

Change the font to MS Serif and the font size to 12. Bold the text and set the alignment to center.



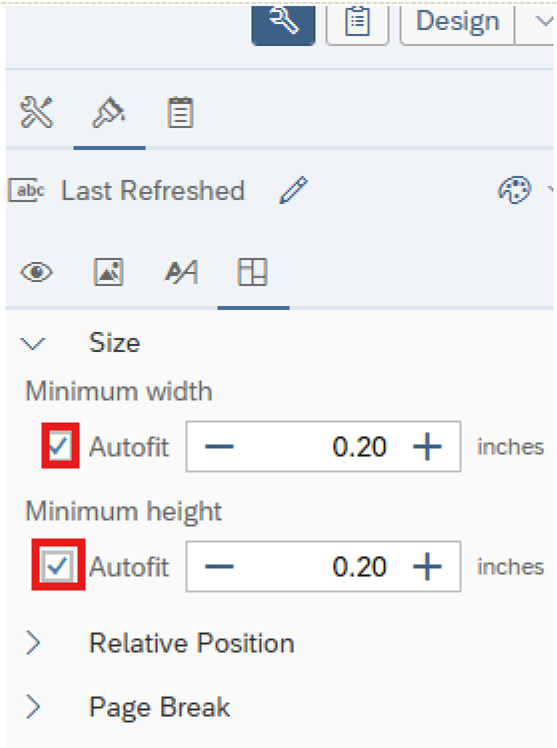
Layout

Click on the Layout  tab to choose the cell's size, where in the report the cell will be displayed, and how the cell will interact with reports spanning multiple pages. This section contains an "Autofit" option for width and height of the cell, which is useful for most cells to prevent cutting off text.

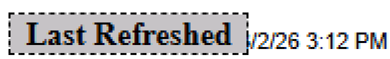
The Relative Position section can be used to have the cell automatically adjust its position based on other elements in the report. For instance, if you set a cell's Left edge to be 1 inches to the Right side of… and then select the header (horizontal) table, then whenever you move the header table the cell will move along with it.

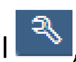
The last section "Page Break" has options to display the cell on every page, or to force the cell to start a new page (which puts a page break behind it).

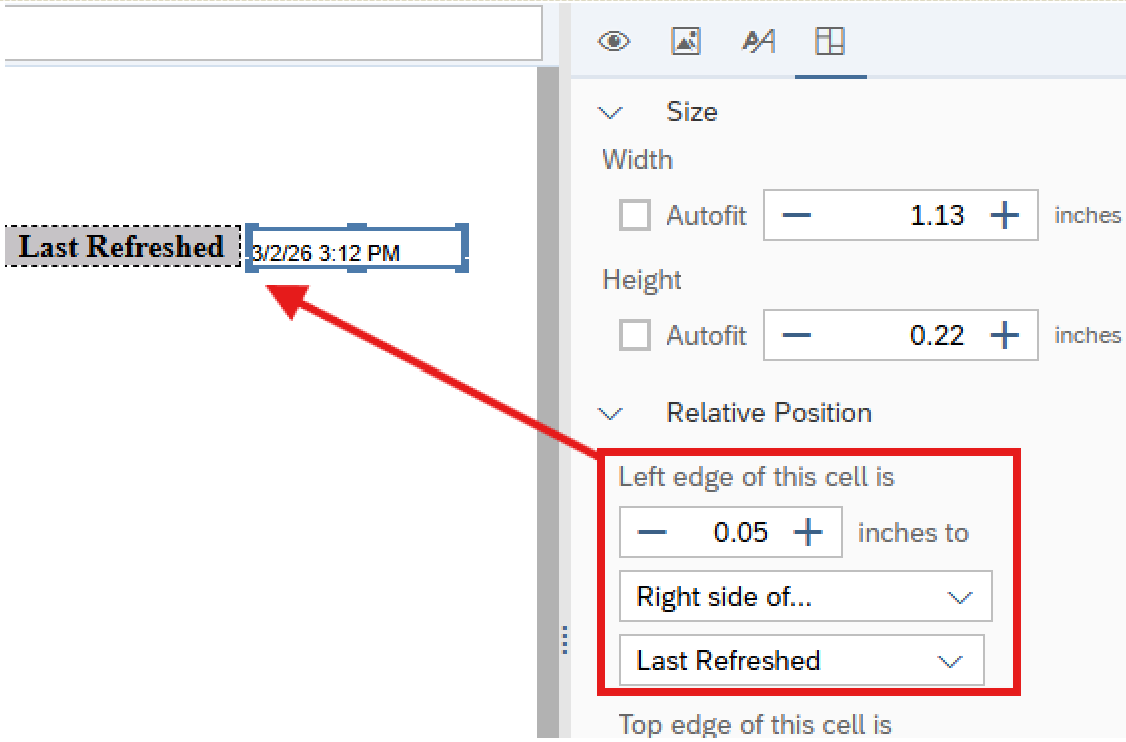
Set the cell's width and height to Autofit.



If you followed the instructions, the cell should look like this:



Click on the last execution date cell. Open the properties panel , and in its format tab , in the layout pane , set the Left edge of the cell to be 0.05 inches to the right side of the Last Refreshed cell. That will make the refresh date display with a small margin between it and the last refreshed box.



Formatting a Table

Tables are formatted similarly to cells, although there are some key differences. Select the Data Table and open its properties and format tab .

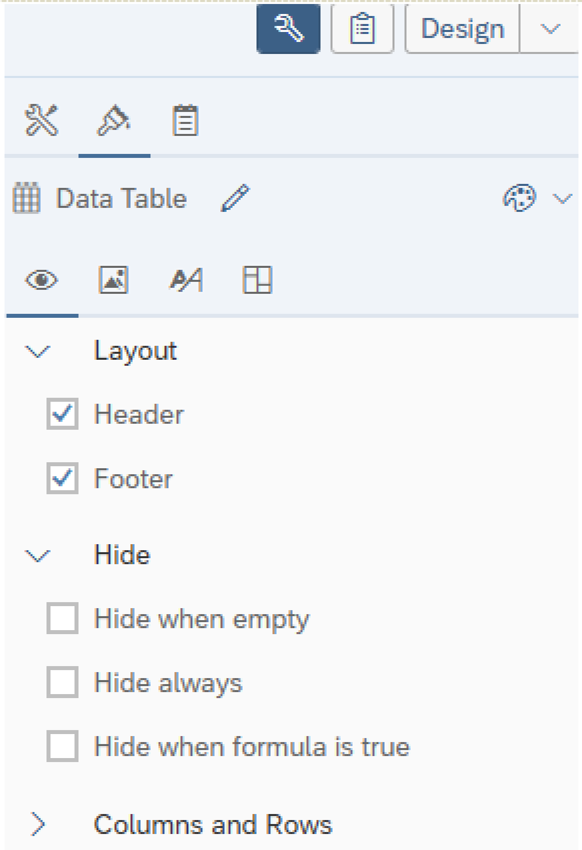
Display

Click the Display pane . You'll see the same options to hide the table as you did with cells. Note that hiding the table applies to the whole table, not to individual cells, rows, or columns.

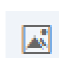
In addition, you'll see the options for enabling and disabling the header and footer rows (or header and footer columns, for a horizontal table). T7/13/2026hese will hide or show the whole row (or column) at a time.

At the bottom of the display tab, there are options for showing or hiding duplicate rows, rows with blank values, and rows with 0 values for their measures.

Leave these options on their default settings for now.



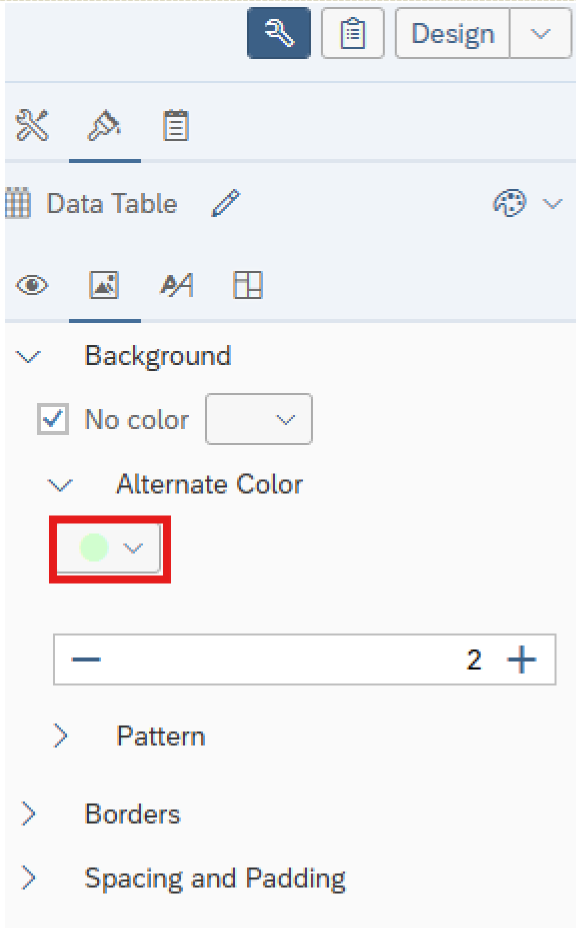
Appearance

Click the Appearance pane . You'll see similar options to the cell's appearance options, with a few key differences.

First, you can set "Alternate Colors" for tables. This can be used to set the background color of every other row. By default, the table is formatted to show rows alternating between gray and white. You can use this to make every other row a color other than gray if you wish.

Second, while the borders options are the same as they are for cells, remember that these options are for the table itself, not the individual cells. Applying a border will give the entire table a border, without applying a border between rows or columns. You must select the cells of the table to apply borders between rows and columns.

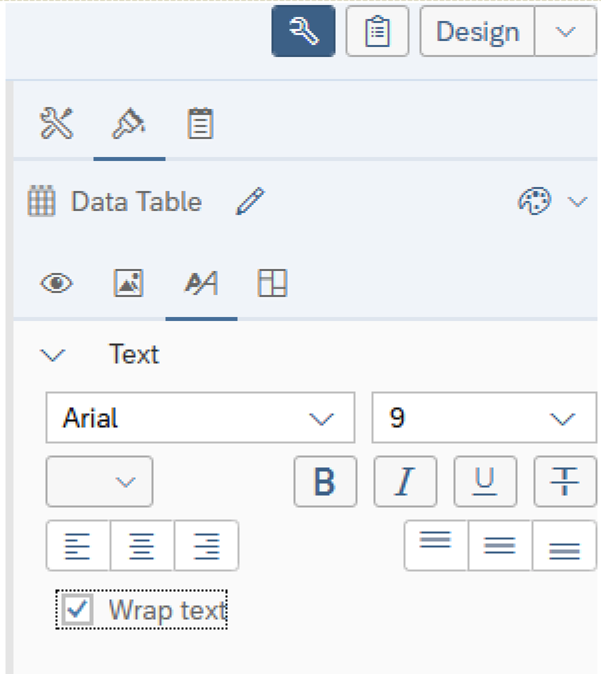
Change the alternate color to light green.



Text

Click the Text pane . These options are the same as they are for cells. Remember that this option applies to the whole table. To change the text formatting for a specific column, you must select that column.

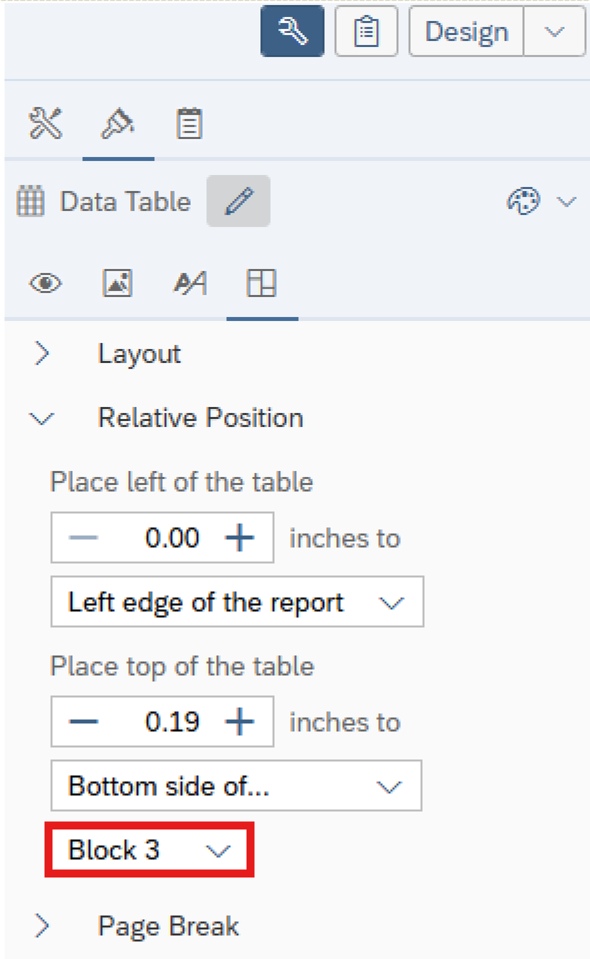
Enable Wrap text.



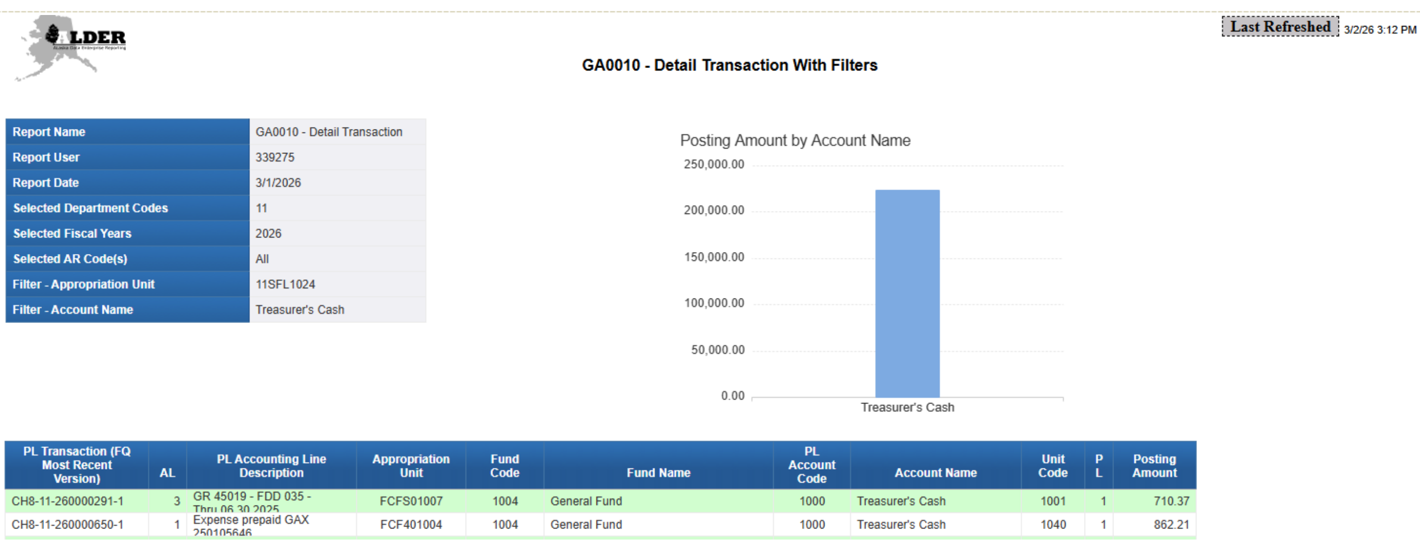
Layout

Click the Layout pane . The difference here is the ability to repeat the headers and footers on each page. By default, the header will display on every page, but the footer will not. Notice that the report was created originally with the top of the table aligned to be 0.19 inches from the bottom of the heading box.

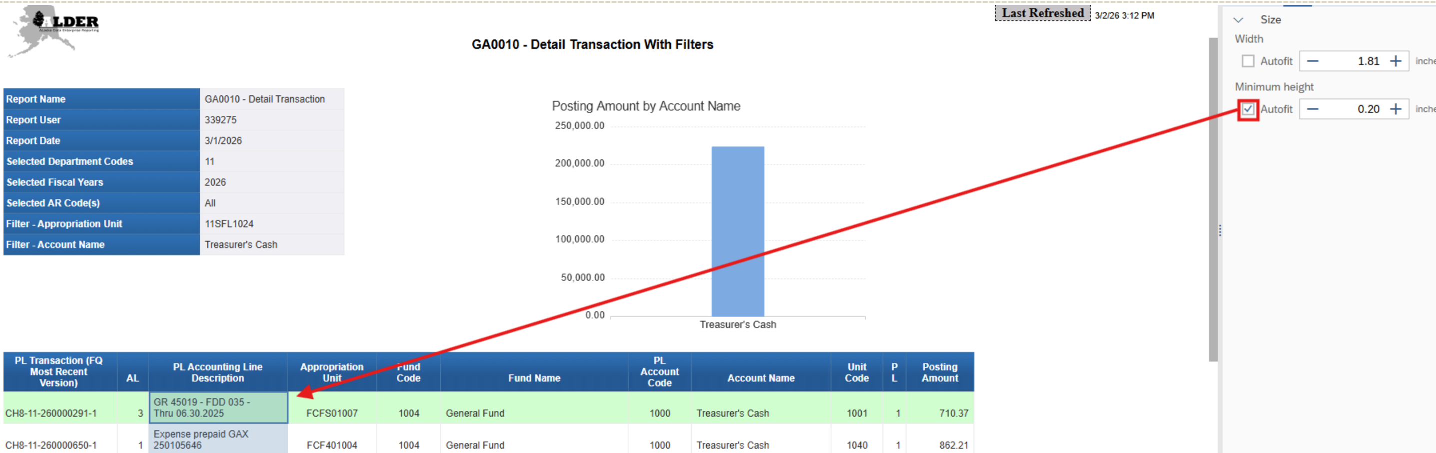
Change the table to be 0.19 inches to the bottom side of the column chart.



After making these changes, the report should look like this:



Click the table to select it, then click the first data row in the PL Accounting Line Description column. In the layout tab, set the height to “Autofit”.

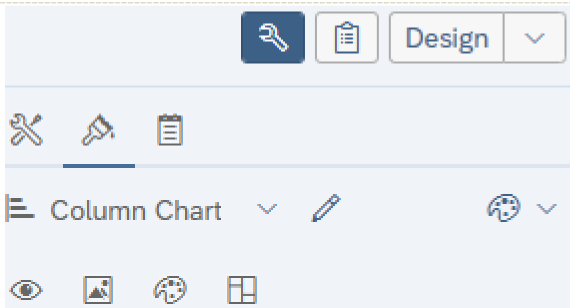


Formatting a Chart

There are many kinds of charts, and they will each have different options for formatting them. For a full list of the options for chart formatting, see [Formatting charts | SAP Help Portal](). For now, we'll go over some of the basic options which are available on the column chart you already have.

Add "Personal Services Transfer" to the "Account Name" report filter's input control. This will make the chart a little more visually interesting as we play with its settings.

Open the chart's properties panel and open the format tab . Use the Edit icon to change its name to "Column Chart"



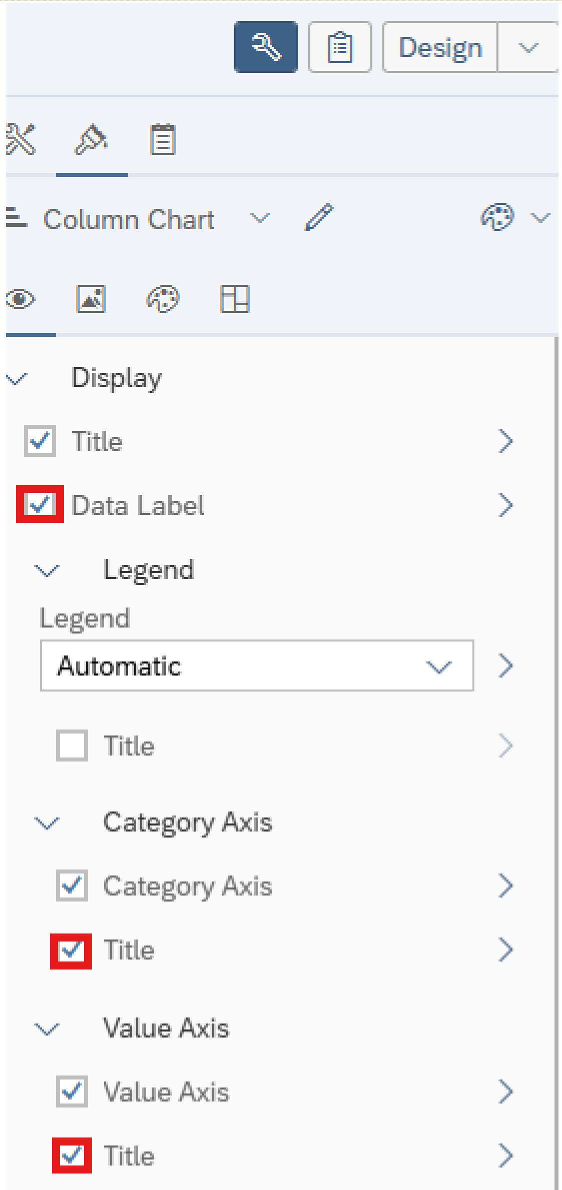
You'll notice a new pane in the format tab of the chart, although three of the panes are similar to what exists for tables and cells.

Display

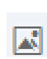
Click the Display settings . Notice how different the chart's display settings are from tables and cells.

A chart's display settings contain labels, titles, options for turning axes on or off, adding legends, etc. Next to many of these options is a right arrow , which will display additional settings for the corresponding option.

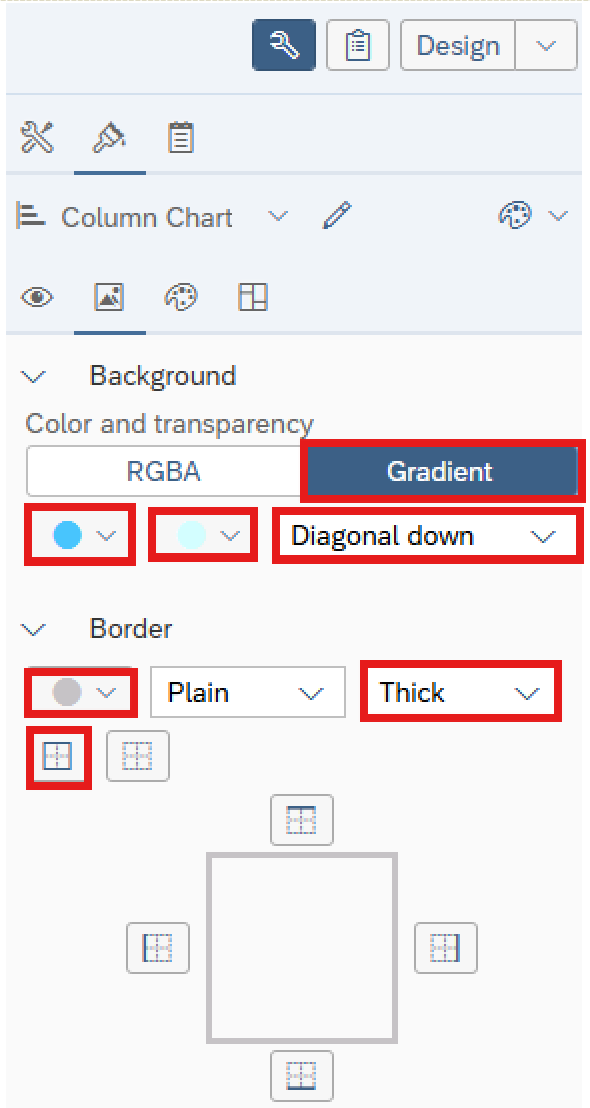
Add titles to the chart's value and category axes and then add a data label.



Appearance

Click on the appearance pane  . Notice the Gradient option under the background settings.

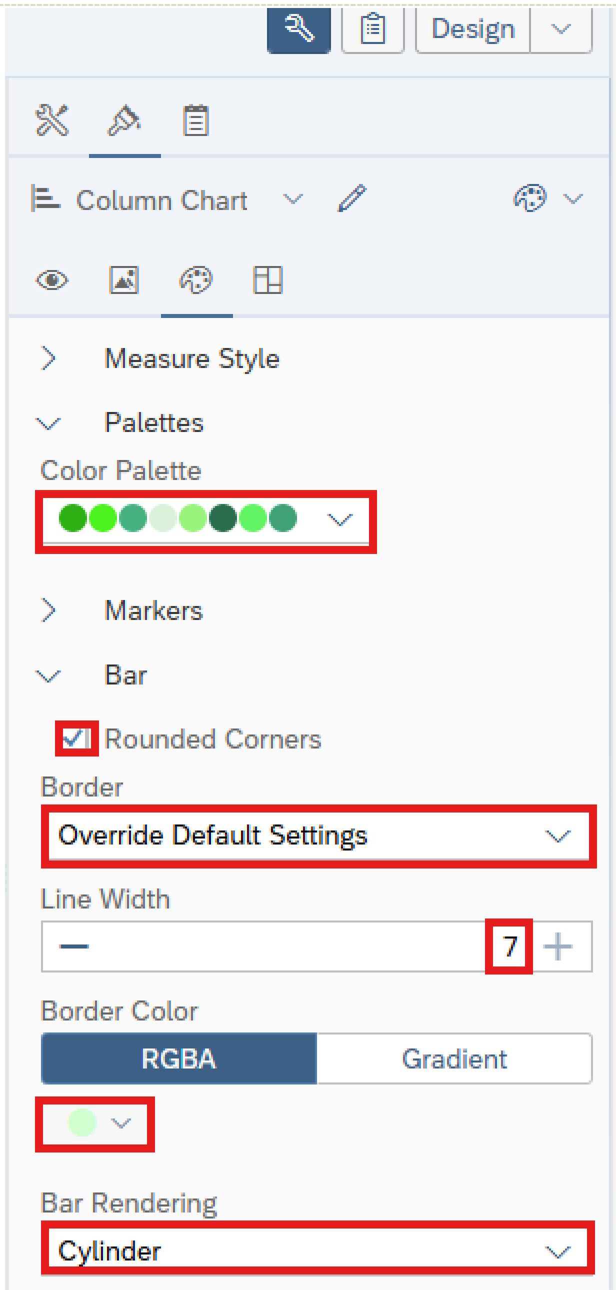
Add a Gradient background going from dark blue to light blue diagonally-down. Add a gray, plain, thick border.



Style

Click the Style  pane. This has the most variable settings which change from chart type to chart type. Styles change the way the chart displays itself graphically. In Style settings you can change the color palette for the chart, add borders to markers, and apply 3D, Light, and Shadow effects.

Change the Color Palette to “Green”, give the bars rounded corners, and add a light green border to the bars with width 7. Render the bars as Cylinders.

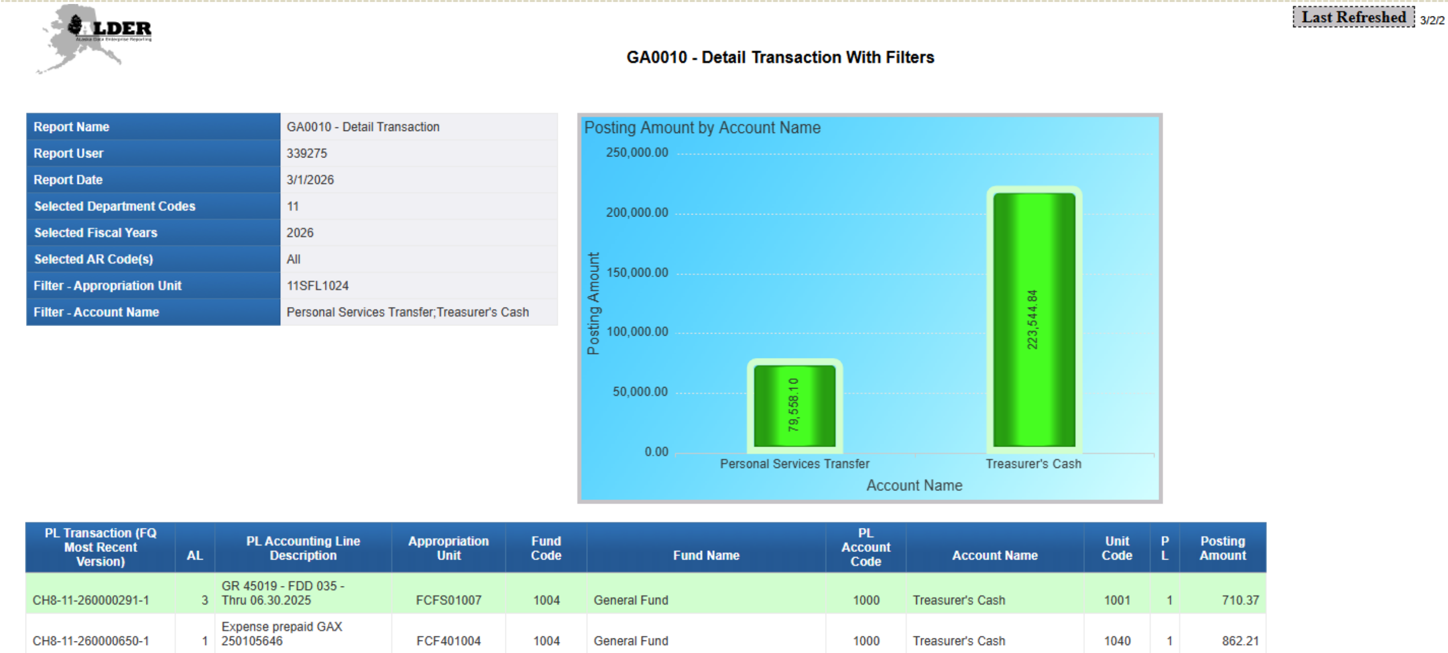


Layout

Click the layout tab . This should look very similar to what you've seen before.

Change the width and height to 6 and 4 inches, respectively. Change the relative position of the chart to align with the top edge of the heading box with a 0.2 inch margin between them.

After these changes, the report should look like this:



Last Refreshed 3/2/2

GA0010 - Detail Transaction With Filters

Report Name	GA0010 - Detail Transaction
Report User	339275
Report Date	3/1/2026
Selected Department Codes	11
Selected Fiscal Years	2026
Selected AR Code(s)	All
Filter - Appropriation Unit	11SFL1024
Filter - Account Name	Personal Services Transfer;Treasurer's Cash

PL Transaction (FQ Most Recent Version)	AL	PL Accounting Line Description	Appropriation Unit	Fund Code	Fund Name	PL Account Code	Account Name	Unit Code	PL	Posting Amount
CH8-11-260000291-1	3	GR 45019 - FDD 035 - Thru 06.30.2025	FCFS01007	1004	General Fund	1000	Treasurer's Cash	1001	1	710.37
CH8-11-260000650-1	1	Expense prepaid GAX 250105646	FCF401004	1004	General Fund	1000	Treasurer's Cash	1040	1	862.21

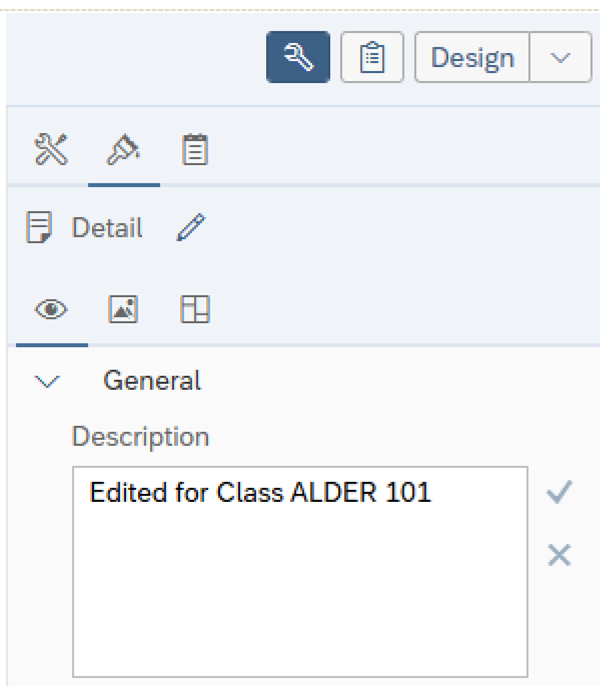
Formatting a Report

Click anywhere in the report without selecting an element. Open the properties panel , and you will access the overall report formatting.

Display

Click the Display pane . Here you can choose to add description for the report tab and show or hide the header and footer.

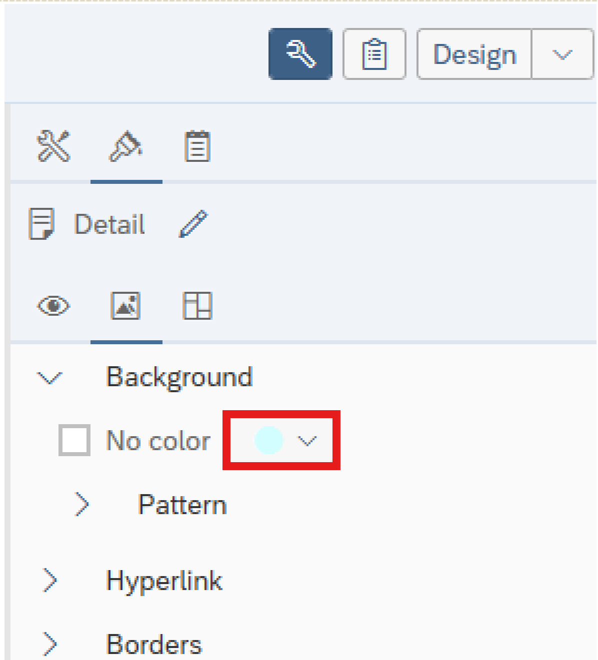
Add the description "Edited for Class ALDER 101".



Appearance

Click the appearance tab . Here you can add backgrounds and borders or change the way hyperlinks are displayed.

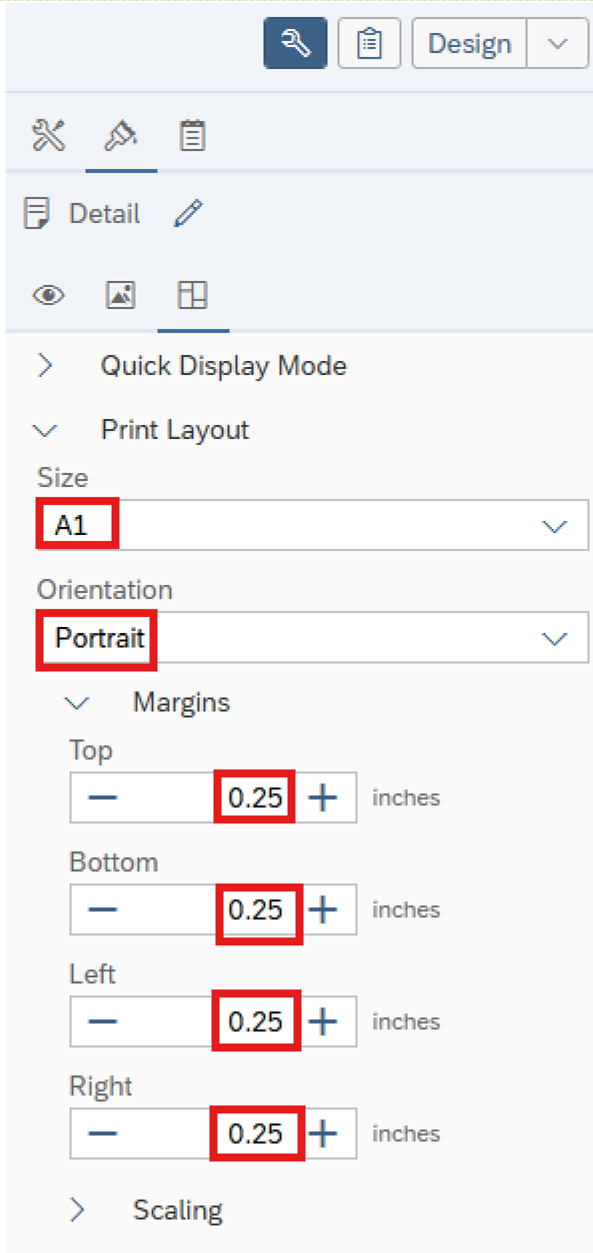
Add a light blue background.



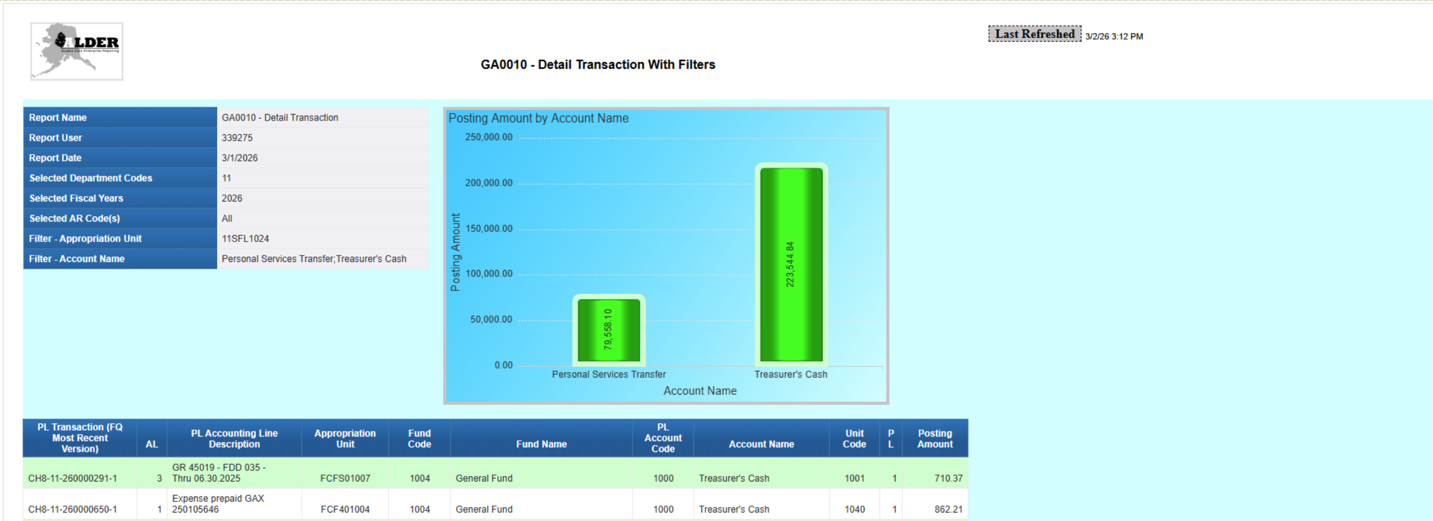
Layout

Click the Layout settings . Here you can set the margins for the report, the print layout, and adjust the number of rows/columns that are displayed.

Change the margins to 0.25 inches on all sides. Change the size to A1 and the orientation to Portrait.



If you followed the instructions, the report should look like this:

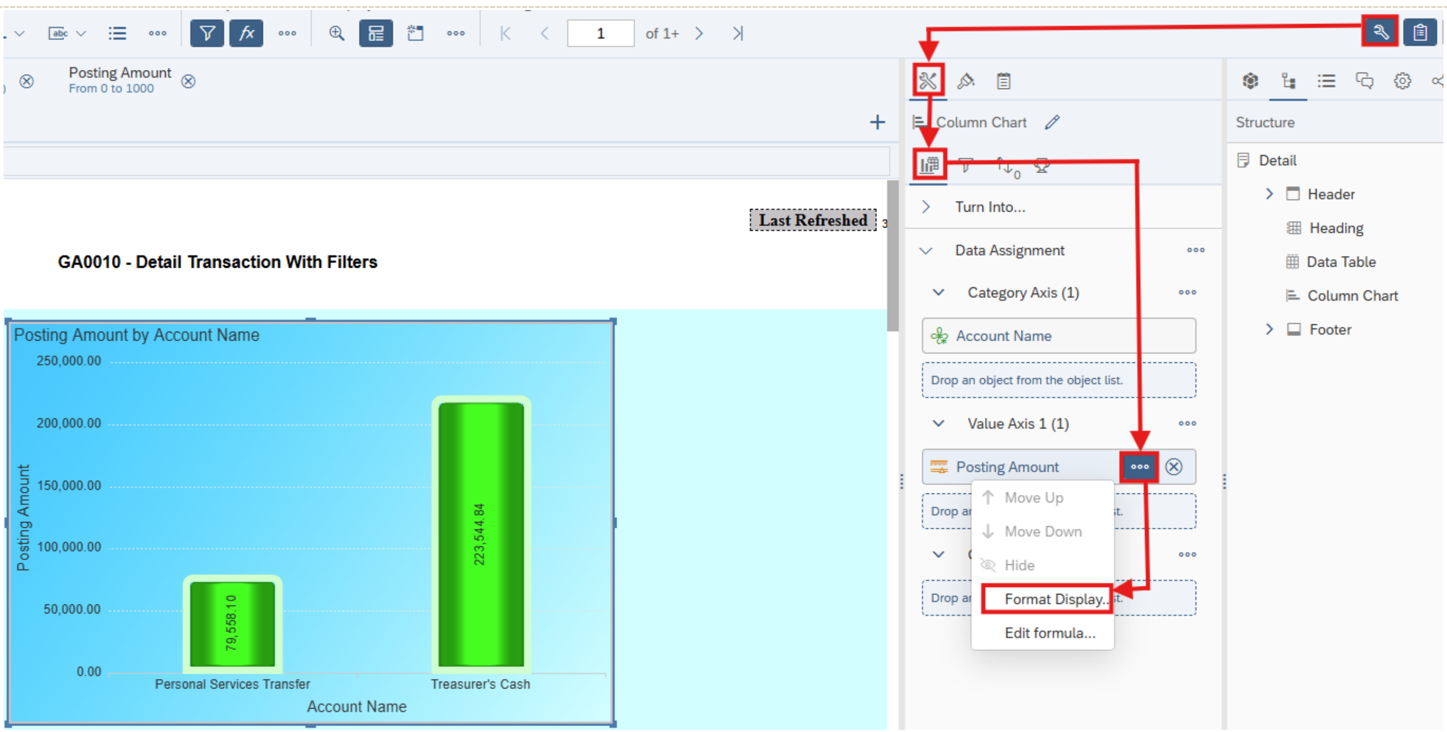


Notice the background you applied does not encompass the margins of the report, the header, or the footer.

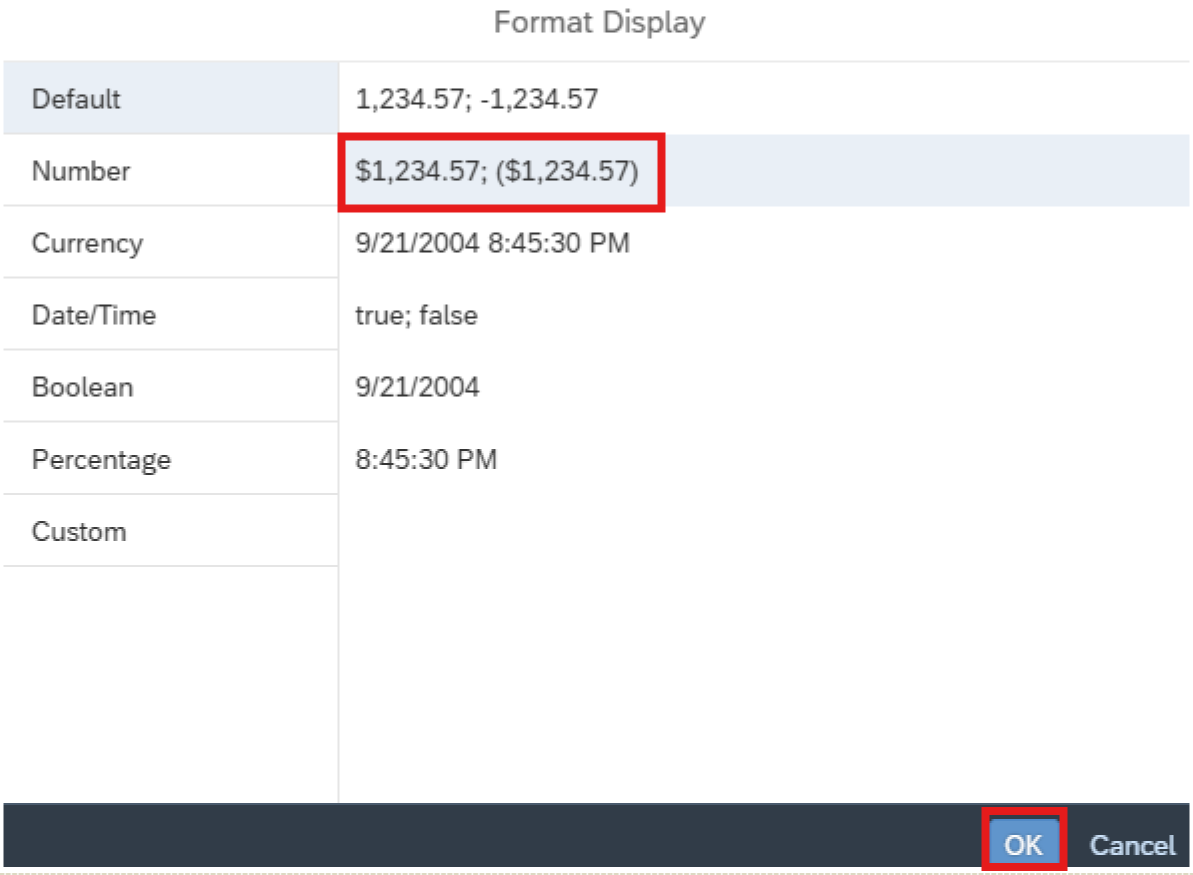
Formatting an Object

Objects that are included in charts, tables, or cells can be formatted. This is especially useful for making numbers display as percentages, or getting dollar amounts to display as currencies, or adjusting the default display of dates.

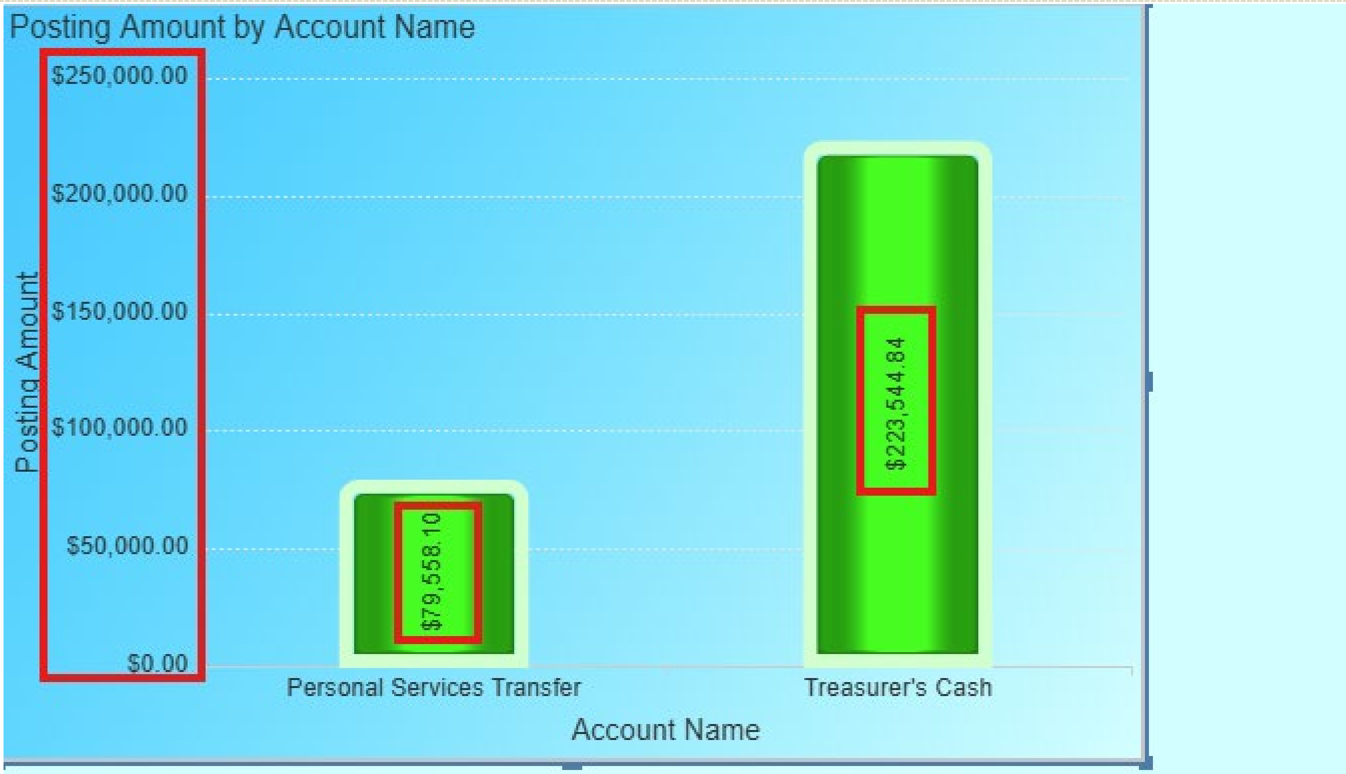
Select the Column Chart and open its properties. In the data tab, on the feeding panel, click the More options button next to posting amount and click "Format Display…"



The format display popup wizard will open with options to choose from. Choose the currency option, then click "OK".



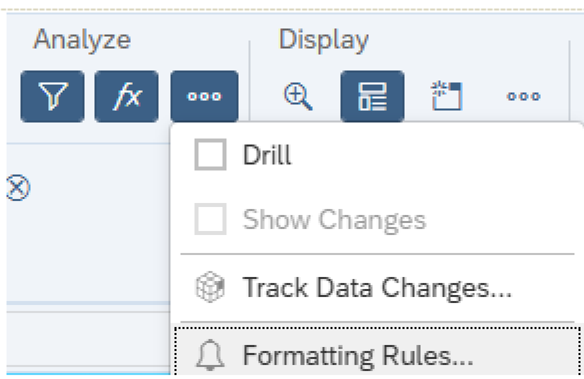
Notice that the chart is now displaying all the numbers as currencies. However, since the format was applied to the chart's formatting, the posting amount in the table remains unchanged.



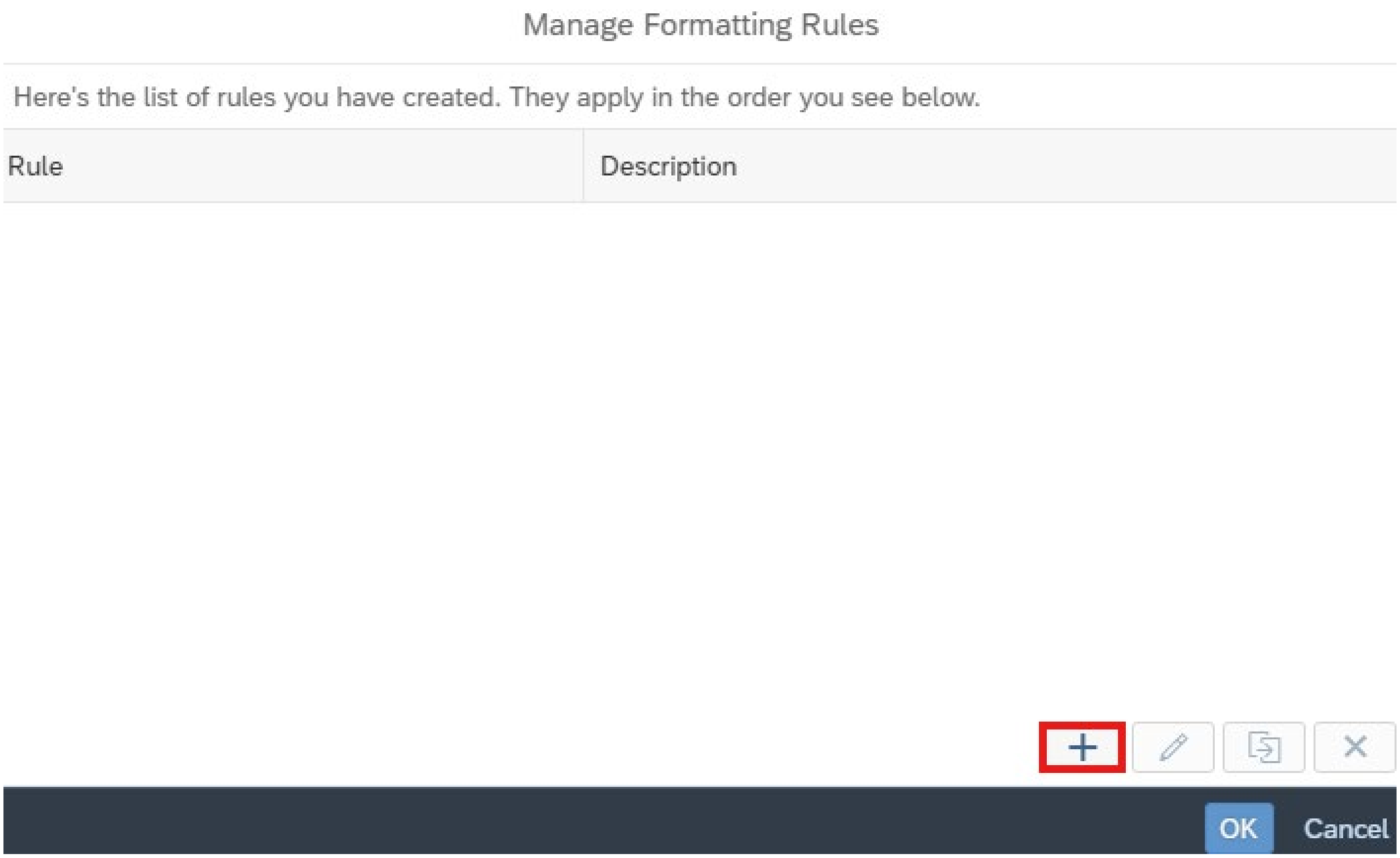
Fund Name	PL Account Code	Account Name	Unit Code	P L	Posting Amount
General Fund	1000	Treasurer's Cash	1001	1	710.37
General Fund	1000	Treasurer's Cash	1040	1	862.21

Conditional Formatting

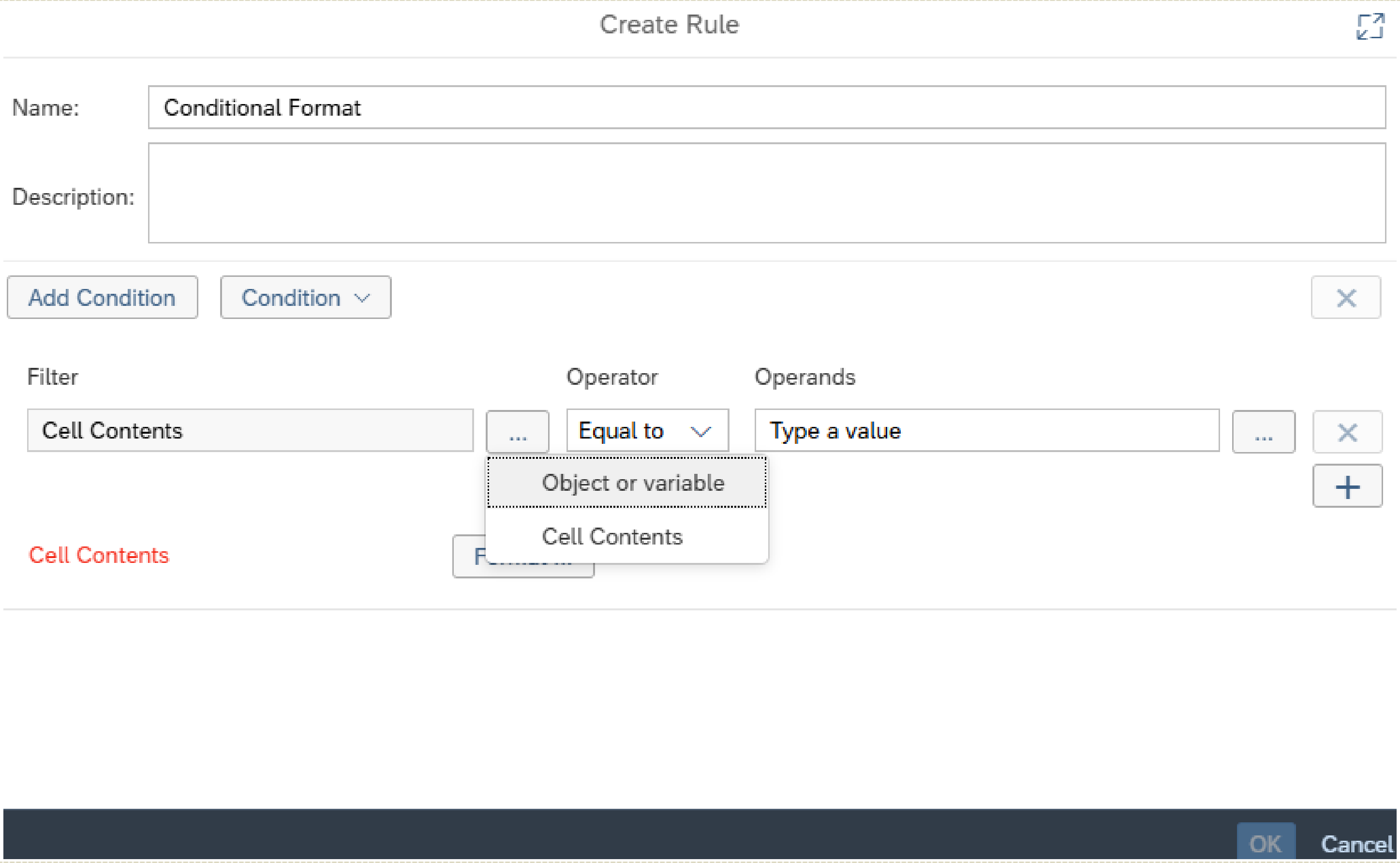
Tables of data can be conditionally formatted like Excel spreadsheets. In the report toolbar, in the "Analyze" section, click the More button, then click "Formatting Rules"



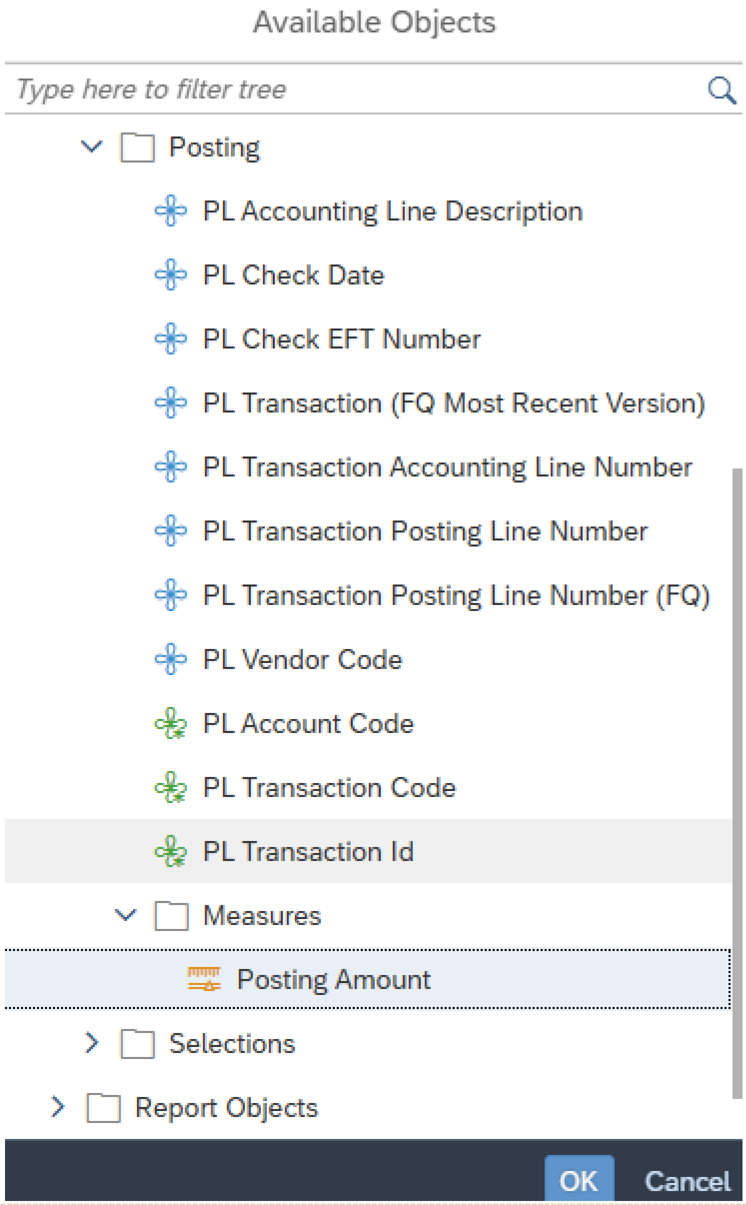
The "Manage Formatting Rules" popup wizard will open. Click Add Rule to create a new conditional formatting rule.



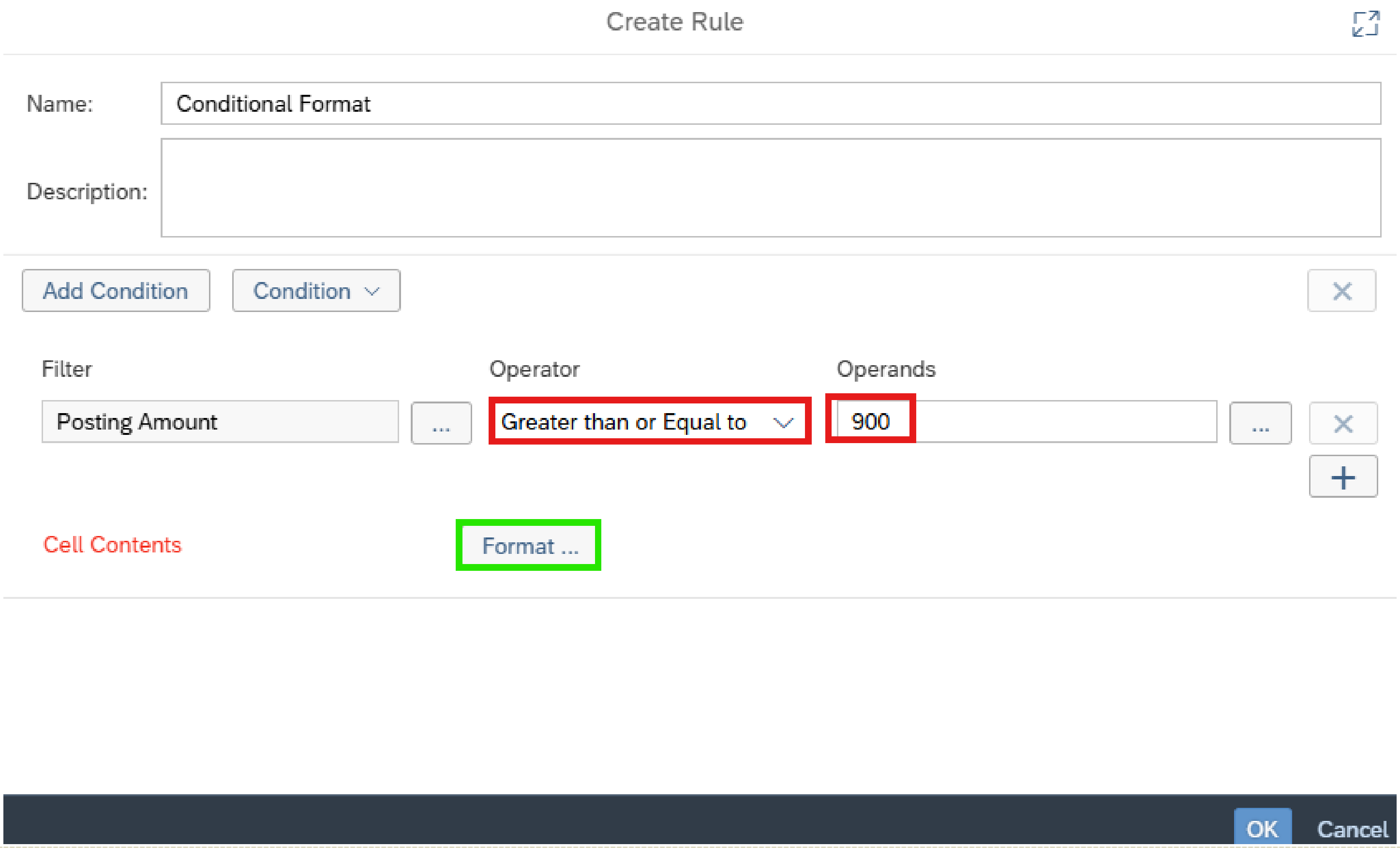
The Create Rule popup wizard will open. Click the Select Object button, then click Object or variable



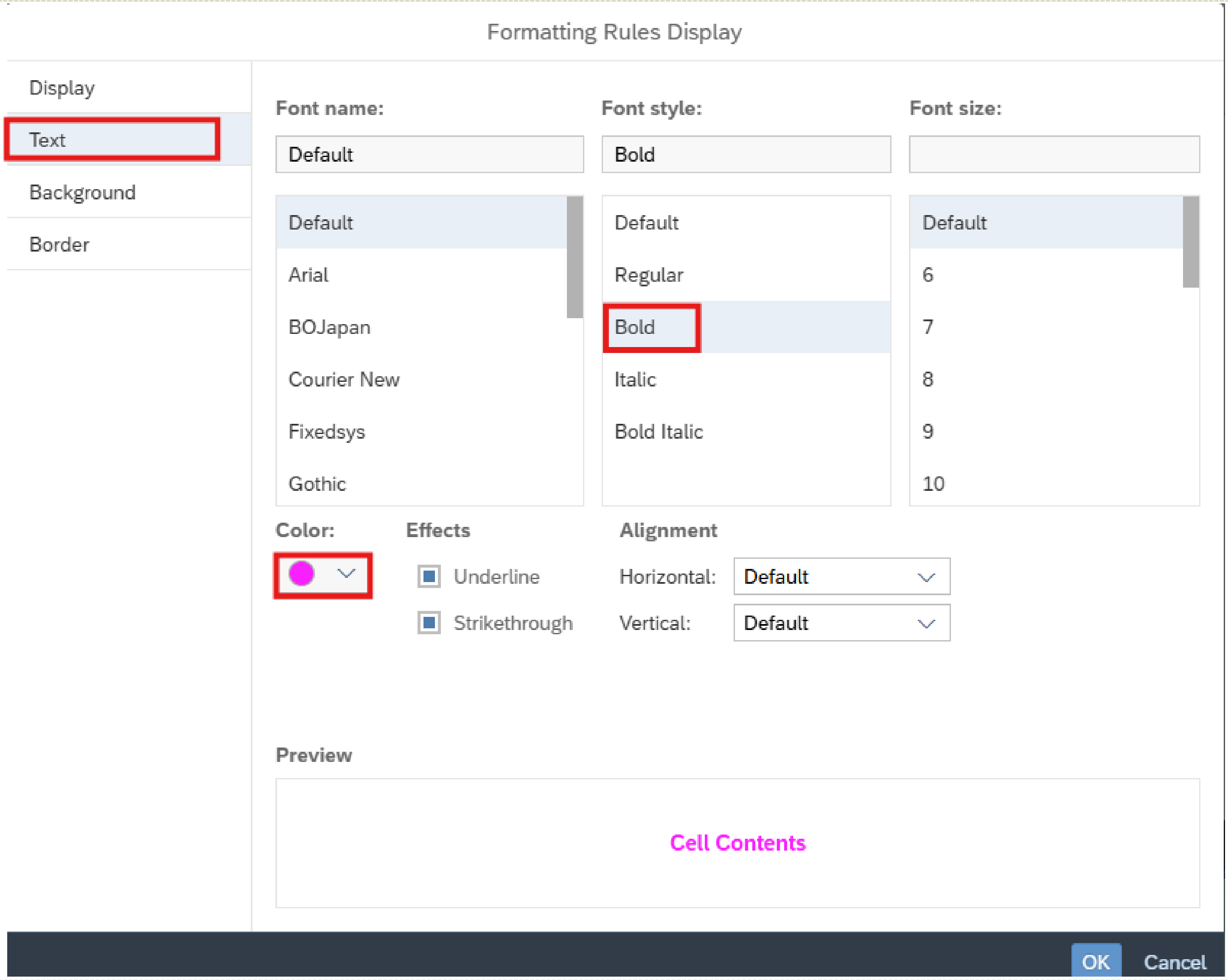
Select Posting Amount and click OK



Set the operator to “Greater than or Equal to” and the Operand to 900. Then click the Format… button to choose the formatting for the cells that match the condition.



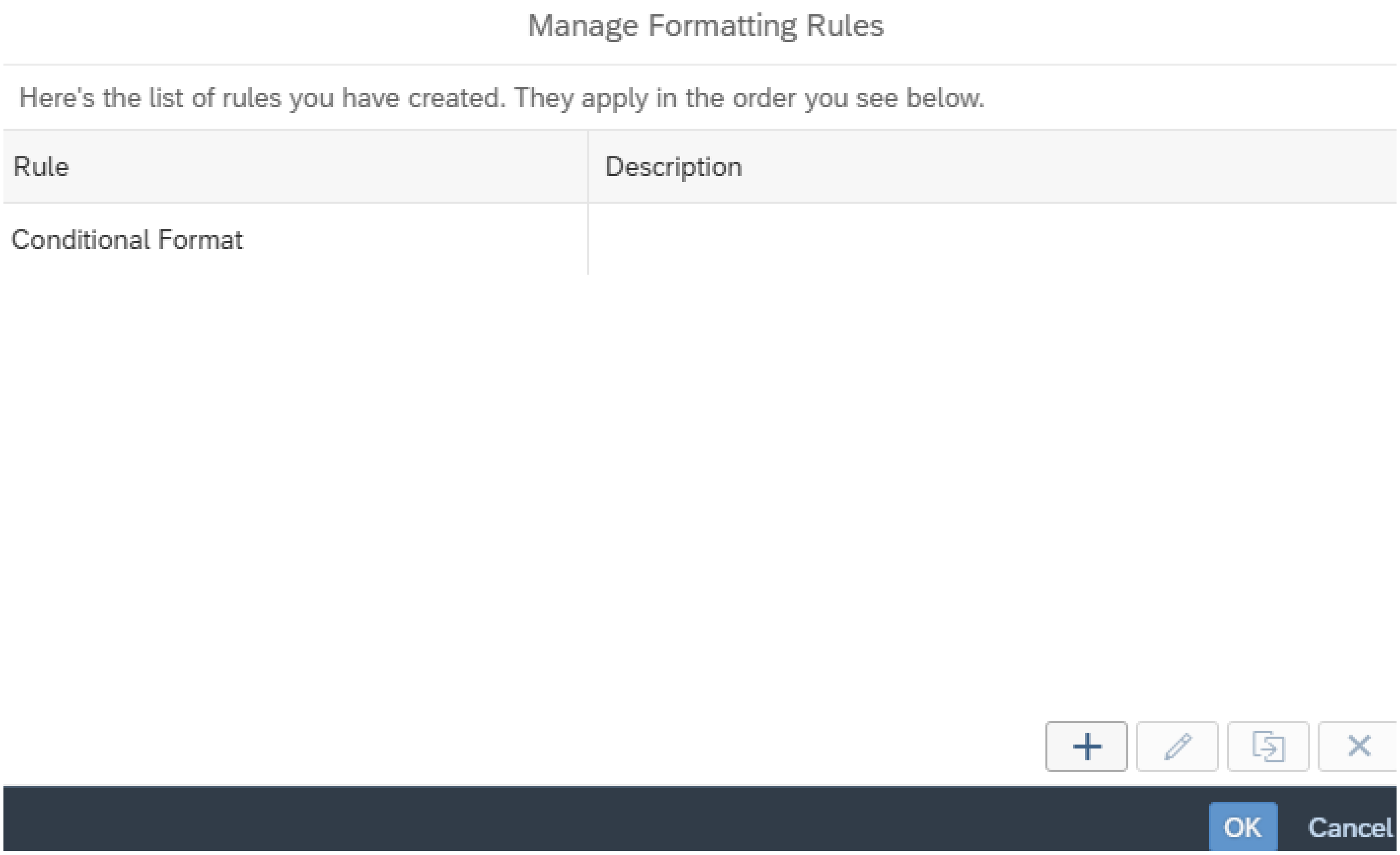
The Formatting Rules Display popup wizard will open. You have options for editing the display, text, background, and borders of cells that match the condition that you set. Set the text color to purple and the font style to bold.



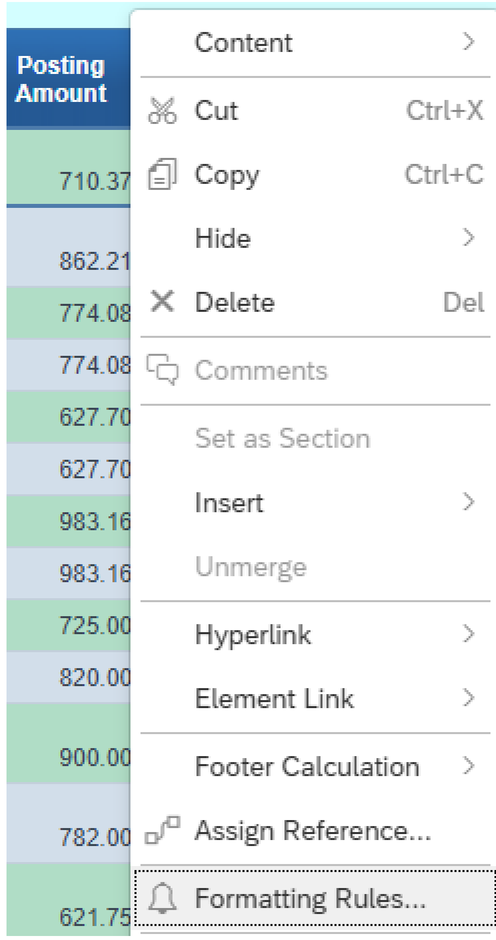
Click OK. Notice the rule’s preview displays how the cell will look.

Cell Contents

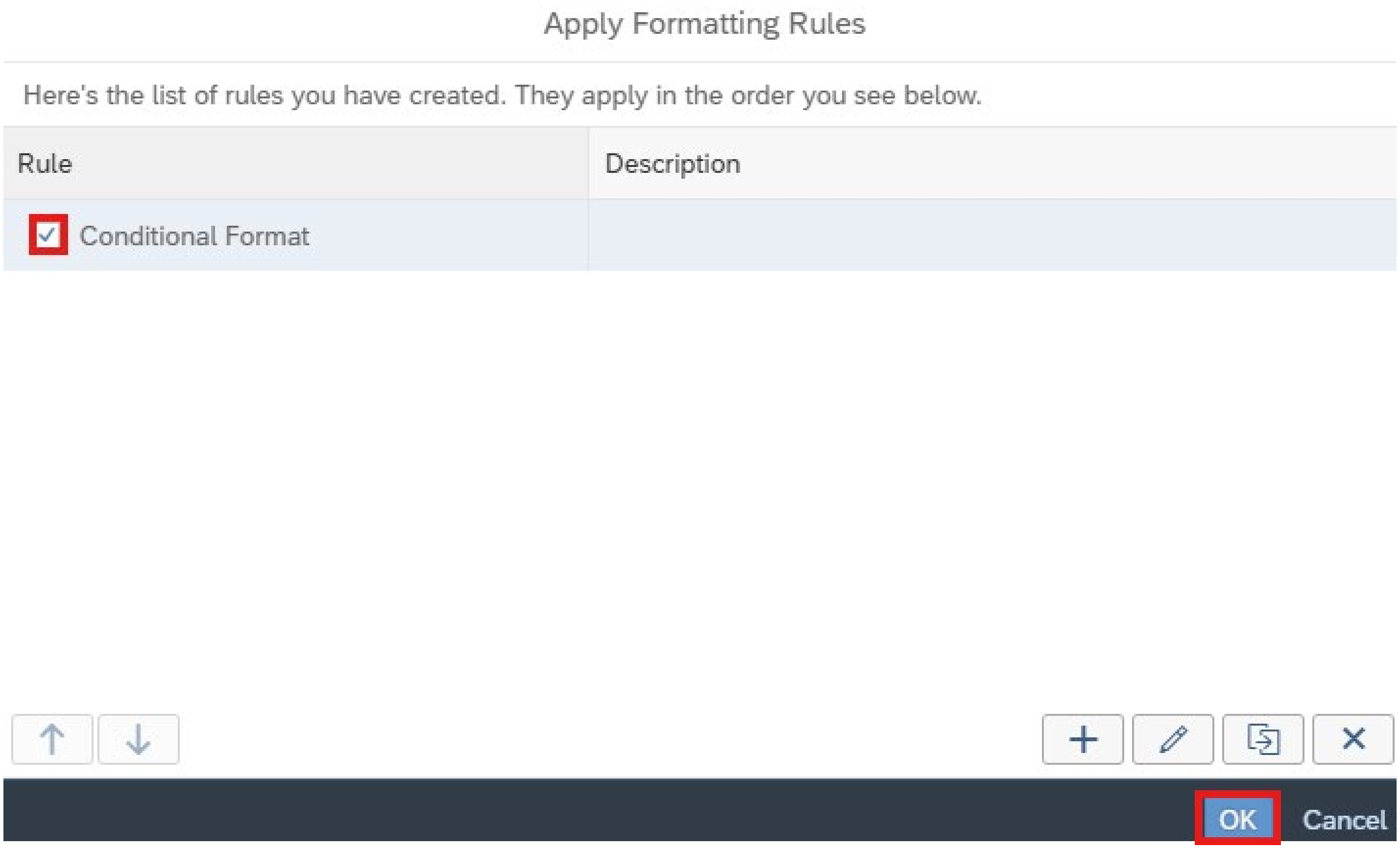
Click OK again. Notice there is a new rule called “Conditional Format” in the formatting rules.



Click OK. Now that you have a rule created, select a column to which the rule will be applied. Click the table once to select it, then click a cell in the “Posting Amount” column. Right-click to bring up the options menu, then click “Formatting Rules”.



Check the box next to the rule you created to apply the formatting. Then click OK.



Observe that posting amounts greater than 900 have their formats edited to match what you selected previously.

Posting Amount
710.37
862.21
774.08
774.08
627.70
627.70
983.16
983.16
725.00
820.00
900.00
782.00
621.75
609.00
881.00
669.20

Save the report as **GA0010 – Detail Transaction With Filters and Formatting** to your *Class ALDER 101* folder.

Chapter 9: Element Links

Goals and Objectives

In this chapter you will learn how to:

- Link charts and tables together for interactive filtering
- Use and reset element link filters
- Update existing element links

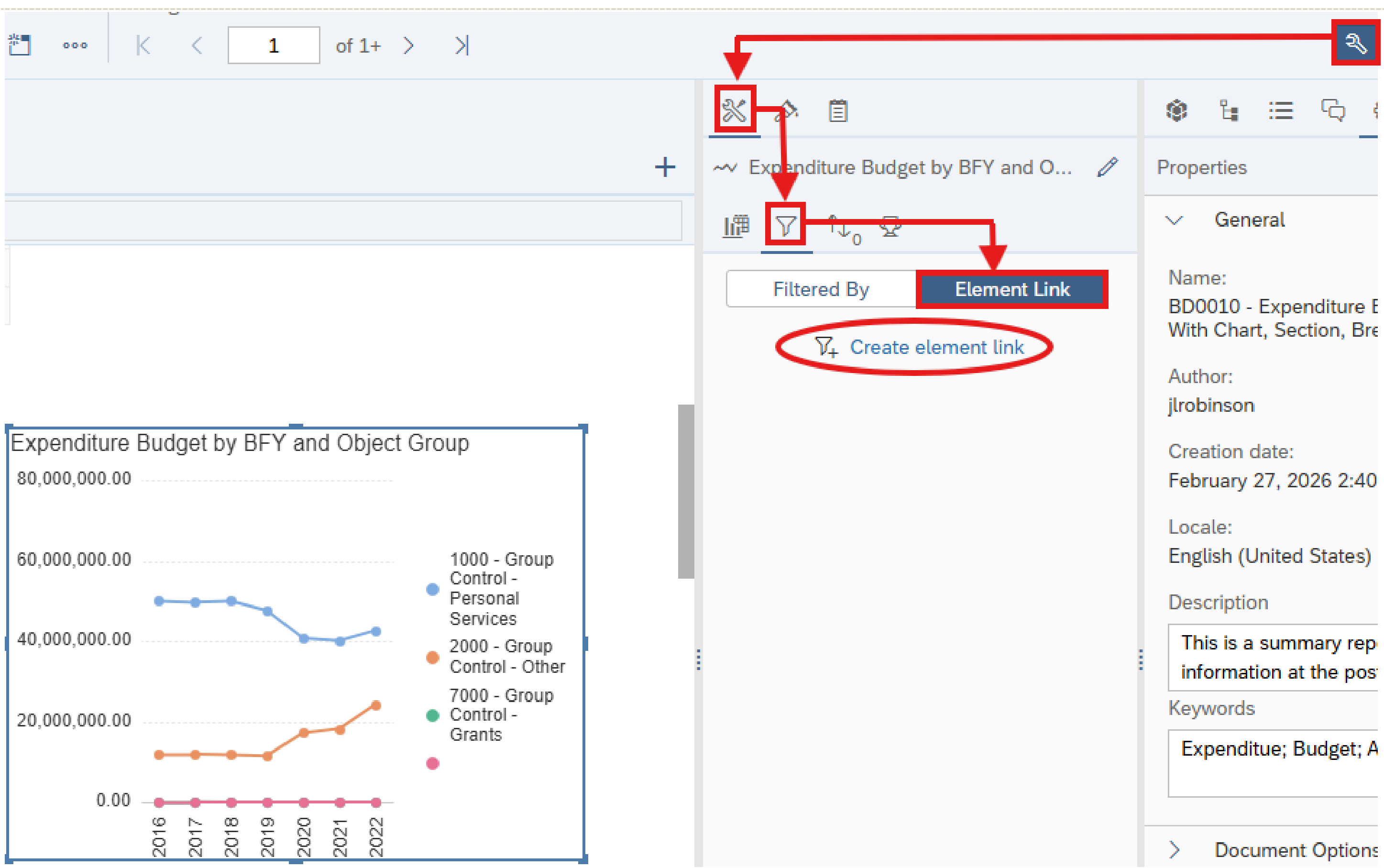
Introduction

An element link will link two or more report elements together so that one can be filtered by clicking on the other. These can be used to make your reports interactive.

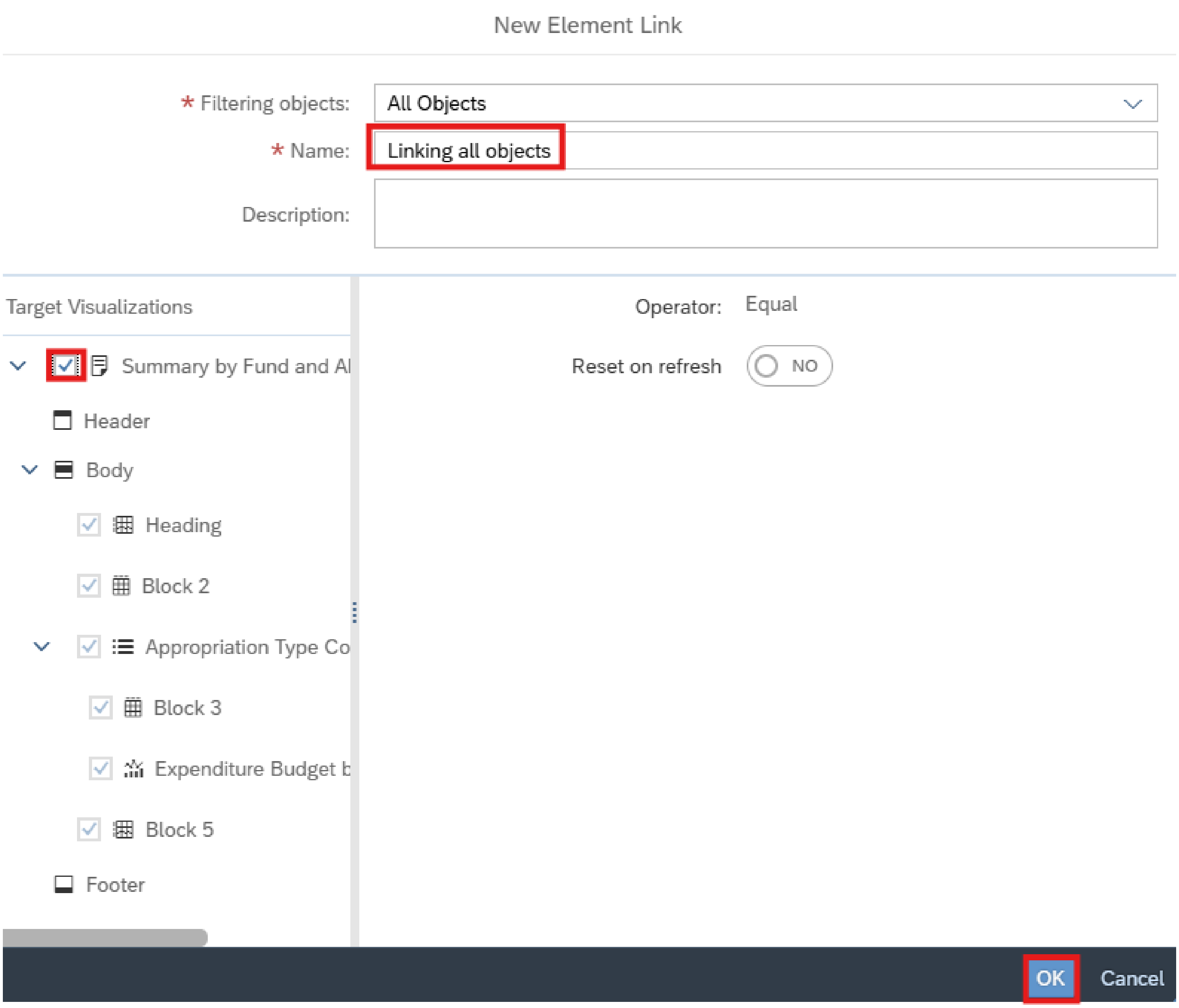
Open **BD0010 – Expenditure Budget and Actual With Chart, Section, Break, and Sort** from your *Class ALDER 101* folder.

Creating an Element Link

Open the chart's properties . In the data tab , the filter panel , click the "Element Link" button. Then click "Create element link".

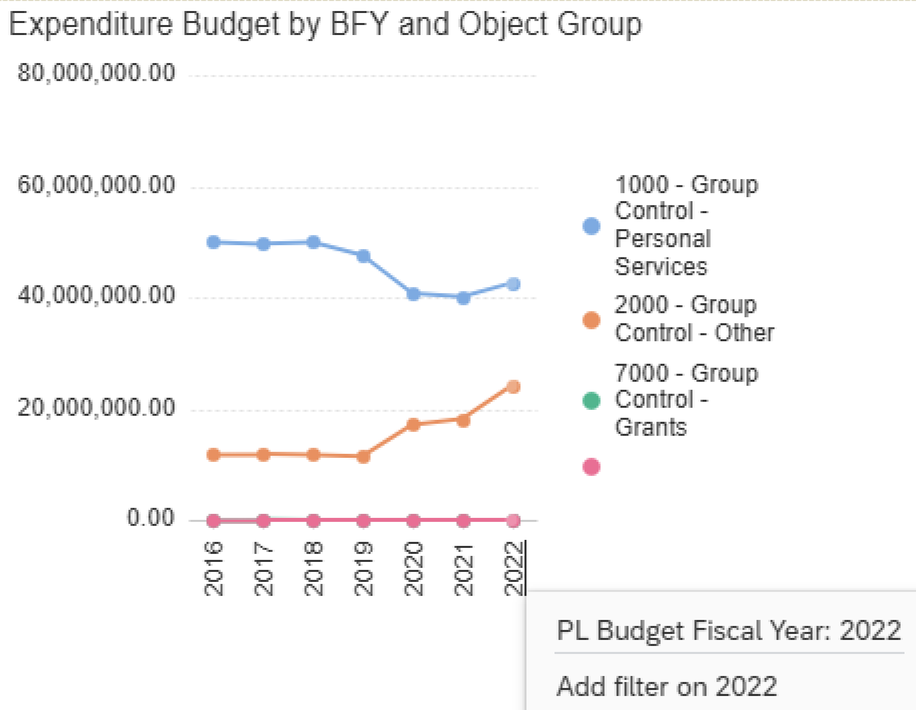


The "New Element Link" popup will appear. Name the link "Linking all objects" and then check the report name in the "Target Visualizations" section on the left. Then click "OK".



Using an Element Link

Switch to "Reading Mode" and then hover over one of the horizontal axis labels on the chart. Notice that the tooltip now says "Add filter on XXXX"

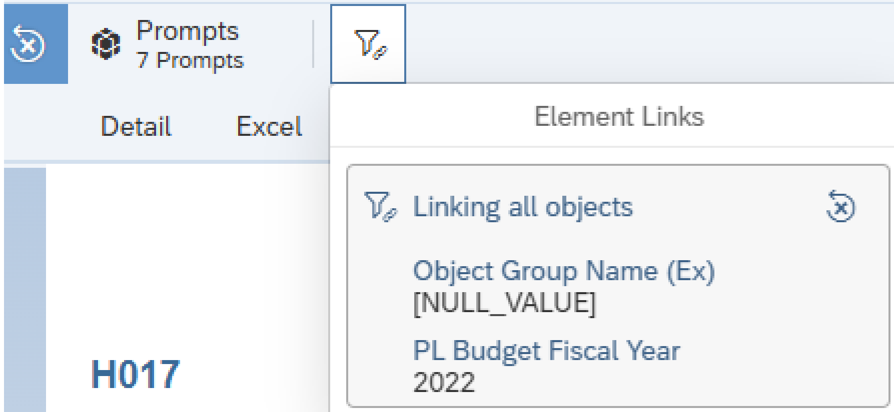


Left-click and observe how the report changes: nothing displays other than the year you clicked.


H017

PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2022	2000	2000 - Group Control - Other	062301505	20,095,279.01
	2000	2000 - Group Control - Other	062301504	1,891,855.13
	2000	2000 - Group Control - Other	062301511	1,729,754.87
	2000	2000 - Group Control - Other	062301501	448,059.06
	2000	2000 - Group Control - Other	06H017CRD	0.00
	7000	7000 - Group Control - Grants	062301505	3,900.00
	7000	7000 - Group Control - Grants	062301565	0.00
	1000	1000 - Group Control - Person	062301504	19,222,230.14
	1000	1000 - Group Control - Person	062301505	16,582,170.02
	1000	1000 - Group Control - Person	062301503	4,199,474.23
	1000	1000 - Group Control - Person	062301501	1,911,438.20
	1000	1000 - Group Control - Person	062301565	408,100.00
	1000	1000 - Group Control - Person	062301511	241,356.52
				0.00
2022				**66,733,617.18**

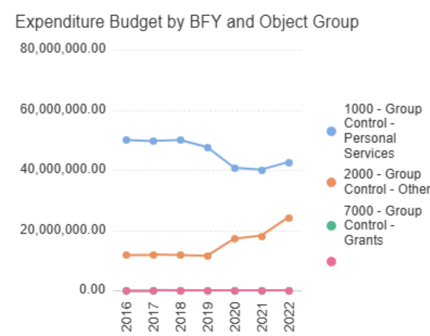
Up in the workspace toolbar, look for the "Element Links" icon. Click it and you'll see the element links currently filtering the report. Notice the "Object Group Name (Ex)" object says "NULL_VALUE", meaning the report is not filtering on that object. Meanwhile, the "PL Budget Fiscal Year" object will show the filter you selected.



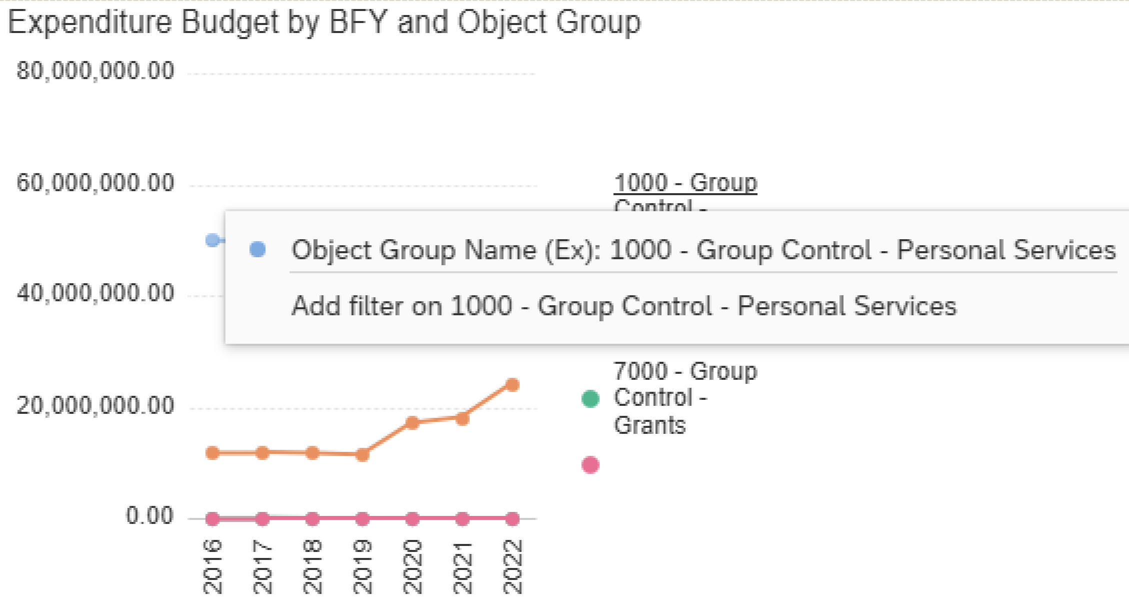
Click the “Reset element link” button to remove the filter you just applied. Notice that all the data is displaying again.

H017

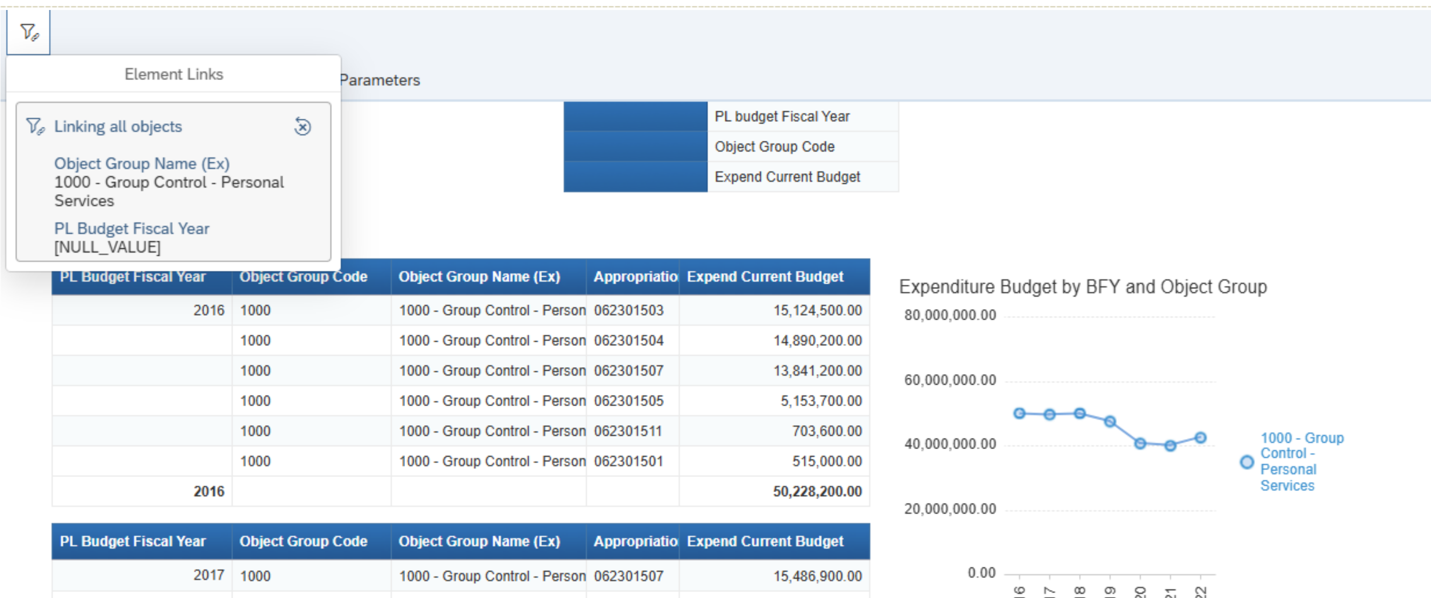
PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2016	2000	2000 - Group Control - Other	062301503	4,182,525.82
	2000	2000 - Group Control - Other	062301511	2,378,500.00
	2000	2000 - Group Control - Other	062301507	2,126,100.00
	2000	2000 - Group Control - Other	062301504	1,996,900.00
	2000	2000 - Group Control - Other	062301505	1,132,800.00
	2000	2000 - Group Control - Other	062301501	116,000.00
	7000	7000 - Group Control - Grants	062301503	24,200.00
	7000	7000 - Group Control - Grants	062301504	14,300.00
	7000	7000 - Group Control - Grants	062301507	13,500.00
	1000	1000 - Group Control - Person	062301503	15,124,500.00
	1000	1000 - Group Control - Person	062301504	14,890,200.00
	1000	1000 - Group Control - Person	062301507	13,841,200.00
	1000	1000 - Group Control - Person	062301505	5,153,700.00
	1000	1000 - Group Control - Person	062301511	703,600.00
	1000	1000 - Group Control - Person	062301501	515,000.00



Hover over the color legend for the chart on one of the object groups. Notice that it says “Add filter on …” in the tooltip. Click the object to add the filter.



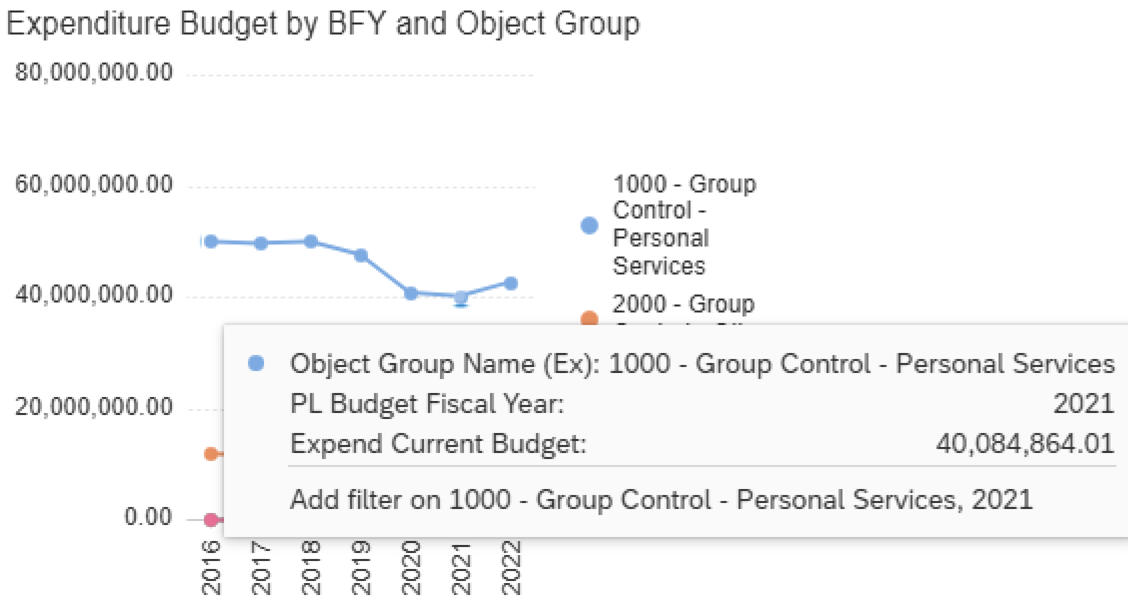
Notice now there is no filtering on the fiscal year, but only the object group that you clicked is displayed. This time, the "Element links" shows the filter on "Object Group Name (Ex)", but no filter on "PL Budget Fiscal Year".



PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2016	1000	1000 - Group Control - Person	062301503	15,124,500.00
	1000	1000 - Group Control - Person	062301504	14,890,200.00
	1000	1000 - Group Control - Person	062301507	13,841,200.00
	1000	1000 - Group Control - Person	062301505	5,153,700.00
	1000	1000 - Group Control - Person	062301511	703,600.00
	1000	1000 - Group Control - Person	062301501	515,000.00
2016				**50,228,200.00**

PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2017	1000	1000 - Group Control - Person	062301507	15,486,900.00

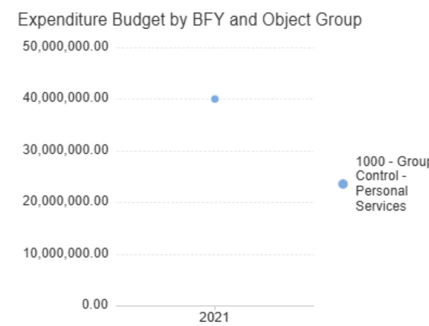
Reset the element link again. Now hover over one of the markers in the chart. Notice the "Add Filter …" part of the tooltip displays both an object group and a fiscal year.



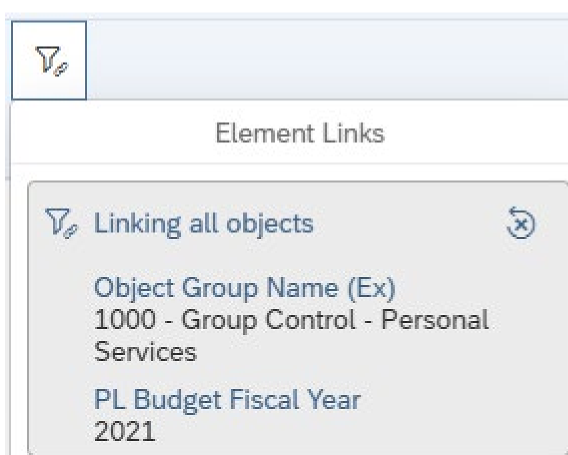
Click the marker and a filter will be applied on both fields.

H017

PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2021	1000	1000 - Group Control - Person	062301505	19,496,178.24
	1000	1000 - Group Control - Person	062301504	16,381,907.78
	1000	1000 - Group Control - Person	062301503	2,066,210.64
	1000	1000 - Group Control - Person	062301501	1,715,901.49
	1000	1000 - Group Control - Person	062301511	424,665.86
2021				**40,084,864.01**



H016

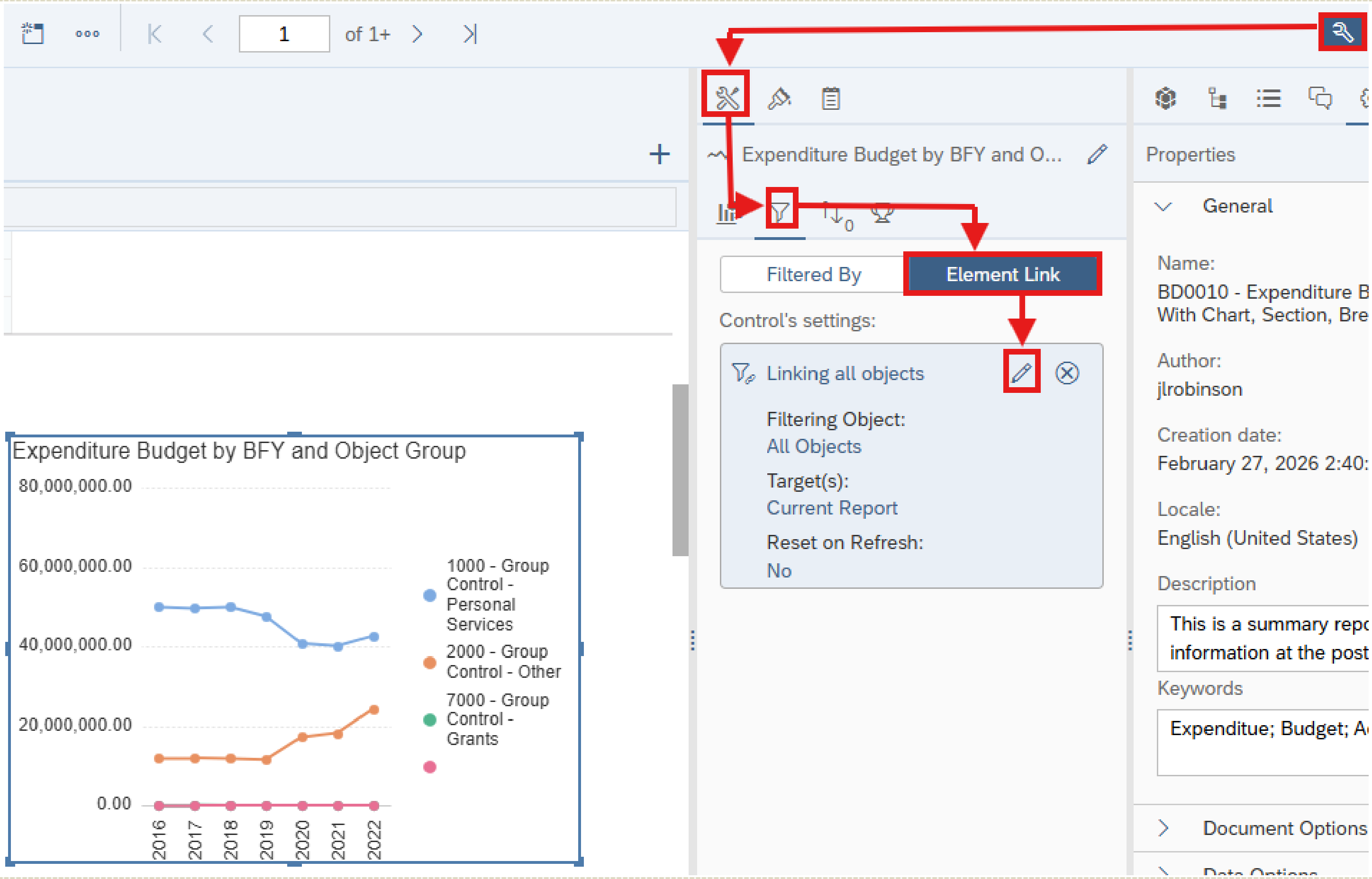


Reset the element link .

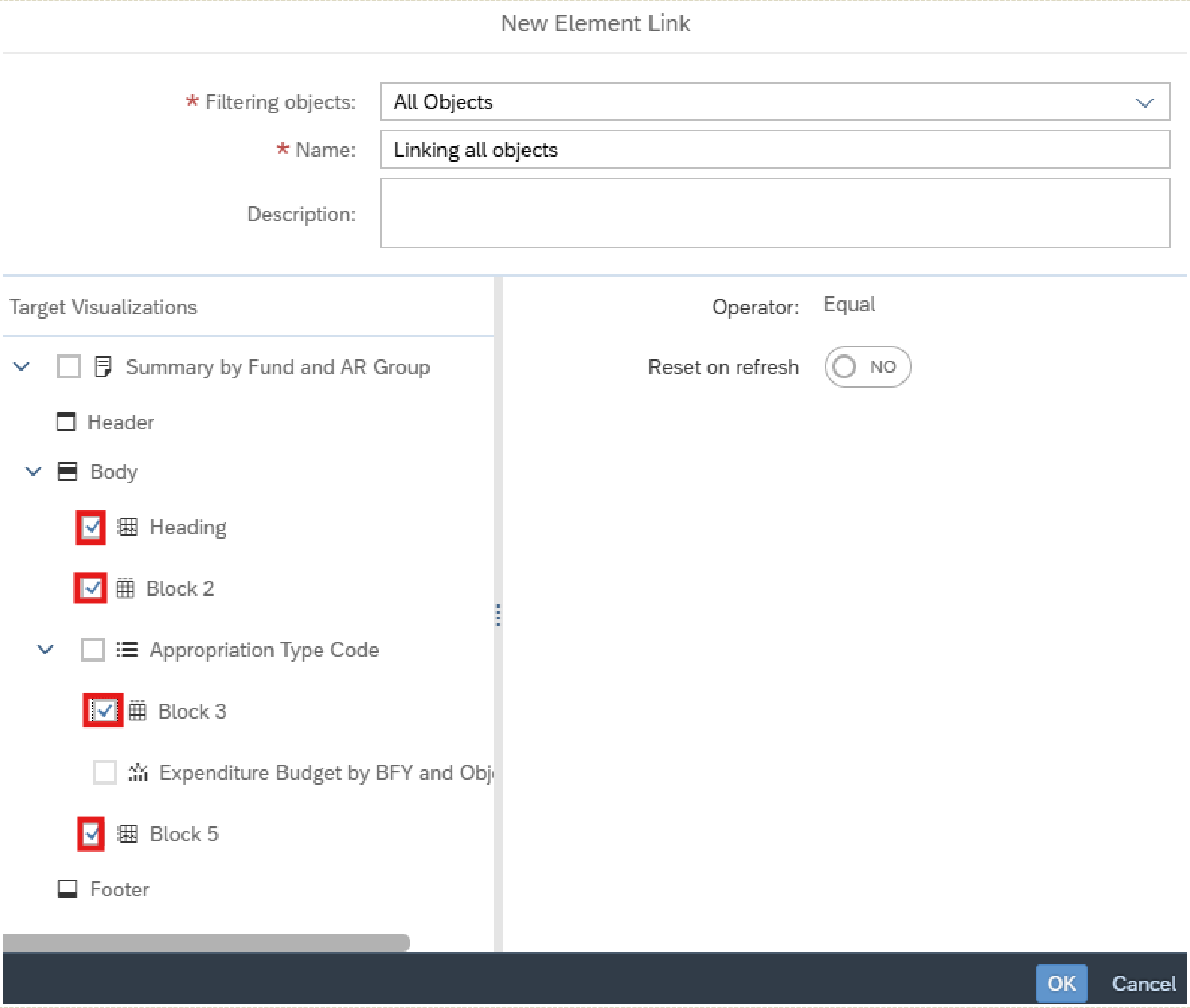
Updating an Element Link

Most of the time you use an element link, you won't necessarily want the chart you're clicking on to filter, only the other charts and tables in the report. Let's edit the element link to make that happen.

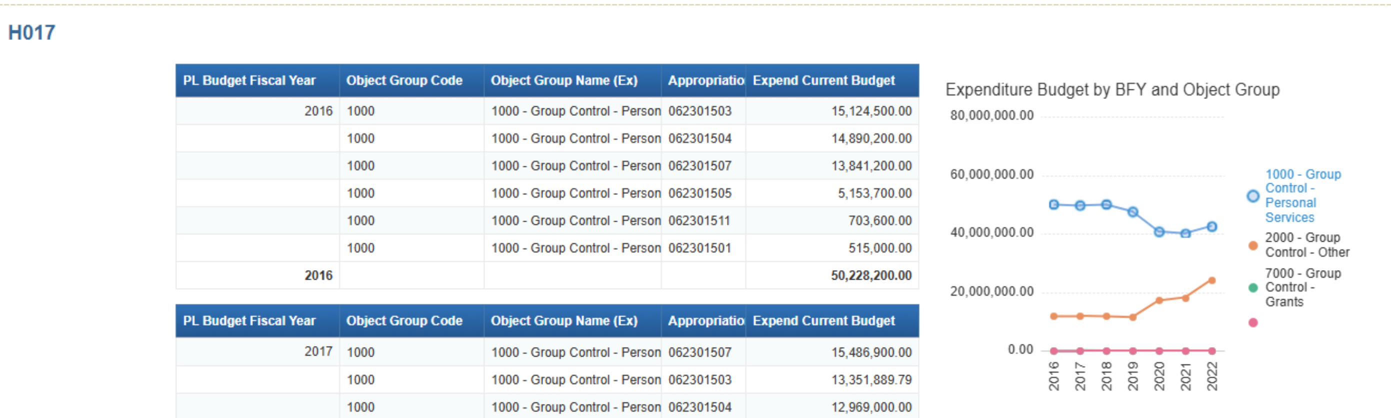
Back in Design Mode, open the chart's properties and navigate to the data tab, filter pane again. Click the "Edit" icon to adjust the settings for the element link.



Back in the "New Element Link" popup, uncheck the "Summary by Fund and AR Group" report. Then check all the boxes beneath it, except the chart to which the link was added.



Click OK and switch back to Reading Mode. Try filtering the chart on an object group again. You'll see that while the data is filtered for that object group, the chart is not filtered. This makes it easy to adjust the filter by simply clicking on another object group.



PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2016	1000	1000 - Group Control - Person	062301503	15,124,500.00
	1000	1000 - Group Control - Person	062301504	14,890,200.00
	1000	1000 - Group Control - Person	062301507	13,841,200.00
	1000	1000 - Group Control - Person	062301505	5,153,700.00
	1000	1000 - Group Control - Person	062301511	703,600.00
	1000	1000 - Group Control - Person	062301501	515,000.00
2016				**50,228,200.00**

PL Budget Fiscal Year	Object Group Code	Object Group Name (Ex)	Appropriatio	Expend Current Budget
2017	1000	1000 - Group Control - Person	062301507	15,486,900.00
	1000	1000 - Group Control - Person	062301503	13,351,889.79
	1000	1000 - Group Control - Person	062301504	12,969,000.00

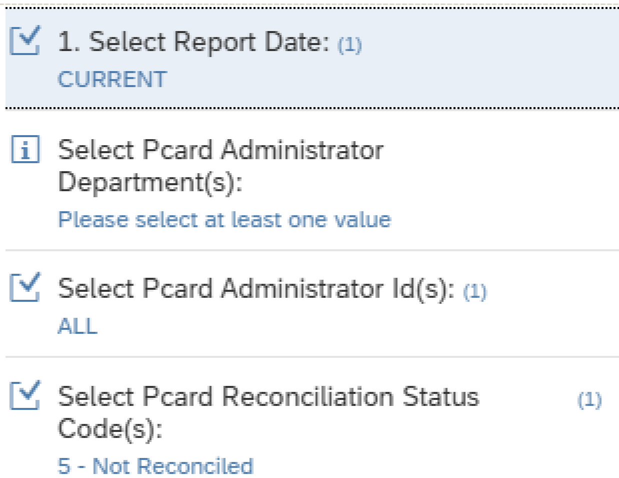
Save the report as **BD0010 - Expenditure Budget and Actual With Chart, Section, Break, and Sort With Element Link** to your *Class ALDER 101* folder.

Final Exam

This exam will encompass all the skills you've learned over the course of the class. If you can successfully complete the Final exam, consider yourself a master of the ALDER 101 course material. Feel free to read previous chapters to review the steps involved.

For this exam, we'll pretend that your supervisor has asked that you prepare a dashboard report for outstanding PCard transactions. You'll use the **AP0008 – Outstanding PCard Transactions** report found in the *Enterprise* folder as a start, then add charts, objects, sections, filters, and formatting to turn the report into a dashboard. Make a folder within *Class ALDER 101* called *Final Exam* and copy the report there while you work on it.

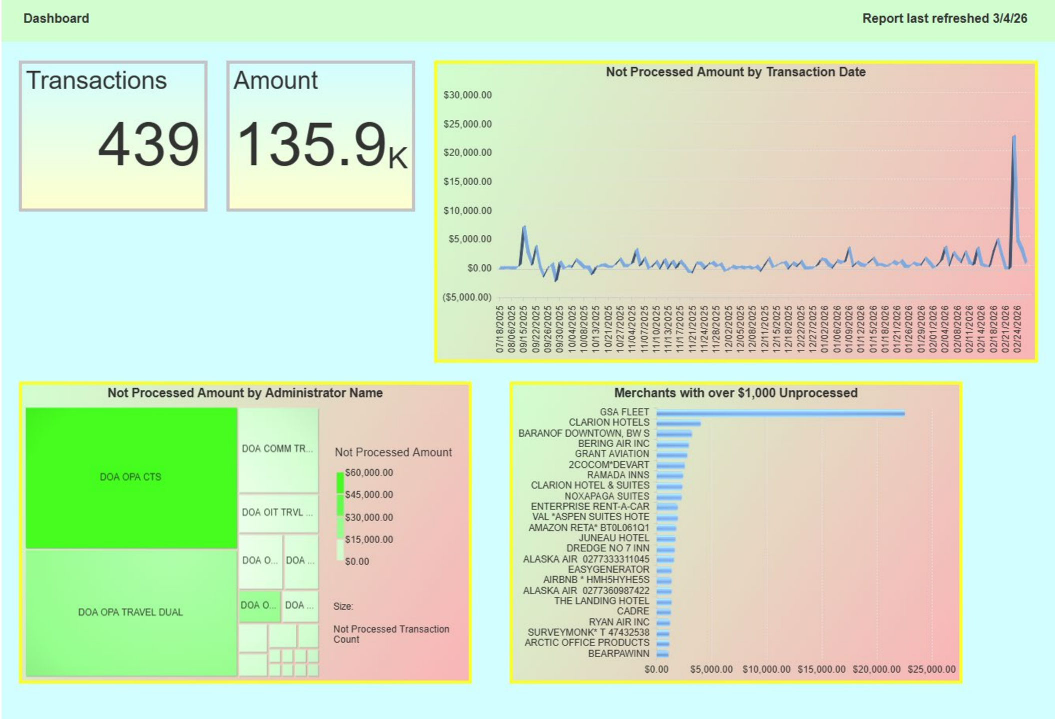
It is recommended to use prompts like the following for this report (use your own department for the second prompt):



1. Create a new report tab. Rename the new tab "Dashboard". Give the report a background color.
2. Add a cell in the header displaying the report name. Add another cell indicating when the report was last refreshed. Give the header a background color.
3. Create an indicator tile in the report body labelled "Transactions" that shows the "Not Processed Transaction Count" measure. Give it a thick border and a gradient background. Display it in the top left, with a small margin.
4. Create another indicator tile labelled "Amount" that shows the "Not Processed Amount" measure. Give it a thick border and a gradient background. Turn on the 3D look in its styling options. Display it to the right of the other indicator tile, with a small margin, so that their top edges align.
5. Create a line chart showing "Not Processed Amount" on the value axis and "Transaction Date" on the category axis. Format the amount to display as a currency. Give it a gradient background and a thick border. Display it to the right of the second indicator with a small margin, so that their top edges align.
6. Create a tree map chart showing "Not Processed Transaction Count" on the Size axis and "Not Processed Amount" in the color axis, and "Administrator Name" in the Label. Format the amount to display as a currency. Enable a legend and give the legend a title. In the tree map's styling options give it a 2-color gradient and enable lighting and shadows. Display it so that it is aligned on the left with the first indicator you created, with a small margin.

7. Create a bar chart showing “Merchant Name” on the category axis and “Not Processed Amount” on the value axis. Format the amount to display as a currency. Add a chart filter on this chart so that only merchants with “Not Processed Amount” Greater than or Equal to $1,000 are displayed. Give the chart a descriptive title. In the styling, add rounded corners, light glossy rendering, and enable real lighting. Display it with a small margin between it and the tree map chart, so that their top edges align.
8. Add a vertical table beneath the charts. Add the columns “Administrator ID”, “Administrator Name”, “Pcard Id”, “Card Holder Name”, “Merchant Name”, “Transaction Date”, “Transaction Amount”. Format the amount to display as a currency. Make the columns Autofit width. Add alternate coloring to the chart’s background. Set the “Card Holder Name” as a section and give the section a background color. Make the section hide when empty. Add a break on Merchant Name. Sort the table by Transaction Date.
9. Create an input control report filter for Transaction Date. Make it a calendar type, with operator Greater than or Equal to.
10. Make another input control report filter for “Administrator Unit Code” with default settings.
11. Make another input control filter for “Not Processed Amount” as an Entry Field with Operator “Granter Than or Equal to”.
12. Create element links in all the charts to filter the data table interactively.
13. Conditionally format the rows of the data table to highlight the row in red text if the transaction amount is greater than $1,000.

The following image is an example of how your final copy might look. Depending on your choice of prompts, color scheme, margin size, and fonts, your copy may look different.



AMY L HOAGLAND

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	AMAZON.COM*U29596Y23	01/23/2026	$74.10
			AMAZON.COM*U29596Y23		**74.10**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	AMAZON MKTPL*IM97B2U23	02/14/2026	$120.97
			AMAZON MKTPL*IM97B2U23		**120.97**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	AMAZON MKTPL*RR83Q3CL3	02/04/2026	$139.99
			AMAZON MKTPL*RR83Q3CL3		**139.99**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	AMAZON RETA* BT0L061Q1	11/07/2025	$1,711.98
			AMAZON RETA* BT0L061Q1		**1,711.98**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	BUDGET-KETCHIKAN, AK	02/24/2026	$475.70
			BUDGET-KETCHIKAN, AK		**475.70**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	CENTER GUARDIANSHIP CERT	02/02/2026	$285.00
			CENTER GUARDIANSHIP CERT		**285.00**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	KIC HARDWARE AND LUMBE	10/21/2025	$237.80
PC02162	DOA OPA TRAVEL DUAL	12778-07028331		11/26/2025	$310.70
			KIC HARDWARE AND LUMBE		**548.50**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07028331	VITAL STATS ANCHORAGE	02/19/2026	$150.00
PC02162	DOA OPA TRAVEL DUAL	12778-07028331		02/20/2026	$120.00
			VITAL STATS ANCHORAGE		**270.00**

ANNA M AMBROSE

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07897990	ALASKA AIR 0277350693675	12/01/2025	$73.81
			ALASKA AIR 0277350693675		**73.81**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07897990	ALASKA AIR 0277358961495	01/09/2026	$378.41
			ALASKA AIR 0277358961495		**378.41**

Administrator Id	Administrator Name	Pcard Id	Merchant Name	Transaction Date	Transaction Amount
PC02162	DOA OPA TRAVEL DUAL	12778-07897990	ALASKA AIR 0277366853743	02/05/2026	$569.10

Congratulations on completing the ALDER 101 course!

Appendix

Review Question Answers

Chapter 2 – Review Question Answers

1. What are the names of the modes in which you can view a document?

   b. Reading, Design, Structure

2. What is the difference between viewing a report in Design mode versus Structure mode?

   a. Design mode shows the data in the report, but Structure mode does not show data.

3. True or false: You can insert new rows into the heading table.

   a. True

4. True or false: When you want to delete a column from a table, you must delete each cell of the column individually.

   b. False

5. When would you use the Outline button?

   a. When you want to show or hide specific sections of data.

Chapter 3 – Review Question Answers

1. What are the kinds of document objects?

   c. Dimension, Measure, Attribute

2. Which of the following is derived from the report's structure map?

   d. The navigation map

3. What is a downside of the document property "Refresh on Open"?

   b. Every time you open the report, you will have to wait for the report to refresh, even if no new data is available in ALDER.

Chapter 4 – Review Question Answers

1. What are some examples of report elements?

   a. Horizontal table, Line Chart, Blank Cell

2. True or false: most ALDER reports have both a horizontal table and a vertical table

   a. True

3. True or false: When you add a new table to a report, the original data table is replaced.

b. False

4. When would you use a Trend chart?

c. When you want to show how a measure changes over time

5. Which of the following statements are true about cells?

d. All of the above

6. What is a reason why you would rename a report element?

a. To make it easy to find in the structure map

Chapter 5 – Review Question Answers

1. In what order are sorts applied?

b. Sections, breaks, and then table sorts

2. True or false: You can take an existing column in a data table and turn it into a section.

a. True

3. Which of the following is **not** true about breaks?

d. You cannot sort a break.

4. Which of the following are true about table sorts?

c. Both a and b

5. What is a custom sort?

a. A specific order created by you that determines the order data is displayed

Chapter 6 – Review Question Answers

1. What does every formula begin with?

b. =

2. How do you reference an object in a formula without using the formula editor?

c. Type the name of the object, surrounded by square brackets

3. What are the names of the "Round" function's parameters?

d. Number and round_level

4. Why would you turn a formula into a variable?

b. To reuse the formula in multiple places in a report

5. True or false: When creating a variable directly, you begin by typing the variable's formula into the formula toolbar.

    b. False

6. What are the names of the functions in the Functions panel that you use to create a conditional formula?

    a. If, Then, Else

Chapter 7 – Review Question Answers

1. What is the difference between a report filter and a table filter?

    b. A report filter filters the whole report, the table filter only applies to the table

2. True or false: Report viewers can interact with your table filters

    b. False

3. Can a report viewer interact with report filters?

    c. Yes, if you create them as input controls from the workspace toolbar

4. Which of the following are types of report filters that you can make as an input control?

    d. All of the above

5. Why is it sometimes confusing to use table filters?

    a. You can forget to apply table filters to other elements, in which case the totals will be out of sync

6. True or false: Chart filters work just like table filters

    a. True

7. Which of the following operators are used to create a nested filter?

    c. Both a and b

8. True or false: You can use variables in filters the same way you use objects in filters.

    a. True

Available Functions

Often users need to build additional calculations or objects into a report beyond the report's base objects or calculations.

Web Intelligence has seven categories of Available Functions:

Category	Description
All	All the functions for all the categories listed below in this table
Aggregate	Aggregates data (for example by summing or averaging a set of values)
Character	Manipulates character strings
Date and Time	Returns date or time data
Document	Returns data about a document
Data Provider	Returns data about a document's data provider
Logical	Returns TRUE or FALSE
Numeric	Returns numeric data
Misc	Functions that do not fit into the above Categories
Set	Returns the parent, ancestor, children, or siblings of an object

Definitions of User Roles and Capabilities

Group	Course	Capabilities	Prerequisites
Report viewers	ALDER 100 (self-paced)	• Run, refresh and schedule reports in enterprise, department internal, public, favorites, and user's inbox folders • Receive sections of scheduled reports • Change prompt values for a report to limit the results displayed, but cannot change report layout	Increment 1: Some knowledge of structures and financial data
Interactive users	ALDER 101 (self-paced)	• Same capabilities as report viewers, plus the ability to: • Drag and drop fields onto a report from a list of objects • Change the sort, filter, and add new sections and breaks to a report	ALDER 100

		• Create different views of data (e.g., charts)	
Report developers	ALDER 201A (2 days)	• Same capabilities as interactive users, plus the ability to: • Create new reports	ALDER 101
Advanced Report developers	ALDER 201B (2 days)	• Same capabilities as interactive users, plus the ability to: • Create new reports • Perform quality assurance and certify developed reporting prior to being deployed • Develop agency-specific ad-hoc reports	ALDER 201A
Agency advocates	ALDER 201C (2 days)	• Same capabilities as report developers, plus the ability to: • Be responsible for the two-way communications between the department and the ALDER project team • Serve as the first line of help desk support for department ALDER users • Responsible for maintaining department folder structure within ALDER	ALDER 201B