Finance Activity Hub Training

Beginner Level

IBM Cognos Analytics 11.1 R7

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2021 | Version 5

These materials were customized for the University of California San Diego on IBM Cognos Analytics V 11.1 R7 (LTS).

Table of Contents

Chapter 1—Getting Started

General Housekeeping

- "Be here"— please put your cell phones on vibrate to minimize classroom distractions, and refrain from accessing email, instant message, or other tools on your computer
- You are encouraged to ask questions!
- Your instructor will set break times throughout this course, and class will begin promptly at the agreed upon start time.

BLINK Resources

Blink > Business Intelligence = What is Business Intelligence, What is the Business Intelligence and Analytics Team, How do you work with the BIA team

https://blink.ucsd.edu/technology/bi/index.html

Blink > Cognos Analytics = Links to the Cognos environments

https://blink.ucsd.edu/technology/bi/tools/cognos/index.html

Blink > Cognos Analytics > Training = Links to free Cognos training

https://blink.ucsd.edu/technology/bi/tools/cognos/training/index.html

Blink > Cognos Analytics > Resources = Links to free BI content

https://blink.ucsd.edu/technology/bi/tools/cognos/resources.html

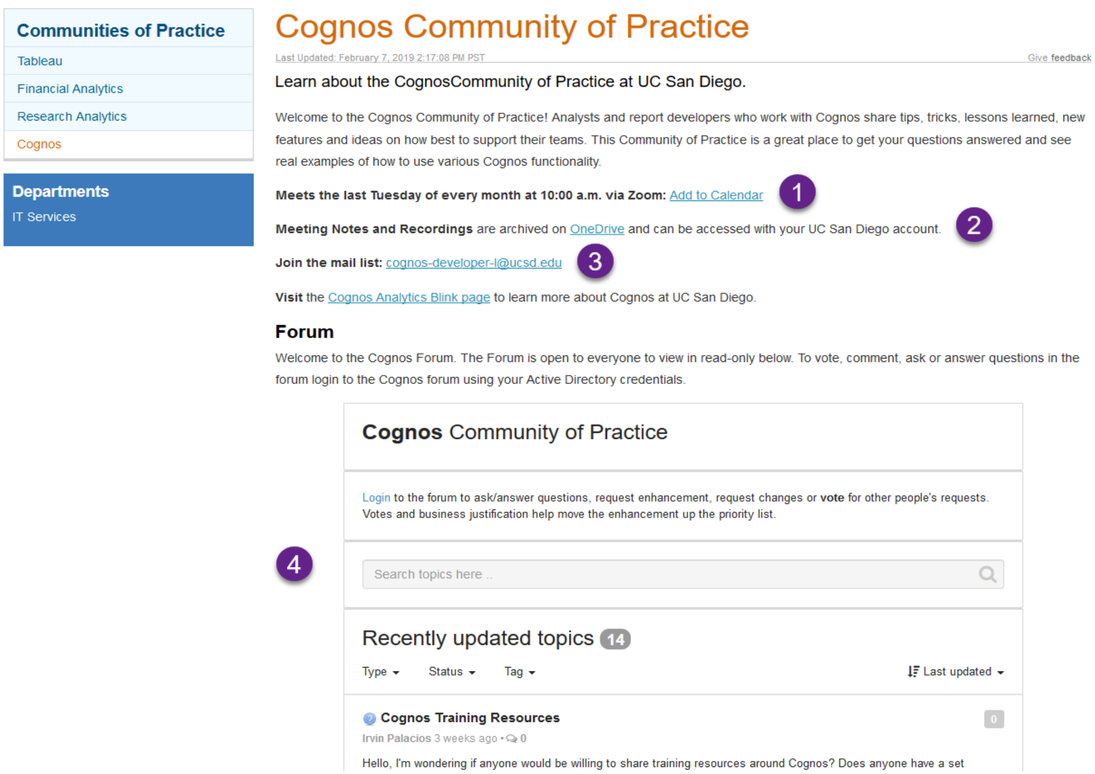
Blink > Cognos Community of Practice = Monthly community meeting to talk about Cognos

https://blink.ucsd.edu/technology/bi/communities/cognos.html

BLINK > Cognos Community of Practice

A monthly zoom session where report builders talk about Cognos. Questions are asked, ideas are shared, and inspiration can be found.

1) Calendar invitations
2) Past session recordings
3) Mail-list for upgrades and training announcements
4) Forum for questions that can be answered by anyone in the community



https://blink.ucsd.edu/technology/bi/communities/cognos.html

Overview of IBM Cognos Analytics

What is Cognos?

Cognos is a business intelligence and performance management software suite sold by IBM.

The software suite was designed to enable non-technical personnel in large enterprises to extract corporate data, analyze the data and then produce reports that would help the business make informed decisions.

Source: https://www.techopedia.com/definition/14673/cognos

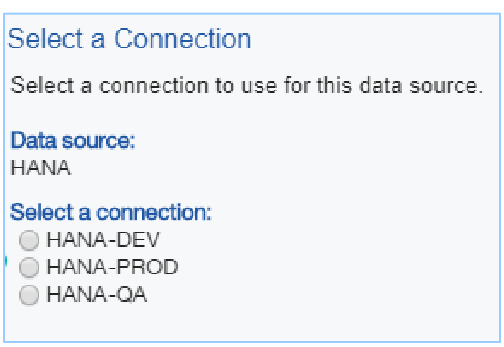
Data from core data source is loaded into an Activity Hub that sits on SAP Hana technology.

Cognos connects to the Activity Hub and pulls data into a report when the report is run. Reports can be run manually or on a schedule.

UCSD Cognos Environments

- **Cognos DEV** – used by full-time report developers to build new reports; can connect to multiple versions of an Activity Hub
- **Cognos QA** – used by new or casual report builders to create new reports; used by full-time report developers to test new reports with small sets of consumers; can connect to multiple versions of an Activity Hub as needed
- **Cognos PROD** – used by consumers to access reports; supported 24/7; scheduled reports live here

Data Connections



While in training whenever prompted to select a connection click **HANA-QA**.

Navigating in Cognos Analytics

Two Levels of Users:

1) **Report Builders** – Go directly to Cognos DEV or QA where you access My content, Team content, Recent and New. We discuss all these areas in detail in the next lessons in this chapter.
2) **Report Consumers** – Access reports via a link to the report. It is recommended that *Report Developers* post the link to a customer facing webpage with additional information about the report.

NOTE

For the best user experience, IBM recommends Google Chrome followed by Firefox and Internet Explorer as the preferred browsers for accessing Cognos Analytics. Browsers not listed here, such as Safari, and Edge are not supported and not recommended.

These training materials were customized in Chrome.

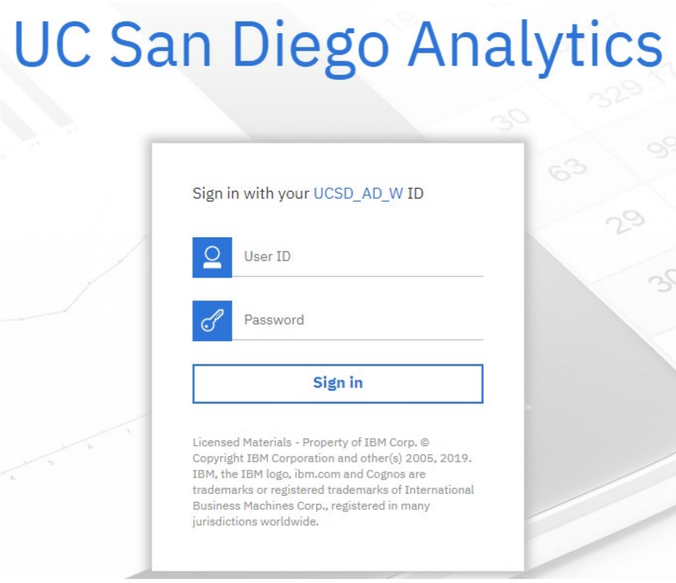
Please use Google Chrome for training.

Navigating in Cognos Analytics

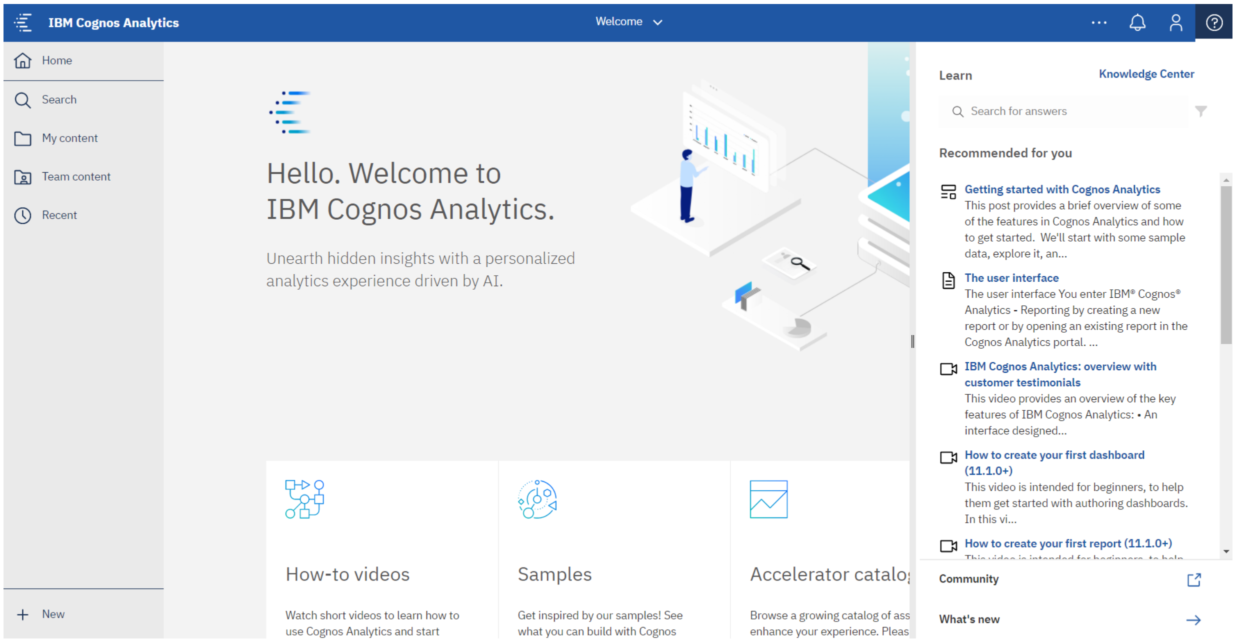
1. In Google Chrome type the following URL into the address bar – or use the one provided by your instructor, if different:

   http://its-cog-dev.ucsd.edu/ibmcognos/bi/

2. In the fields provided, type your assigned Cognos (UCSD Active Directory) **User ID** and **Password**. Click **Sign in**.



The IBM Cognos Analytics **Welcome Portal** home page appears. All Cognos Analytics Users begin their navigation here.



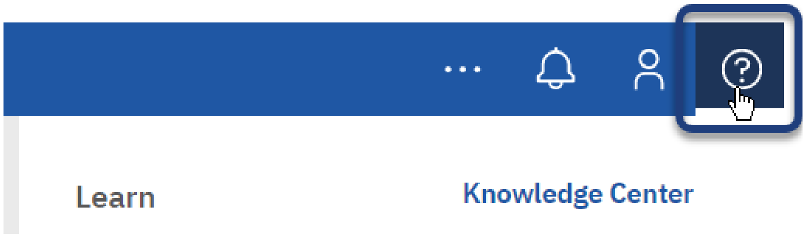
You may not see all the icons that appear in the image above on your home page as they are based on permissions.

The appearance of the Welcome Portal changes based on your screen resolution, browser settings, or browser zoom.

Allow Pop-ups in Google Chrome on a PC

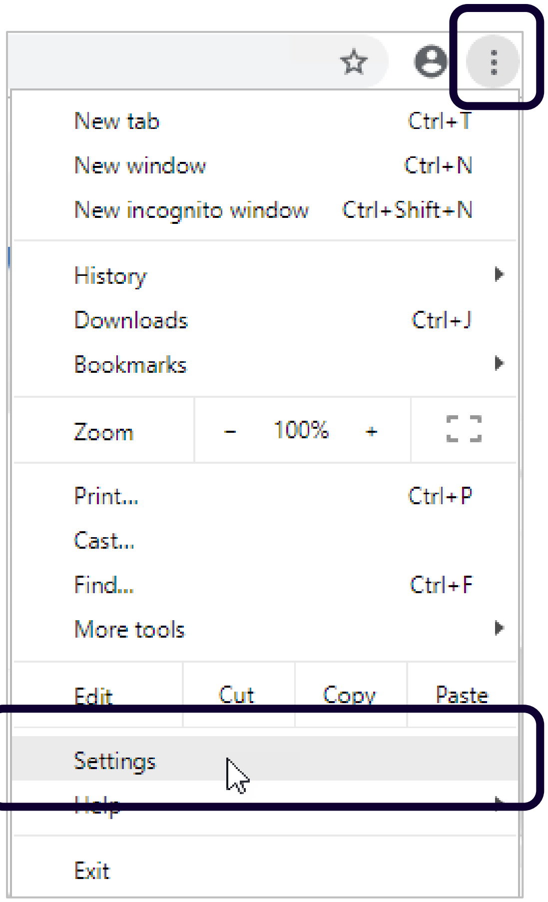
Before we allow Pop-ups, we close the Knowledge Center pane on the Welcome Portal.

1. In the upper right corner of the window click the **Help** features button to close the **Knowledge Center** pane:



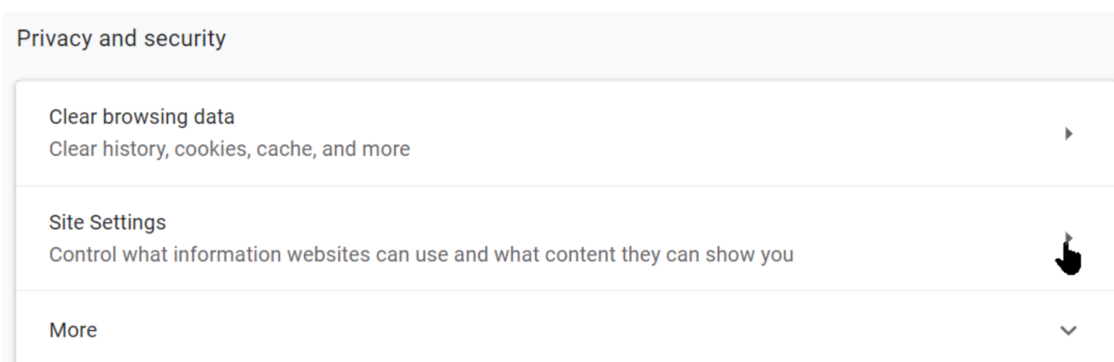
Before we begin working in Cognos, we need to allow pop-ups in the Chrome settings. Please note: Chrome Settings on a Mac may vary.

2. In the address bar, select the entire Cognos URL, and on your keyboard hit Ctrl+C to Copy.
3. In the upper right-hand corner of the Chrome window, click the vertical ellipsis to **Customize and Control Google Chrome** and click **Settings**.

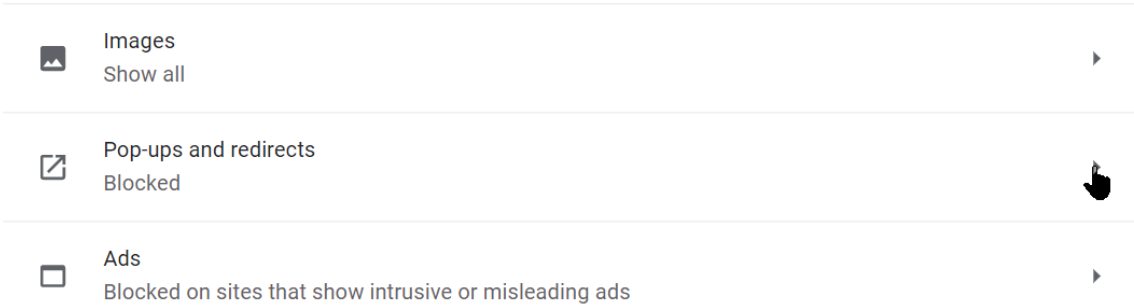


Shortcut: In the Settings menu use the Search option to find: Pop-ups . . . and skip to step 5.

4. Under **Privacy and Security** expand **Site Settings**.

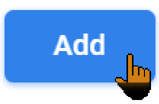


5. Under Permissions scroll down and expand **Pop-ups and redirects**.

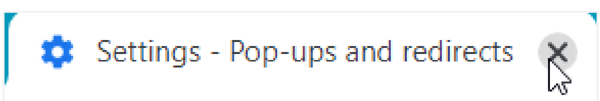


6. Under Pop-ups and redirects, next to Allow, click **Add**.

7. Click in the **Add a site field**, on your keyboard hit Ctrl+V to Paste the URL you copied in step 1 – or – type the Cognos URL provided by your instructor or Cognos Administrator.
8. Click **Add**.



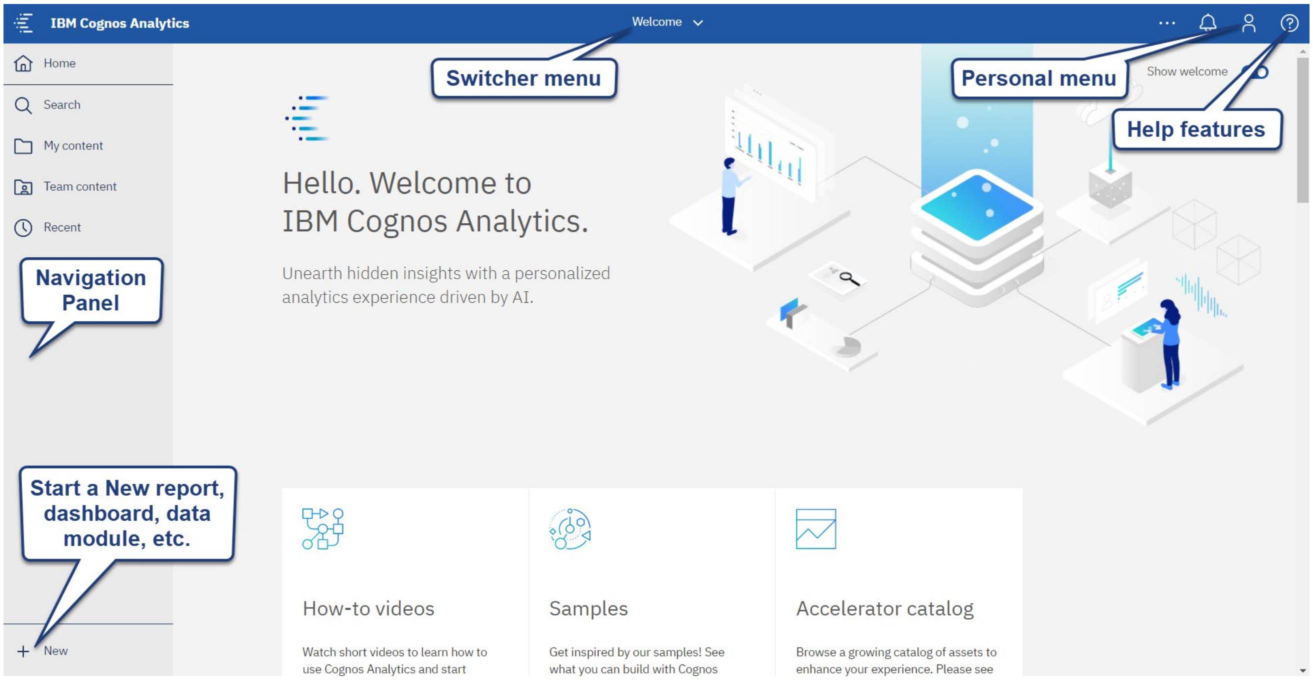
9. Close the **Settings** browser tab.



Introduction to the IBM Cognos Welcome Portal

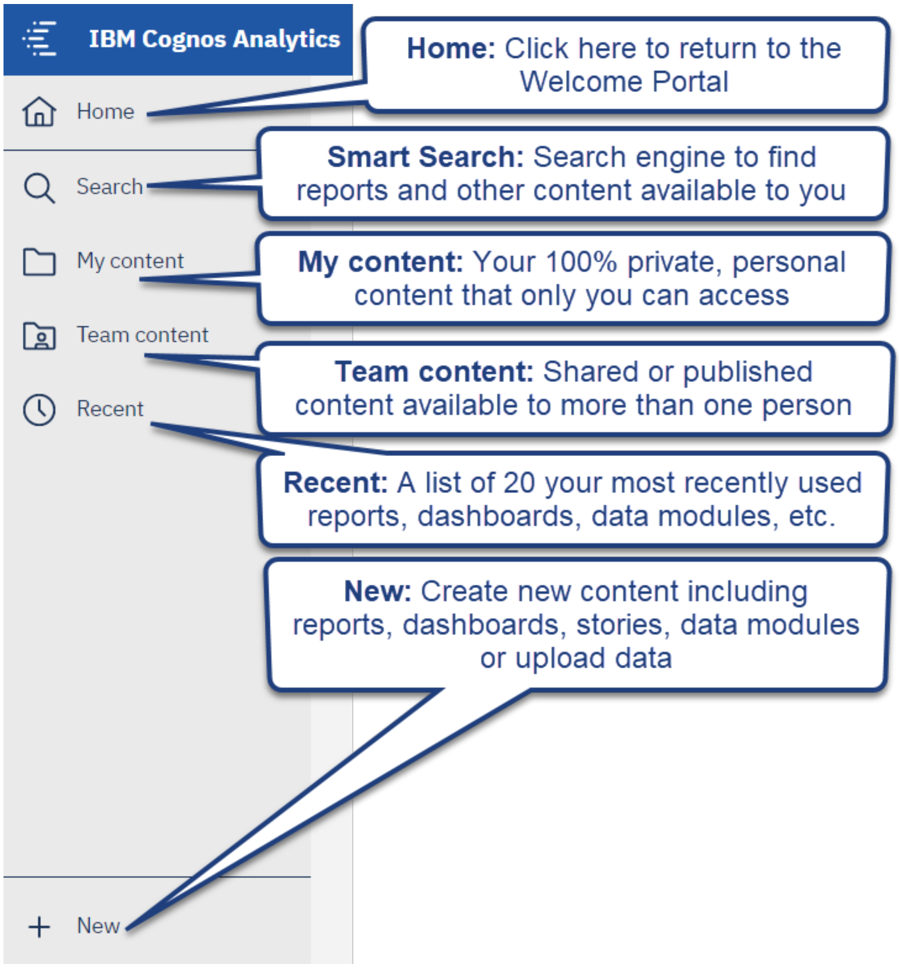
Once you have successfully logged into IBM Cognos the Welcome portal appears. This is the primary way to access all of Cognos Analytics Capabilities, including the Report tool. The web interface means that nothing needs to be maintained on the user's desktop.

At the top of the window is the **Application toolbar**.



Introduction to the Navigation Panel

The Navigation panel provides Users with a streamlined way to view content and activities pertinent to them.



IBM Cognos Welcome Portal

The IBM Cognos Welcome is the portal interface to all of the functionality available in Cognos Analytics. It is a web application for viewing, creating, and managing queries and reports. In the portal, you can:

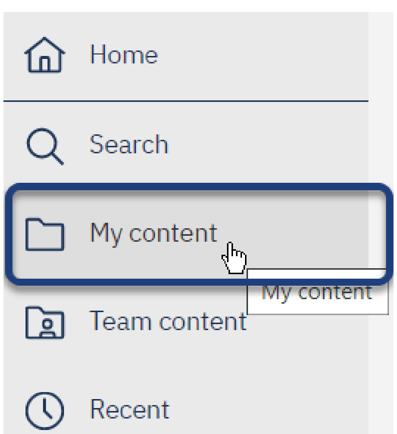
- View public reports under Team content.
- View your own reports under My content.
- View recent reports.
- Create, run and interact with reports, dashboards or stories.
- Create and interact with data modules.
- Perform administrative tasks, such as scheduling and distributing reports.
- Organize data by creating entries and storing the entries in folders.
- Use My Preferences to personalize the portal to meet your needs.

Exploring the Navigation panel in the Welcome Portal

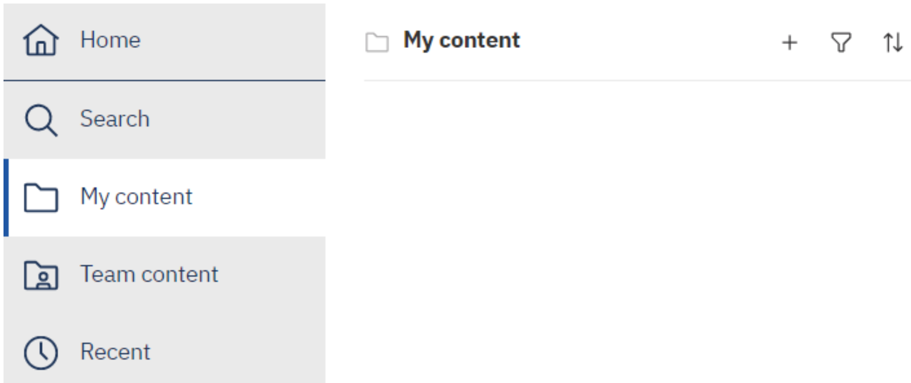
My content

My content area is private to only you.

1. In the Navigation panel click **My content**



The My content panel opens—yours may be empty.



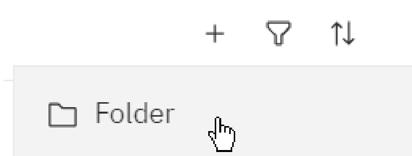
Notice the Folder Tools.

Folder Tool	Use
+	**New** Folder, URL or Upload Files
	Filter the types of content that appear in the list: Reports, Dashboards, Data, or Folders
⇅	**Sort** folder entries

Create a Personal Folder in My content

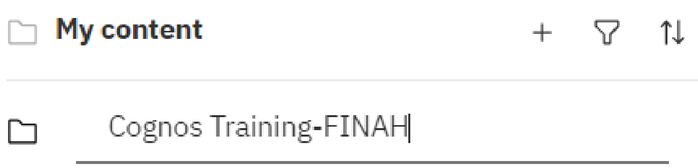
In the next steps we create a Personal Folder in My content. Use this folder to save all the reports you build in class.

2. Click **New** + and click **Folder**.



A new folder appears in the list.

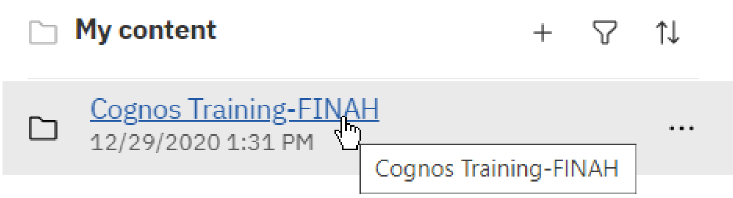
3. Type: Cognos Training-FINAH.



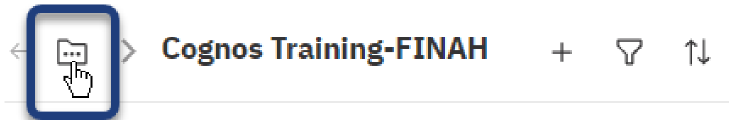
4. Click off the folder – or on your keyboard press Enter.

The new folder appears in the list:

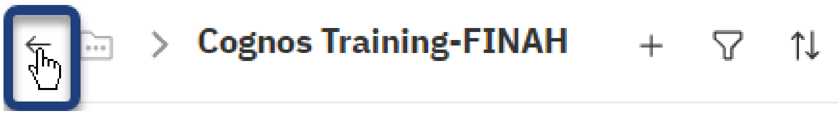
5. Click the new folder to open it.



6. At the top of the pane click the **Collapsed Items** folder to navigate back through the folder structure without the use of the browser's back button.



Or, click the **Previous** arrow to navigate back to the top level of the My content folder:

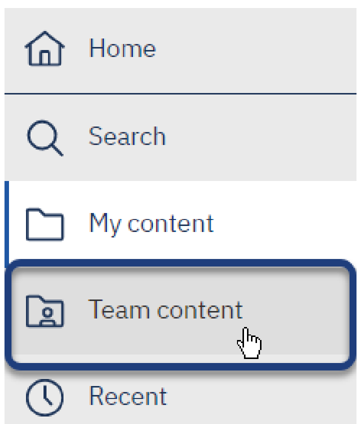


Team content—Folders and security

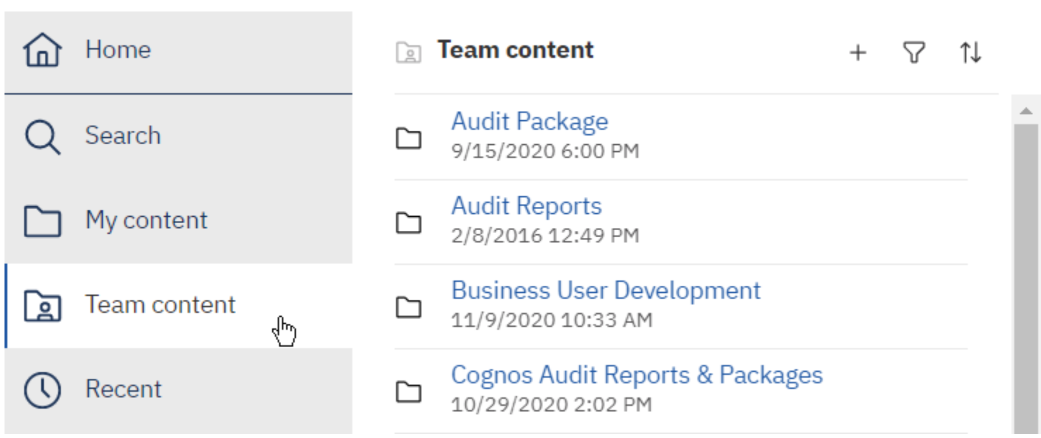
Team content in Cognos Analytics contains:

- Folders visible to only people in corresponding Active Directory (AD) group
- User can only run reports that use data they have access to
- Business User Development contains sub folders where teams can save and share their in-progress reports

7. In the Navigation panel click **Team content**.

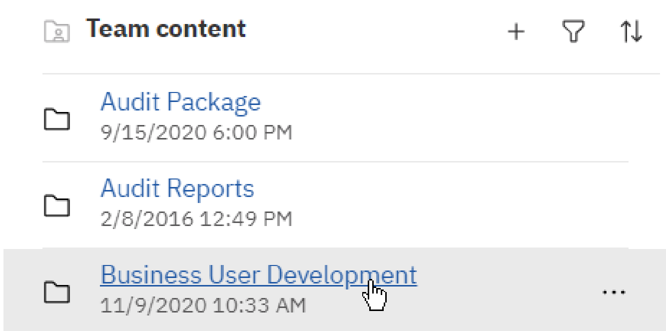


The Team content pane expands.

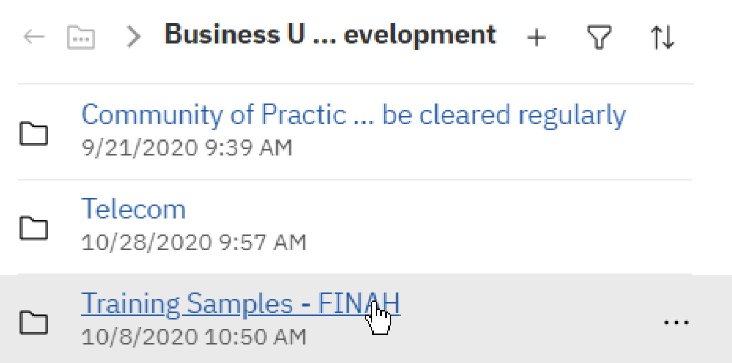


The folders in Team content are permissions based. The folders in your Team content folder may vary from those shown here.

8. Click the **Business User Development** folder.

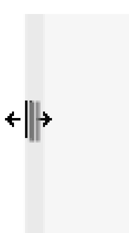


9. Click the **Training Samples – FINAH** folder—*if you do not have access to either of these folders please let your instructor know right away in the Chat window!*



This is the folder where all the key reports used in this training are saved. We discuss more about Folders and Security in a later chapter.

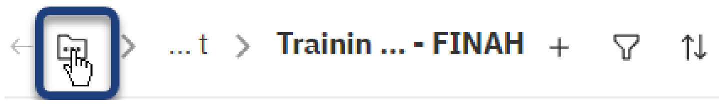
10. Hover your cursor over the little handle at the right edge of the Team Content pane and notice you can drag the pane to make it wider.



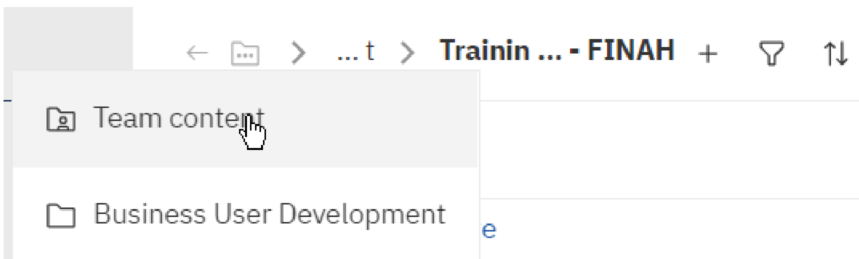
When you have clicked through a few folders it's helpful to be able to see the "breadcrumbs" to navigate back to the top of the Team Content folder.

11. If you expanded the pane to the right, you can click the **Team content** “breadcrumb” to navigate to the top of the folder structure.

Or, you can click the **Collapsed items** button . . .



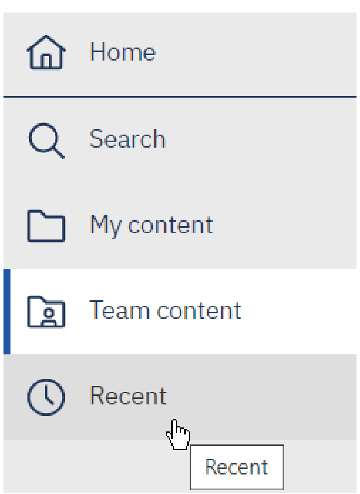
. . . and click **Team content** to navigate to the top of the folder structure.



Recent

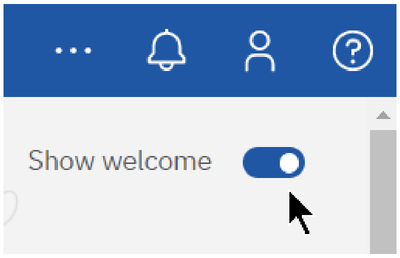
The Recent option is a feature in Cognos Analytics that helps you quickly find content you work with on a regular basis.

12. In the Navigation panel click **Recent**.

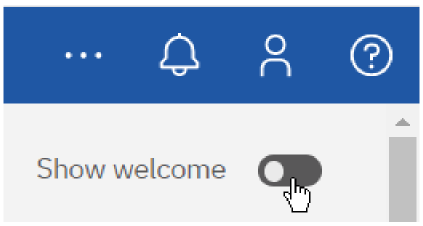


The Recently viewed pane expands. You may not have any recently viewed items . . . yet!

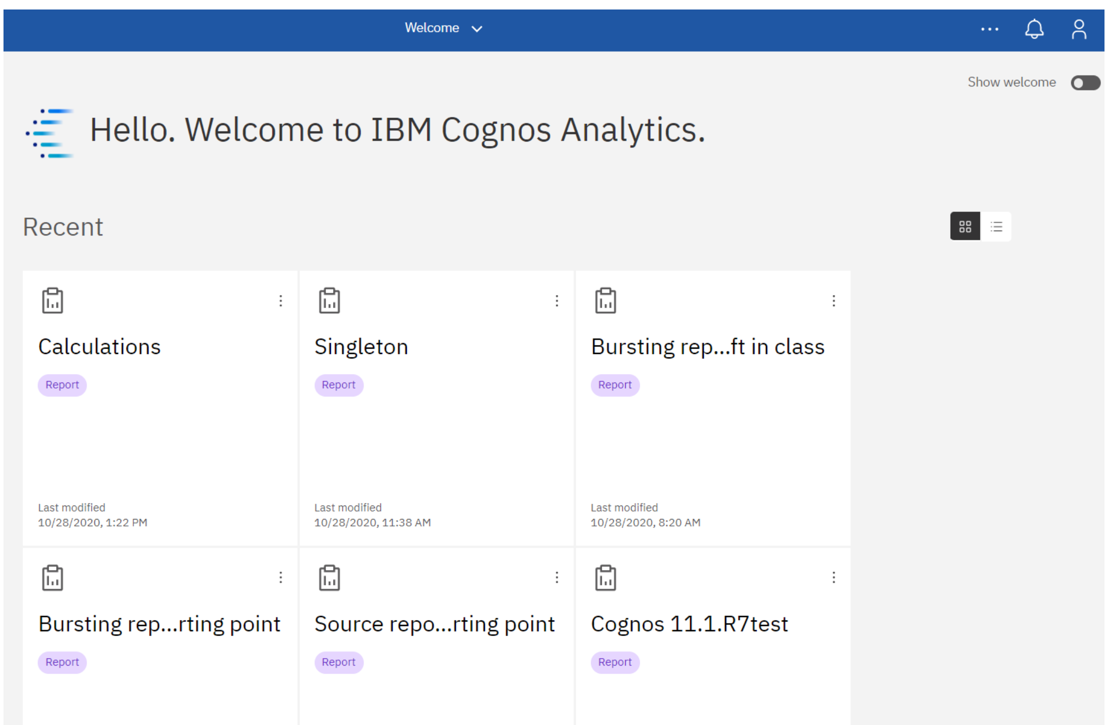
On the Welcome Portal in the upper right corner notice the switch to “Show welcome” is activated:

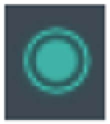


13. Click the **“Show welcome”** switch to *deactivate* it.

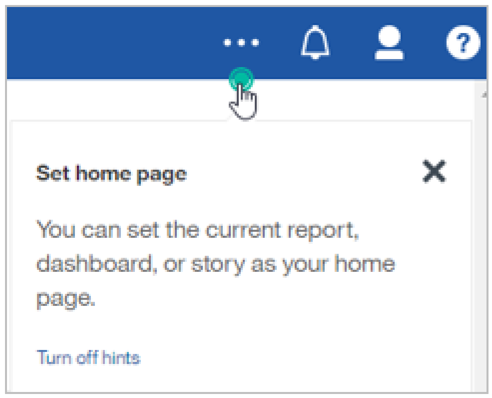


This action hides the top part of the Welcome Portal and reveals an additional Recent area below. You may or may not see anything in your recent area. We learn how to take advantage of and interact with these Recent shortcuts throughout training.





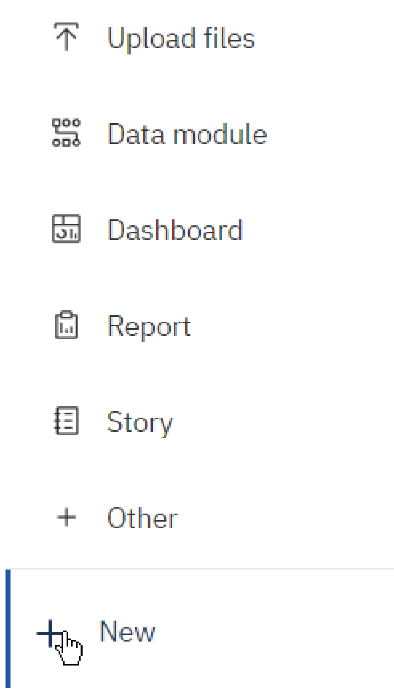
“Coach Marks” are available as indicated by a green button next to action buttons. The buttons provide a pop-up of User Interface hints and are provided to enhance the user experience by providing information to the user on how to use features. Click the Coach Mark buttons to open windows with hints.



Cognos Suite of Tools

The Cognos suite provides tools that allow you to report on and manipulate the data available to you:

- **Upload files** – For uploading Excel xls; Excel xlsx; and Delimited text files containing either comma-, tab-, semi colon-, or pipe separated values
- **Data module** – For blending data sources, including Excel files with Activity Hub data
- **Dashboard** – For building dashboards that contain charts and maps, icons, images, media files, and embedded web pages; focus is on visualizations
- **Report** – For building reports and dashboards that contain lists, crosstabs, visualizations such as charts and maps, images, hyperlinks, drill-thrus, notes, table of contents, and interactive prompts; provides the most options and most detailed control when building a report



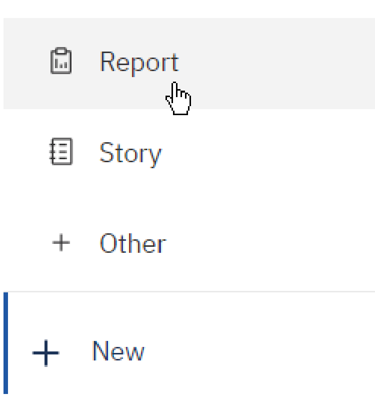
Chapter 2—List Report Basics

In Chapter 2 we cover how to:

- Save a report
- Add data and filters
- Create calculations
- Add Grouping
- Include Summaries
- Create dynamic report titles

Navigating the Reporting Interface & Creating a New Report

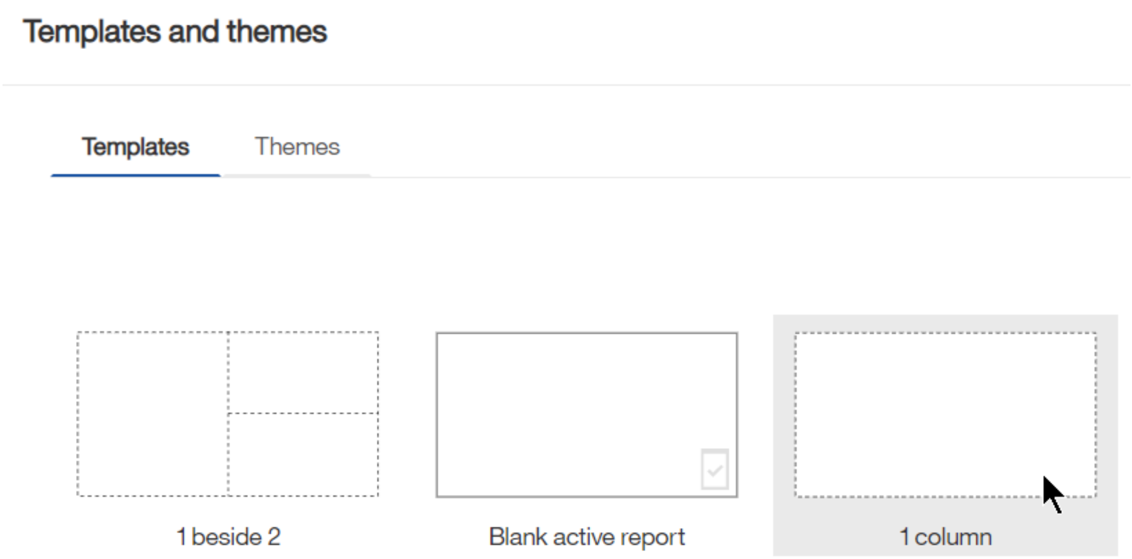
1. In the bottom-left of the **Navigation panel** click **New** + and **Report**.



The Templates and themes menu opens to select the page layout. This menu is customizable by your organization.

Please select the 1 column Template to begin. Do not select any other options during training unless advised by your instructor.

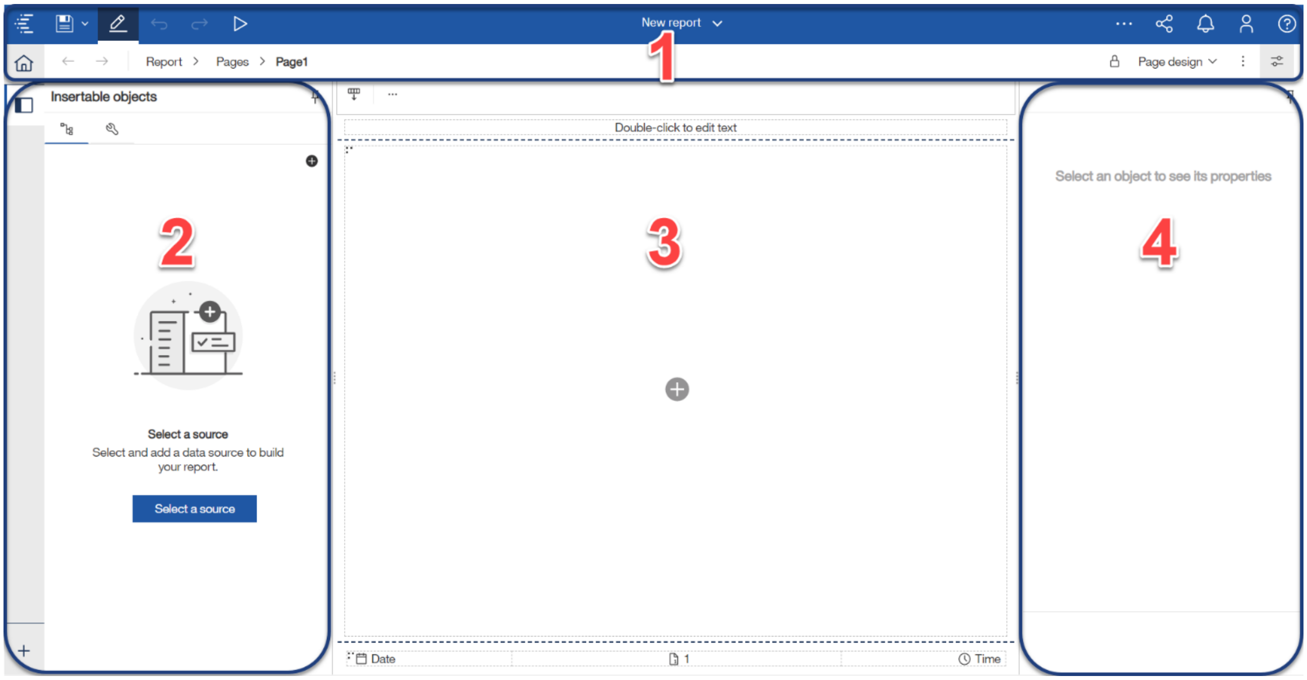
2. Click **1 column**. Click OK.



Tip: *You can also double-click the template selection.*

Report Writer Interface

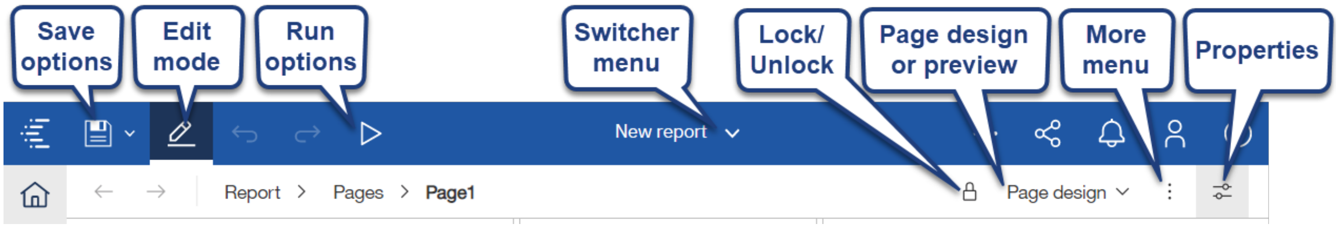
The Report Writer interface opens. There are four main areas:



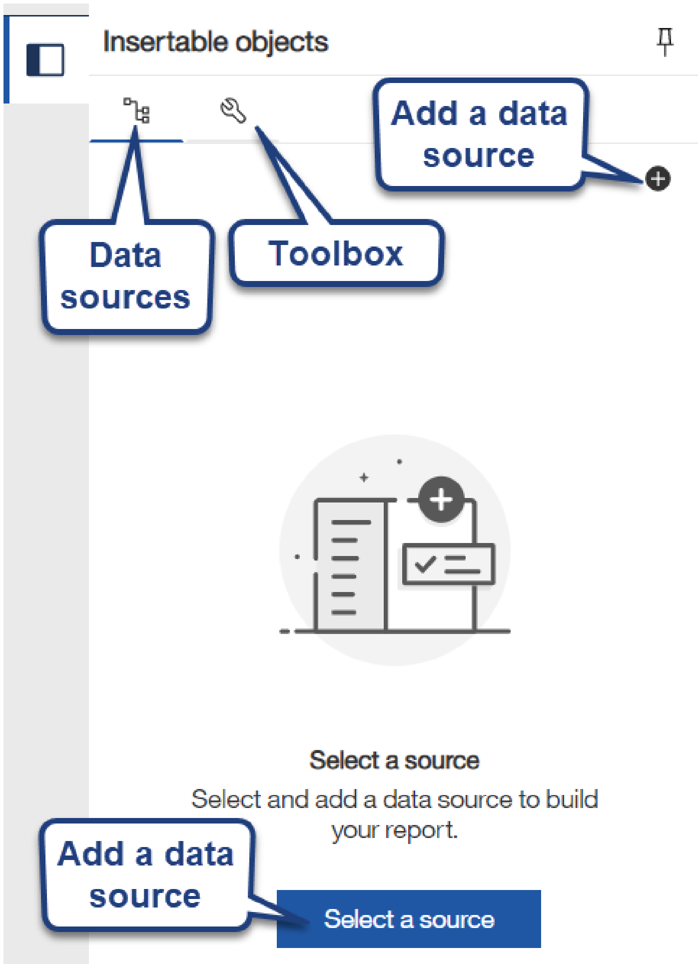
1) Application toolbar (Menu)
2) Insertable Objects (on the left)
3) Work area (middle)
4) Properties (on the right)

Let's spend a little time learning more about each.

Application toolbar & Menus

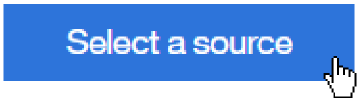


Insertable objects

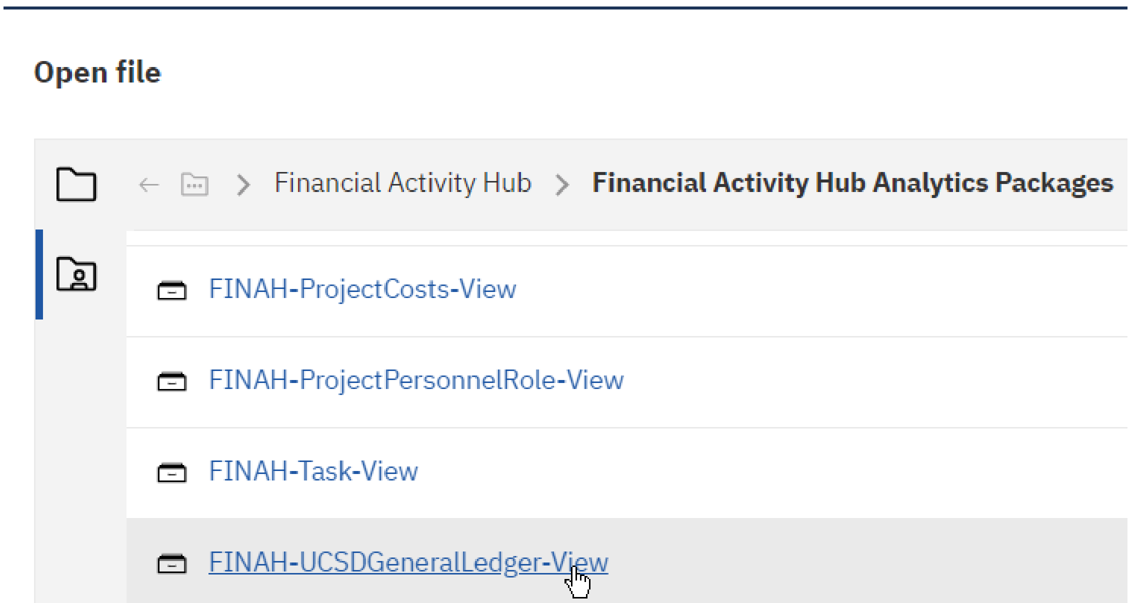


In the next steps we add a Data Source to the report.

3. Under Insertable Objects click **Select a source**:



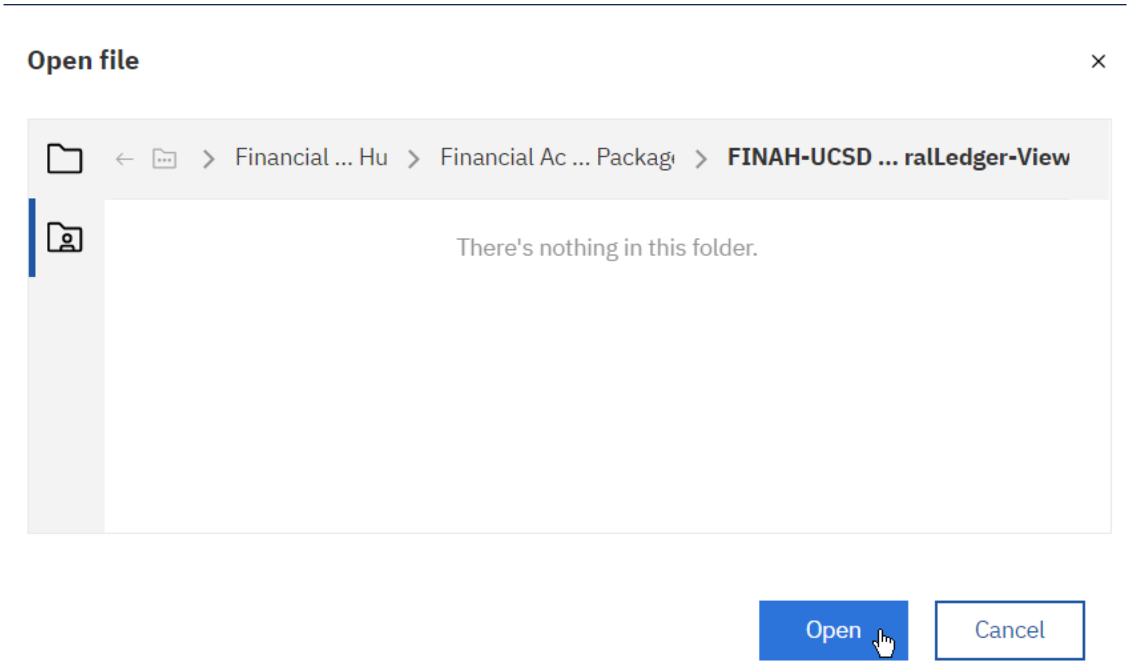
4. In the Open file window, in **Team content** navigate through the **Financial Activity Hub** folder > **Financial Activity Hub Analytics Packages** folder > click the **FINAH-UCSDGeneralLedger-View** package.



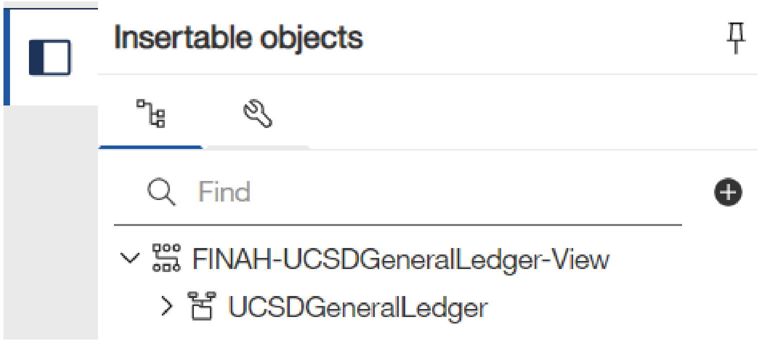
You may have more or fewer packages in this view than your instructor.

The data package opens like a folder—it's OK that there is nothing inside!

5. Click **Open**.

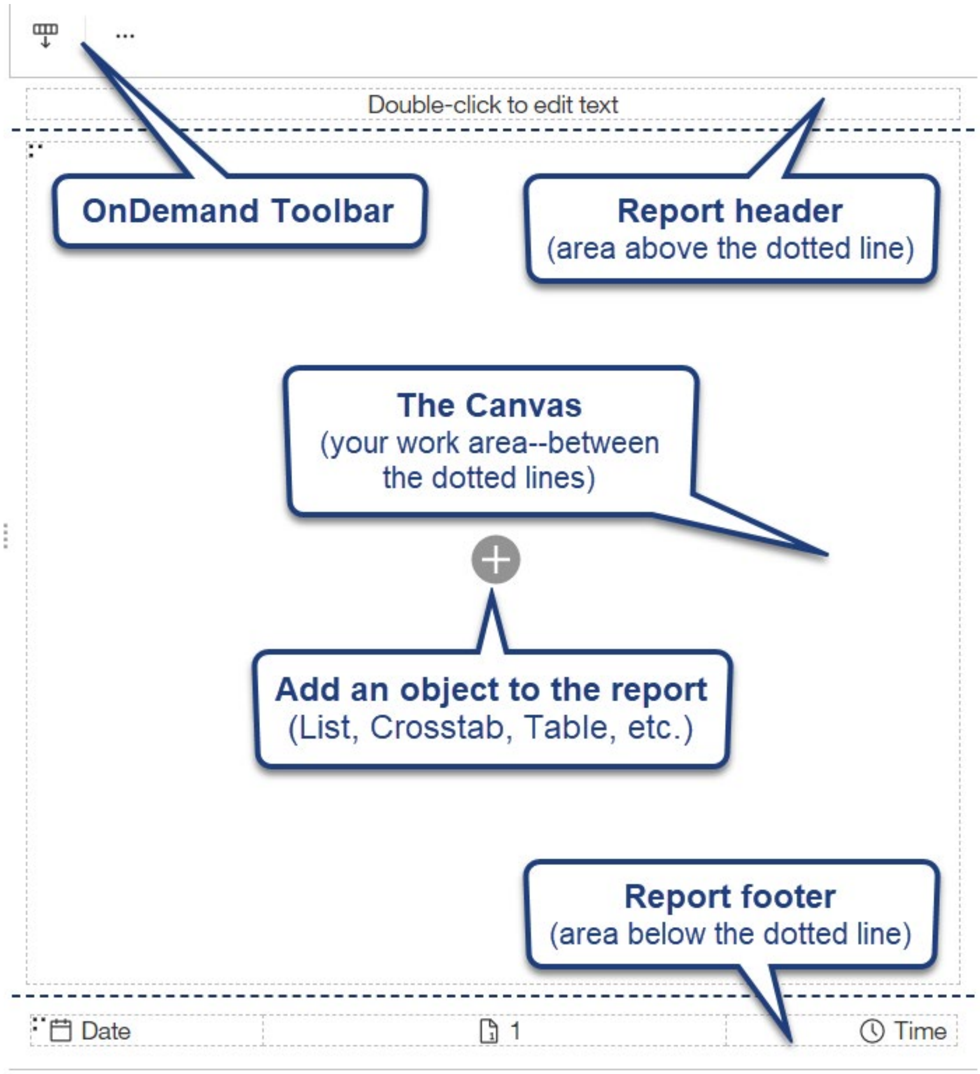


This action launches the data source—a package—in the Insertable Objects pane. Notice the Find feature at the top of the pane!



Work area

Next, we learn about the work area.

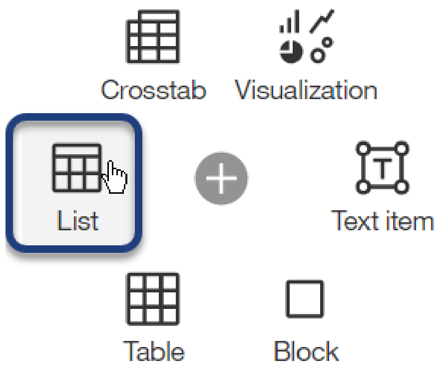


We begin by adding a display object to the page to help us build a report.

6. In the middle of the canvas click **Add** ⊕.

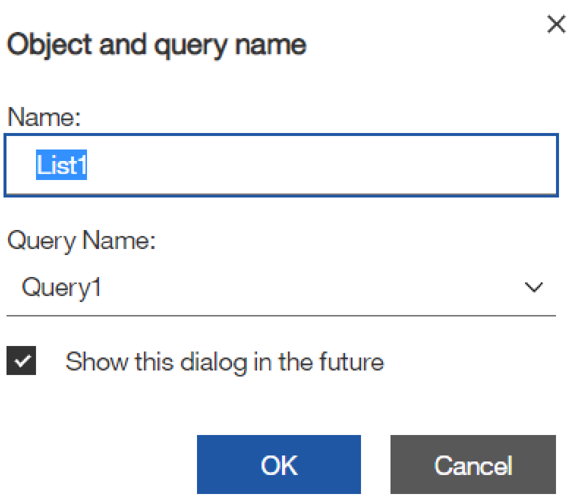
Notice there are a variety of display objects available for quick access here.

7. Click **List**.



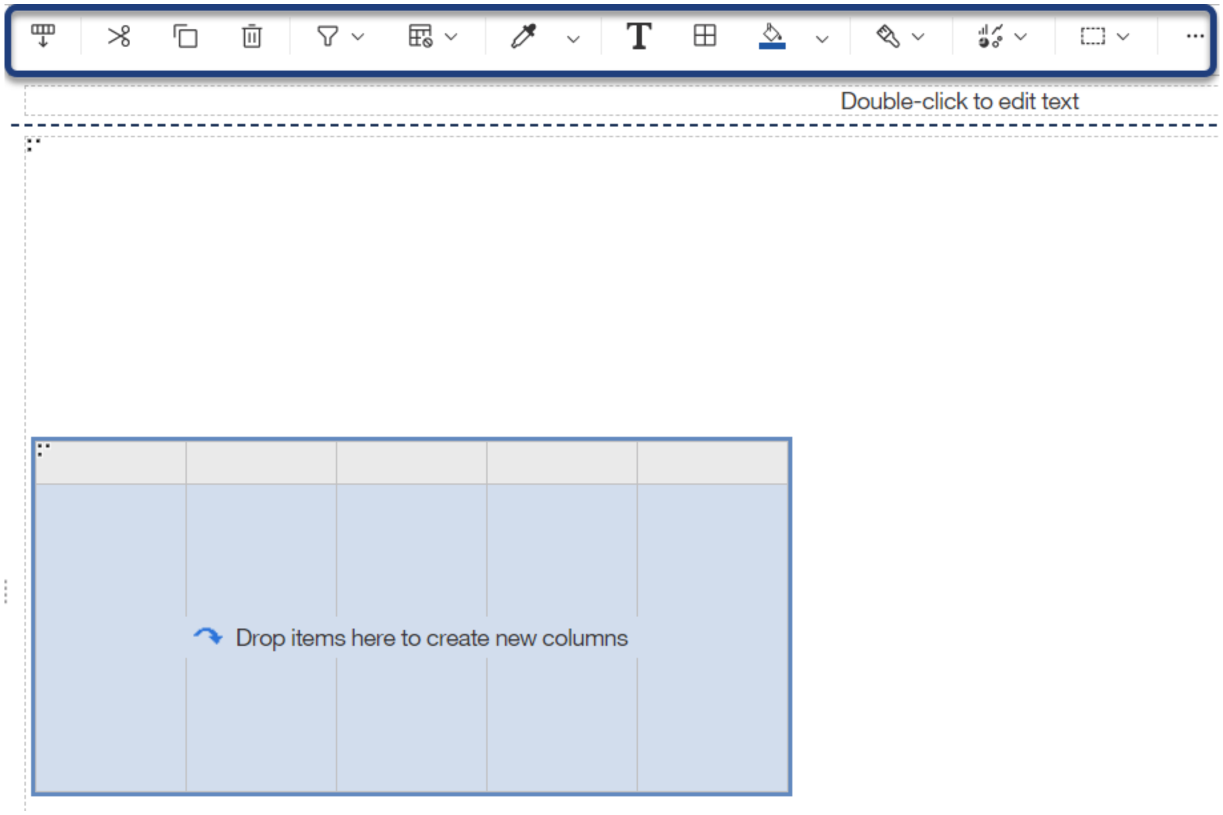
The Object and query name window opens and we have the option to Name the object. We learn more about this window in Intermediate and Advanced training.

8. Click OK.

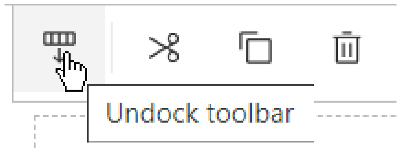


The List container appears on the page.

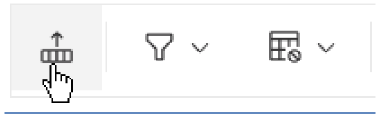
Notice at the top of the work area, the On-demand toolbar is now visible.



The default setting is for the toolbar to be "docked" to the top of the canvas. There is an option to **Undock** the toolbar, but we ask that *for training purposes please leave the toolbar pinned!*

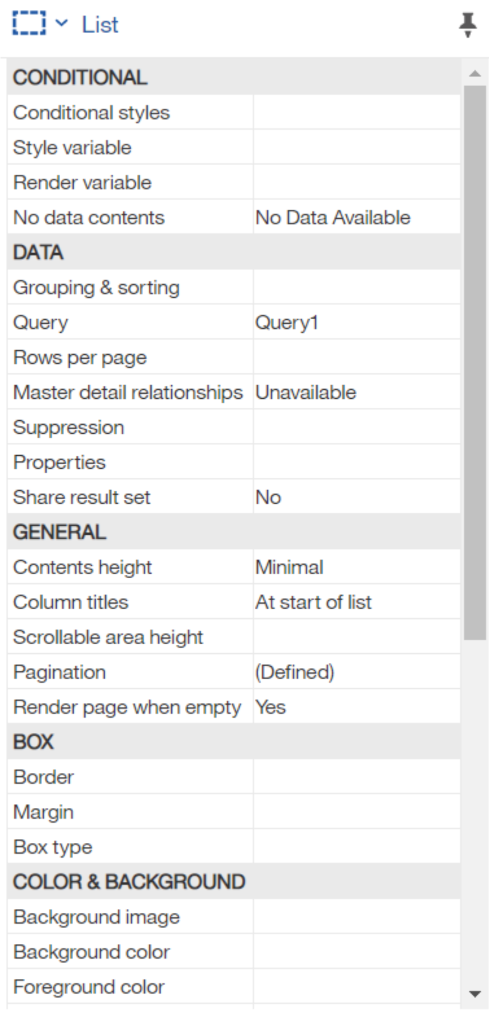


This action undocks the toolbar and instead places it in line with the selected item. Click **Dock** to re-dock the toolbar at the top of the canvas.

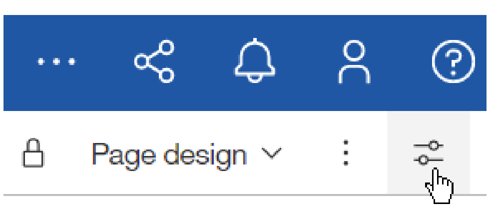


Properties

Next, we learn about the Properties pane. When the List object appears on the page, it is highlighted in blue indicating it is a selected item. When any report item is selected, the Properties pane displays details and settings for the item on the right side of the screen. We learn more about Properties as we learn to write reports in Cognos.

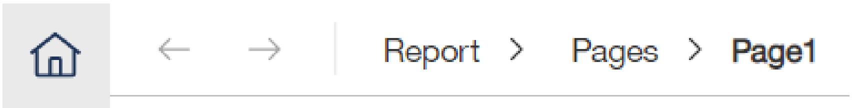


If the Properties pane is not visible, toggle the **Show properties** button in the upper right corner of the Cognos window:



The **Navigation menu** in the upper left corner allows users to quickly navigate through the report pages, prompt pages, queries, classes, and variables in a report.

Select an item in the Navigation menu dropdown to open the object on the canvas.



All reports have two components: a layout component that defines the report appearance and a query component that defines report data.

We use the Navigation menu to move between the layout component (Pages) and the query component (Queries).

Select an item in the Navigation menu to see a navigation dropdown.

We learn more about the Navigation menu in later lessons.

Saving the report

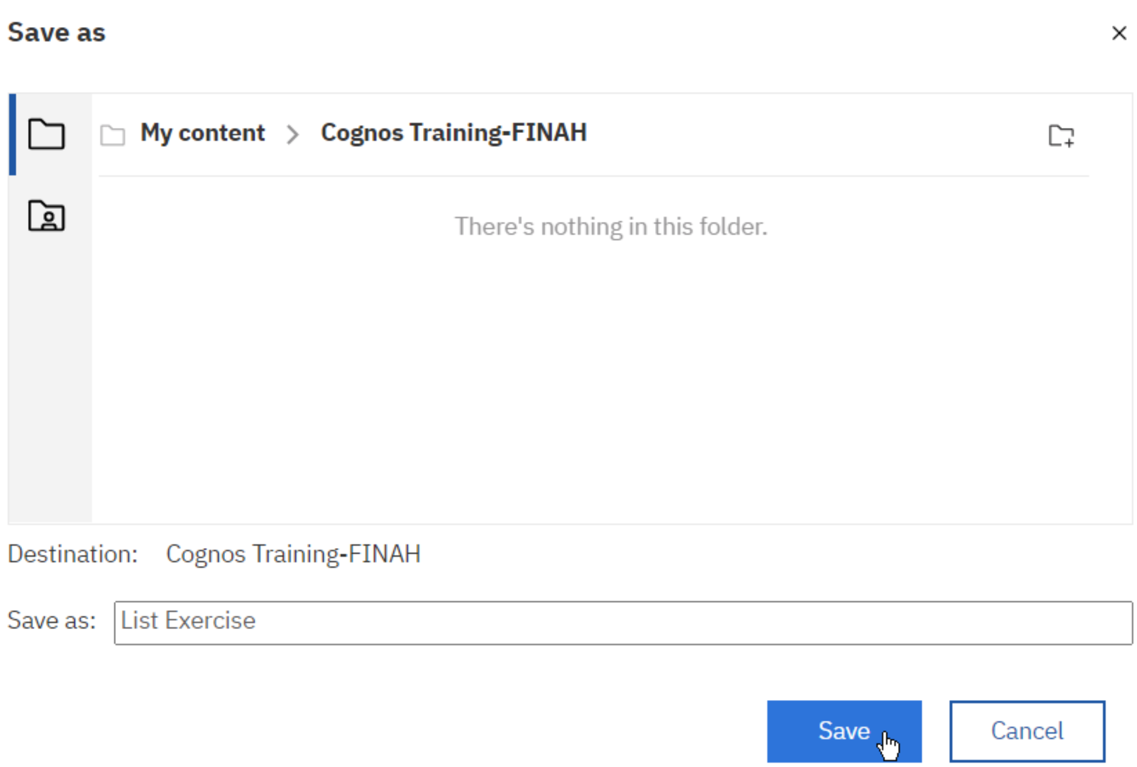
In the next steps we save the report to My content. **<u>There is no “auto save” in Cognos</u>**, so it is best practice to save early and often!

In the Switcher Menu, notice the asterisk next to the “New report” name—this indicates we have unsaved changes.

9. In the Application toolbar click **Save** .

The Save as window opens – the package folder may be selected by default. It is **never** a good practice to save reports to the package folder! Please save all reports in training to My content.

10. Click **My content** , open the **Cognos Training-FINAH** folder and in the Save as field type **List Exercise**. Click Save.



Adding Data Items to the List

To select items for the report you have the following options:

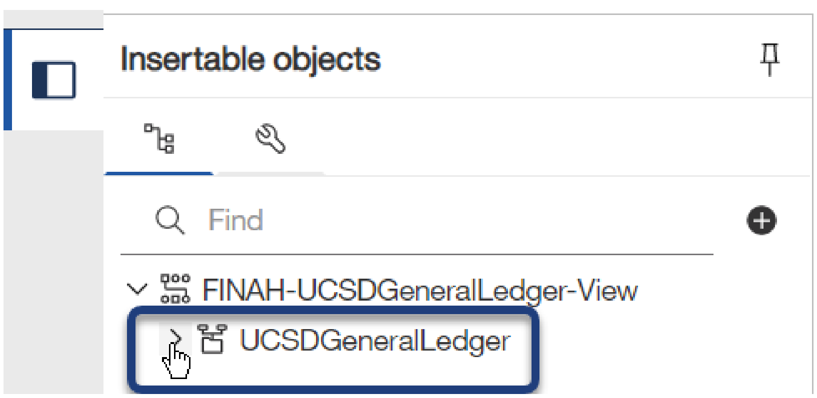
- Highlight the query subject to select all of the query items in that group.
- Click once to select a single item.
- Ctrl-click to highlight multiple items.
- Shift-click to highlight a contiguous group of items.

There are three ways you can add the item(s) to the report:

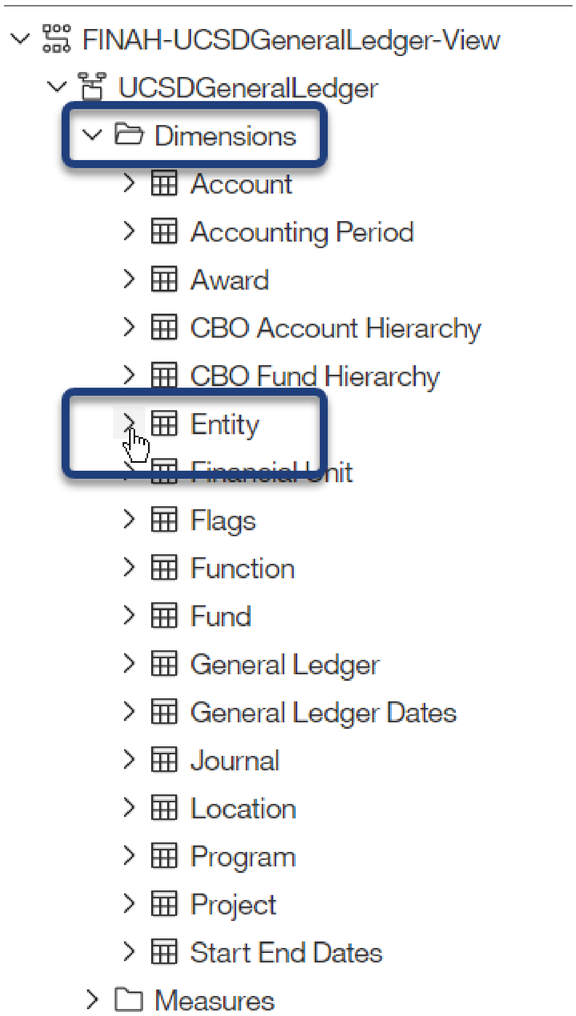
- **Drag** - When you drag a query item into a List look for a triple vertical bar at your insertion point.
  - When you drag near another object, a dark single bar on the left indicates that the object is placed above/before the existing object.
  - A bar on the right indicates placement below/after the existing object.
- **Double-click** – To insert the object at the end of the List, or at the current cursor placement.
- **Right-click** – Select the item, right-click and select **Insert**. Items are inserted at the end of the List, or at the current cursor placement.

Explore the package and notice the package data is organized into folders and query subjects.

11. Under Insertable objects and from the **Source** tab expand the **UCSDGeneralLedger** namespace.



12. Expand the **Dimensions** folder and the **Entity** query subject.



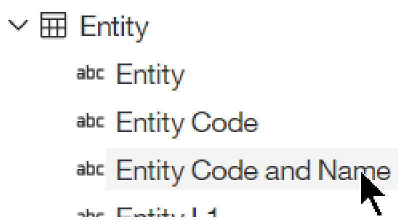
Notice the query subject expands to reveal a list of data items. These data items are used to develop the report:

- Entity
  - abc Entity
  - abc Entity Code
  - abc Entity Code and Name
  - abc Entity L1
  - abc Entity L1 Code
  - abc Entity L1 Code and Name
  - abc Entity L2
  - abc Entity L2 Code
  - abc Entity L2 Code and Name
  - abc Entity L3
  - abc Entity L3 Code
  - abc Entity L3 Code and Name

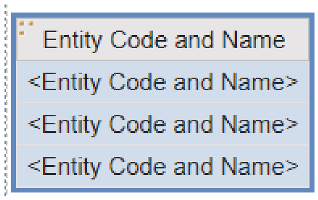
As we further explore the package in training, we see a variety of icons that indicate the types of data the data items represent:

- **text** abc
- numeric fields such as **measures** & **integers** #
- **date/time fields**

13. Double-click **Entity Code and Name** to add it to the List.



The List looks like this:

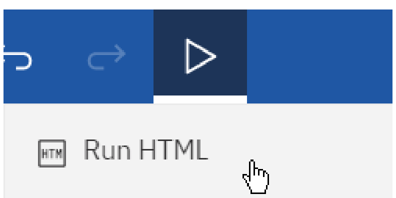


14. In the Application toolbar click **Save** (List Exercise).

Run a Report

To see the data returned by the report, we have a few options. You are encouraged to run reports to HTML as much as possible to get faster results and use the interactivity options in Cognos.

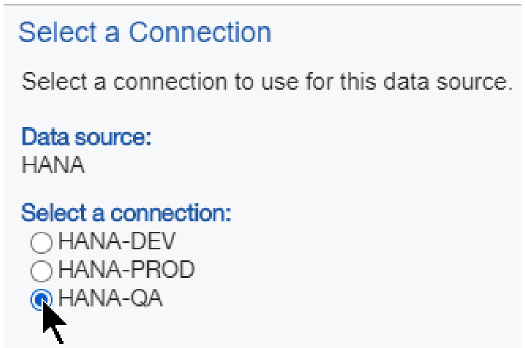
15. In the Application toolbar click **Run options** and click **Run HTML**.



The report runs in a new browser tab. In the DEV environment before we see data, we are asked to select a data source connection.

For training we select HANA-QA but when writing and testing reports outside of training you select HANA-PROD to see the most up to date information in your reports.

16. Click the radio button to select **HANA-QA**. Click OK.

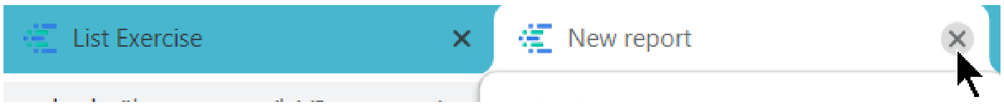


While in training whenever prompted to select a connection click **HANA-QA**.

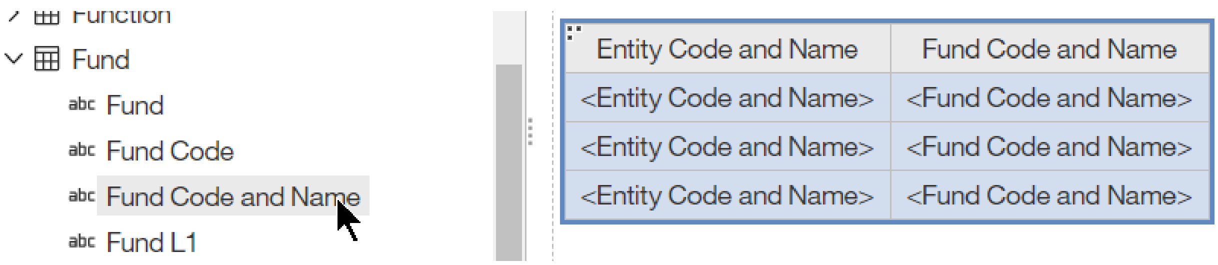
The report runs against the database and opens in Cognos Viewer.

Entity Code and Name
00000-No Entity
16110-Academic Affairs
16120-Marine Science
16130-Health Science
16143-Health Physician Group
16144-Population Health Svc Orgn (PHSO)
16150-Chief Financial Officer
16160-Student Affairs
16170-Resource Management and Planning
16180-Research Affairs
16191-Academic Senate
16192-Office of the President
16193-Advancement
16194-Equity Diversity Inclusion
16195-Chancellor
16196-Campus Operations
16198-Sanford Consortium
16242-CEO of Medical Center
16597-Foundation
99941-Medical Center UCOP Elimination Entries

17. At the top of the browser window close the New report tab to return to the Reporting interface.



18. Expand the **Fund** query subject and double-click **Fund Code and Name**.

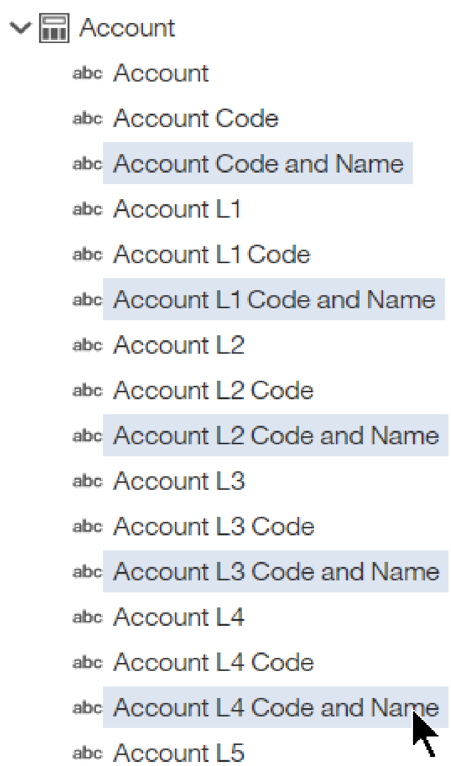


New columns are automatically added to the right of the first column.

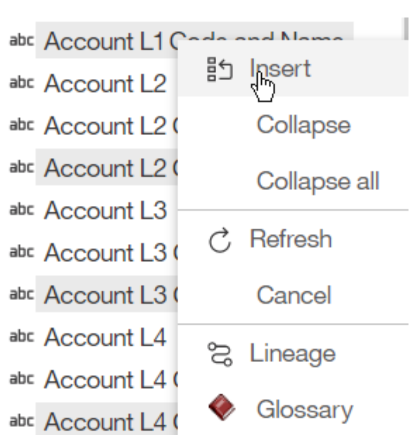
19. Expand the **Financial Unit** query subject and double-click **Financial Unit Code and Name**.

We can Ctrl-click multiple items and bring them into the report at the same time.

20. Expand the **Account** query subject and Ctrl-click the following data items in this order:
    - **Account Code and Name**
    - **Account L1 Code and Name**
    - **Account L2 Code and Name**
    - **Account L3 Code and Name**
    - **Account L4 Code and Name**



21. Right-click one of the selections and click **Insert**:



The new columns are inserted to the right:

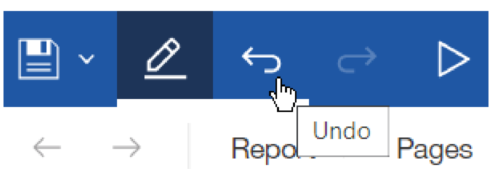
Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>

22. Expand the **Function** query subject and double-click **Function Code and Name**.
23. Expand the **Project** query subject and double-click **Project Code and Name**.
24. Expand the **Program** query subject and double-click **Program Code and Name**.

Actually . . . we decide we don't need the Program Code and Name column in the report.

Undo

25. In the Application toolbar click **Undo** once.

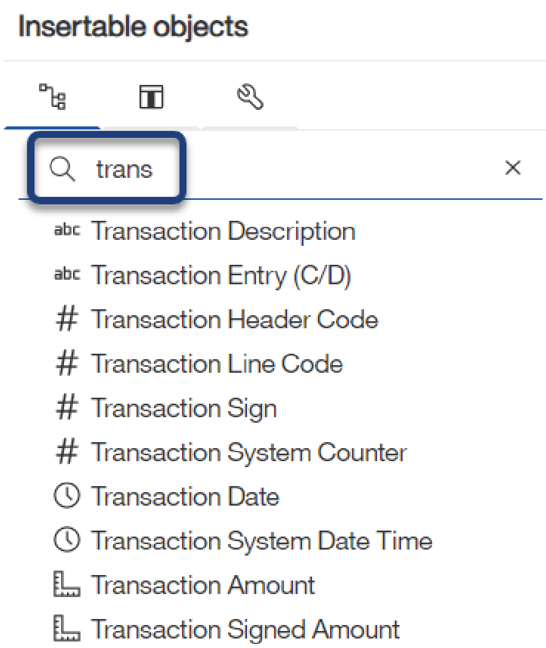


This undoes the last action applied to the report.

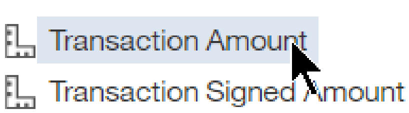
Using the Find field to search for items in the package

In the next steps we add Transaction Amount to the report but assume we don't know where to find it in the package.

26. In the **Find** field at the top of the Insertable objects pane begin typing: **Transaction** and notice the results that appear. This search is not case sensitive.



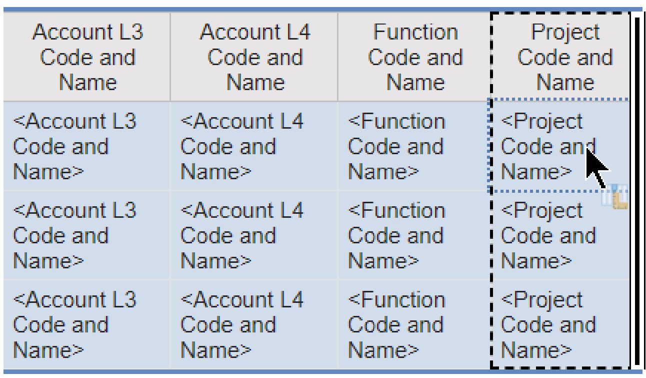
Mouse over any of the Search results . . .



. . . and notice a screen tip gives us details about the location of the item in the package:

[UCSDGeneralLedger].[General Ledger Measures].[Transaction Amount]

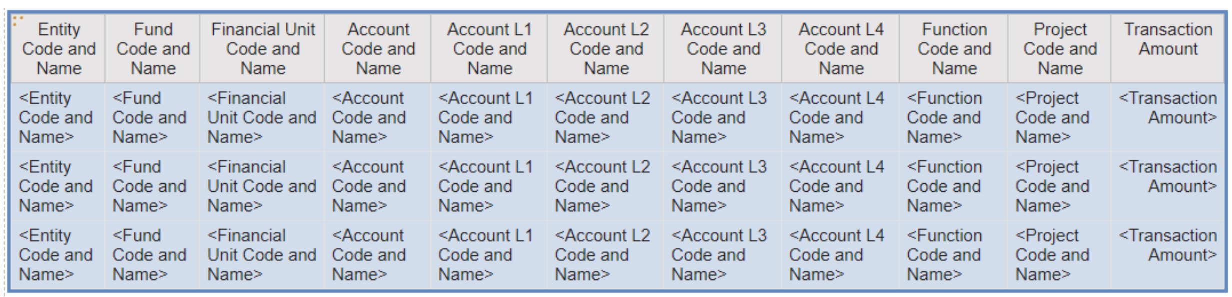
27. Click and drag **Transaction Amount** from the search results and add it to the end of the List--look for the dotted line around the Project Code and Name column and the flashing black bar indicating where the column will drop.



Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name
<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>
<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>
<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>

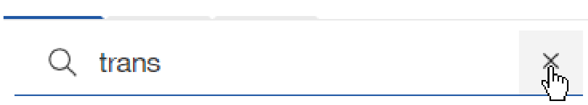
Ensure your cursor stays hovered over the Project Code and Name column so the column goes into the report. Your instructor demonstrates best practices for dragging in data items.

The List report looks like this:



Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>	<Transaction Amount>
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>	<Transaction Amount>
<Entity Code and Name>	<Fund Code and Name>	<Financial Unit Code and Name>	<Account Code and Name>	<Account L1 Code and Name>	<Account L2 Code and Name>	<Account L3 Code and Name>	<Account L4 Code and Name>	<Function Code and Name>	<Project Code and Name>	<Transaction Amount>

28. Under Insertable Objects click the **x** to clear the Search results.



29. In the Application toolbar click **Save** (List Exercise).

Adding Basic Filters to the List

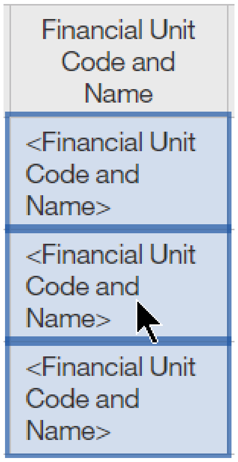
It is best practice to add filters to the report to narrow the data returned. In most cases it is best to apply filters even before running it, especially depending on the level of detail returned in the report.

In the next steps we add Custom based filters to the report.

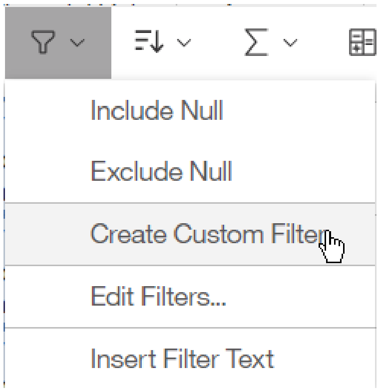
Custom based filters

1. Continue in the **List Exercise** report.
2. In the Application toolbar click the **Save** dropdown, select **Save as**:

3. Save the report specification in **My content**  > **Cognos Training-FINAH** folder as **Custom based filters**.
4. In the List click inside the **Financial Unit Code and Name** column.



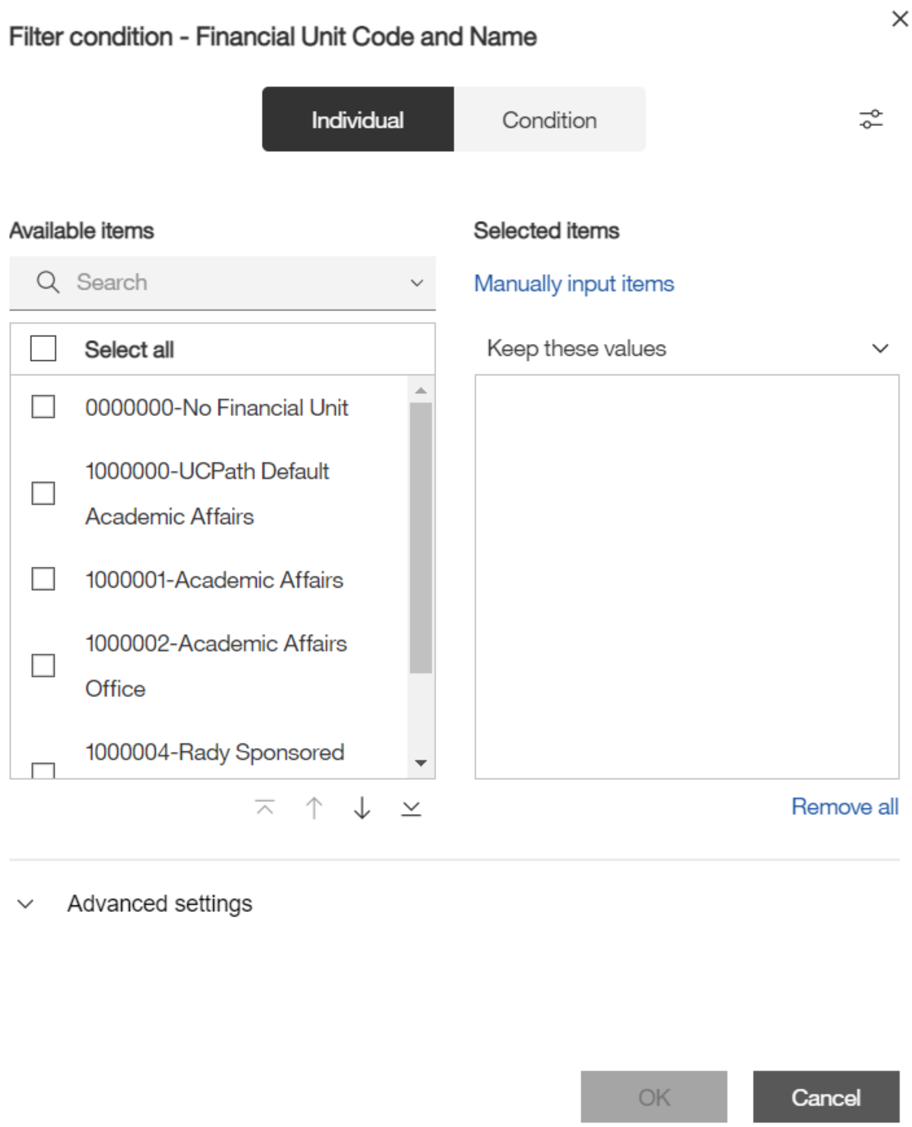
5. In the OnDemand toolbar that pops up click **Filters** and select **Create Custom Filter**:



When we create a Custom Filter Cognos must access the applicable data source to bring back values for us to choose from.

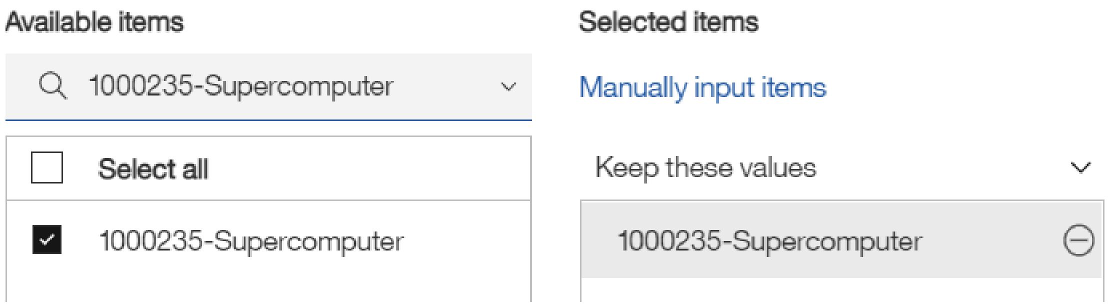
6. Click the radio button to select **HANA-QA**. Click OK.

The Filter condition window/wizard opens.



Notice under Available items we have the option to **Search for values**, and under the Available items pane are **Page down** ↓ and **Bottom** buttons to navigate through the pages of values that are returned from the database:

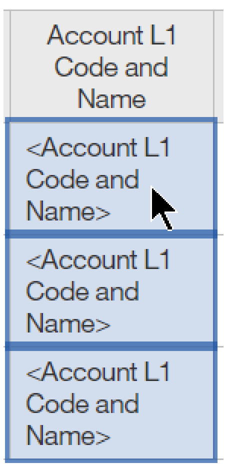
7. Under Available items use the Search field to find and Select **1000235-Supercomputer**—placing a check in the box adds the item to the “Keep these values” pane on the right.



8. Click OK to close the window.

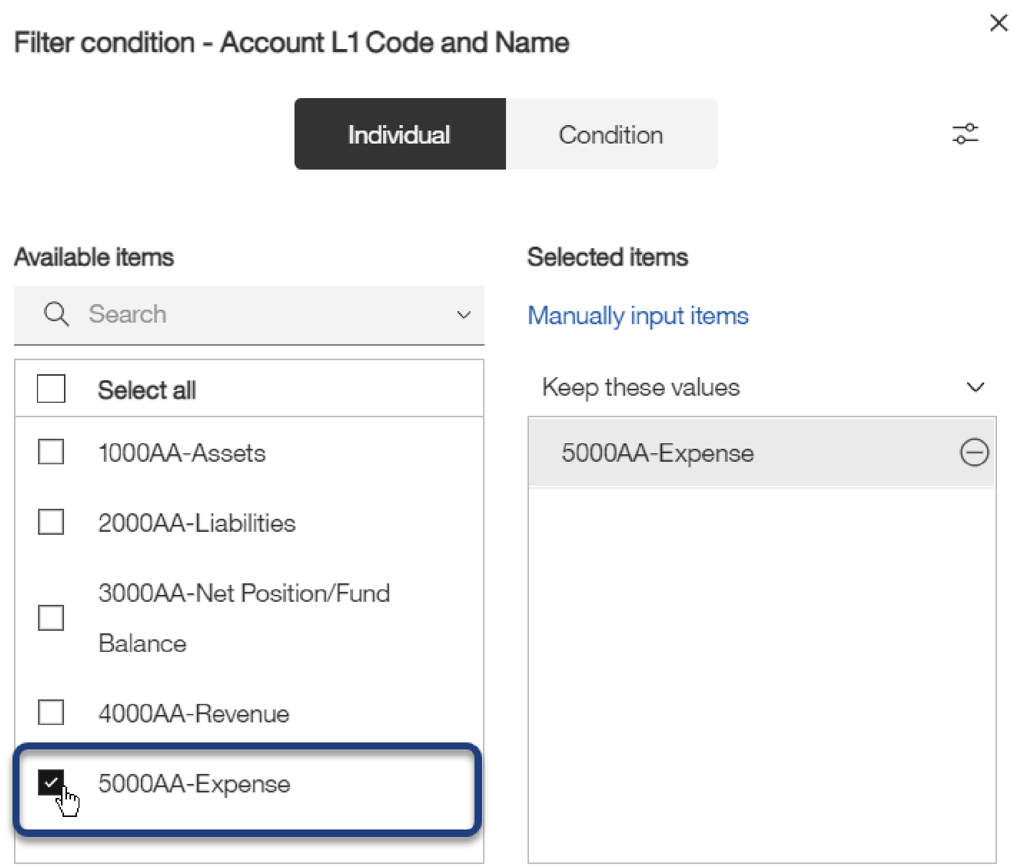
Notice there is no indicator on the report page that we added a filter. Next, we add a Filter to narrow the data returned to an Expense Account.

9. Click inside the **Account L1 Code and Name** column.



10. In the OnDemand toolbar click **Filters** and select **Create Custom Filter**.

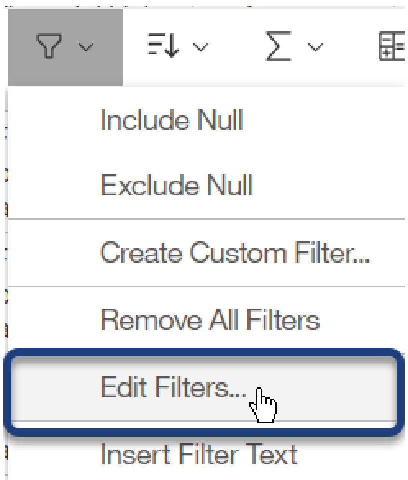
11. In the Filter condition window under Available items select **5000AA-Expense** to add the value to the “Keep these values” pane.



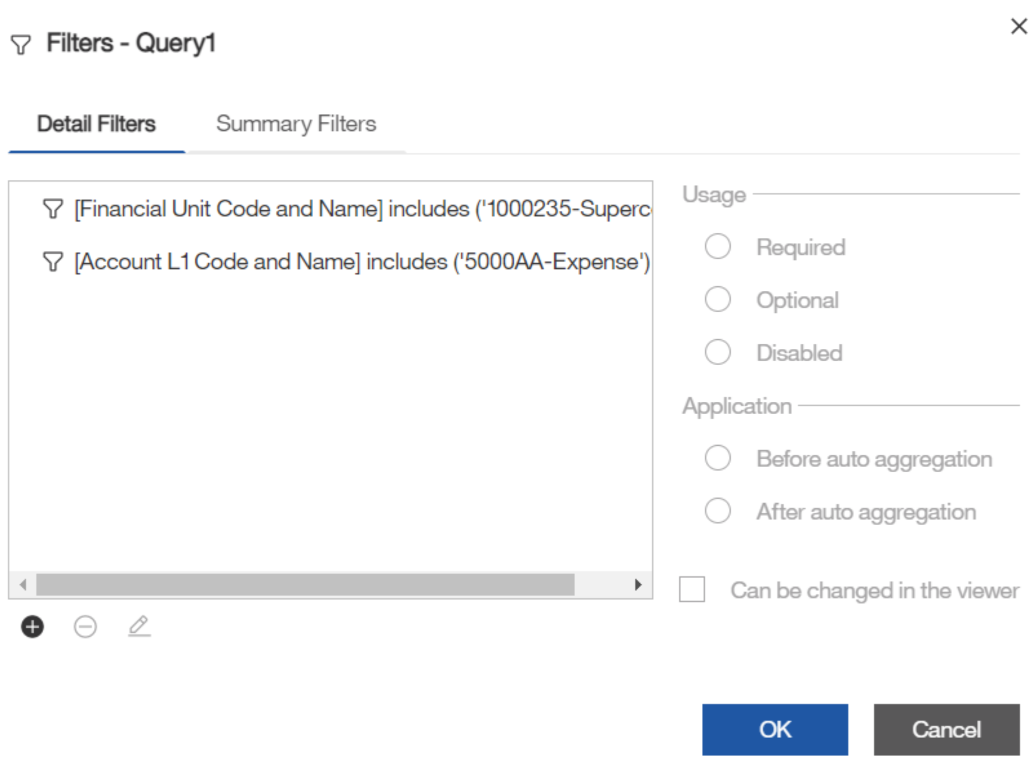
12. Click OK to close the window.

To view or edit the Filters on the report, or add more:

13. In the OnDemand toolbar click **Filters** and **Edit Filters**.

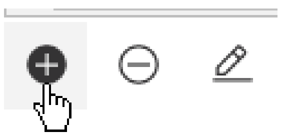


In the Filters – Query window we can review the filters on the report as well as **Add**, **Delete** or **Edit** the filters, or change the Usage or Application properties (discussed later).

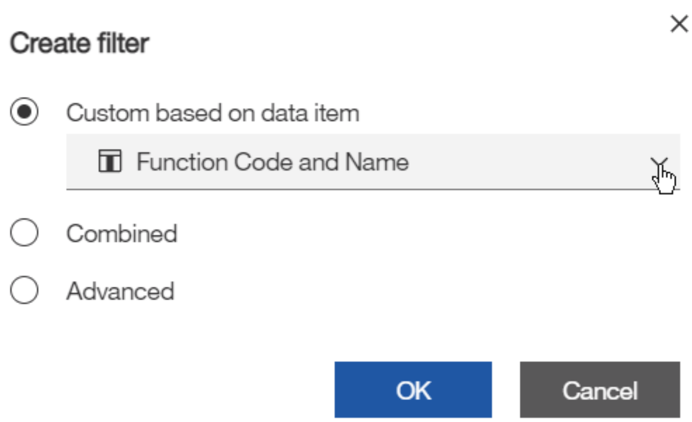


In the next steps we limit the report to the Function of Research.

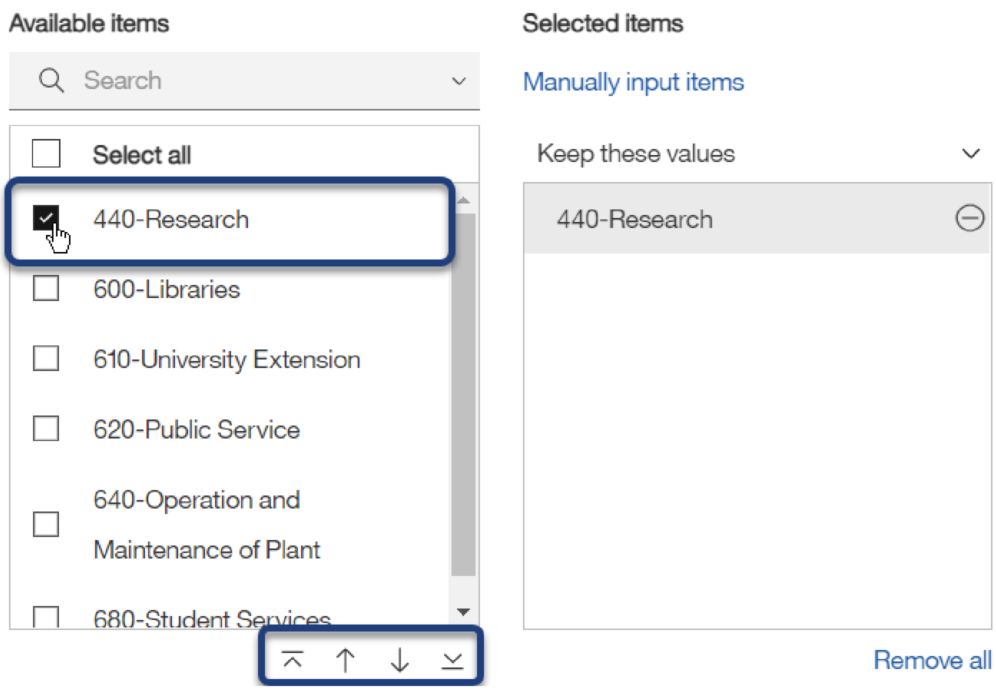
14. In the Filters window click **Add**.



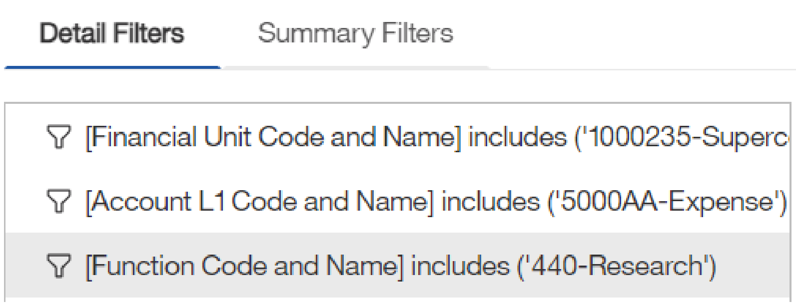
15. In the Create filter window under **Custom based on data item** select **Function Code and Name**. Click OK.



16. In the Filter condition window use the Search field or click Page down to find and select **440-Research** to add the value to the “Keep these values” pane. Click OK to close the window.



Review the three filters on the report.



17. Click OK to close the Filters window.
18. In the Application toolbar click **Save** (Custom based filters).

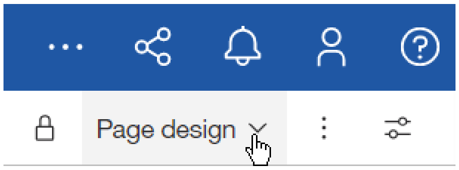
Page design vs Page preview Views

We can control when we see data in the report–in Preview–and when we see the report “shell”, or placeholders for the data in our report–in Design.

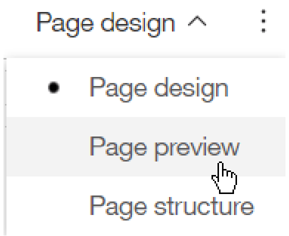
The **Page Design** option allows you to focus on the report layout. It is best to use this option as you develop queries, and until you have determined:

- The specific fields you want to include in the query
- The format you prefer for the report
- How you want to use Filters to limit the data returned.

16. In the Application toolbar, in the upper right corner, click **Page design** . . .



17. . . . and select **Page preview**

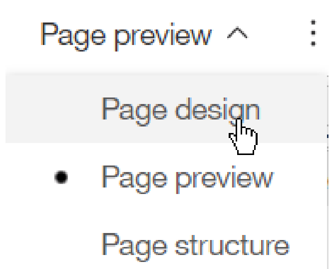


The report runs and displays data in the work area.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	500000-Academic Salary and Wages	5000AA-Expense	50000A-Salaries and Wages	50000B-Academic Salaries and Wages	50000C-Academic Salaries and Wages	440-Research	1003285-ACAD CRSE Coursera Revenue	18,826.22
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	508100-Staff Recognition & Development	5000AA-Expense	50700A-Other Employee Benefits	50810B-Local (Campus Specific) Benefit Programs	50810C-Local (Campus Specific) Benefit Programs	440-Research	1006704-SP FSP NSF CNS 1925001 NORMAN	500
16110-Academic Affairs	RM918-Center for Large-Scale Data Systems (CLDS) Research	1000235-Supercomputer	501000-Non Academic Salary and Wages	5000AA-Expense	50000A-Salaries and Wages	50100B-Non Academic Salaries and Wages	50100C-Non Academic Salaries and Wages	440-Research	1004262-FD DIS short gift	52,148.26
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	508100-Staff Recognition & Development	5000AA-Expense	50700A-Other Employee Benefits	50810B-Local (Campus Specific) Benefit Programs	50810C-Local (Campus Specific) Benefit Programs	440-Research	1003285-ACAD CRSE Coursera Revenue	125
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	501000-Non Academic Salary and Wages	5000AA-Expense	50000A-Salaries and Wages	50100B-Non Academic Salaries and Wages	50100C-Non Academic Salaries and Wages	440-Research	1017267-SP Helly USACE FIRO	43,737.94
16110-Academic Affairs	20700-Private Contracts and Grants	1000235-Supercomputer	505500-UCRP Supplemnt Assessment-Interest	5000AA-Expense	50500A-Pension Benefits	50500B-UCRP	50550C-UCRP Supplemental Assessment Interest	440-Research	1016838-SP Fahy Cardiff Wellcome Trust	280
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	508000-Composite Benefit Rate Campus Payment	5000AA-Expense	50700A-Other Employee Benefits	50800B-Composite Benefit Rate Campus Payment	50800C-Composite Benefit Rate Campus Payment	440-Research	1009186-TEAM LOS SDSC Operations	430,955.24
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	508000-Composite Benefit Rate Campus Payment	5000AA-Expense	50700A-Other Employee Benefits	50800B-Composite Benefit Rate Campus Payment	50800C-Composite Benefit Rate Campus Payment	440-Research	1015434-SP Altintas DOE IPPD	10,617.9
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	508000-Composite Benefit Rate Campus Payment	5000AA-Expense	50700A-Other Employee Benefits	50800B-Composite Benefit Rate Campus Payment	50800C-Composite Benefit Rate Campus Payment	440-Research	1003484-OTHR CS PDB Matching Funds	7,486.95
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	508000-Composite Benefit Rate Campus Payment	5000AA-Expense	50700A-Other Employee	50800B-Composite Benefit Rate Campus Payment	50800C-Composite Benefit Rate Campus Payment	440-Research	1029662-SP DARPA HR00112020014	34,407

Notice the Page down and Bottom buttons at the bottom of the window that indicate this report has multiple pages of data. Cognos by default only displays 20 rows of data per page. We learn how to override this setting later in training.

18. In the Application toolbar click Page preview and **Page design**.

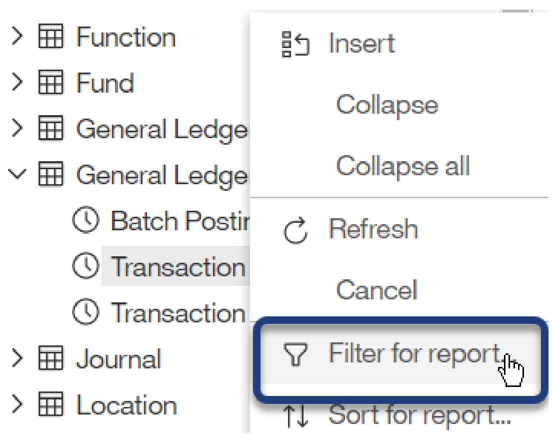


Filter for report

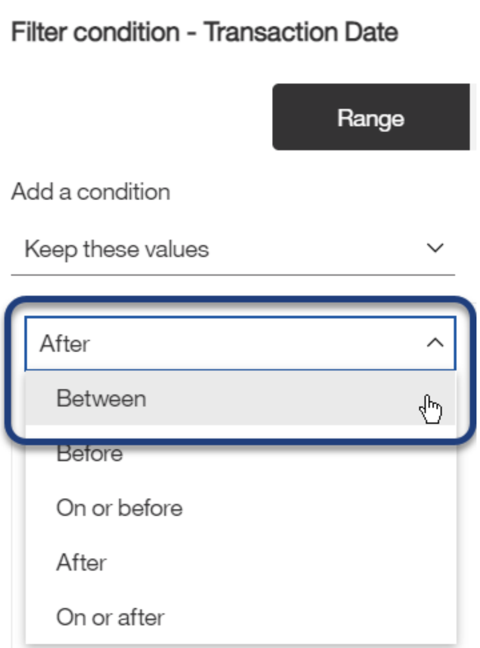
Assume we want to narrow the report by Transaction Date, but we don't need to see that column in the report. We can add the column, apply the filter and delete the column (the filter remains!).

Or, we can right-click the item in the package and select *Filter for report*.

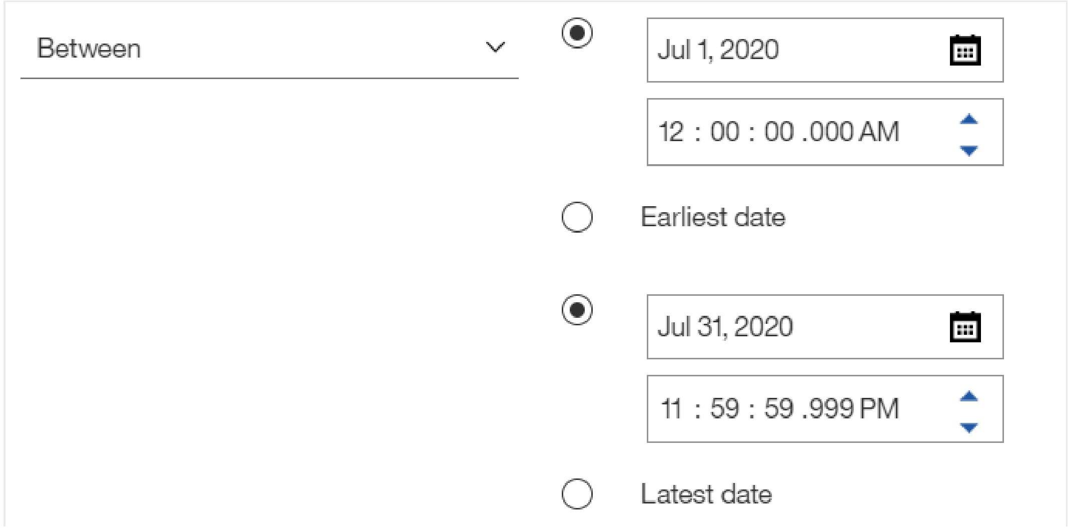
19. Click inside any column in the List report.
20. Under Insertable Objects expand the **General Ledger Dates** ⊞ query subject, right-click **Transaction Date** and select **Filter for report**:



21. In the Filter condition window click the dropdown next to After and select **Between**:



22. Use the Date fields to select **Jul 1, 2020** to **July 31, 2020** – you can type the values or use the calendar. Click OK.



23. In the Application toolbar click **Save** (Custom based filters).
24. In the Application toolbar click Page design and select **Page preview**.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	536700-Conferences and Training	5000AA-Expense	53000A-Other Operating Expense	53650B-Meetings and Training	53670C-Conferences and Training	440-Research	1021069-SP Sivagnanam NSF Open Science	100
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	522200-Mail/Postage/Messenger Services	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52220C-Office and Administrative Supplies	440-Research	1006743-SP NSF ICER 1928208 KIRKPATRICK	15.05
16110-Academic Affairs	20000-Federal Contracts and Grants	1000235-Supercomputer	534104-Computing Service	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	1006743-SP NSF ICER 1928208 KIRKPATRICK	455.96
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	0000000-No Project	67,877.24
16110-Academic Affairs	RN192-Google - Research/CAC/Dhamdhere	1000235-Supercomputer	534104-Computing Service	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	1003996-FD DIS CAIDA gift	55.07
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1003285-ACAD Coursera Revenue	2,488.4
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522308-Safety and Fire and Environmental Supply	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52230C-Physical Plant Manufacturing and Furnishing Materials	440-Research	1000750-TEAM BOC SDSC Business Office	134.75
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522201-Office Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52220C-Office and Administrative Supplies	440-Research	1000750-TEAM BOC SDSC Business Office	259.99
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	523201-Other Materials and Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52320C-Other Non Medical Supplies	440-Research	1003285-ACAD Coursera Revenue	134.39
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1009189-TEAM LOS Sherlock	172.94
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1004260-FSU DIS SDSC Startup Retention Bridge	35,000
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	522500-Printed Items and Other Classroom Aids	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52250C-Printed Items and Other Classroom Aides	440-Research	1003285-ACAD Coursera Revenue	34.99
16110-Academic	13991-University Core Funds	1000235-Supercomputer	534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating	53400B-IT and Communications	53400C-Software Maintenance and Licenses	440-Research	1009185-TEAM LOS SDSC Initiatives	299

25. In the Application toolbar click Page preview and select **Page design**.

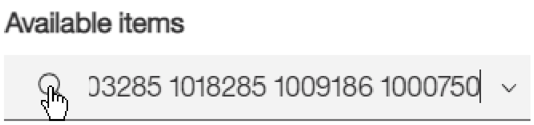
Filter on a list of values

In the next steps we learn how to filter on a list of values: Project Codes. We can copy and paste a list of values from our computer into a Custom based filter. Assume we have the following list of Project IDs we want to filter on:

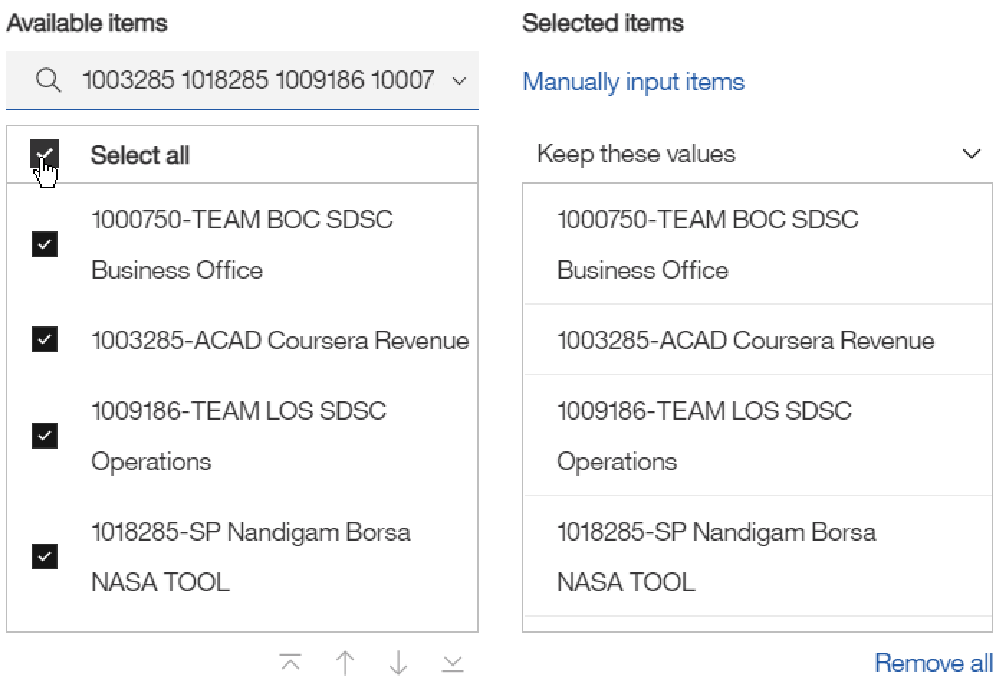
1003285 1018285 1009186 1000750

26. In the List click inside the **Project Code and Name** column.
27. In the OnDemand toolbar click **Filters** and **Create Custom Filter**.
28. In the Filter condition window Search field type or paste the following list of IDs and click **Search**:

    1003285 1018285 1009186 1000750



29. Confirm all the values were returned and click **Select all** to move them into the Keep these values pane. Click OK.



30. In the Application toolbar click **Save** (Custom based filters).

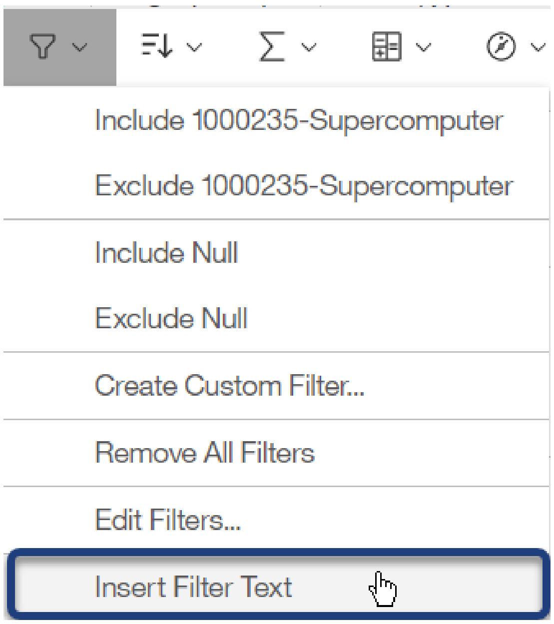
31. In the Application toolbar click Page design and **Page preview**.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1009186-TEAM LOS SDSC Operations	1,000
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1003285-ACAD Coursera Revenue	2,488.4
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522308-Safety and Fire and Environmental Supply	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52230C-Physical Plant Manufacturing and Furnishing Materials	440-Research	1000750-TEAM BOC SDSC Business Office	134.75
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522201-Office Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52220C-Office and Administrative Supplies	440-Research	1000750-TEAM BOC SDSC Business Office	259.99
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	523201-Other Materials and Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52320C-Other Non Medical Supplies	440-Research	1003285-ACAD Coursera Revenue	134.39
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	522500-Printed Items and Other Classroom Aids	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52250C-Printed Items and Other Classroom Aides	440-Research	1003285-ACAD Coursera Revenue	34.99
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1009186-TEAM LOS SDSC Operations	196,273.98
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522303-Furniture <$5K	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52230C-Physical Plant Manufacturing and Furnishing Materials	440-Research	1009186-TEAM LOS SDSC Operations	215.49
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522900-Maintenance and Cleaning Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52290C-Cleaning Supplies	440-Research	1000750-TEAM BOC SDSC Business Office	249.21
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	522201-Office Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52220C-Office and Administrative Supplies	440-Research	1003285-ACAD Coursera Revenue	16.98

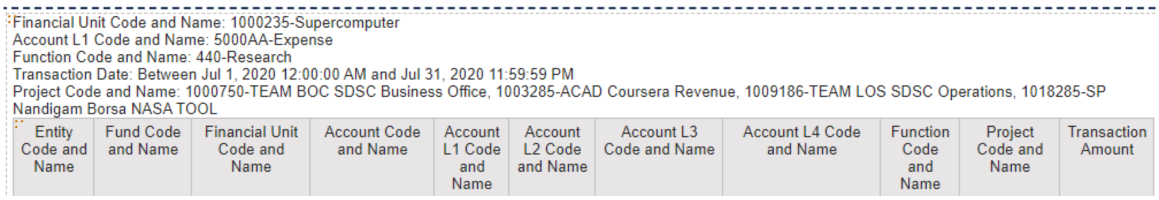
Insert filter text

We’ve added quite a few filters to the report but there’s no indicator of this on the page.

32. Click inside any column in the List and in the OnDemand toolbar click **Filters** and **Insert Filter Text.**



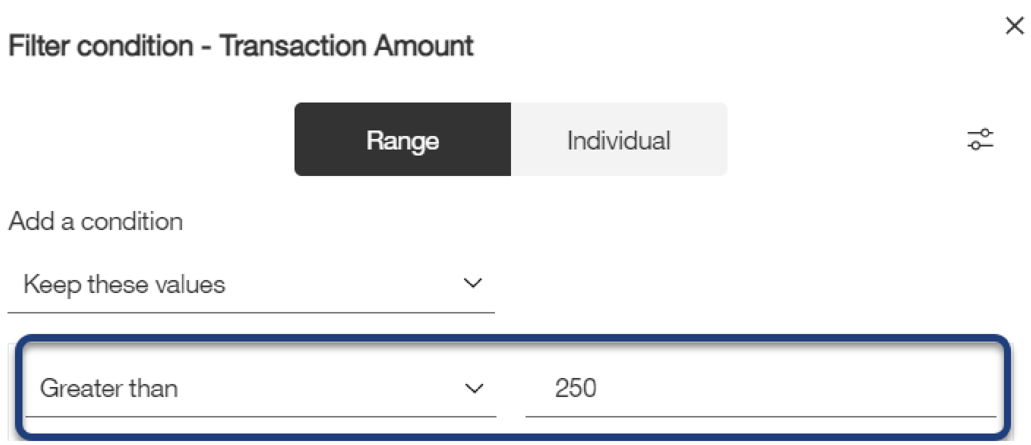
Filter text is added to the report directly above the List:



Filter Application setting—Before or after aggregation

In the next steps we learn tips when applying a Filter to a measure like Transaction Amount. Assume we want to limit the report to Transaction Amounts > 250.

33. In the Application toolbar click Page preview and **Page design**.
34. Click inside the **Transaction Amount** column and in the OnDemand toolbar click **Filters** and **Create Custom Filter**.
35. In the Filter condition window, next to Greater than type: 250. Click OK.



36. In the Application toolbar click Page design and **Page preview**.

Notice you only see Transaction Amounts greater than 250, and the filter text updates with each Custom based filter we add to the report:

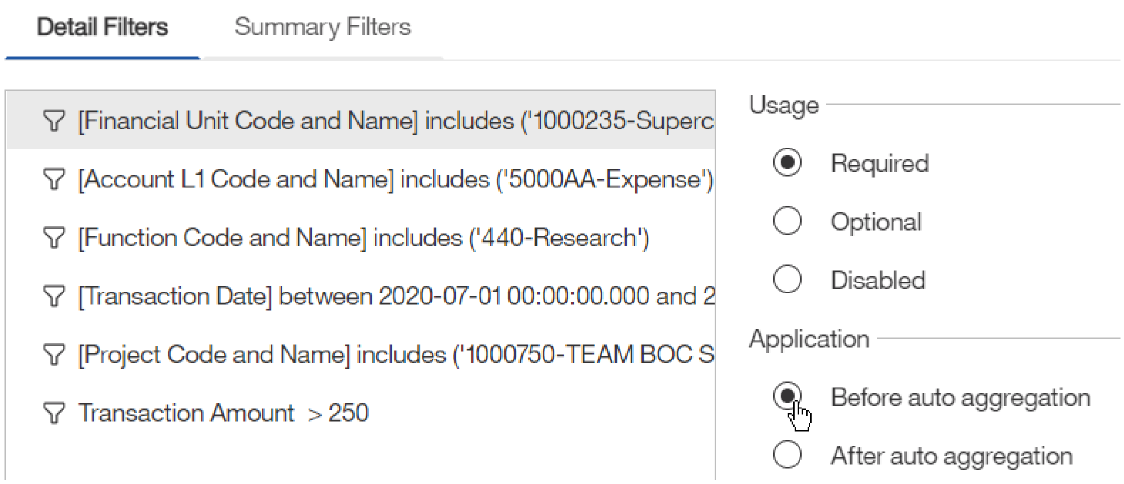
Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1009186-TEAM LOS SDSC Operations	1,000
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1003285-ACAD Coursera Revenue	2,488.4
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	522201-Office Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52220C-Office and Administrative Supplies	440-Research	1000750-TEAM BOC SDSC Business Office	259.99
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1009186-TEAM LOS SDSC Operations	196,273.98
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	536700-Conferences and Training	5000AA-Expense	53000A-Other Operating Expense	53650B-Meetings and Training	53670C-Conferences and Training	440-Research	1009186-TEAM LOS SDSC Operations	498

Currently the filter on Transaction Amount is returning 5 rows of data. The filter we applied is filtering on the Transaction Amount total for *each row in the report*. We are not seeing individual transactions in this report; instead we are seeing an aggregated and summarized Transaction Amount by the lowest level of detail in the report—which is Project.

The value we see is a summary of all the individual transactions in the database that match our filters. Each of those transactions has its *own row in the database* and we have the option to apply the filter at the row level, too!

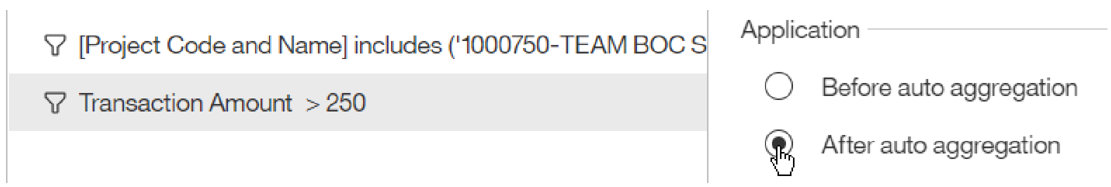
37. In the OnDemand toolbar click **Filters** and **Edit filters**.

38. Click the **Financial Unit Code and Name** filter and notice the Application setting is set to Before auto aggregation--click each filter in the list and notice the Application setting.



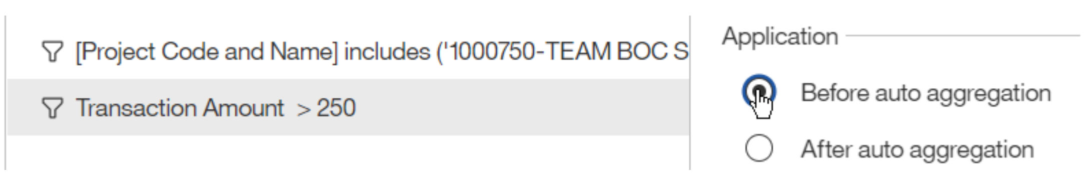
Most filters are applied Before auto aggregation by default. This indicates the filter with this application is applied to the *individual rows in the database* and bring back the applicable data.

Notice when you get to the Transaction Amount filter the Application is set to After auto aggregation.



This filter—as most filters on measures or amounts in Cognos—is applied after all the data gathered by the other filters is aggregated and summarized in the report.

39. Click the **Transaction Amount** filter and under Application click **Before auto aggregation**. Click OK.



The report refreshes and we only see three rows this time. The report is only returning Transaction Amounts for a Project when the *individual transactions* at the database level have amounts > 250.

Financial Unit Code and Name: 1000235-Supercomputer
Account L1 Code and Name: 5000AA-Expense
Function Code and Name: 440-Research
Transaction Date: Between Jul 1, 2020 12:00:00 AM and Jul 31, 2020 11:59:59 PM
Project Code and Name: 1000750-TEAM BOC SDSC Business Office, 1003285-ACAD Coursera Revenue, 1009186-TEAM LOS SDSC Operations, 1018285-SP Nandigam Borsa NASA TOOL
Transaction Amount: Greater than 250

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1009186-TEAM LOS SDSC Operations	900
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1009186-TEAM LOS SDSC Operations	196,273.98
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1003285-ACAD Coursera Revenue	2,488.4

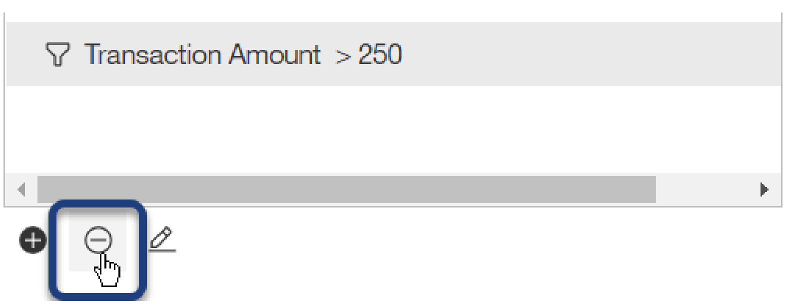
This is an important concept to understand especially when working with finance—or any kind of transactional—data.

40. In the Application toolbar click Page preview and select **Page design**.

As time allows your instructor will discuss tips and tricks to help you better understand the how Cognos aggregates and summarizes data in reports and ways to see more detail of each transaction by turning off the Auto Group & Summarize property on the report query.

Delete a filter

41. Click inside any column in the List.
42. In the OnDemand toolbar click **Filters** and **Edit Filters**.
43. Click the **Transaction Amount** filter and click **Delete**. Click OK.

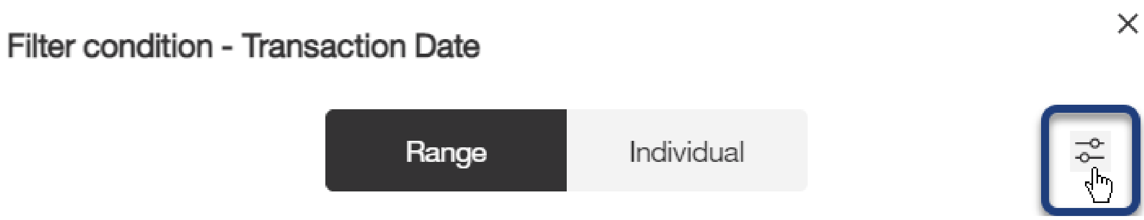


44. In the Application toolbar click **Save** (Custom based filters).

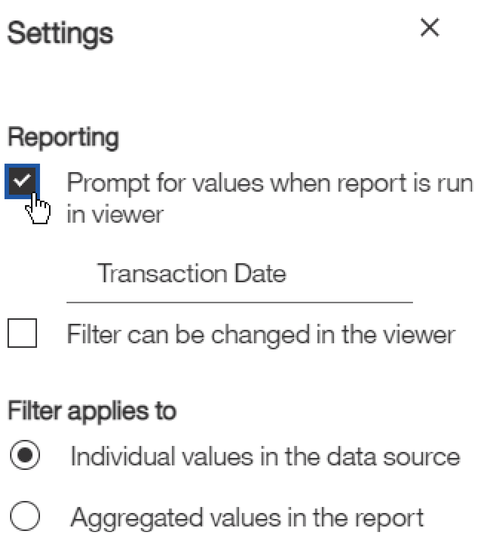
<u>INSTRUCTOR DEMO</u>: Introduction to Prompts on Custom based filters

Assume that when this report runs you want to give the user the option to select the filter values—these are called prompts. In the next steps the instructor demonstrates how to “Prompt for values when report is run in viewer”:

1) In the OnDemand toolbar click **Filters** and **Edit filters**.
2) Double-click the **Transaction Date** filter.
3) In the upper right corner of the Filter condition- window click **Settings**:

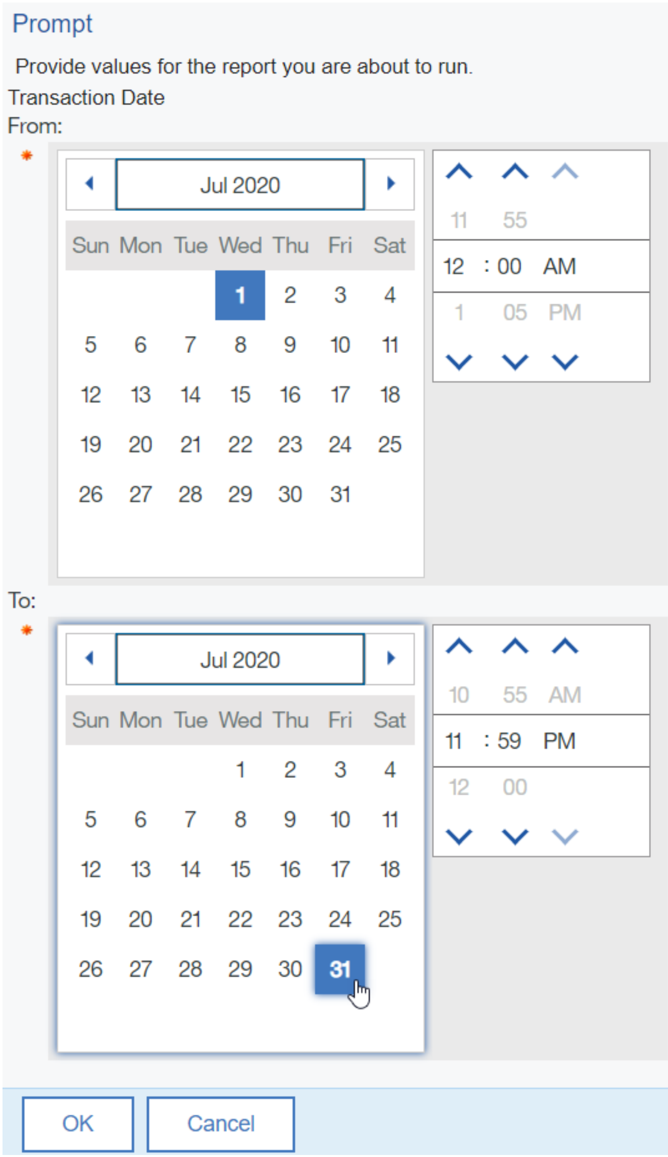


4) In the Settings window under Reporting place a check in the box to **Prompt for values when report is run in viewer**:



5) Click off the Settings window to close it. Click OK twice to close the filters windows.
6) In the Application toolbar click **Run options** and **Run HTML**.

7) On the Prompt page, for Transaction Date select **July 1** and **July 31**. Click OK.



The report runs in the viewer.

8) Close the New report browser tab.
9) In the Application toolbar click **Undo** to undo the action of adding a Prompt.

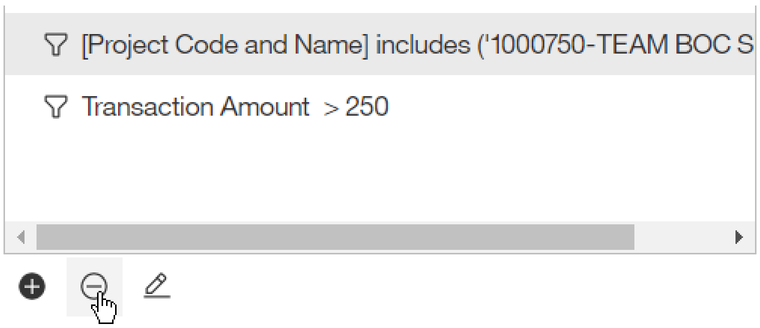
You can also edit the filter and uncheck the box to Prompt on values to remove the prompt. We discuss the concept of prompts in more detail in Day 3: Advanced training.

Counting and Calculations

In the next series of lessons, we learn how to: group data to make the report easier to consume; add a count to the report; add basic calculations; and summarize the calculated and grouped data.

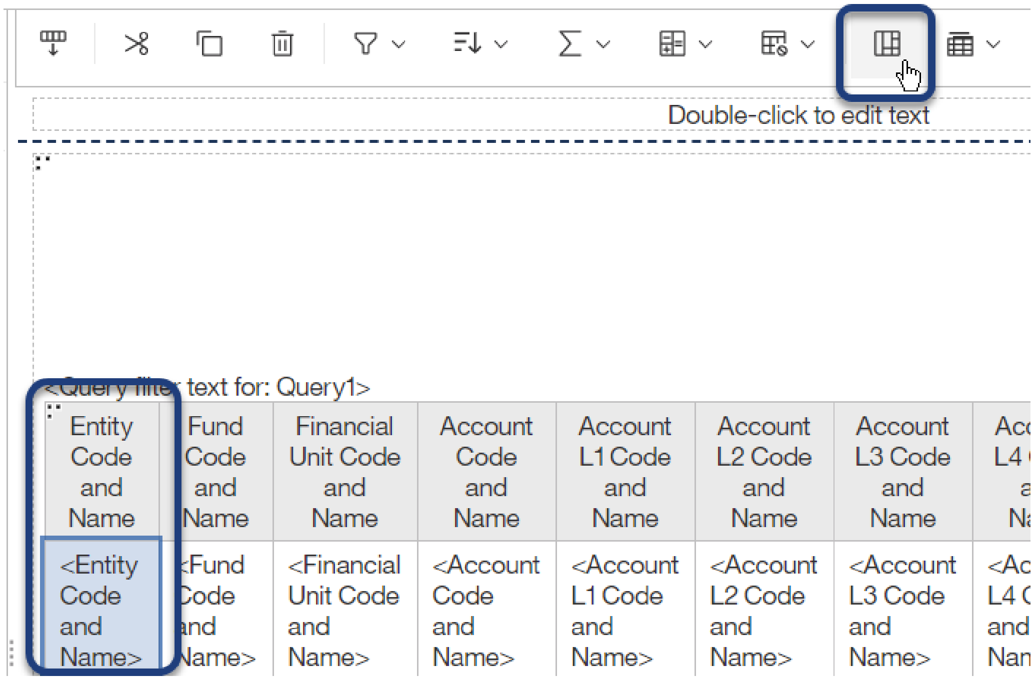
Grouping, Counting and Basic Calculations

1. Continue in the **Custom based filters** report from the previous lesson.
2. In the Application toolbar click the **Save** dropdown, select **Save as**, and save the report specification as **Calculations**.
3. Click inside any column in the List report and in the OnDemand toolbar click **Filters** and **Edit filters**.
4. Click the **Project Code and Name** filter and click **Delete** . Click OK.

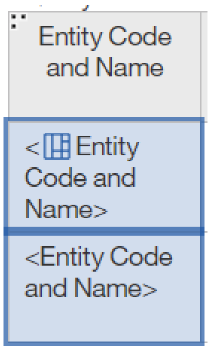


Group

5. Click inside the **Entity Code and Name** column and in the OnDemand toolbar click **Group** .



Notice the Group icon that appears in the Entity column.



6. In the Application toolbar click Page design and **Page preview**.

Financial Unit Code and Name: 1000235-Supercomputer
Account L1 Code and Name: 5000AA-Expense
Function Code and Name: 440-Research
Transaction Date: Between Jul 1, 2020 12:00:00 AM and Jul 31, 2020 11:59:59 PM

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	13991-University Core Funds	1000235-Supercomputer	532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	0000000-No Project	24,588.8
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	0000000-No Project	6,445
	13991-University Core Funds	1000235-Supercomputer	534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	0000000-No Project	67,877.24
	13991-University Core Funds	1000235-Supercomputer	523100-Other Minor Equipment ? $5K	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52310C-Other Minor Equipment	440-Research	0000000-No Project	24.35
	12300-Other Dept Course Program Income	1000235-Supercomputer	522500-Printed Items and Other Classroom Aids	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52250C-Printed Items and Other Classroom Aides	440-Research	0000000-No Project	13.49
	13991-University Core Funds	1000235-Supercomputer	522900-Maintenance and Cleaning Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52290C-Cleaning Supplies	440-Research	0000000-No Project	289.28
	13991-University Core Funds	1000235-Supercomputer	534100-Computer Supplies and Equipment less than 5k	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	0000000-No Project	98,809.77
	13991-University Core Funds	1000235-Supercomputer	523201-Other Materials and Supplies	5000AA-Expense	52000A-Supplies and Materials	52200B-Supplies (Non Health)	52320C-Other Non Medical Supplies	440-Research	0000000-No Project	175.05
	13991-University Core Funds	1000235-Supercomputer	532301-Equipment Repairs and	5000AA-Expense	53000A-Other Operating	53200B-Facilities Construction / Leasing /	53230C-Repairs and Maintenance	440-Research	0000000-No Project	5,366.65

Notice the behavior of the Grouped column.

7. Click inside the **Fund Code and Name** column hold the Shift key on your keyboard and click inside the **Account L4 Code and Name** column—this action selects all the columns in-between:

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	500000-Academic Salary and Wages	5000AA-Expense	50000A-Salaries and Wages	50000B-Academic Salaries and Wages	50000C-Academic Salaries and Wages	440-Research
	20000-Federal Contracts and Grants	1000235-Supercomputer	508100-Staff Recognition & Development	5000AA-Expense	50700A-Other Employee Benefits	50810B-Local (Campus Specific) Benefit Programs	50810C-Local (Campus Specific) Benefit Programs	440-Research
	RM918-Center for Large-Scale Data Systems (CLDS) Research	1000235-Supercomputer	501000-Non Academic Salary and Wages	5000AA-Expense	50000A-Salaries and Wages	50100B-Non Academic Salaries and Wages	50100C-Non Academic Salaries and Wages	440-Research
	12300-Other Dept Course Program Income	1000235-Supercomputer	508100-Staff Recognition & Development	5000AA-Expense	50700A-Other Employee Benefits	50810B-Local (Campus Specific) Benefit Programs	50810C-Local (Campus Specific) Benefit Programs	440-Research

8. In the OnDemand toolbar click **Group** .

The report refreshes. Notice that when we Group columns Cognos also sorts the columns in Ascending order by default.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1003285-ACAD Coursera Revenue	2,488.4
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1004260-FSU DIS SDSC Startup Retention Bridge	35,000
								440-Research	1009186-TEAM LOS SDSC Operations	900
								440-Research	0000000-No Project	6,325
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	0000000-No Project	2,360
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	0000000-No Project	24,588.8
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	0000000-No Project	5,366.65
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1009185-TEAM LOS SDSC Initiatives	299

Counting

Next let's assume that instead of seeing individual Project Code and Names we see an aggregated count of Projects for each Account in the report.

9. Click inside the **Project Code and Name** column.
10. In the Properties pane scroll to the bottom and under DATA ITEM section for **Detail aggregation** (notice the default setting is None) use the dropdown to select **Count distinct**:

DATA ITEM	
Type	Data Item
Name	Project Code and Nam
Label	
Expression	[UCSDGeneralLedg
Detail aggregation	Count distinct
Summary aggregation	None
Solve order	

The report refreshes—and rather than seeing individual Projects in the report, we see an aggregated and summarized count for the lowest level of detail in the report—Account L4. We are also seeing Transaction Amounts summarized for all the Projects:

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Code and Name	Transaction Amount
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.4
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.8
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	1	5,366.65
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	299
			534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	3	286,000.92

11. In the Properties pane under DATA ITEM for **Label** type: Project Count.

DATA ITEM	
Type	Data Item
Name	Project Code and Nam
Label	Project Count
Expression	[UCSDGeneralLedg…
Detail aggregation	Count distinct

12. In the Application toolbar click **Save** (Calculations).

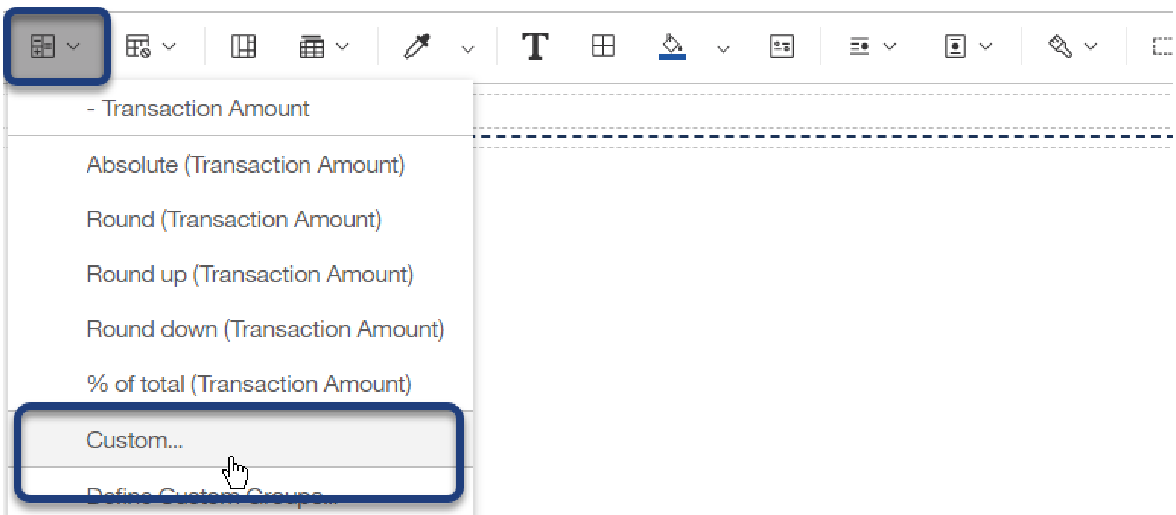
Basic Calculations

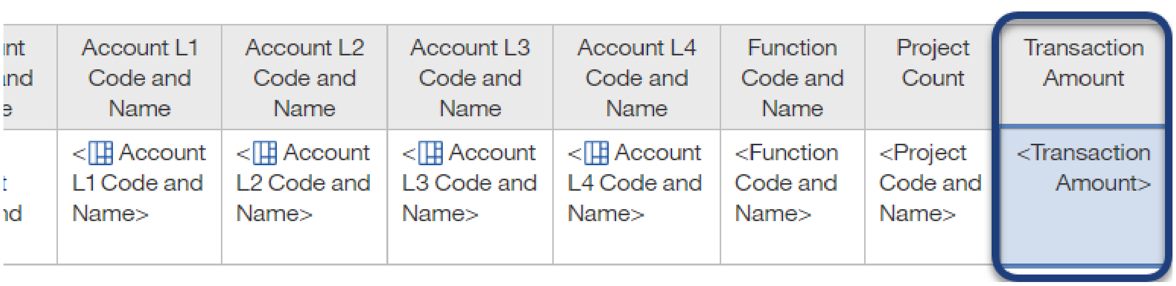
Cognos makes it easy to add basic calculations based on one or more columns of data in the report.

In this example we create a custom calculation based on Transaction Amount to forecast future expense transactions. Recall we are filtering this report for Expenses in one month—July 2020.

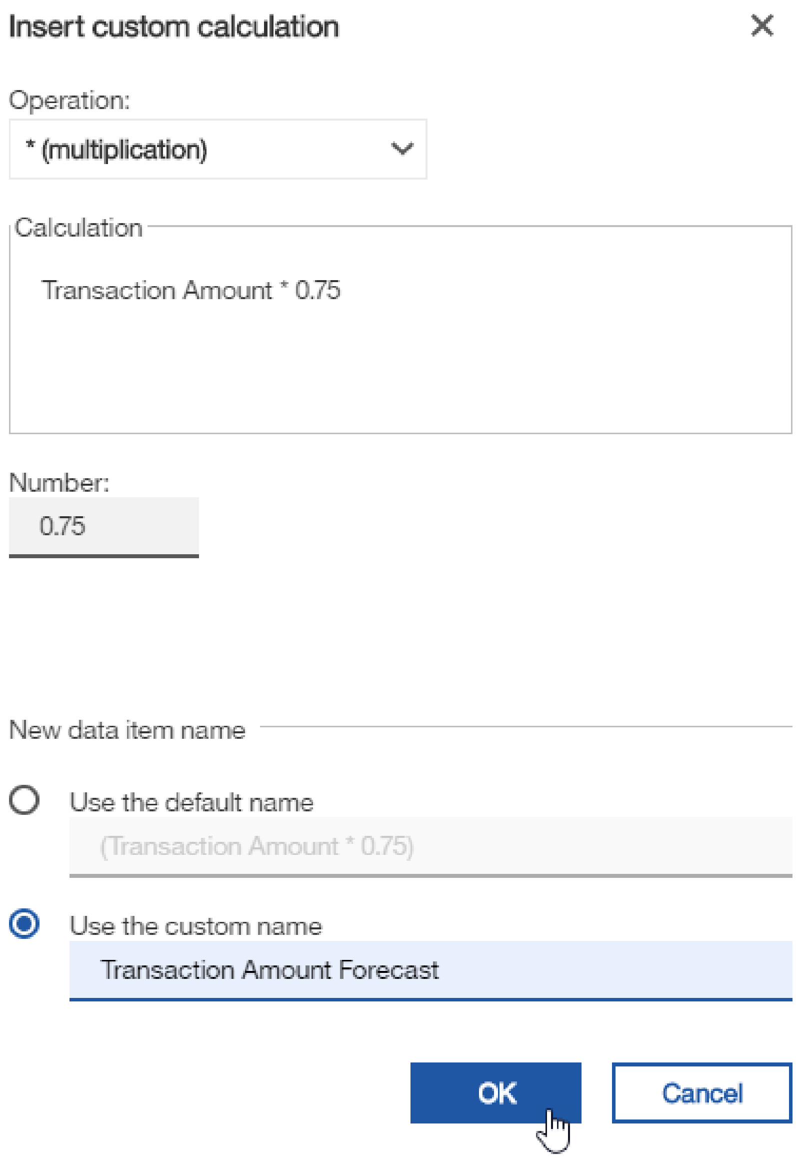
In this scenario we've noticed a downward trend in Expenses, and we want to simulate Transaction Amount expenses if there is a decrease of 25% for the following week. We create a forecast calculation for this scenario.

13. In the Application toolbar click Page preview and **Page design**.
14. Click inside the **Transaction Amount** column and in the OnDemand toolbar click **Insert Calculation** and **Custom...**.





15. In the Insert custom calculation window:
    a. For Operation select *** (multiplication)**.
    b. In the Number field type 0.75.
    c. Under New data item name select the radio button for **Use the custom name** and type: Transaction Amount Forecast.
    d. Click OK.



The new column is added the report to the right of the Transaction Amount column.

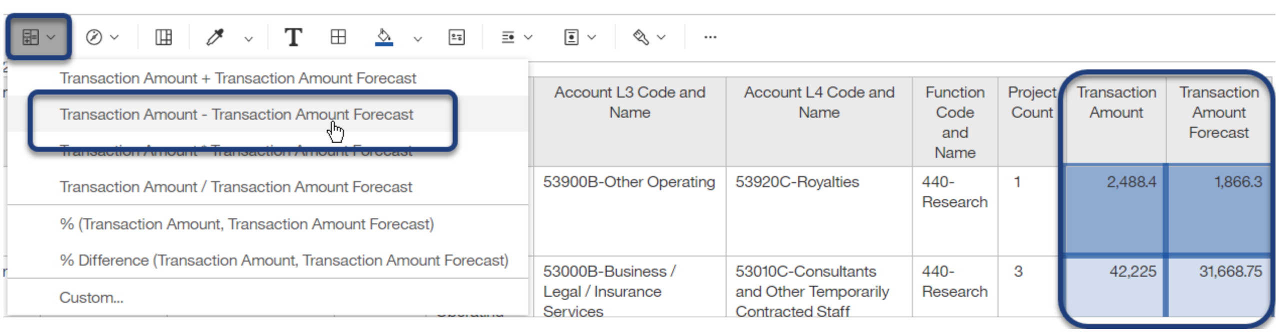
16. In the Application toolbar click **Save** (Calculations).

17. In the Application toolbar click Page design and **Page preview**.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Count	Transaction Amount	Transaction Amount Forecast
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.4	1,866.3
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225	31,668.75
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360	1,770
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.8	18,441.6
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	1	5,366.65	4,024.9875
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	299	224.25
			534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	3	286,000.92	214,500.69

In addition to creating calculations based on one column of data we can also create calculations easily between two columns. Let's find the difference between the Transaction Amount and the Forecast columns.

18. Ctrl-click inside the **Transaction Amount** and **Transaction Amount Forecast** columns.
19. In the OnDemand toolbar click **Insert Calculation** and select **Transaction Amount - Transaction Amount Forecast**:



The new column appears in the report to the right of the selected columns.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Count	Transaction Amount	Transaction Amount Forecast	Transaction Amount - Transaction Amount Forecast
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.4	1,866.3	622.1
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225	31,668.75	10,556.25
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360	1,770	590
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.8	18,441.6	6,147.2
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	1	5,366.65	4,024.9875	1,341.6625
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	299	224.25	74.75
			534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	3	286,000.92	214,500.69	71,500.23
			534100-Computer Supplies and Equipment less	5000AA-Expense	53000A-Other Operating	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	3	137,468.83	103,101.6225	34,367.2075

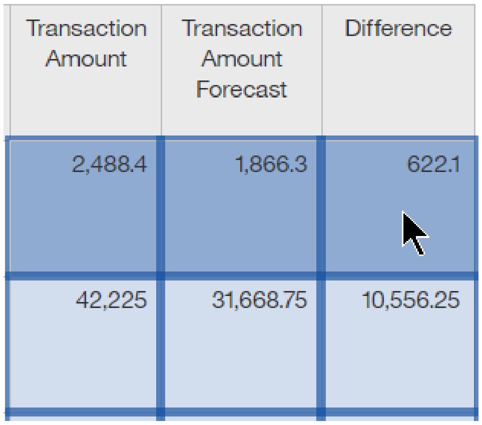
Label property

20. Click inside the new **Transaction Amount – Transaction Amount Forecast** column.
21. In the Properties pane under DATA ITEM for **Label** type: Difference.

DATA ITEM	
Type	Data Item
Name	Transaction Amount - '
Label	Difference
Expression	[Transaction Amount...
Detail aggregation	Calculated

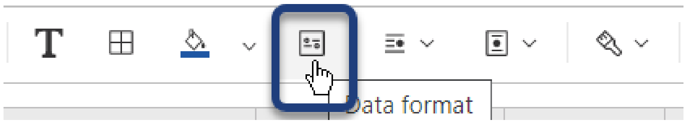
Data Format

22. Ctrl-click inside the **Transaction Amount**, **Transaction Amount Forecast** and **Difference** columns.

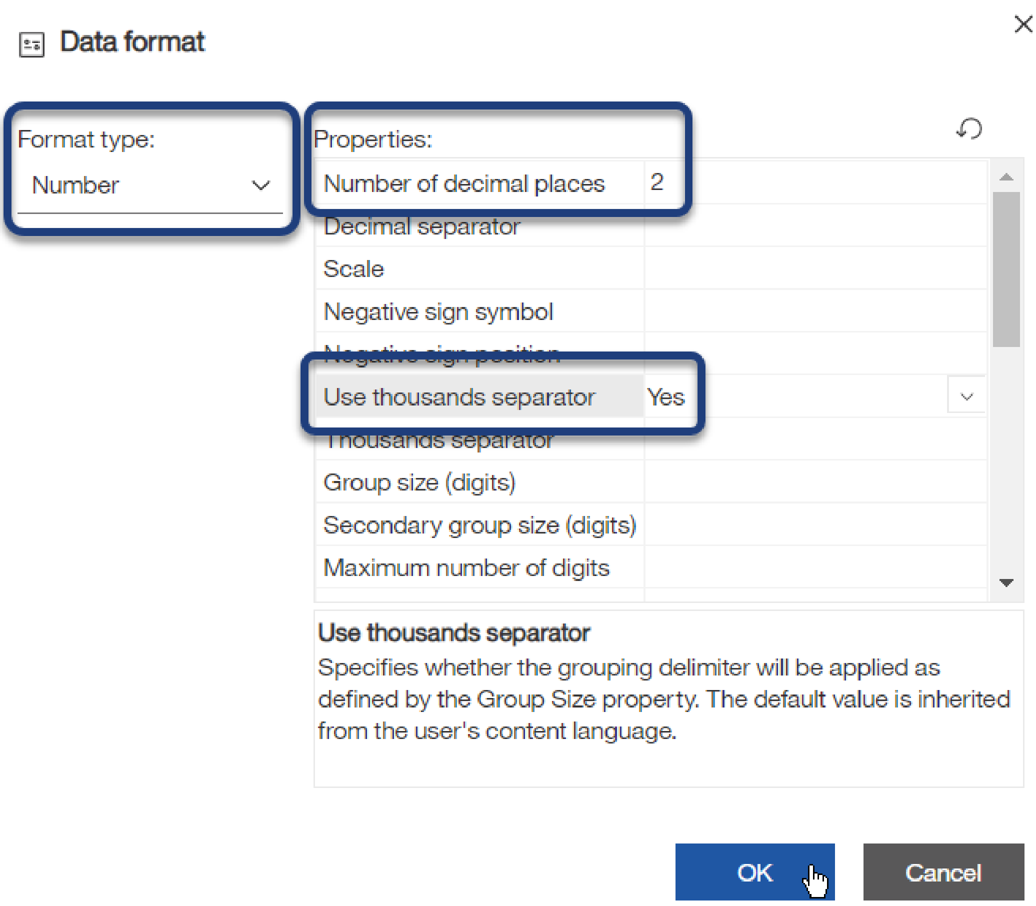


Transaction Amount	Transaction Amount Forecast	Difference
2,488.4	1,866.3	622.1
42,225	31,668.75	10,556.25

23. In the OnDemand toolbar click **Data Format** .



24. In the Data format window for **Format type** select **Number** and under Properties:
    a. For Number of decimal places select **2**
    b. For Use thousands separator select **Yes**.
    c. Click OK.



The report refreshes with the updated formatting:

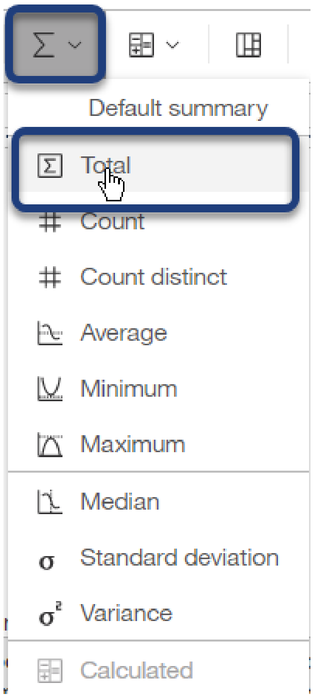
Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Count	Transaction Amount	Transaction Amount Forecast	Difference
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.40	1,866.30	622.10
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225.00	31,668.75	10,556.25
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360.00	1,770.00	590.00
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.80	18,441.60	6,147.20

Basic Summaries

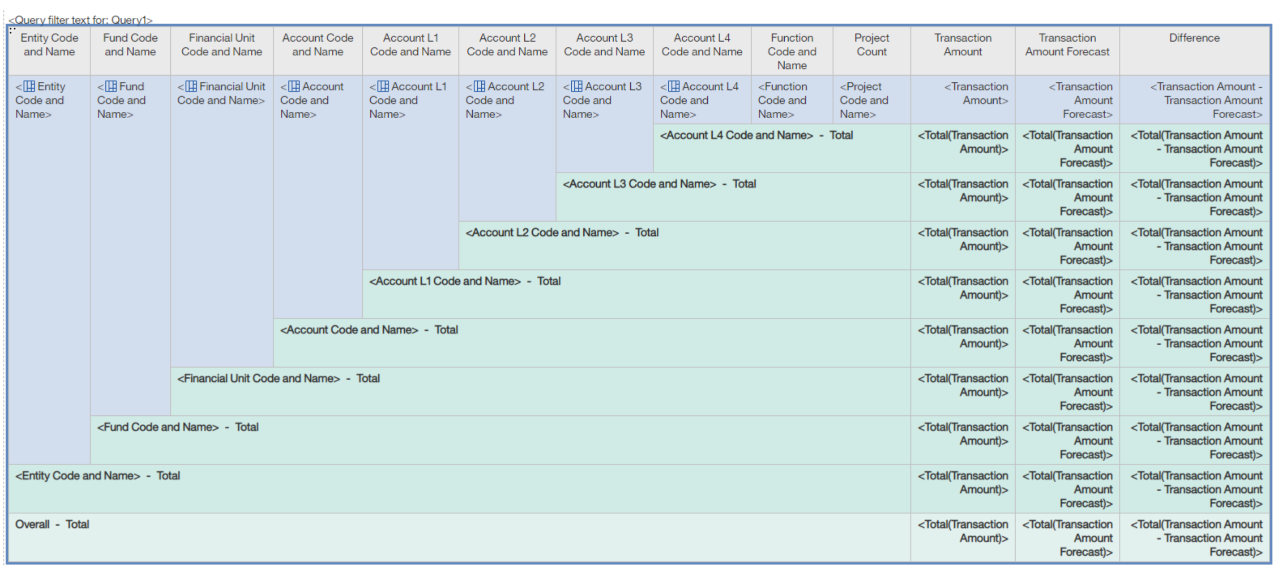
25. In the Application toolbar click Page preview and select **Page design**.
26. Ctrl-click inside the **Transaction Amount**, **Transaction Amount Forecast** and **Difference** columns.

Transaction Amount	Transaction Amount Forecast	Difference
<Transaction Amount>	<Transaction Amount Forecast>	<Transaction Amount - Transaction Amount Forecast>

27. In the OnDemand toolbar click **Summarize** Σ and select **Total**.

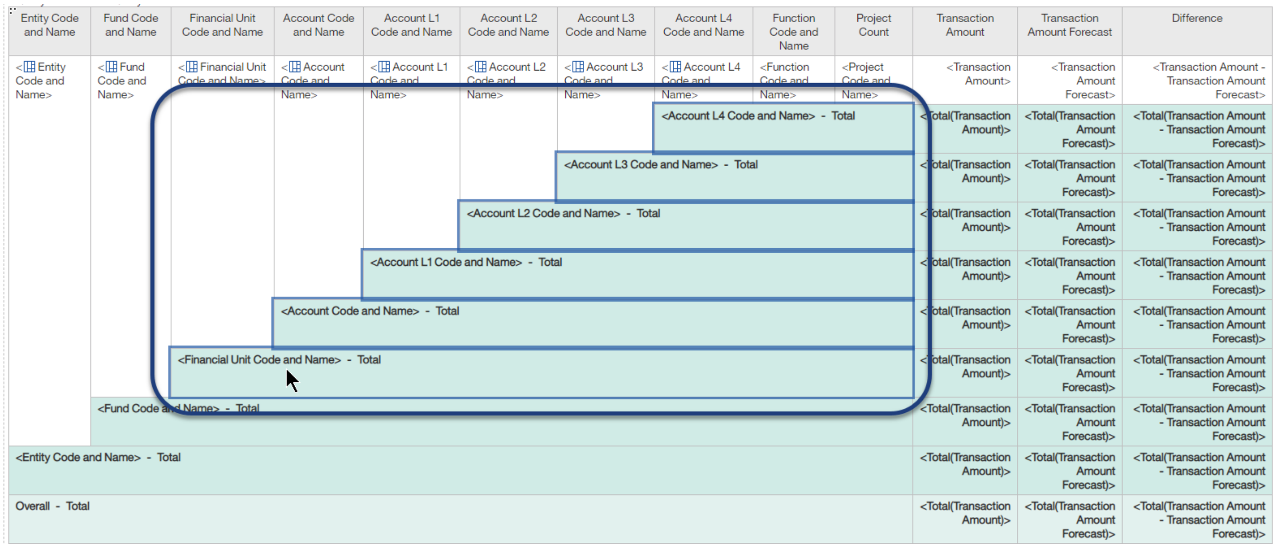


Notice the green subtotals applied to each of the Grouped columns and the lighter green Overall total at the bottom of the List.



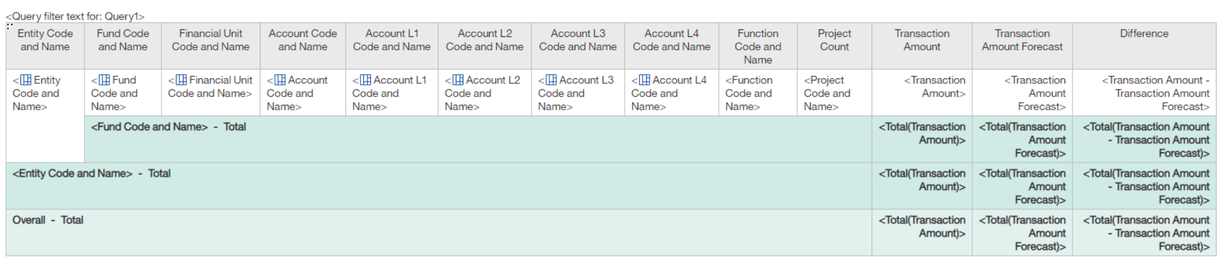
If we leave all these summary footers in place the report will be hard to read. We can remove the footers we don't want to see without having to remove the Grouping applied to the columns.

28. Ctrl-click inside each of the green rows *except* those for Fund Code and Name and Entity Code and Name:



29. On your keyboard hit **Delete**.

The List report looks like this:



30. In the Application toolbar click **Save** (Calculations).

31. In the Application toolbar click Page design and select **Page preview**.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Count	Transaction Amount	Transaction Amount Forecast	Difference
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.40	1,866.30	622.10
	12300-Other Dept Course Program Income - Total									**2,488.40**	**1,866.30**	**622.10**
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225.00	31,668.75	10,556.25
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360.00	1,770.00	590.00
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.80	18,441.60	6,147.20
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	1	5,366.65	4,024.99	1,341.66
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	299.00	224.25	74.75
			534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	3	286,000.92	214,500.69	71,500.23
			534100-Computer Supplies and Equipment less than 5k	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	3	137,468.83	103,101.62	34,367.21
	13991-University Core Funds - Total									**498,309.20**	**373,731.90**	**124,577.30**
	20000-Federal Contracts and Grants	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	2	34,780.03	26,085.02	8,695.01
			530102-Management Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1	59,623.50	44,717.62	14,905.88

32. Scroll to the bottom of results to see the light green Overall Total:

	RM918-Center for Large-Scale Data Systems (CLDS) Research - Total									**5,188.17**	**3,891.13**	**1,297.04**
	RN333-Internet Measurement and Data Analysis	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	1	186,192.00	139,644.00	46,548.00
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	464.68	348.51	116.17
	RN333-Internet Measurement and Data Analysis - Total									**186,656.68**	**139,992.51**	**46,664.17**
16110-Academic Affairs - Total										**895,306.46**	**671,479.84**	**223,826.62**
Overall - Total										**895,306.46**	**671,479.84**	**223,826.62**

Notice the values in the blue footers adopted the formatting applied to the Amount columns. Assume we want to see the values in the blue footers formatted as Currency—with dollar signs. We can format these rows on their own.

33. In the Application toolbar click Page preview and select **Page design**—it's easier to select the cells to format in design view.

34. Ctrl-click inside *all the green cells that contain Totals*:

Transaction Amount	Transaction Amount Forecast	Difference
<Transaction Amount>	<Transaction Amount Forecast>	<Transaction Amount - Transaction Amount Forecast>
<Total(Transaction Amount)>	<Total(Transaction Amount Forecast)>	<Total(Transaction Amount - Transaction Amount Forecast)>
<Total(Transaction Amount)>	<Total(Transaction Amount Forecast)>	<Total(Transaction Amount - Transaction Amount Forecast)>
<Total(Transaction Amount)>	<Total(Transaction Amount Forecast)>	<Total(Transaction Amount - Transaction Amount Forecast)>

35. In the OnDemand toolbar click **Data Format** .
36. In the Data format window for **Format type** select **Currency**. Click OK.

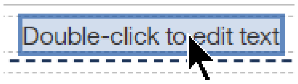
37. In the Application toolbar click Page design and select **Page preview**—notice the changes to the Totals in the green cells.

Entity Code and Name	Fund Code and Name	Financial Unit Code and Name	Account Code and Name	Account L1 Code and Name	Account L2 Code and Name	Account L3 Code and Name	Account L4 Code and Name	Function Code and Name	Project Count	Transaction Amount	Transaction Amount Forecast	Difference
16110-Academic Affairs	12300-Other Dept Course Program Income	1000235-Supercomputer	539200-Royalties	5000AA-Expense	53000A-Other Operating Expense	53900B-Other Operating	53920C-Royalties	440-Research	1	2,488.40	1,866.30	622.10
	12300-Other Dept Course Program Income - Total									$2,488.40	$1,866.30	$622.10
	13991-University Core Funds	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	3	42,225.00	31,668.75	10,556.25
			530700-Legal Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53070C-Legal Services	440-Research	1	2,360.00	1,770.00	590.00
			532100-Space Rental	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53210C-Leases and Rentals Building	440-Research	1	24,588.80	18,441.60	6,147.20
			532301-Equipment Repairs and Maintenance	5000AA-Expense	53000A-Other Operating Expense	53200B-Facilities Construction / Leasing / Maintenance Services	53230C-Repairs and Maintenance	440-Research	1	5,366.65	4,024.99	1,341.66
			534000-Software Maint and Support	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	1	299.00	224.25	74.75
			534001-Comp Software Purchases and Licenses	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53400C-Software Maintenance and Licenses	440-Research	3	286,000.92	214,500.69	71,500.23
			534100-Computer Supplies and Equipment less than 5k	5000AA-Expense	53000A-Other Operating Expense	53400B-IT and Communications Services	53410C-Computers and Network Infrastructure	440-Research	3	137,468.83	103,101.62	34,367.21
	13991-University Core Funds - Total									$498,309.20	$373,731.90	$124,577.30
	20000-Federal Contracts and Grants	1000235-Supercomputer	530101-Professional Services	5000AA-Expense	53000A-Other Operating Expense	53000B-Business / Legal / Insurance Services	53010C-Consultants and Other Temporarily Contracted Staff	440-Research	2	[illegible]	[illegible]	[illegible]

Report Title

Before we leave this report, we have one more concept to apply—giving the report a meaningful title.

38. In the Report header (above the dotted line) *double-click* on “Double-click to edit text”.



39. In the Text field type: Cognos Training Report - Calculations.
40. In the Application toolbar click **Save** (Calculations).

Chapter 3—Report Management and Scheduling

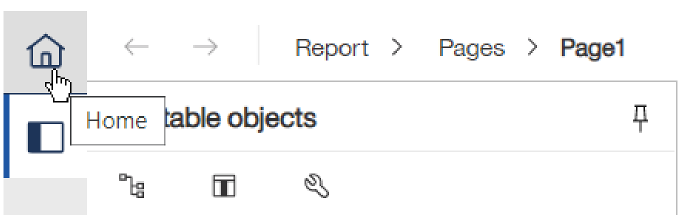
In this chapter we learn how to manage, organize, and schedule reports. We conclude the chapter with notes on:

- Folders and security
- Development cycle
- Steps in report migration
- Finding more training
- Finding more ideas of what to build
- What's not supported in Cognos and why

Welcome Portal Tips and Tricks

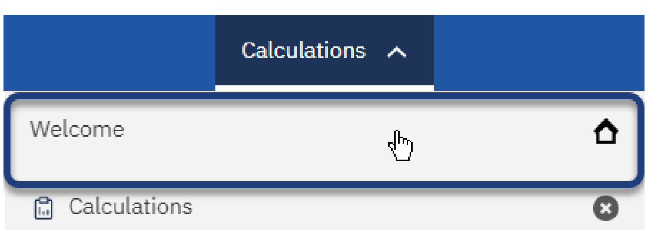
There are several ways to get back to the Welcome Portal from anywhere in Cognos.

1. From the Reporting interface:
   1) In the Application toolbar click **Home** .



   OR

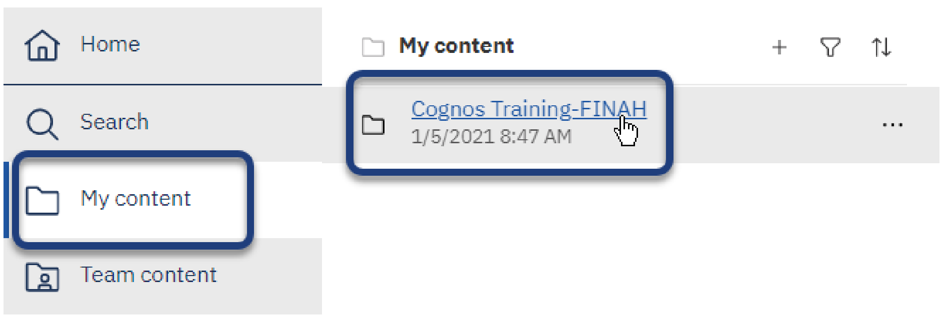
   2) At the top of the window use the Switcher Menu dropdown to toggle between reports or click **Welcome** to return to the Welcome Portal.



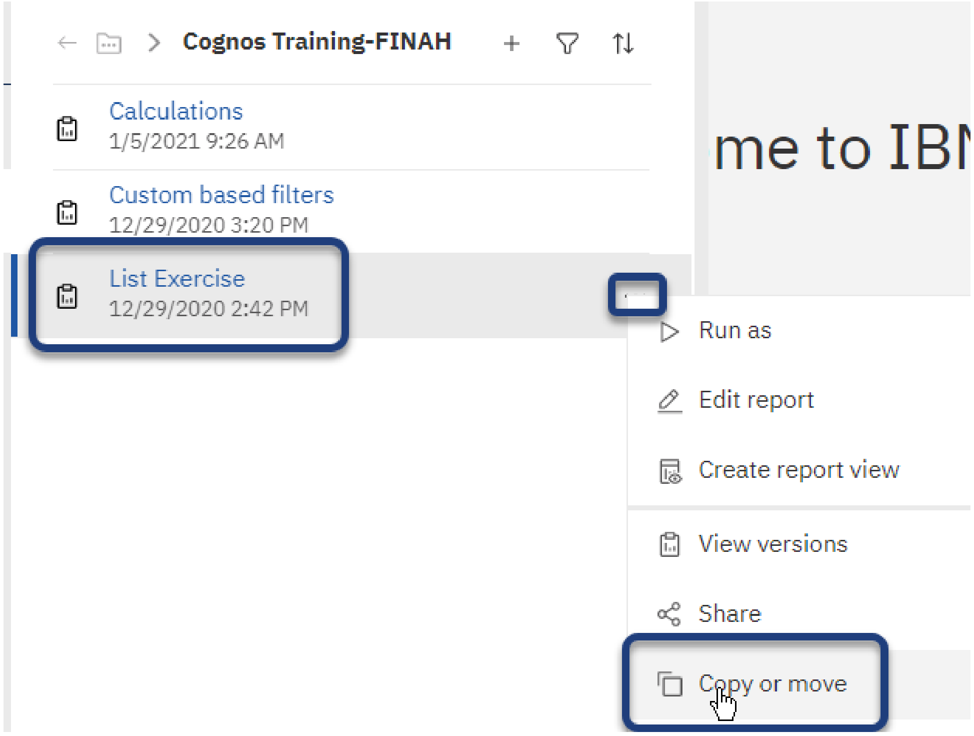
Copy/Move reports

As we learned earlier in the day, you will need to move reports between various Team content folders when your report is ready to share and test, and then again when it is ready for Production. For this lesson, we demonstrate this concept inside our My content folders.

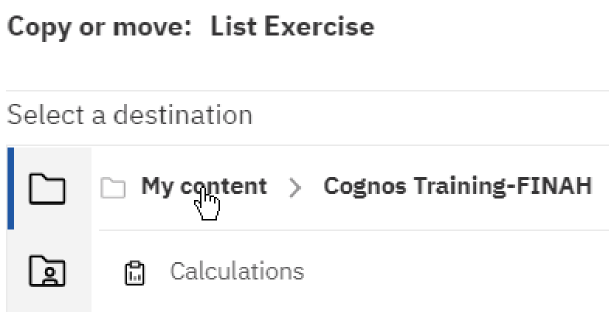
2. In the Navigation panel click **My content** and open the **Cognos Training-FINAH** folder.



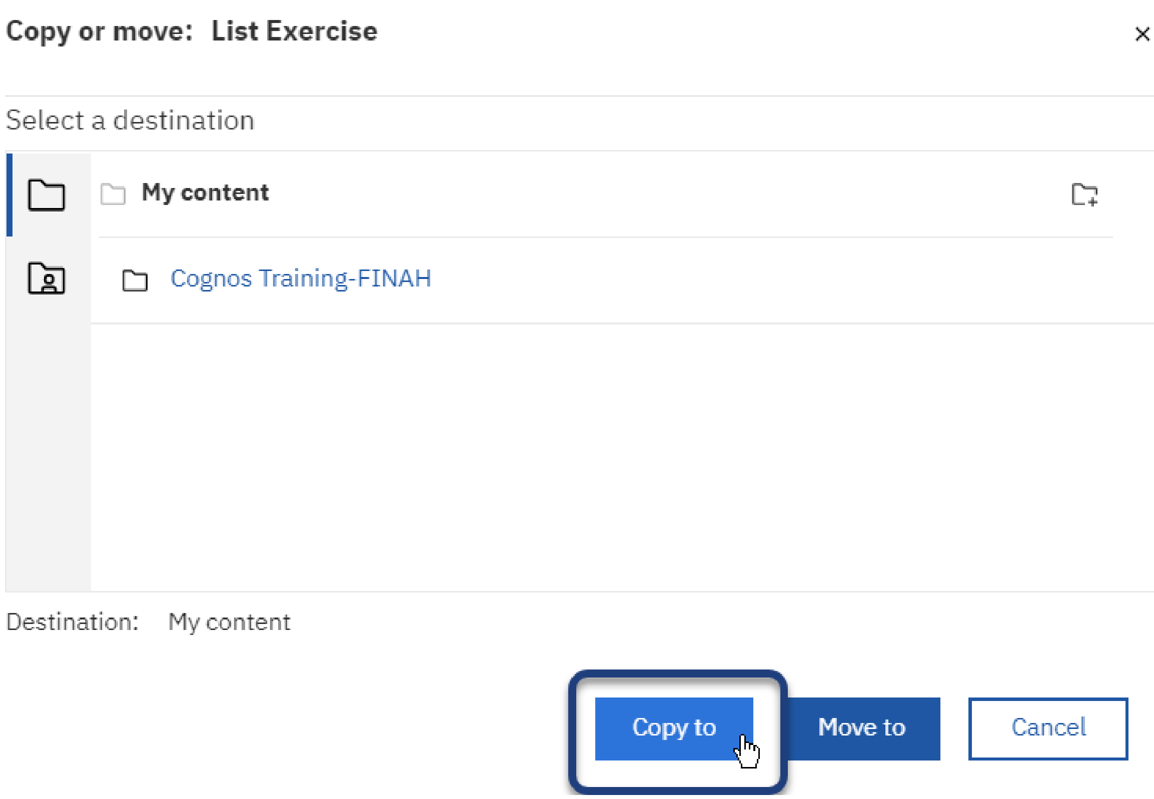
3. Mouse over the **List Exercise** report click **More** ••• and click **Copy or move**.



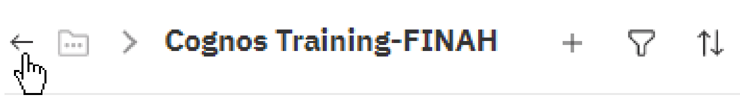
4. Click **My content**



5. Click **Copy to**.



6. In the My content pane click **Previous** and notice the copied report is in the My content folder.



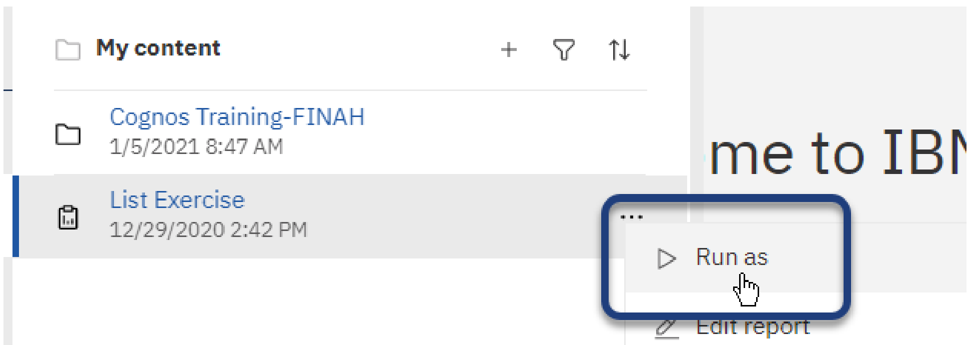
Scheduling reports–Onetime run schedule

For this lesson, we use the copy of the List Exercise report to demonstrate the two ways to schedule a report: a onetime run schedule, and an ongoing schedule.

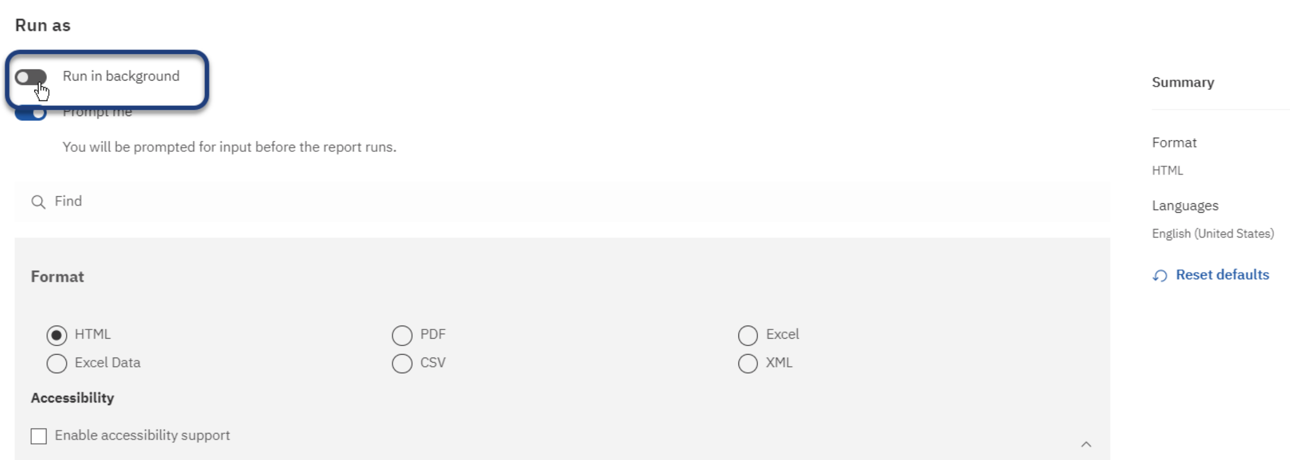
Scheduling reports is ideal for reports that take a long time to run or creating PDFs; it is not recommended for reports with interactivity.

Note! Report scheduling is turned off in DEV.

7. In the My content pane mouse over the copied **List Exercise** report, click **More** ... and click **Run as**.

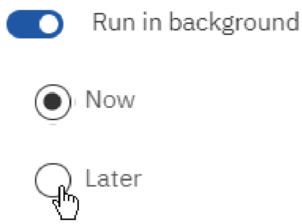


8. At the top of the Run as panel toggle the switch to **Run in background.**

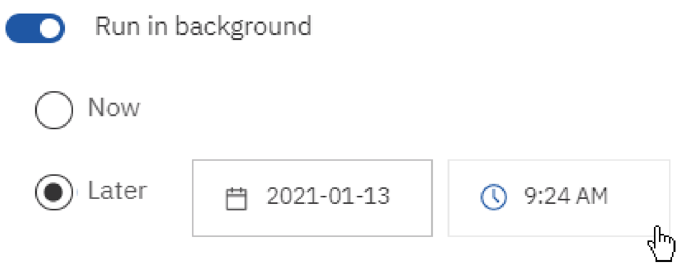


The switch activates. Notice the option to run the report Now or Later

9. Click the radio button for **Later**.

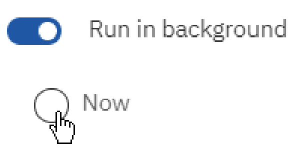


Notice the option to choose a date and time in the future to run the report.



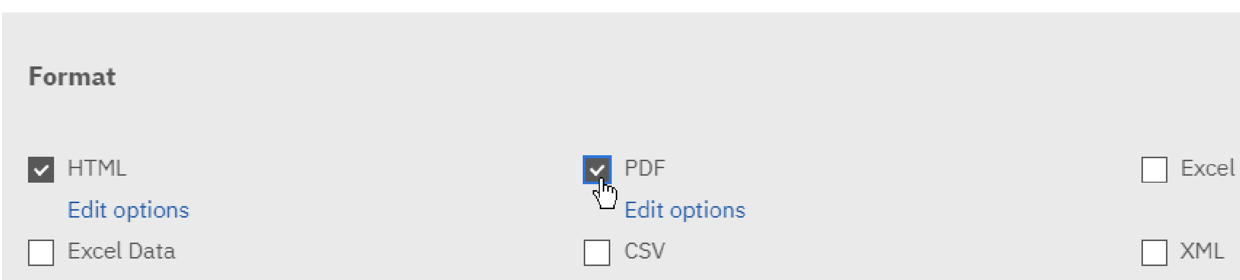
For this example, we run the report Now. ***Tip!*** *Avoid everyone running their reports at 7:00am, or some other common time.*

10. Click the radio button for **Now**.

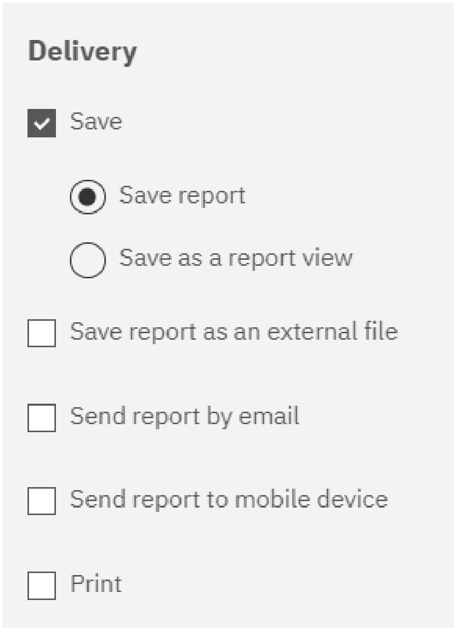


When we run reports “in background” we can select more than one Format.

11. Under Format select **HTML** and **PDF**.



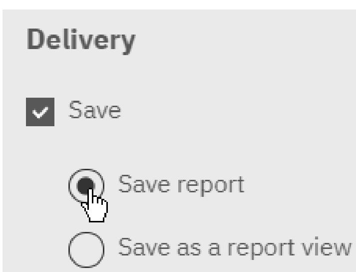
12. Scroll down and notice the **Delivery** options.



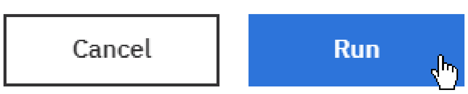
Save the report indicates the report output will be saved to the Cognos DEV server—this does not mean the report will be saved to your computer.

Your instructor explains the Delivery options, and demonstrates and explains the benefits and security warnings regarding the option to *Send the report by email*.

13. Ensure **Save report** is the only selected Delivery option.

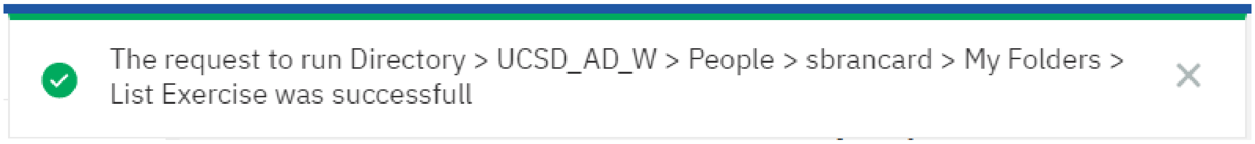


14. Click **Run** in the bottom righthand corner of the Run as window.



15. When prompted select the **HANA-QA** connection. Click OK.

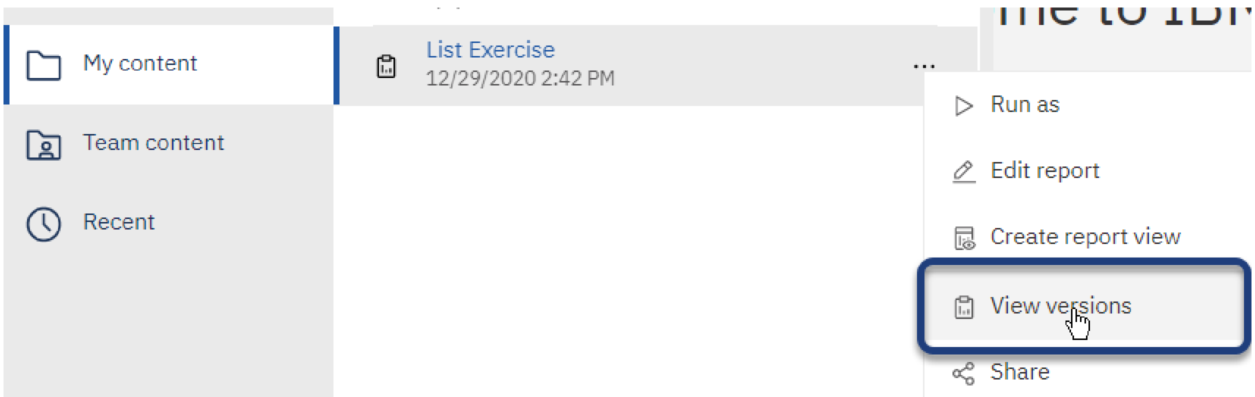
The report runs in the background. A very brief confirmation slides down from the top of the window.



Next, we learn how to find the report output that we just ran in the background. *Note it may take several minutes or longer for these versions to appear here.*

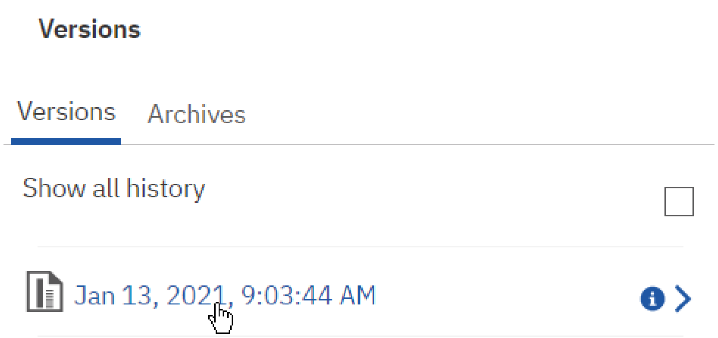
To View the output versions

16. In the Navigation panel click **My content** and mouse over the **List Exercise** report, click **More** ⋯, and click **View versions**.

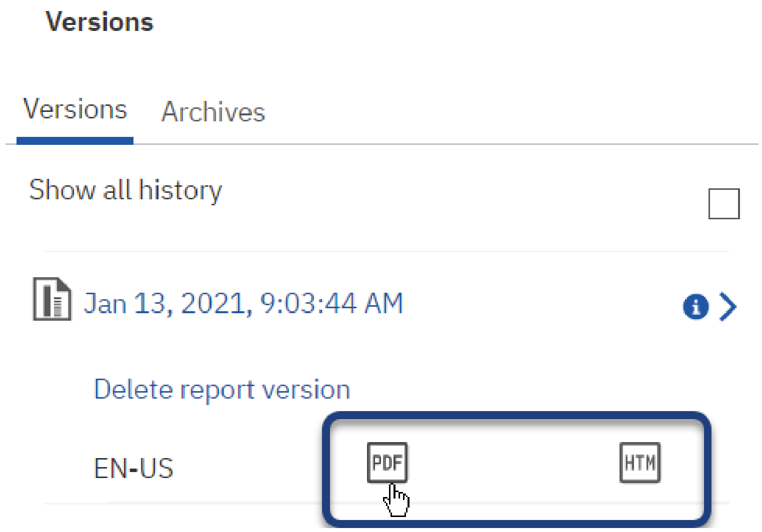


The Versions pane expands:

17. Click the Run date and time link (not the >):



Notice the icons representing the output for each of the formats we selected in the Run menu – PDF and HTML.



Click the applicable link to save and open the files.

Note! *When you run the report again, these versions are replaced with the newest versions.*

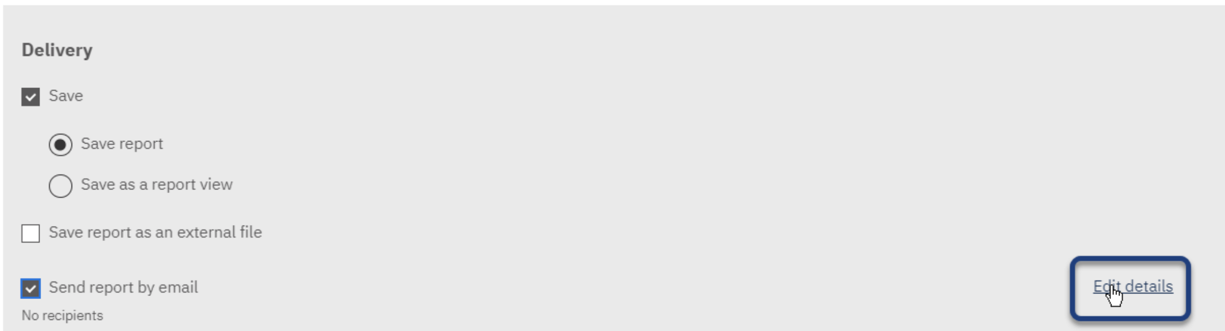
Click the information arrow to see more detail about the report run.

Instructor Demo: Sending a report by email

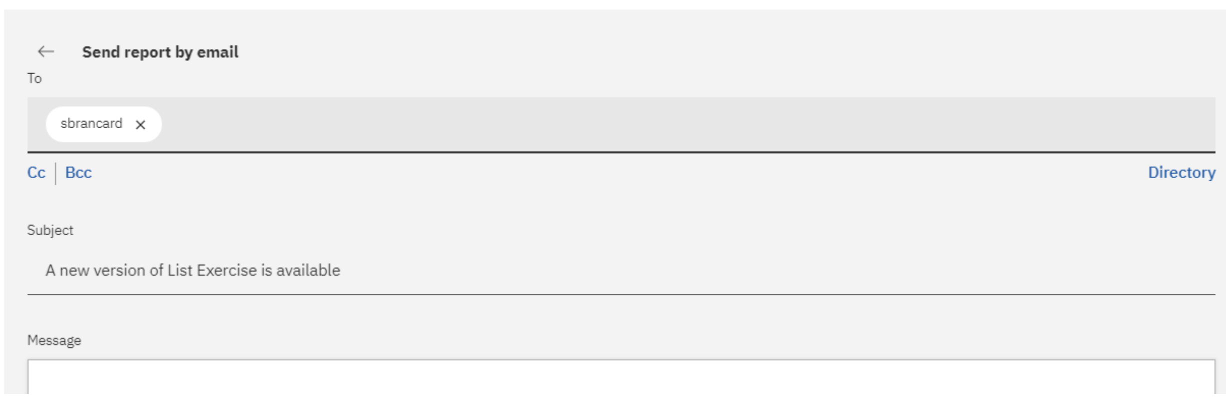
<u>Please do not follow these steps in training. They are for future reference only.</u>

1) In the Run as window, with the Run in background option selected, under Delivery click **Send report by email**.

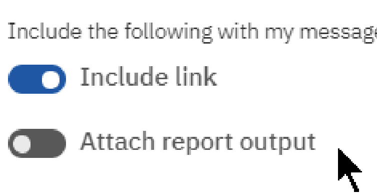
2) Click **Edit details** next to Send report by email:



An email opens inside the Run as window. Here you can add recipients and edit the Subject and Message.



3) Scroll down below the email and notice the Include the following with my message options:



4) When all options are setup, click **Run**.

Tips & Tricks when Sending Reports by Email

- Attaching the report can run into size limitations on UCSD's mail server
- Attaching the report removes the report from behind the Cognos security checks
- You can email individuals or mail lists
- You can change the subject line
- Adding cc: and bcc: is optional
- Adding a message in the body of the email is optional
- **Including a link to the report is best practice to protect UCSD data.**

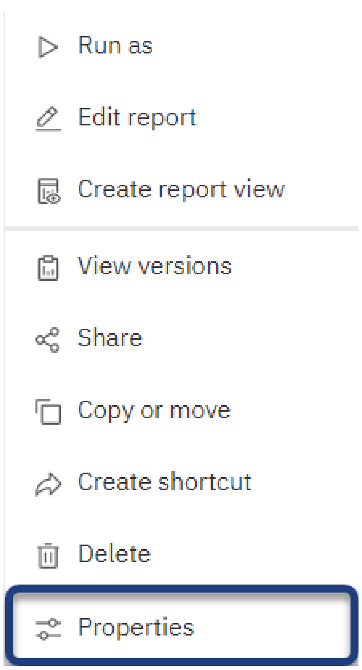
If the recipient of the email forwards the link to another, any person who clicks on the link will need access to the report and data in Cognos in order to see the report results

Instructor Demo: Scheduling reports—Reoccurring run schedules

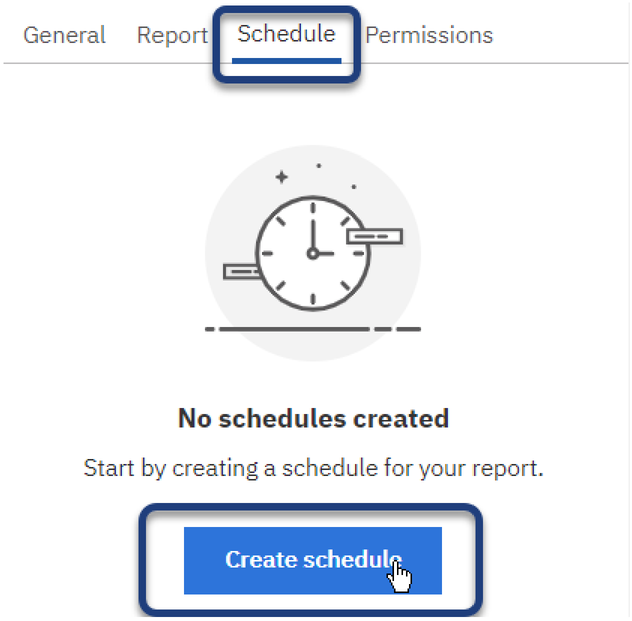
Next the instructor demonstrates how to use the Properties and the Schedule feature to setup a reoccurring run schedule for the same report. Once the schedule is set, the report runs until the schedule ends, or you cancel it.

Use the Properties > Schedule tab to add, update, maintain or cancel schedules for each report, or content.

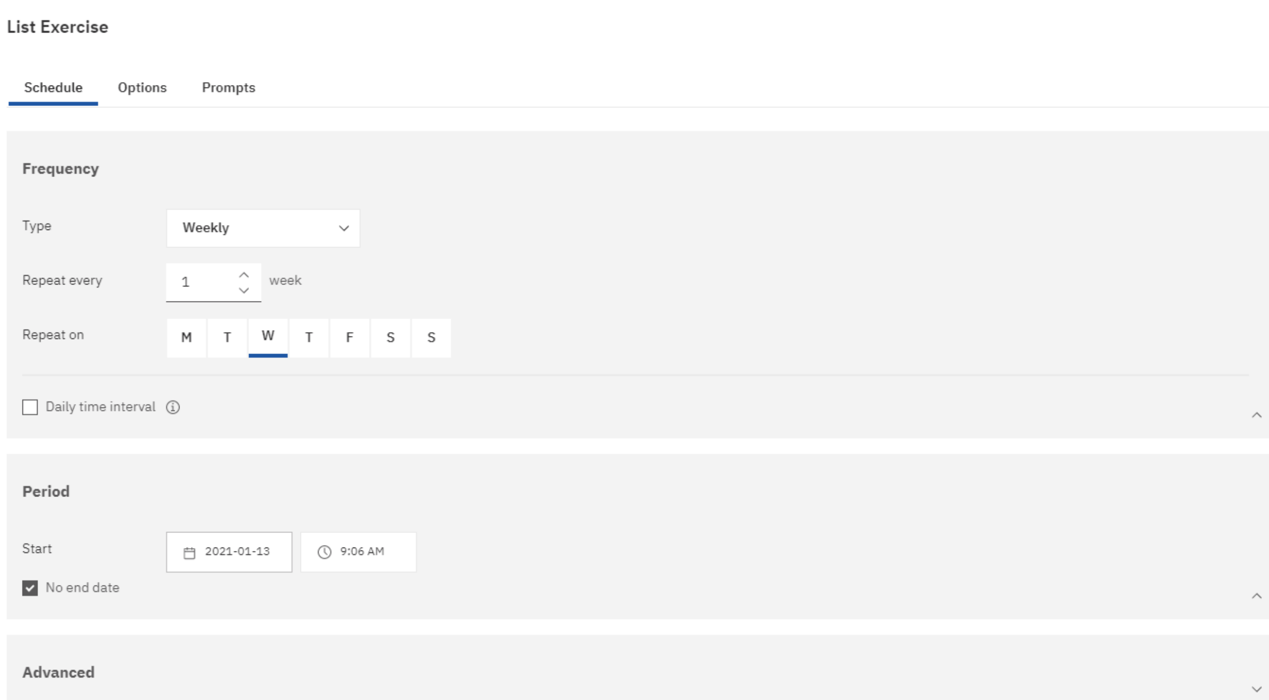
1) Mouse over the **List Exercise** report click **More** ⋯, and click **Properties** .



2) In the Properties pane click the **Schedule** tab and click Create schedule:



3) Use the **Frequency** and **Period** panes to set up the schedule—your instructor explains some of the key fields and settings.



4) Click **Save**.

Report schedule maintenance

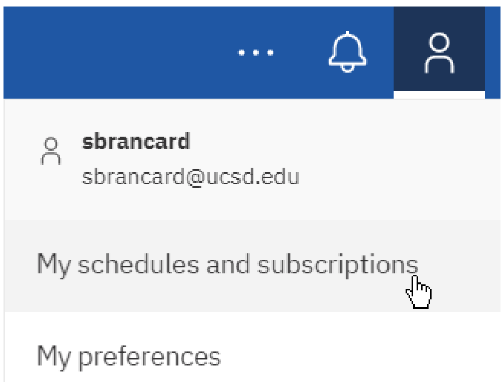
To maintain, edit or check the status of your report schedules, you have two options:

For an individual report schedule:

a) Mouse over the report
b) Click **More** ··· and click **Properties**
c) In the Properties pane click the **Schedule** tab.

To view and maintain all your report schedules in one place:

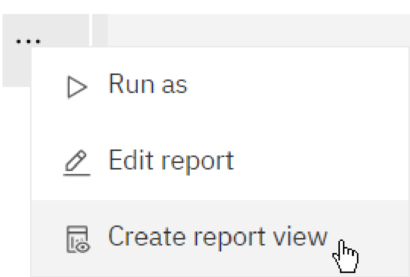
a) From the Welcome Portal, in the Application toolbar click **Personal Menu** and **My schedules and subscriptions**.



Create a Report view

If you require multiple run schedules for the same report, create one or more Report views of that report for each schedule you need.

a) Mouse over any report in My content or Team content, click **More** and click **Create report view**:



Folders and security

AD groups are created and maintained by various help desk groups

My content	Team content > Business User Development	Team folder
Reports and data sources are private to only you	Sub-folders are secured to AD groups for specific teams	Folders are secured to AD groups for specific audiences
You can create folders here	You can create folders within the sub-folders	Reports are saved here when they are ready to be moved into Production and used by end users
Default locations for uploaded files to be saved	Can be used to share in-progress reports with other teammates or BIA team	Migration and security are set at a folder level

- To set up a new folder work with your IT Help Desk to create the AD with your desired membership
- Email busintel@ucsd.edu with the names of your AD groups and the name of the folders and/or sub-folders you would like created
- Folders in Cognos DEV, Cognos QA and Cognos Prod can have different security based on the needs of your team.

Development cycle

Start in Cognos DEV:
- Build and save to My Content
- When you want teammates or BIA to look at the report move it to Business User Development > Team folder
- When reports are ready for end-user acceptance testing you can migrate the report to Cognos QA and allow end-users to test their reports
- When your report is ready for testing move it to Business User Development > Team Folder
- When your report is done and ready for customers to use it or for you to schedule it to send to your users save it to Team Content > Team Folder
- Once in Team Content > Team Folder then email busintel@ucsd.edu to request the folder be migrated to Cognos PROD

Reports in Cognos PROD:
- Can have their links posted or embedded to other websites
- Can be scheduled to send to users
- Receive 24/7 server support

Steps in report migration

1) Save the completed report to Team Content > Team Folder

2) Email busintel@ucsd.edu requesting a migration to Cognos PROD
   - Include the Team Folder name as migrations only happen at a folder level
   - Include what Cognos environment you are in (DEV) and where you want to go (PROD)
   - Migration requests sent to busintel@ucsd.edu before 3pm Monday-Friday will be completed same day
   - Migration requests sent to busintel@ucsd.edu after 3pm will be completed the next business day

3) BIA will notify you of a completed migration
   - Verify that your report was moved as expected
   - New schedules can be created now
   - Existing schedules will continue unchanged
   - Existing links to the report will be unchanged

Finding more training

Blink > Cognos Analytics

https://blink.ucsd.edu/technology/bi/tools/cognos/index.html

Blink > Cognos Analytics > Training

https://blink.ucsd.edu/technology/bi/tools/cognos/training/index.html

YouTube > Cognos Analytics

https://www.youtube.com/watch?v=LhFw1D-gzas&list=PLfq0ST5X3p-Sd57_PJg_rjAOlyAVGnoL9

IBM Business Analytics Community

https://community.ibm.com/community/user/businessanalytics/communities/community-home?CommunityKey=6b10df83-0b3c-4f92-8b1f-1fd80d0e7e58

Finding more ideas of what to build

YouTube > Cognos Analytics

https://www.youtube.com/watch?v=LhFw1D-gzas&list=PLfq0ST5X3p-Sd57_PJg_rjAOlyAVGnoL9

IBM Business Analytics Community

https://community.ibm.com/community/user/businessanalytics/communities/community-home?CommunityKey=6b10df83-0b3c-4f92-8b1f-1fd80d0e7e58

Visual Business Intelligence

https://www.perceptualedge.com/blog/

What's not supported in Cognos and why

- Custom code in HTML, Java, SQL, etc…
  - Cognos upgrades often break custom code and IBM does not modify their tool to fit customer custom code
  - BIA does not specialize in HTML, Java, SQL, etc…
- Single user security
  - BIA cannot scale to support adding and removing individuals to folders or reports
  - BIA does not have rights to add or remove users to AD groups
- Excel downloads
  - UCSD IT Security is actively working to remove security threats to the university, including sensitive data downloaded to local laptops.
- "Data dumps"
  - Reports that fail due to excess size are evaluated for usage and process improvement
  - BIA will help put you in contact with the data integration team so that your data movement needs are met using ITS best practices

Chapter 4—Dashboard Basics

In this chapter we learn how to develop a Dashboard. In the following lessons we:

- Create a basic dashboard while learning how to navigate the Dashboard interface
- Add data
- Learn about charts, including icons and how to edit
- Add interactive filters
- More visualizations
- Dashboard tabs
- Add a webpage and video

Dashboards

Explore powerful visualizations of your data in IBM Cognos Analytics and discover patterns and relationships that impact you. Then, communicate the insights that you discovered in a dashboard and share it with others.

What is a Dashboard?

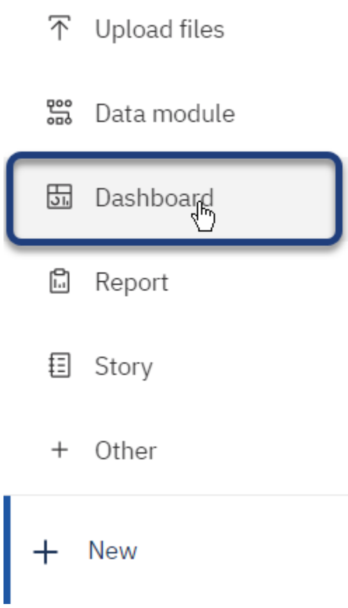
> From Stephen Few: *"A dashboard is a visual display of the most important information needed to achieve one or more objectives; consolidated and arranged on a single screen so the information can be monitored at a glance."*

Dashboards typically have the following characteristics or features:

- Multiple visual representations of data on a single screen
- Interactivity, allowing customers to focus and understand dependencies of the data via visual gestures
- High-level measurements with access to underlying details via drill-down, drill-through or some other intuitive data exploration gesture

Introduction to Dashboards

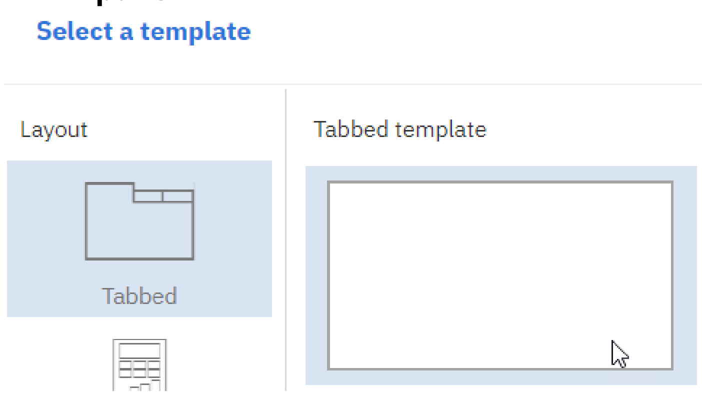
1. In the **Navigation panel** click **New** + and **Dashboard**.



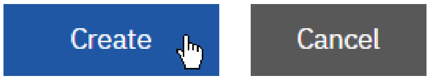
In the next step we select a template. Templates contain predefined designs and grid lines for easy arrangement and alignment for the visualizations.

Choose from Tabbed templates to create a dashboard with multiple tabs or choose an Infographic for a long, scrollable dashboard. ***Tip!*** *If you want just one tab you can hide tabs for less clutter.*

2. For the first dashboard, we select from the Tabbed menu, and select the template with **1 pane**.



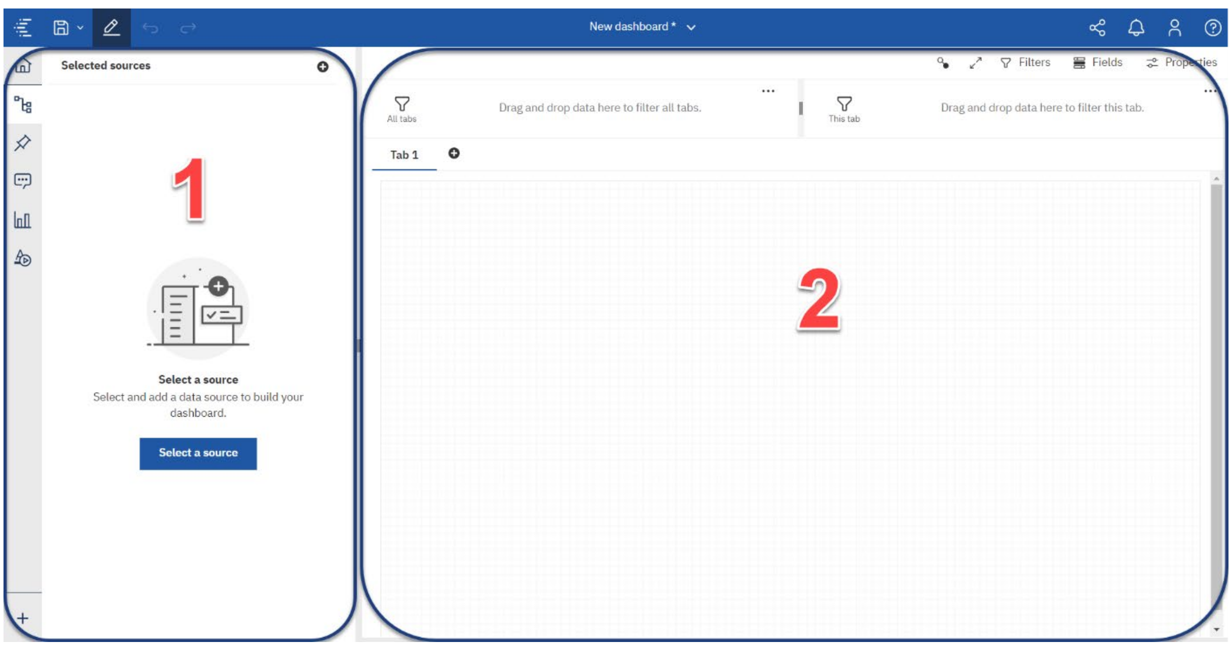
3. Click **Create**.



The Dashboard interface opens. Let’s take a few minutes to get to know the Dashboard interface.

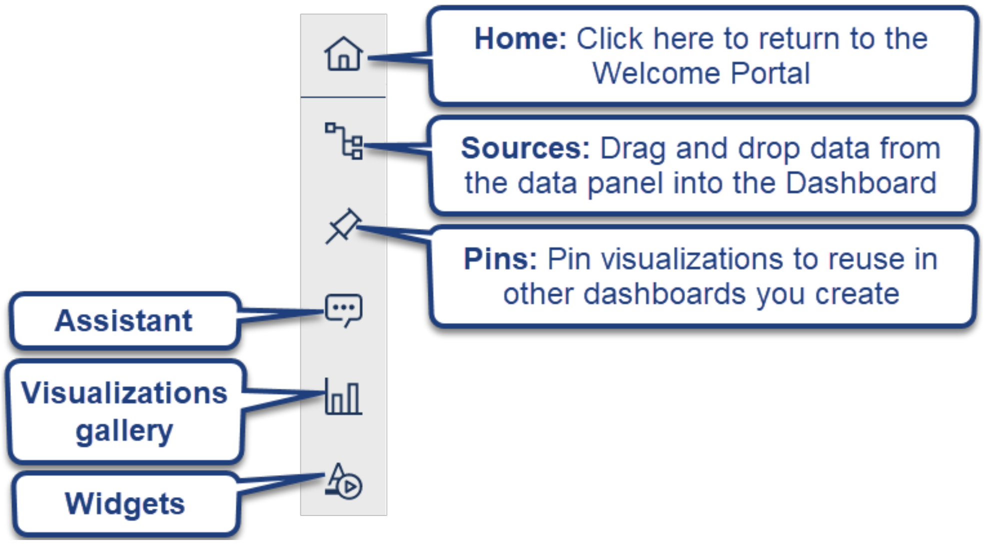
Parts of the Dashboard interface

1) **Selected sources / Data panel** (on the left) – provides access to data sources (packages, cubes, data modules); where the data comes from to build the dashboard.
2) **Canvas** (in the middle) – where you build the dashboard.



Navigation panel

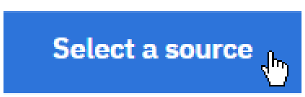
On the left side of the Dashboard interface is the Navigation panel which varies from what we saw in Reporting:



Select a source

In the next steps we open the data source for the dashboard.

4. Under Selected sources click **Select a source**:



5. Navigate to **Team content** > **Financial Activity Hub** folder > **Financial Activity Hub Analytics Packages** folder > click the **FINAH-UCSDGeneralLedger-View** package. Click **Add**.

The data source launches in the Sources pane.

Save the dashboard

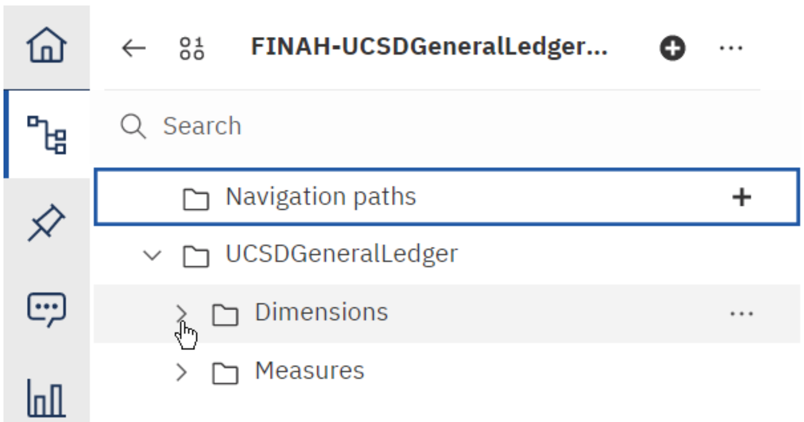
In the next steps we save the dashboard to My content. A reminder that, **<u>there is no “auto save” in Cognos</u>**!

6. In the Application toolbar click **Save**, click **My content**, open the **Cognos-Training-FINAH** folder and save as **Dashboard**. Click Save.

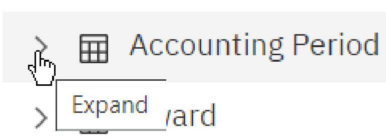
Add data to the Dashboard

In the next steps we learn how to Ctrl-click two data items in the Source and drag them into the Dashboard to create a visualization.

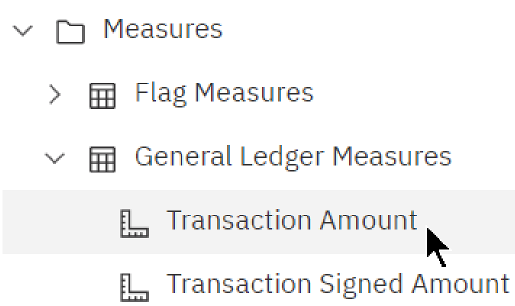
7. In the Sources pane expand the **UCSD GeneralLedger** folder and the **Dimensions** folder.



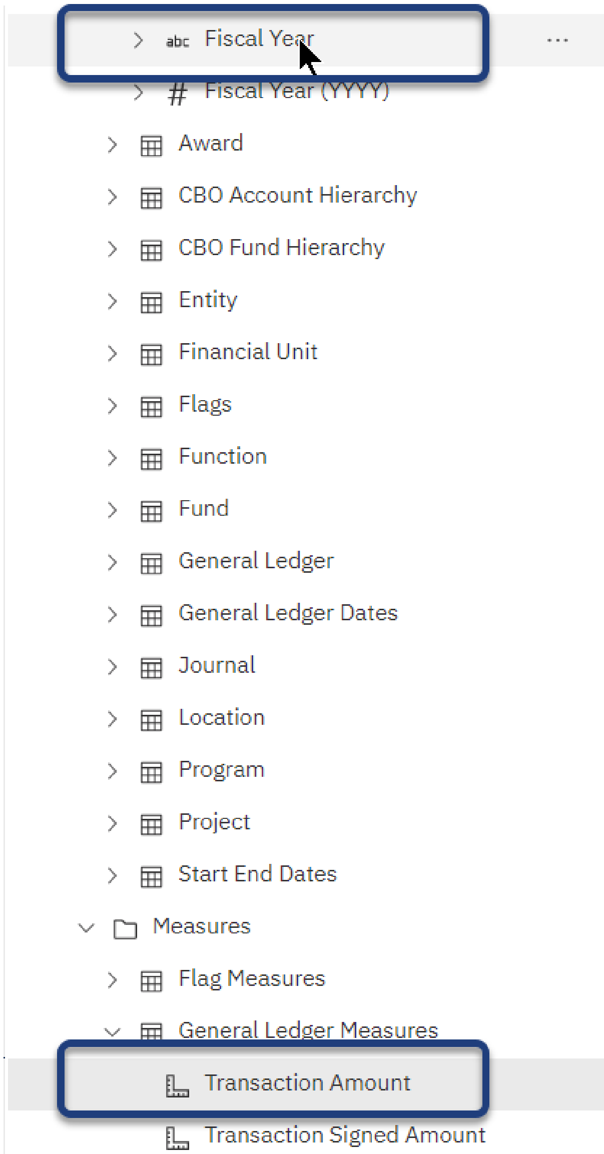
8. Expand the **Accounting Period** query subject.



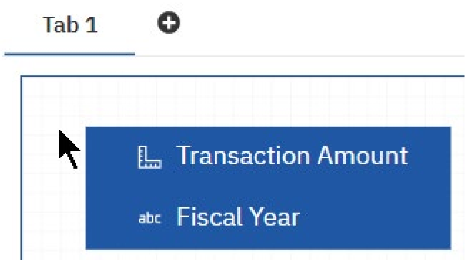
9. Scroll to the very bottom of the package and expand the **Measures** folder and the **General Ledger Measures** query subject and click **Transaction Amount:**



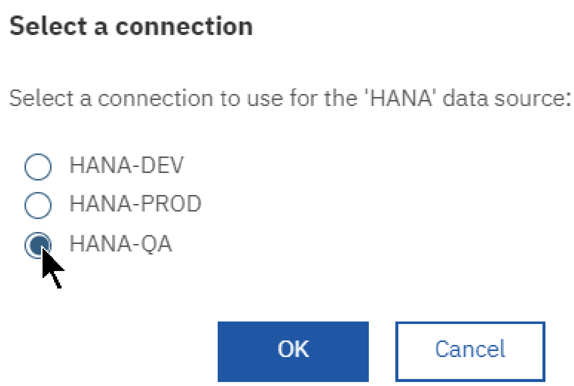
10. Scroll back up in the package (until you see Fiscal Year), hold the Ctrl-key on your keyboard and click **Fiscal Year** (select the option with abc in front of it).



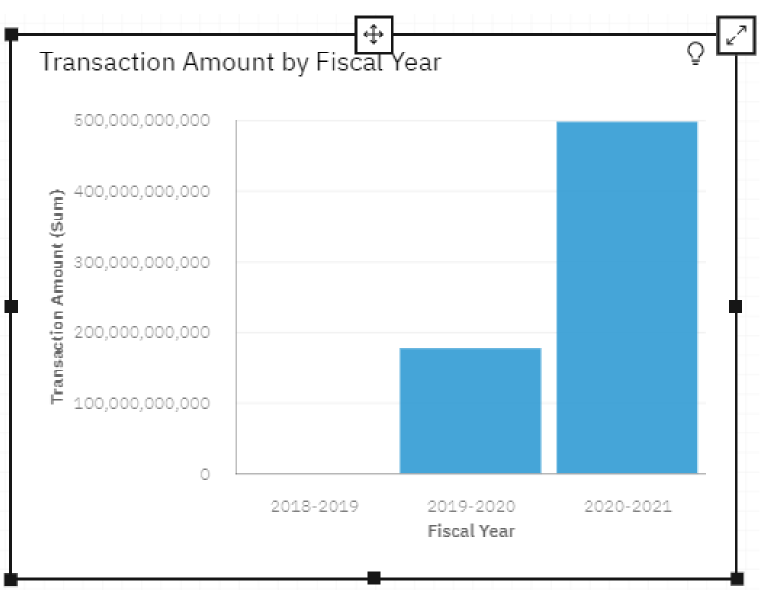
11. Click and drag **Fiscal Year** into the canvas—notice both data items are coming into the canvas together.



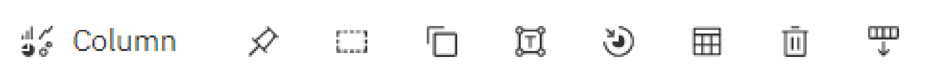
12. Drop the items in the upper left corner of the canvas.
13. Select **HANA-QA**. Click OK.



A visualization appears. This is Cognos's recommendation of the visualization based on the data items. Your viz may be different than your instructor's—or this image.



Notice the widget toolbar that appears at the top of the Dashboard.



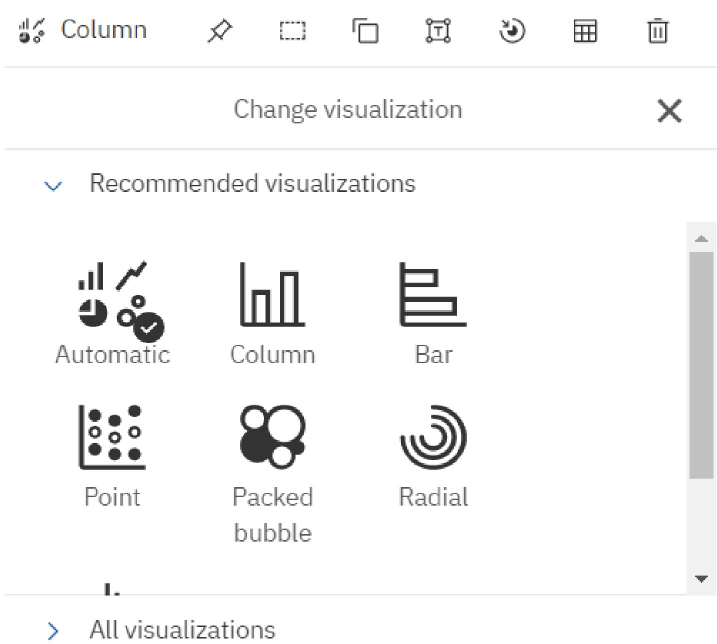
Widget tools

Tool	Use
Column	Change visualization
	Add the widget to your **Pins**
	Select tool
	Duplicate
	Edit the **title**
	Drill through
	Show data
	Delete
	Unlock (or Undock) Toolbar

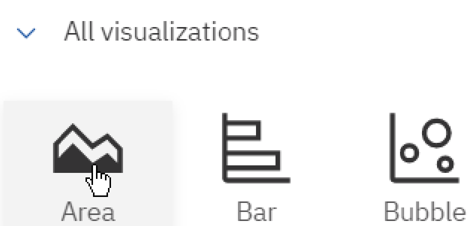
Change visualization

14. In the Widget tools click **Change Visualization**.

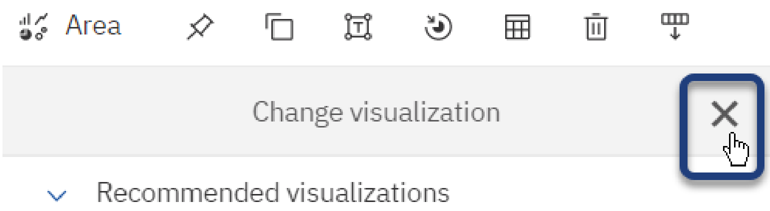
Notice there are **Recommended visualizations**, or you can select from **All visualizations**:



15. Click **All visualizations** and select **Area**.

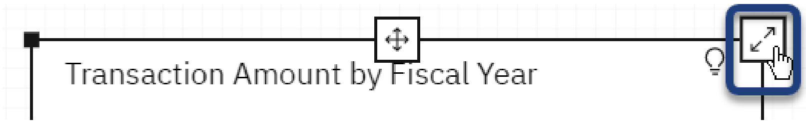


16. Click the **X** to close the Change visualization pane.



The visualization refreshes and is now an Area chart.

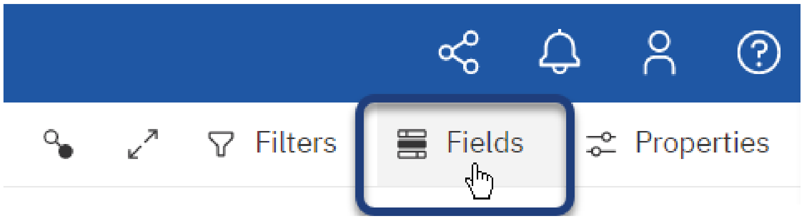
17. In the upper right corner of the visualization widget click **Expand**:



This action expands the widget giving you a zoomed in view.

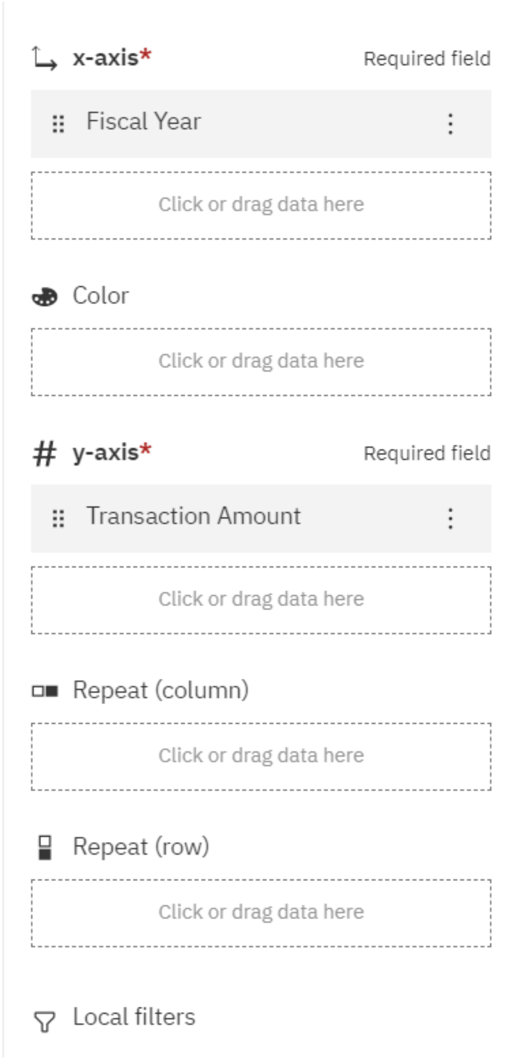
Object fields

18. With the visualization expanded, in the upper right corner of the Dashboard window, next to Properties, click **Fields**:



This action displays the Object fields for the visualization. Here we can add, delete, or further modify the data items displayed in the visualization.

Notice Fiscal Year is under x-axis field and Transaction Amount is under y-axis. Object fields vary for each visualization.

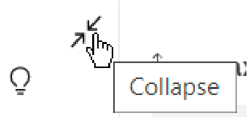


Common Object fields

Object field	Use
	**x-axis**
	**Bars**: break data into the bars (y-axis)
	**Length** or **y-axis:** (often a required field)
	**Y-start**: where the bottom of the bar starts
	**Target:** specifies the target measure
	**Color**: where the colors break apart
	**Repeat column and repeat row**: same chart copies per field value
	**Local filters**: applies to this object only

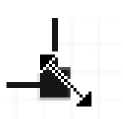
We do not make any modifications to the object fields. We can leave this pane open or close it each time.

19. In the upper right corner of the *visualization* click Collapse.

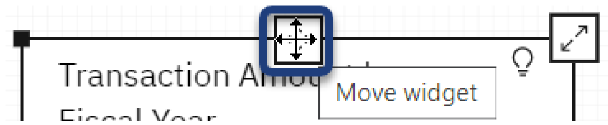


Resize or move the widget

20. Use the handles on the corners of the widget to **Resize** it.



21. Use the **Move widget** handle (at the top of the visualization widget) to move the widget around the canvas—eventually putting it in the upper left corner of the canvas:



Your instructor demonstrates where to put the widget.

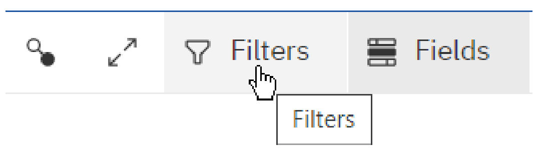
22. In the Application toolbar click **Save** (Dashboard).

Dashboard Filters

Currently there are no filters applied to the Dashboard. The visualization is displaying ALL data currently available from the data source.

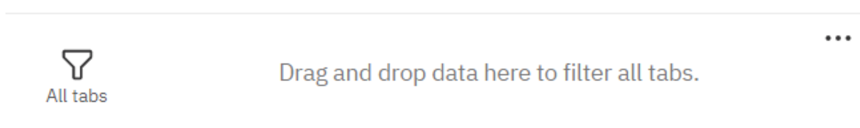
Interactive filters available on Dashboards include

Local filters: Applies to the individual object; User can change using tiny filter icon

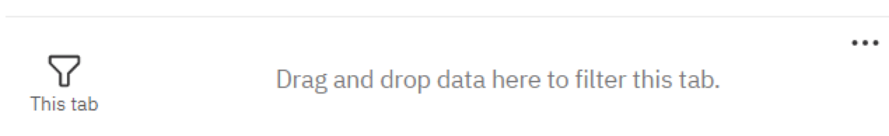


Filter shelves: Across the top of the Dashboard are Filter shelves

All tabs (on the left)—filters here are applied to all Tabs on the Dashboard.

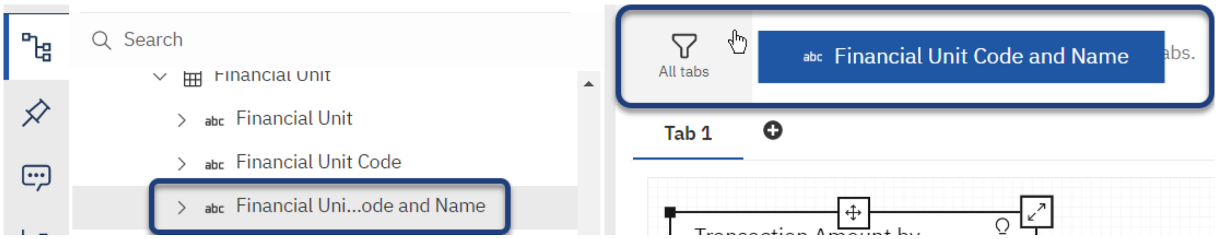


This tab (on the right)—filters here are only applied to the current Tab.

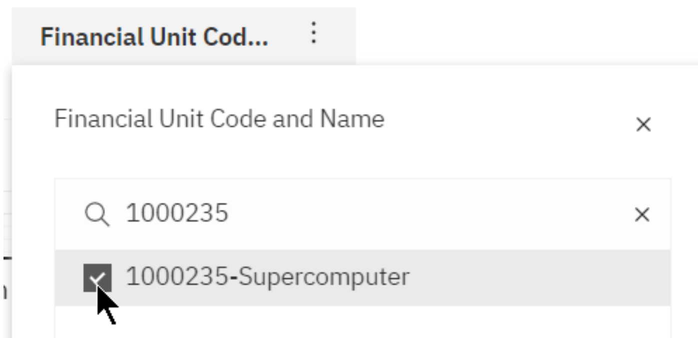


Assume we want to filter all the tabs in this Dashboard to narrow data by Fin Unit and Fiscal Year.

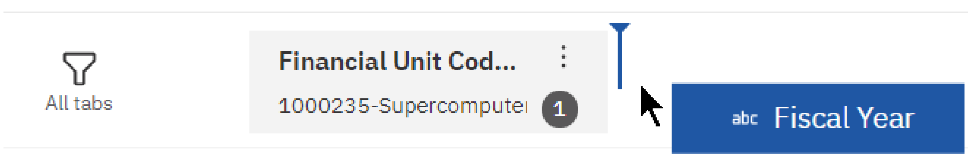
23. From Sources expand the **Financial Unit** query subject and drag **Financial Unit Code and Name** into the **All tabs** filter shelf:



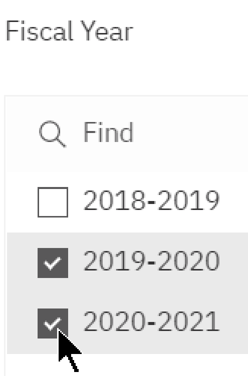
24. From the Financial Unit Code and Name filter window search for and select **1000235-Supercomputer**. Click OK.



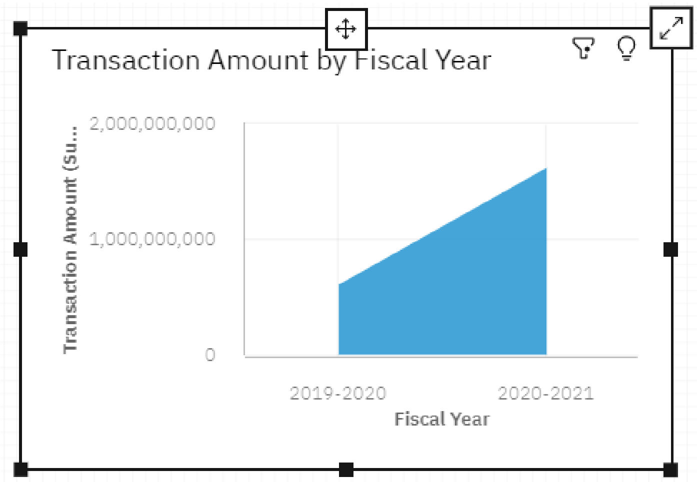
25. From the **Accounting Period** query subject drag **Fiscal Year** into the **All tabs** shelf to the right of Financial Unit Code and Name:



26. In the Filter window select **2019-2020** and **2020-2021**. Click OK.

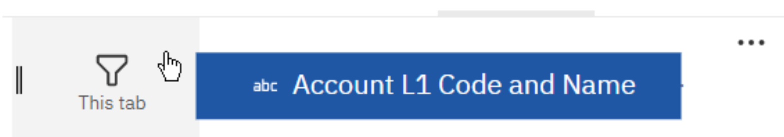


Notice the visualization updates with the addition of the filter.

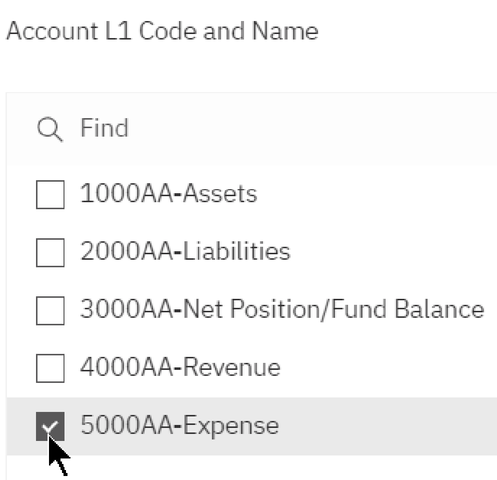


We also add a filter to the This tab shelf to narrow the data to only see Expense data.

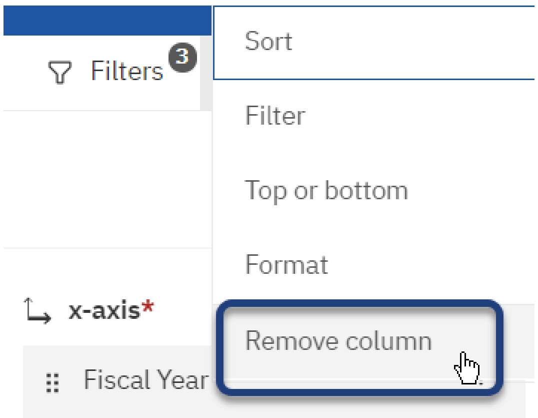
27. Expand the **Account** query subject and drag **Account L1 Code and Name** into the **This tab** shelf:



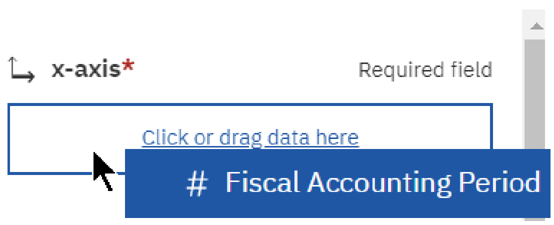
28. In the Account L1 Code and Name filter window select **5000AA-Expense**. Click OK.



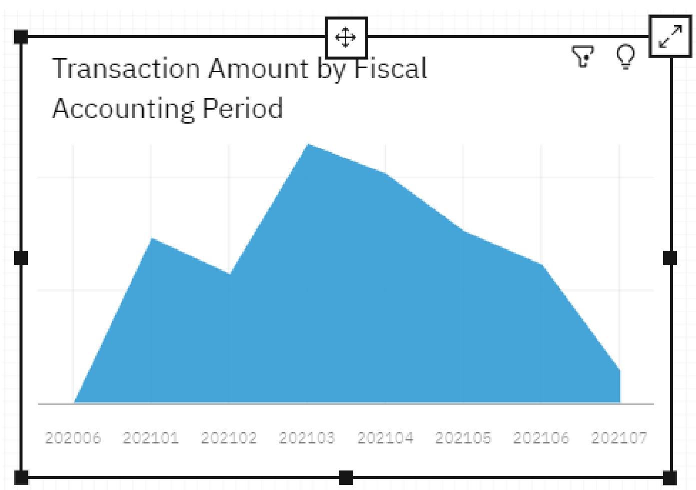
29. In the **Fields** pane (on the right), in the x-axis field for **Fiscal Year** click **More** and **Remove column**.



30. From the **Accounting Period** query subject drag **Fiscal Accounting Period** into the x-axis field:



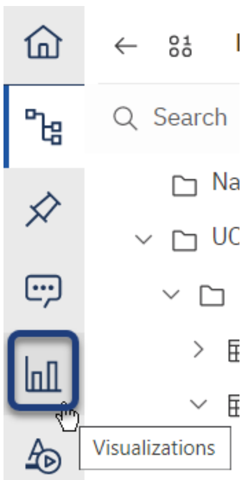
The visualization refreshes.



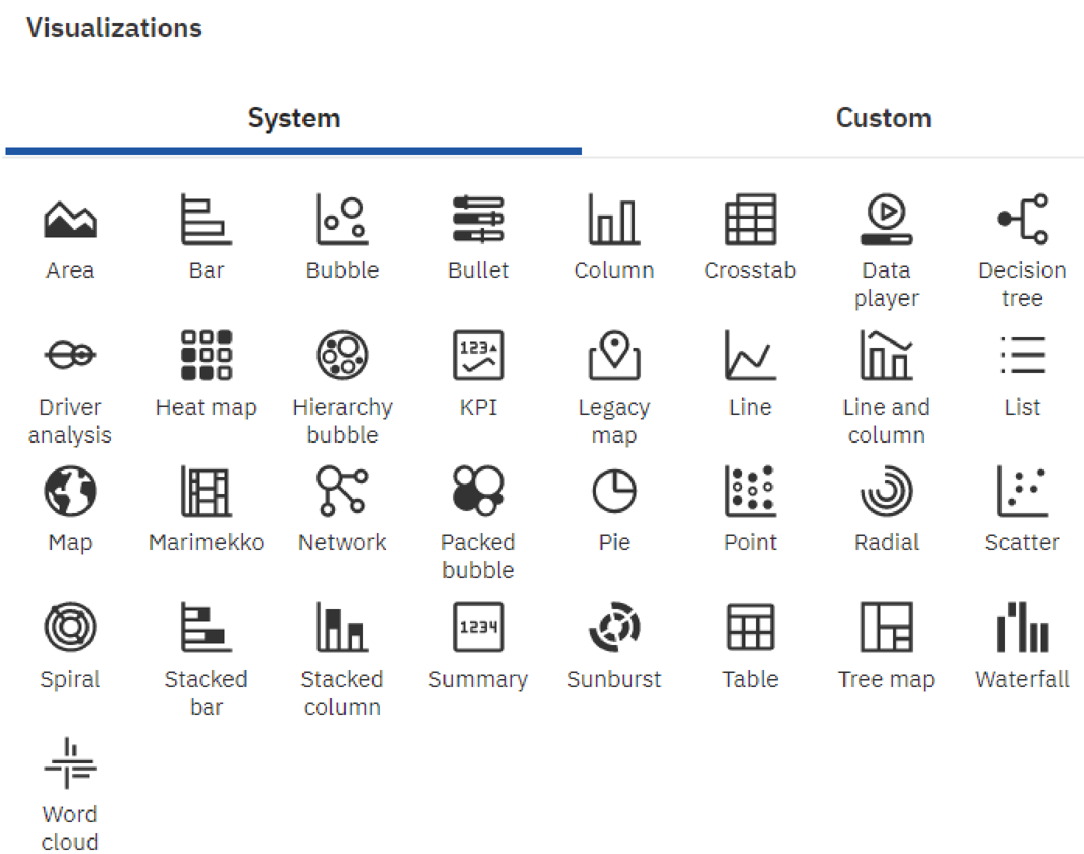
In the next steps we access the visualizations gallery and add two more visualizations to the 1st tab on the Dashboard.

Visualizations gallery

31. In the Navigation panel click **Visualizations**:



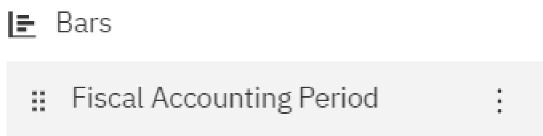
Review the menu of available Visualizations:



32. From the Visualizations gallery drag a **Stacked Bar** visualization into the Dashboard and drop it in the upper right corner of the canvas:

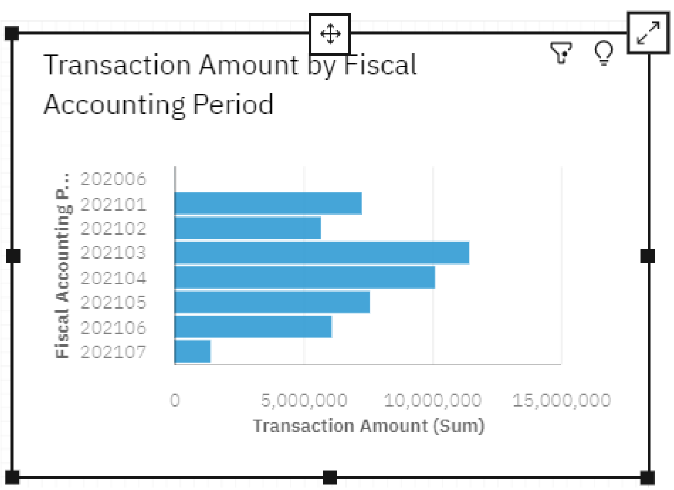
33. From the **Accounting Period** query subject drag **Fiscal Accounting Period** and drop it directly on top of the new visualization.

In the Fields pan notice Cognos put Fiscal Accounting Period into the **Bars** field.

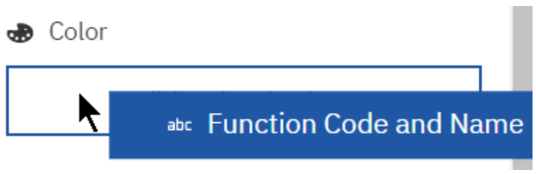


34. From the **Measures** folder and the **General Ledger Measures** query subject drag **Transaction Amount** and drop it directly on top of the visualization.

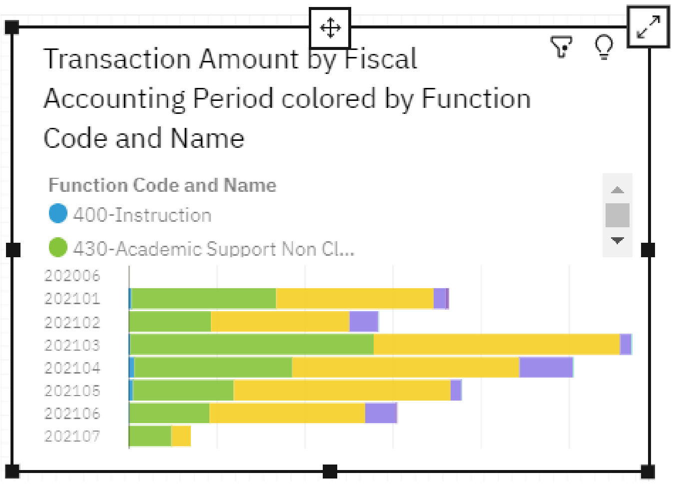
The visualization refreshes and we see data.



35. From the **Function** query subject drag **Function Code and Name** into the **Color** field



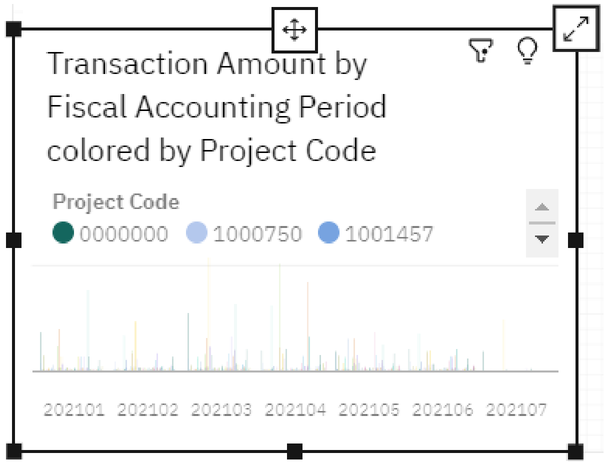
The visualization refreshes as we add data to the fields:

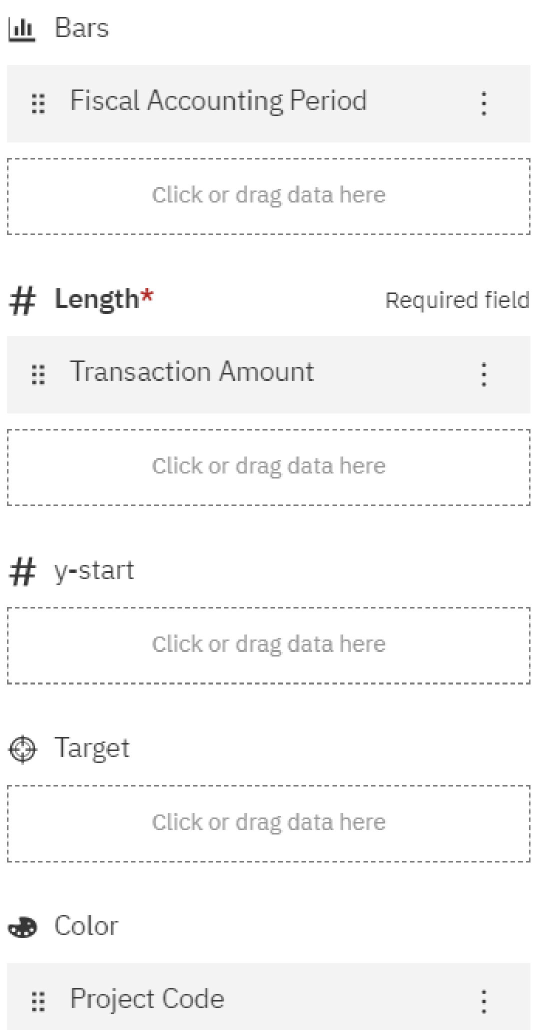


36. In the Navigation panel click the **Visualization** gallery and drag a **Column** visualization into the Dashboard and drop it in the lower right corner:

37. From the **Accounting Period** query subject drag **Fiscal Accounting Period** into the new visualization.
38. From the **General Ledger Measures** query subject drag **Transaction Amount** into the new visualization.
39. From the **Project** query subject drag **Project Code** into the new visualization .

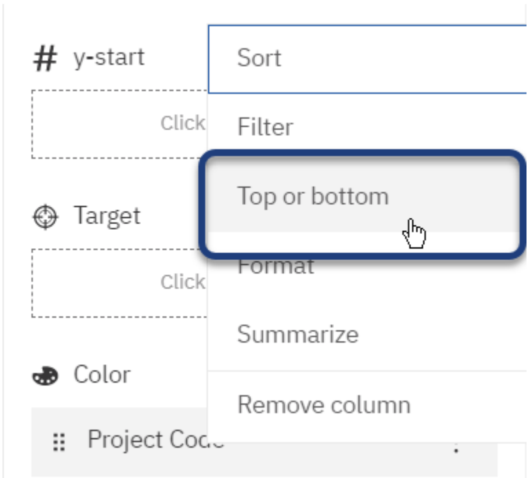
The visualization and fields look like this:



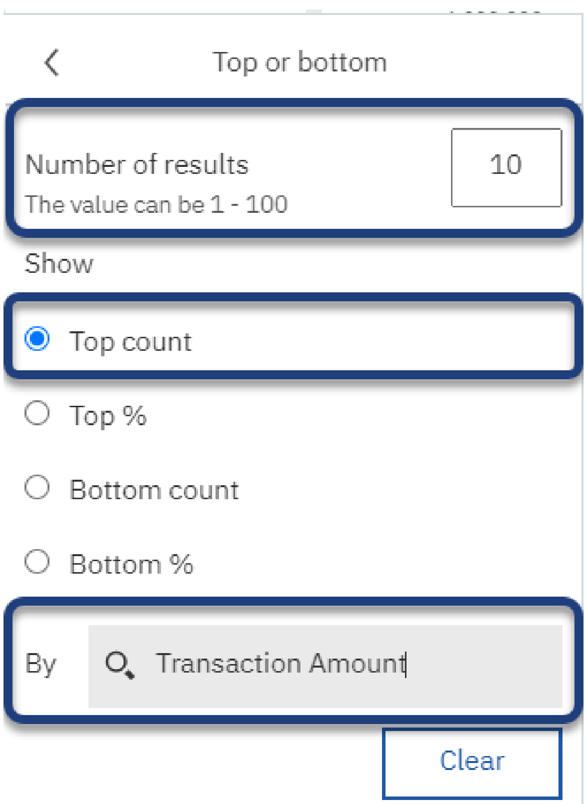


There are quite a few Projects and this visualization is hard to read. To make this visualization easier to consume we narrow the Projects to just the top 10 based on Transaction Amount.

40. In the **Color** field next to Project Code click **More** ⋮ and **Top or bottom**:



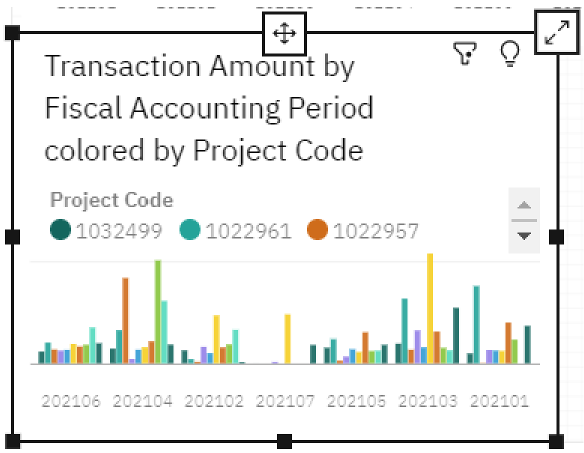
41. For Number of results leave it set to **10**, under **Show** select **Top count**, and in the By field begin to type: Transaction Amount and select if from the list.



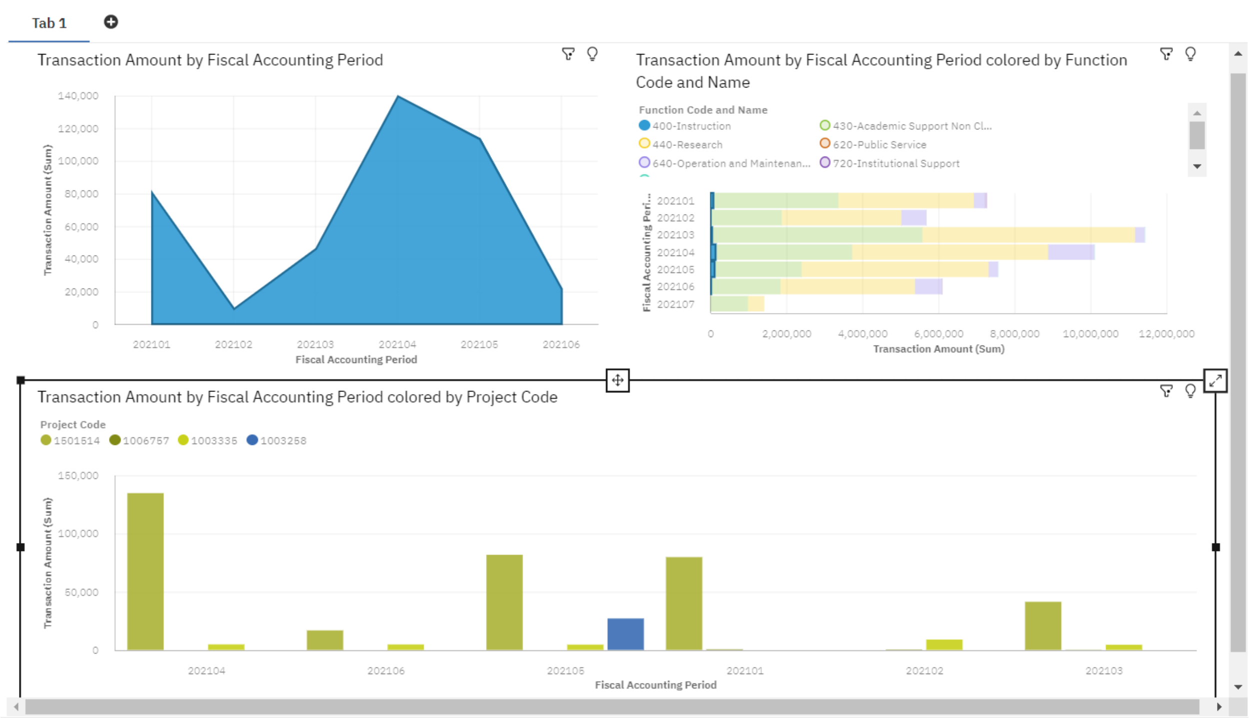
The visualization refreshes as soon as you select Transaction Amount.

42. Click outside the Top or bottom window to close it.

The visualization looks like this:



43. Use the handles to resize of the visualizations and use the Move widget handle to move the widgets around the canvas—something like this:



Notice the blue line that appears indicating the outside border of the canvas and the green rulers and other visual helpers that appear as you drag and resize widgets.

44. In the Application toolbar click **Save** (Dashboard).

Duplicate a dashboard tab

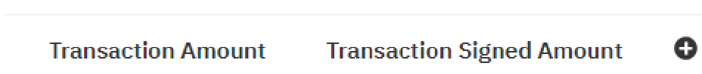
45. Click the **Tab 1** and click the middle button in the little toolbar to **Duplicate** the current Tab:

Notice it does just as it says and duplicates the Tab so we can make slight modifications to tabs to get different views of the data.

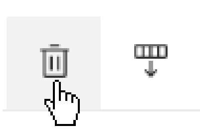
Rename a tab

46. Click the **Tab 1** and click the first button in the little toolbar to **Edit the title** and type: Transaction Amount.

47. Double-click **Tab 1-1** and rename it: Transaction Signed Amount.

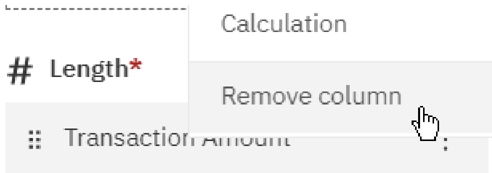


48. Click inside the 1st column chart (area visualization) and in the widget toolbar click **Delete**.



49. Click between the bars of the 2nd visualization widget in the top row of the Dashboard (the one with Function Code).

50. In the fields pane, in the **Length** field, mouse over **Transaction Amount** , click **More** ⋮ and **Remove column**.

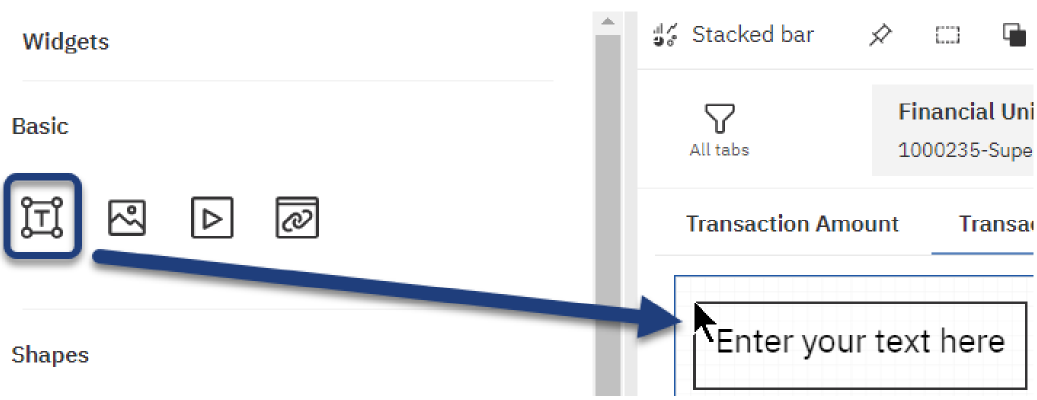


51. From the **General Ledger Measures** query subject drag **Transaction Signed Amount** into the same visualization.
52. Click inside the 3rd visualization widget on the Dashboard (the one with Project Code).
53. In the fields remove **Transaction Amount** from the **Length** field.
54. From the **General Ledger Measures** query subject drag **Transaction Signed Amount** into the same visualization.
55. In the Application toolbar click **Save** (Dashboard).

Add a Text widget to the canvas

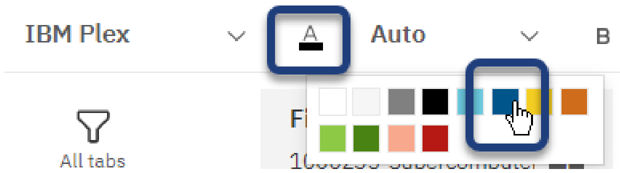
56. In the Navigation panel click **Widgets**:

57. From the Widgets > Basic menu drag a **Text** widget into the upper left corner of the canvas:

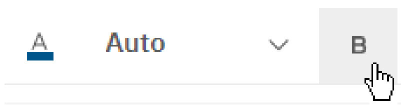


58. Double-click inside the **Text** widget and type: Transaction Signed Amount Analysis by Fiscal Accounting Period.
59. Use the handles to resize the widget, and then move the widget directly into the corner.

60. Highlight the text, and in the Widget toolbar click and select the **darker blue** color.



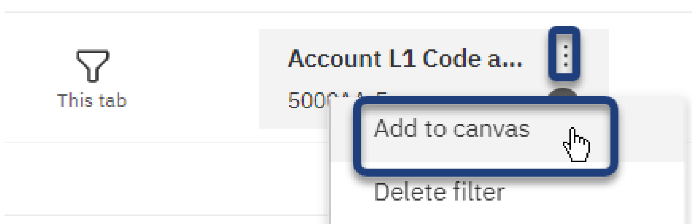
61. Highlight just the **Transaction Signed Amount Analysis** text and click **Bold**.



62. In the Application toolbar click **Save** (Dashboard).

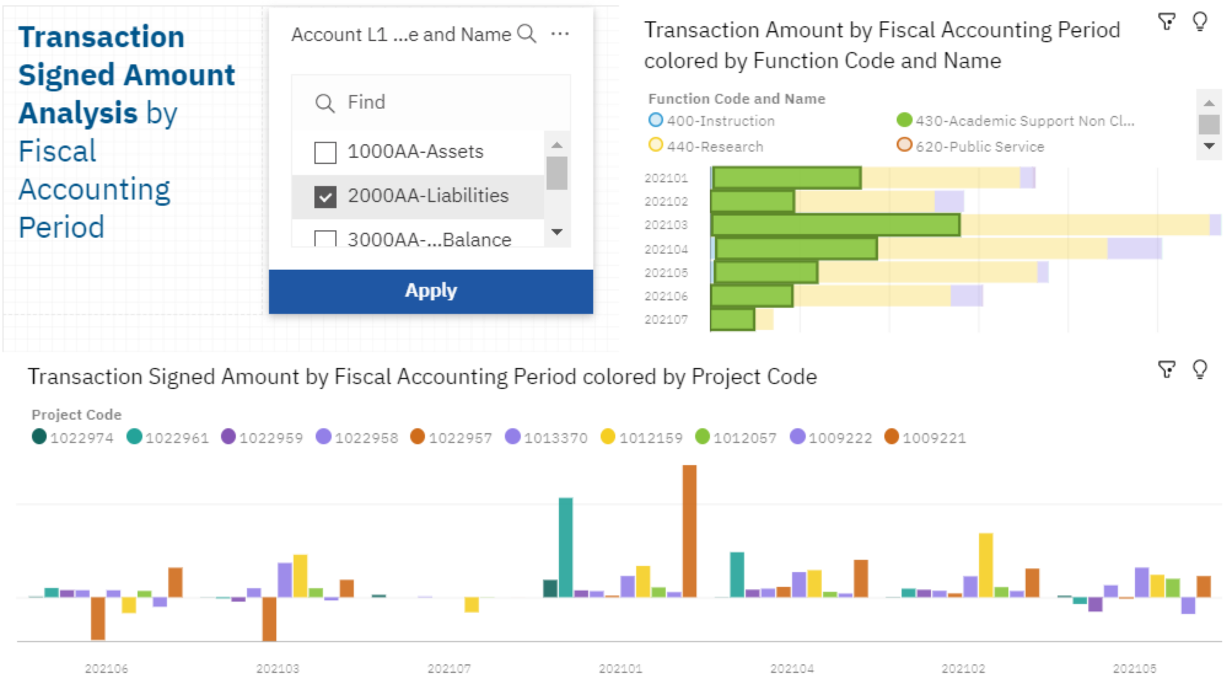
Add Text and Filter widgets to the canvas

63. In the **This tab** filter shelf mouse over the **Account L1** filter, click **More**, and **Add to canvas**:



A filter widget appears on the canvas:

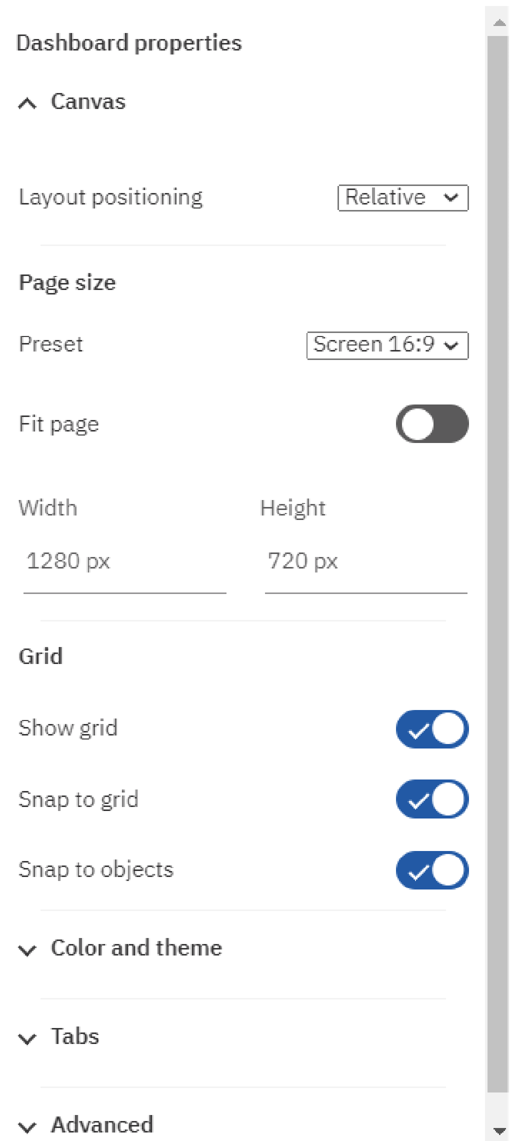
64. Use the **Resize** and **Move** handles to move the filter widget into place on the canvas between the Text widget and the bar chart so it looks like this:



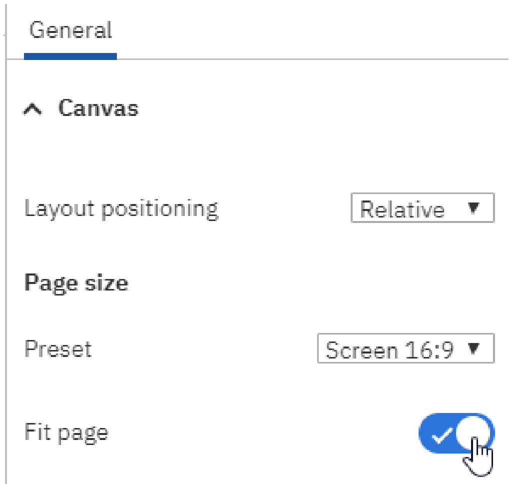
Properties

65. Click somewhere on the canvas, not on a widget, and in the Application toolbar click **Properties** .

The Dashboard properties pane opens—and the Fields pane closes. These are the Dashboard properties:

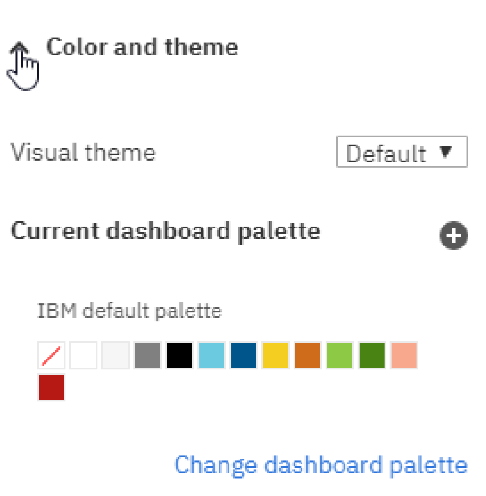


66. Toggle the switch to **Fit page**:



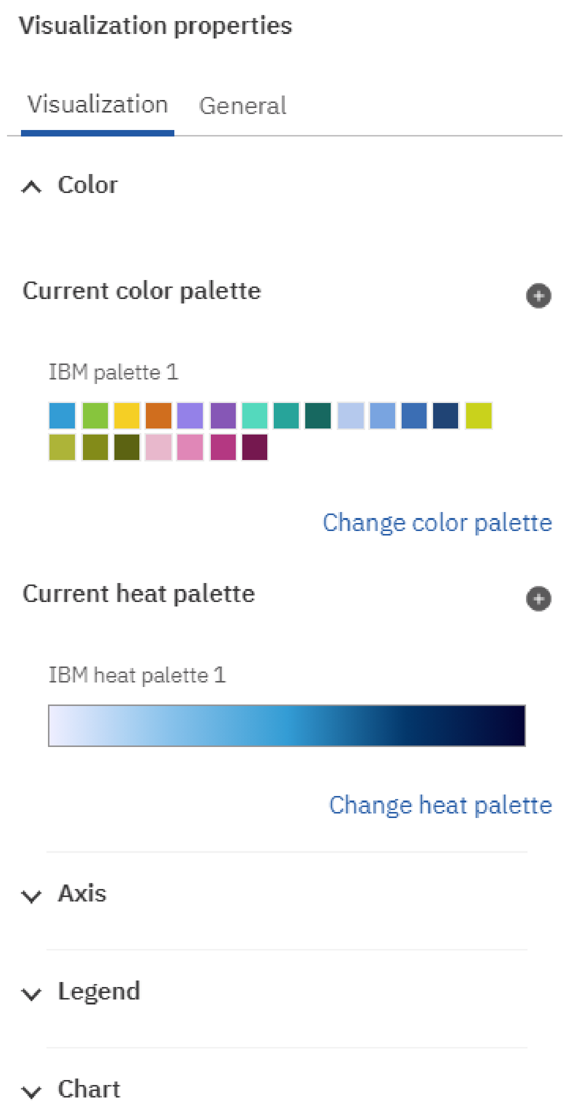
This action ensures the Dashboard fits the screen. Your instructor expands on the Layout positioning and other canvas properties.

67. Expand the **Color and theme** section and notice the options to change the Visual them as well as the **Current dashboard palette**.

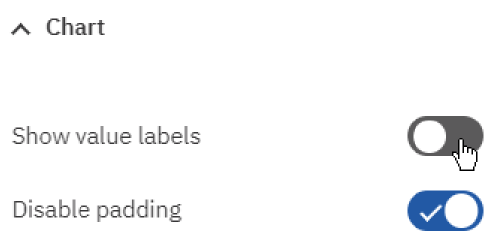


68. Click between the bars of the Column chart (the one on the bottom).

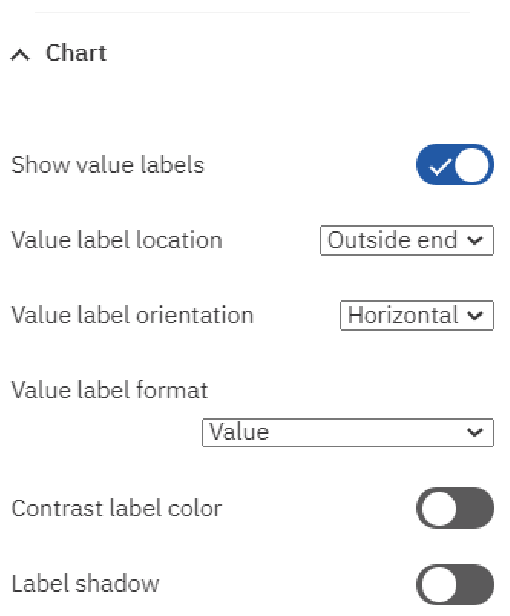
Notice the Visualization properties replace the Dashboard properties in the pane on the right.



69. Expand the **Chart** section of the Properties and toggle the switch to **Show value labels**.



More properties appear when this switch is turned on:

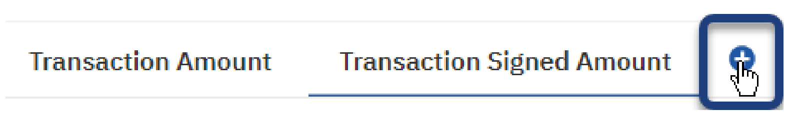


This is a common UI feature of Dashboard properties. You are encouraged to explore these further when working on your own Dashboards.

70. In the Application toolbar click **Save** (Dashboard).

Add a new tab

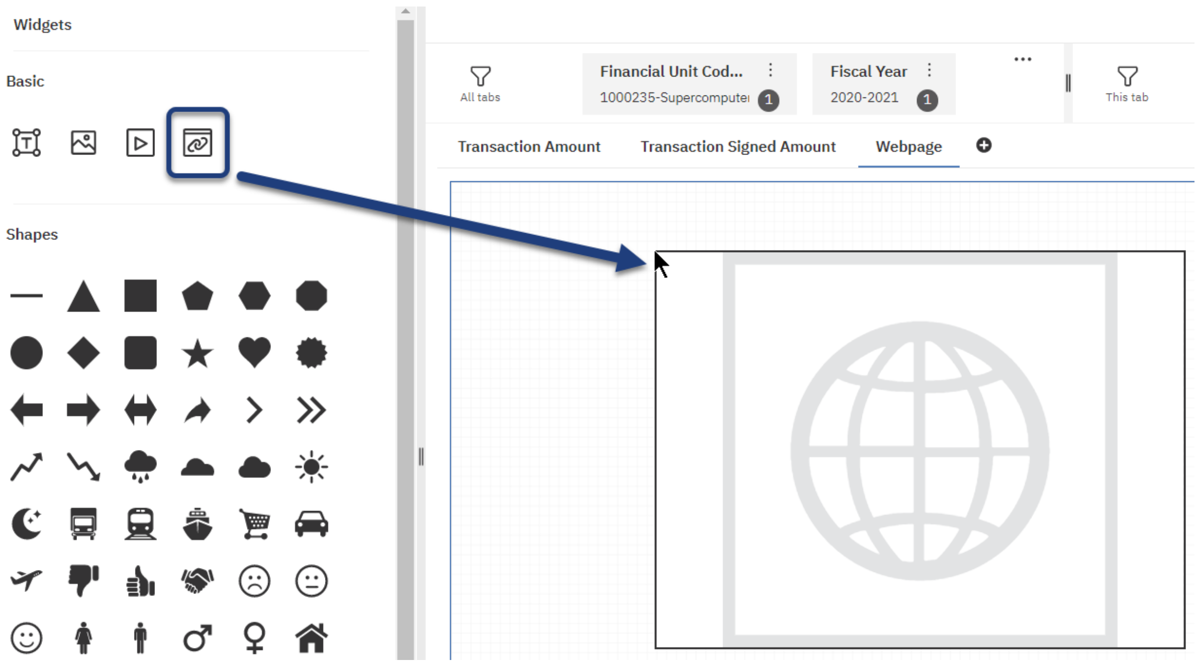
71. Click **Add new tab**.



72. Select the **Blank** template. Click Create.
73. Double-click the new **Tab 1** and rename it: Webpage.

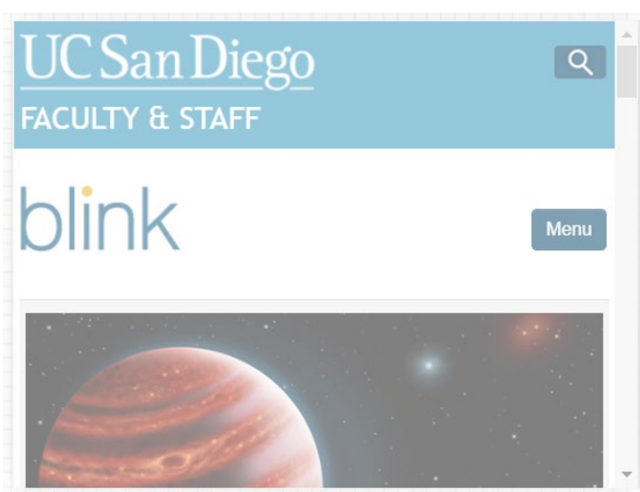
More Widgets

74. In the Navigation panel click **Widgets** .
75. From the Widgets pane Basic section drag a **Webpage** widget into the canvas.

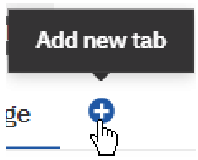


76. Type the following URL in the field provided and click in the white space outside the widget to refresh the page:

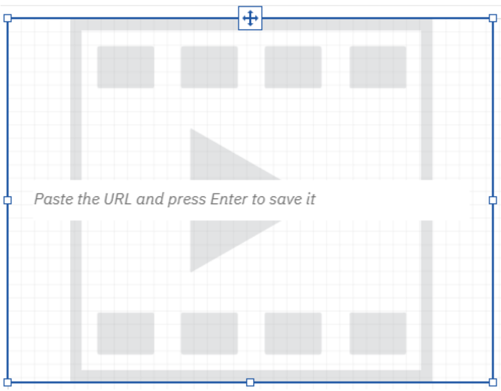
https://blink.ucsd.edu/



77. Use the handles to help the widget fill the canvas.
78. Add a new **Tab** to the Dashboard, choose the **Blank** template. Click **Create**.

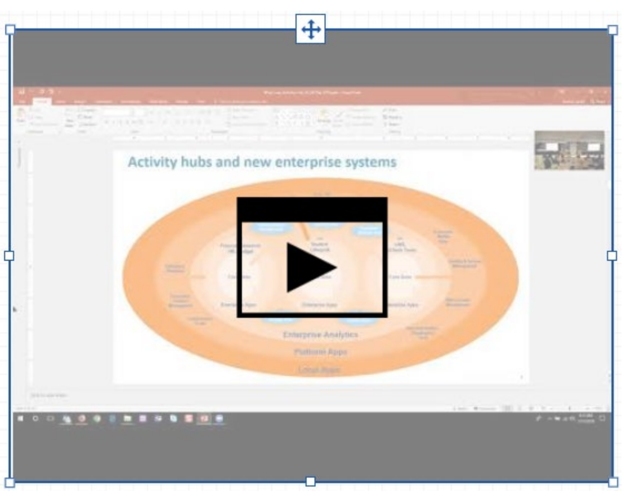


79. Rename the tab: Video.
80. From the Widgets pane Basic section drag a **Media**  widget into the canvas.



81. Type the following URL in the field provided and click in the white space outside the widget to refresh the page:

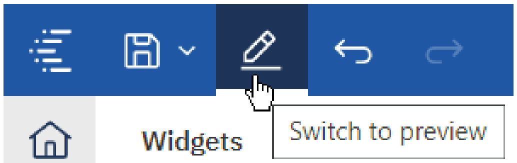
https://youtu.be/_XNVFWDQcLY



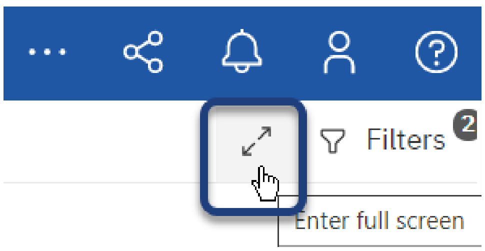
82. Use the handles to help the widget fill the canvas.
83. In the Application toolbar click **Save** (Dashboard).

Preview and interact with the dashboard

84. In the Application toolbar click **Switch to preview**.



85. In the toolbar in the upper right corner of the Dashboard click **Enter full screen** to experience your Dashboard with no distractions from the browser.



Notice that if you:

86. Click on the Transaction Amount tab, and click on the bars of any visualization—or on any of the items in the Legend—the selected value "filters" through the other visualizations to give you a different perspective.
87. Click between the bars, in the white space of the visualization to revert to the original view (may take a few seconds to refresh).
88. Mouse over the values in the Legend to highlight specific items in the visualization.
89. Mouse over any of the bars and notice the screen tip.
90. Experiment with the interactive filters at the top of the Dashboard.
91. Click the Transaction Signed Amount tab and experiment with the filter widget the canvas.

Observe how these changes impact the Dashboard.

Take a few minutes to click through the tabs, explore and interact with the Dashboard you created!

92. Hit **Esc** on your keyboard to exit Full screen mode.