



IBM Cognos Analytics Report Writer Training

*Information Services
Integrated Data and Reporting Team*

2019 - 11

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1 Overview

The Integrated Data and Reporting (IDR) is a team within Information Services' Applications and Middleware group, responsible for implementing and maintaining the data infrastructure for the reporting and information needs of the U of O community.

IDR's goals are:

- To reduce data storage redundancy;
- To make the data reporting process on campus more efficient and accessible;
- To more fully integrate data storage and reporting into one comprehensive solution.

The U of O has adopted IBM Cognos Analytics BI as its enterprise wide reporting and BI tool. IBM Cognos is a comprehensive reporting and data analysis tool, combining reporting, modeling, analysis and dashboards, which can be shared across functional teams leveraging their combined skills to promote greater effectiveness throughout the community.

For more information about IDR, please visit <http://idr.uoregon.edu>.

1.1 Intended audience

This training is intended for University of Oregon employees whose activities require inquiring U of O data beyond information available in existing enterprise or departmental reports, such as ad-hoc queries, or modifying reports to suit specific or changing needs.

After completing this training, trainees will become proficient in writing simple reports, create queries for ad-hoc reporting or perform simple changes to existing reports.

1.2 Report writer prerequisites

Report writing requires some baseline knowledge this training is not intended to provide. Prior to taking this training class, a trainee must possess:

- Basic understanding of database terminology and concepts, data structures and entity relationship diagrams;
- General understanding of Ellucian Banner data;
- Solid understanding of trainee's department data and business processes;

1.3 Training scope

This training does not include Banner data training or University's business processes, and is not intended to teach student, human resource or financial data analysis.



1.4 IDR Data

University of Oregon data is segmented in three broad categories, namely student, financial and human resources, and further subdivided in core, private and sensitive data.

Core data spans non-sensitive data for all broad data categories including Finance, HR, and Student information.

Sensitive and private finance data are data such as bank and collection agency information, SSNs, tax ID, disbursements, payments and holds, and personal information such as ethnicity, citizenship, visa, veteran status.

Sensitive and private HR data includes personal data such as benefits, deductions, taxes, degrees, employment history and beneficiaries.

Finally, sensitive student data includes personal student information, degrees, transcripts, majors, holds, withdrawals and grades.

Important: University of Oregon data is private and sensitive in nature, much of which falling under the Family Educational Rights and Privacy Act (FERPA) and other state and federal regulations. Prior to gaining access to data, please be sure to become familiar with university data use policies in <https://registrar.uoregon.edu/records-privacy> and [https://ba.uoregon.edu /content/policies](https://ba.uoregon.edu/content/policies). Please be careful not to share protected data with unauthorized persons.

1.5 Gaining access to IBM Cognos and University of Oregon data

Access to IBM Cognos can be requested via service portal online form, with link available in <https://idr.uoregon.edu/getting-access>. Access to Cognos comes with core data privileges. To access sensitive or private data additional permissions need to be granted. These are managed by data stewards in Business Affairs, Human Resources and Registrar. Requests for sensitive and private data access are done via request form, with links available in <https://idr.uoregon.edu/getting-access>.

1.6 System availability and maintenance

IBM Cognos is off-line during data updates, which occur nightly between 1 am and 7am. Regular maintenance is scheduled weekly, on Fridays between 7pm and 9pm, at which point it may also be off-line.



1.7 Additional Help

The U of O has many resources you can take advantage of to help you with your report questions and problems.

- Data stewards in Business Affairs, Human Resources and Registrar can help you understand Cognos data and data issues;
- Advanced report writers and report writers can help you understand your data and customize reports;
- The IDR team, via service portal or open lab sessions;
- IBM Cognos Analytics manual;
- IBM Cognos Analytics tutorial videos;
- Existing reports in Cognos, to be used as starting points or models;

For more information please visit <https://idr.uoregon.edu/contacts-and-support>.

2 Database notation

It is not the goal of this document to teach report writers database notation, but it is virtually impossible to develop reports without a minimum knowledge in this domain. The purpose of this section is, therefore, to provide writers a basic reference for entity relationship diagrams, to help in decoding the database documentation available in IBM Cognos from Ellucian's Operational Data Store (ODS).

2.1 Entity relationship diagrams

An Entity Relationship Diagram (ERD) is a type of notation that describes databases. There are many aspects and versions of this notation, but we will focus on two elements of an ERD: entities and relationships between entities.

2.1.1 Entities

Entities are the fundamental building block of the conceptual representation of things in a database. These “things” can be anything, such as a person (PERSON_DETAIL), a student (STUDENT), someone's job (EMPLOYEE_POSITION), an accounting ledger (OPERATING_LEDGER), an event (EVENT) or a building (LOV_BUILDING) – the names in parenthesis are entity names that exist in Cognos and are commonly used in reports. In Cognos these entities are the ODS views.

Entities have descriptors that detail their characteristics. These descriptors are the fields in a database view.

Take the entity Person, represented in Cognos by the view PERSON_DETAIL. Persons represent people that are a part of the U of O community. In ODS, a person is described by many aspects. Among them are their unique identification number (PERSON_UID) also known as PIDM, their name (FIRST_NAME, LAST_NAME and MIDDLE_INITIAL), 95 number (ID), birthdate (BIRTH_DATE), gender (GENDER and GENDER_DESC) and citizenship (NATION_OF_CITIZENSHIP).

In summary, entities are representations of database tables or views, and attributes are representations of database fields. ERDs present entities as a rectangle, with the entity name and attributes listed inside (entity name on top, figure 1).

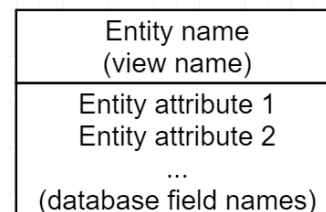


Figure 1: entity representation

2.1.2 Entity relationships

ERDs, as the name indicate, describe conceptually how a database is structured by way of presenting the relationship between entities.

Take students for instance. In the “real” world, people are a part of the U of O community. Some of these people are U of O students, others are employees. Each term some of the students are active students, others drop out. While active, students enroll in certain courses each term, declare majors, earn GPAs, and apply for financial aid. This reality is modeled in databases, and can be observed by the entity relationship diagram.

Entities relate to one another through connecting lines. The lines feature three “arrow heads” that represent cardinality as 0, 1 or many.

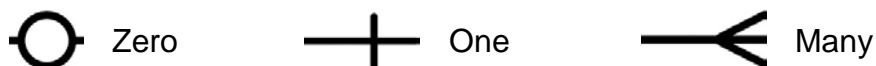


Figure 2: relationship representation

Take, for example, the following business rule: people are active students, some of which enroll in courses each term. This is represented in ODS by the following ERD snippet (figure 3).

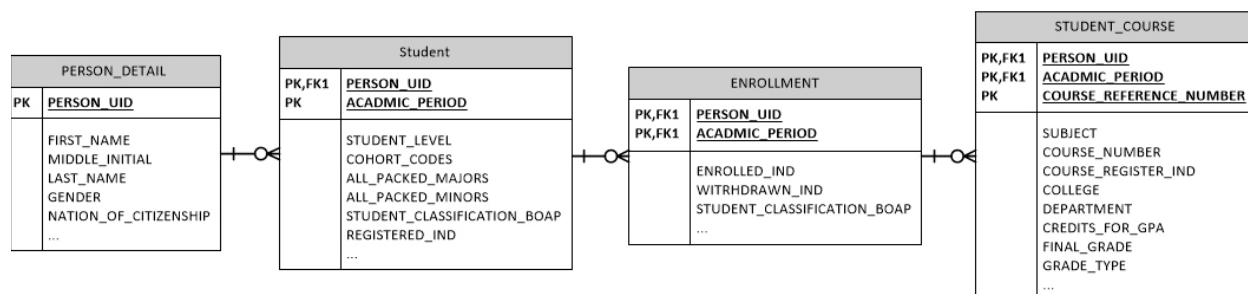


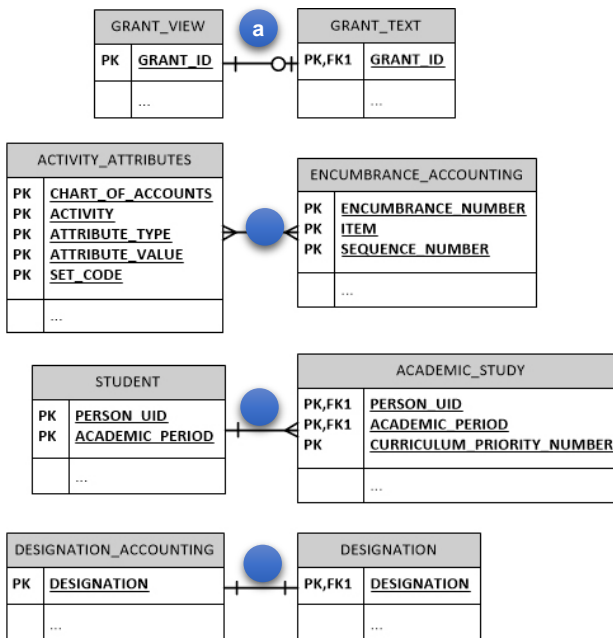
Figure 3: ODS ERD snippet

The model in figure 3 can be read as follows: each person in ODS may be students in any given term. Each student may have enrollments. Each enrollment has courses.

The cardinality between PERSON_DETAIL and STUDENT is one to zero or many (each PERSON_UID in PERSON_DETAIL may or may not be present in STUDENT, and when present, there may be one or more student records for each PERSON_UID); the model represents the same cardinality between the remaining tables represented.

Other cardinalities represented in ODS are:

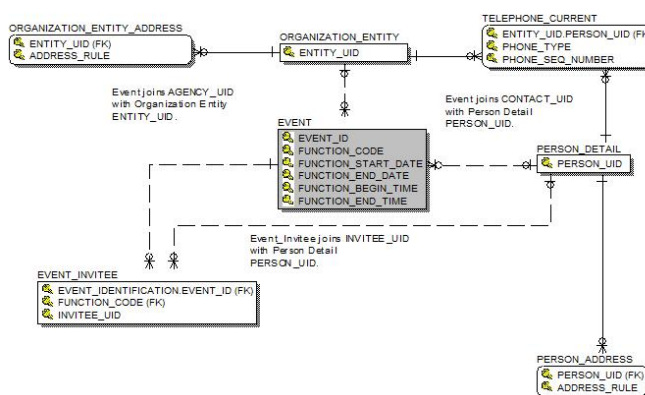
- one to zero or one (for each GRANT_ID record in GRANT_VIEW there may be one or none in GRANT_TEXT)
- many to many (ACTIVITY_ATTRIBUTES have many ENCUMBRANCE_ACCOUNTING and vice versa)
- one to many (each STUDENT record relates to many ACADEMIC_STUDY records)
- one to one (each DESIGNATION_ACCOUNTING record has exactly one counterpart in DESIGNATION)



2.1.3 Cognos ERD

Figure 5 shows one of many available ODS / Cognos entity relationship diagrams. The ODS vendor, Ellucian, chose to represent only entity keys in the ERD.

To learn more about entity relationship diagrams, there are many books and sites that explain in more detail the concepts that were briefly presented in this section. Search for database design books, or the knowledge bases of software vendor sites such as Microsoft and IBM.



The entire ODS / Cognos data model can be viewed through Cognos' Quick links (figure 9, [c] under "Data Definitions (Metadata)"), or by accessing the model directly in https://odsedw.uoregon.edu/production/metadata/ods/bcreps/ODS_bcreps.html.

3 Cognos data

3.1 Data source

IDR data is derived from Banner data, but with transformations to simplify use in reports. These transformations are achieved by a process called ETL (extract, transform, load) that combines and reorganizes data nightly, so Cognos reports and visualizations reflects data from end of prior business day, or **D-1**. The status of data refresh can be verified in the welcome page.

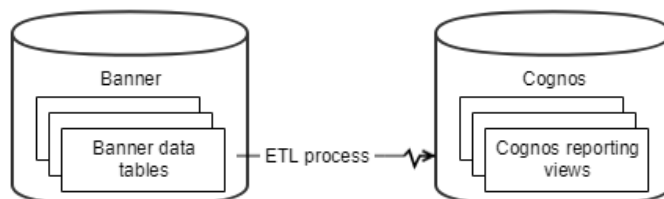


Figure 6: Banner and ODS

3.2 Data packages

The ODS ETL process creates views that present Cognos users with a restructured, albeit accurate and trustworthy, version of the banner data. These views are then grouped in packages, which are entities that contain and relate a series of reporting views. Views may exist in multiple packages at the same time, as represented in figure 7.

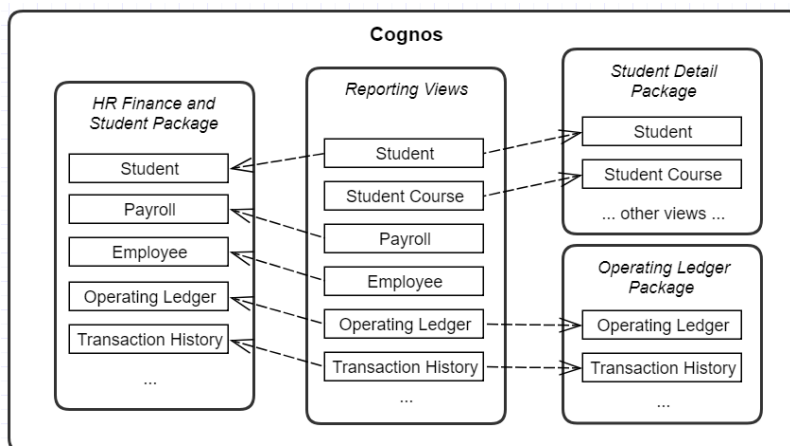


Figure 7: Cognos packages representation

Cognos has many data packages available for report writers, divided in Financial, Student and HR domains, with one package, aptly named HR Finance and Student, spanning these three domains. Packages are located in the team folder /Packages.

4 IBM Cognos Analytics

IBM Cognos Analytics is an online secured application may be accessed using your UO Duck ID and password.

User ID

Password

[Sign in](#)

The following web browsers are officially supported:

- Apple Safari v. 9
- Apple Safari on iOS v. 10.x
- Google Chrome (current)
- Microsoft Internet Explorer v. 11
- Mozilla Firefox ESR v. 52

IDR recommends use of Internet Explorer or Google Chrome due to problems reported with the latest versions of Firefox (Quantum).

4.1 IBM Cognos Analytics interface

Data Grouping	Start Time	End Time	Elapsed Time	Status
Financial Aid	9/25/19 4:15 AM	9/25/19 4:25 AM	0 hours 10 minutes	Success
General	10/25/19 1:00 AM	10/25/19 1:09 AM	0 hours 9 minutes	Success
Accounts Receivable	10/25/19 1:30 AM	10/25/19 1:32 AM	0 hours 2 minutes	Success
Student	10/25/19 1:45 AM	10/25/19 4:45 AM	2 hours 59 minutes	Success
Finance	10/25/19 2:00 AM	10/25/19 2:41 AM	0 hours 41 minutes	Success
Human Resource	10/25/19 2:30 AM	10/25/19 3:10 AM	0 hours 40 minutes	Success

Figure 9: IBM Cognos home screen

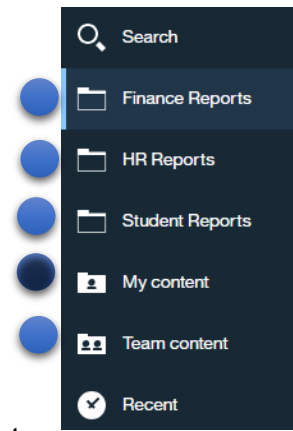
- Navigation menu:** report title search and access to report folders;
- Report switcher:** flips between open reports;
- Quick links shortcuts:** Access to IDRs service portal page and other important content;
- Notifications:** Shows IBM Cognos notifications;
- Current user menu:** Access to account information, report schedules and sign out;
- Help menu:** About page, learning center and other IBM Cognos resources;

- g. **Data refresh status:** presents the time the data was refreshed and success / failure ;
- h. **Results / work area:** this is where Cognos displays reports;

Group folders

All reports developed by report writers are stored in Cognos, in group folders. Each user has access to groups based on department and activity needs, with different permissions levels granted by folder delegates.

Enterprise reports are stored in finance, HR and student folders, and department specific reports are stored in departmental folders. Shortcuts to these folders are available in the left navigation bar (figure 10, [a], [b] and [c], respectively).



My content (figure 10, [d]) is the user’s private folder, and its contents cannot be seen by other users. It is often used for report development.

Team content (figure 10, [e]) contains all shared folders, including departmental folders, user acceptance and testing, and other shared content. Report writers must be particularly careful when saving reports to this space, in order not to overwrite existing reports.

Tip: existing reports are a great resource for new report writers, just remember to save them to your My Content folder prior to modifying for your specific needs.

5 Report preparation

5.1 Preparing to write a new report

Writing a report is similar to any product development. It is important to plan the work, and become familiar with the data structure and meaning, as well as the business processes that feed the data. Here, the data dictionary and the ERD are key to understand where data comes from and how it is best interpreted.

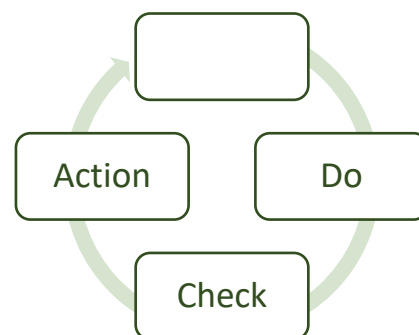


Figure 11: PDCA cycle

After writing the report, testing and corrections as needed are essential, to ensure decisions are not made with faulty information.

5.2 Choosing a data package

Whether you are writing financial, HR or student reports, there are many packages to choose from, and it may not always be clear which one is correct. Consult the Entity

Relationship Diagram and evaluate which package contains the most complete set of reporting views (called query subjects in Cognos)

Most reports can be derived from one of three packages:

- a. Operating Ledger – financial information
- b. Human Resources and Finance – HR / payroll information
- c. Student Detail – student information

6 Report writing

6.1 How a report is structured

There are three main elements that make up a Cognos report:

- a. Data source is the package from which the report is derived. Reporting views in packages contain all the data for a given domain.
- b. Queries are subsets of fields from reporting views used as basis for reports. Queries are also filtered to contain only the relevant portion of the data available in the data source;
- c. Report pages are the report themselves. These are composed by visualization objects, such as lists or graphics, that display the data contained in queries. Every object that displays database data must be associated to one query.

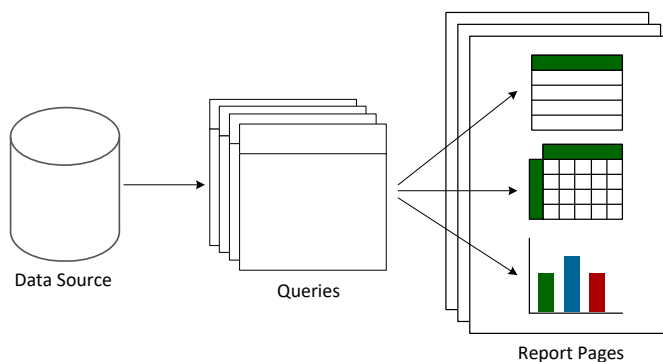


Figure 12: report structure

6.2 Starting a report from scratch

This training shows step by step how to create a report. The example report is a financial report that presents Operating Ledger transactions for a given fiscal period and year, fund and organization.

6.2.1 Connecting to a data source

As outlined in figure 12, the foundation of a report is its data source. Here are 5 steps to locating and opening a new data source.

Step 1: Click New (figure 13, [a]) and Report (figure 13, [b]);

Step 2: Cognos presents a set of report templates that can be used as starting points for laying out a new report. At the bottom of the list (users may have to scroll down) there are University of Oregon themed templates. Click UO Template;

Step 3: Select your data source by clicking Sources (figure 14, [a]) and “+” (figure 14, [b]);

Step 4: Traverse team folders (🗂️ icon) to Packages, then Finance packages. Select the package identified in the planning stage as containing the reporting views required by the report.

Exercise: follow the steps above and click Finance / Operating Ledger.

Step 5: Click the button “Open”;

Cognos presents the contents of the package. Typically, packages contains:

1. A value reference folder, “List of Values”, containing views that list attributes used to describe datasets, such as lists of academic periods, organization codes, lists of departments, colleges, etc.;
2. A folder matching the package name that contains reporting views;
3. Reporting views, also known as query subjects, represented by the icon ;
4. Pre-built filters represented by the icon ;
5. There may be other folders with views or filters, as in this case;

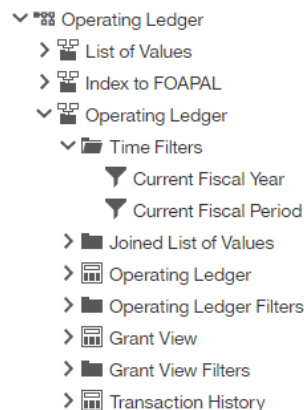
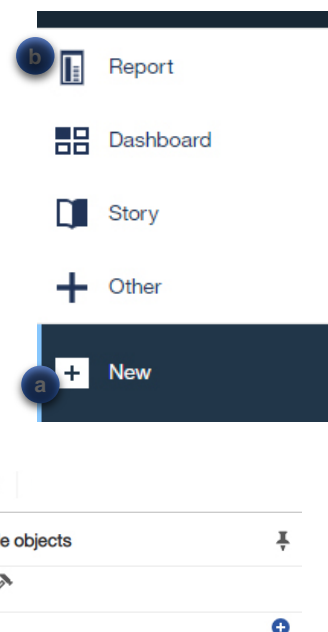
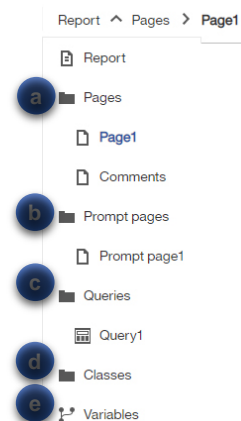


Figure 15: operating ledger package



6.2.2 Navigation Menu

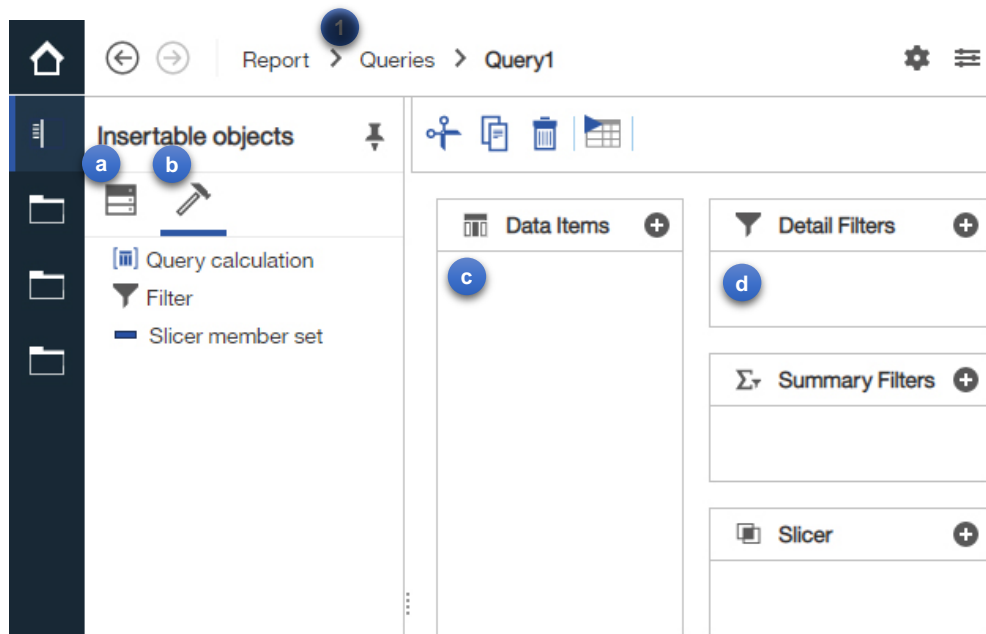
New for version 11.1, the report menu is located on top of your work area, and allows direct access to any function or object in your report. It is a context-style menu where you can access your report pages (figure 16, [a]), prompt pages (figure 16, [b]), queries (figure 16, [c]), classes (figure 16, [d]) and variables (figure 16, [e]).



6.2.3 Designing a query

Queries are the framework that give reports structure and content. These draw on the data foundation available in data sources, allowing writers to select subsets of fields and filter data to comply with the goals of a given report project. Queries also allow users to perform their own run-time transformations and create attributes not available in the original data source.

Figure 17 presents the elements of the query building screen. To access, click the chevron (>) next to “Report” in the context menu then select “Queries” (figure 17, [1]).



- a. Data source
- b. Query tools (create field);
- c. Data items list (fields that compose the selected query);
- d. Detail filter (filter that restricts data selection);

For the purposes of this training we will not take in consideration the remaining elements of the Queries screen.

Exercise:

Step 1: Open Query1 (click > next to Report in the context menu, click on Query1 and make sure you can see the Data Items (figure 17, [c]) container;

Step 2: Click Data source (figure 17,[a]) to open the package;

Step 3: Drag the desired fields to the data items container (figure 18);

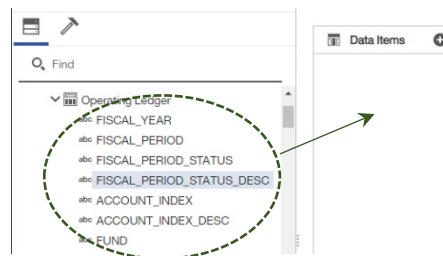


Figure 18: data source

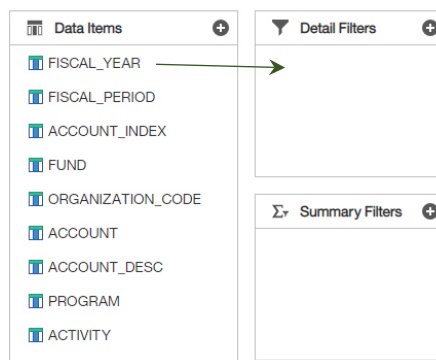
Add the following fields from the Operating Ledger Package, Operating Ledger View:

- FISCAL_YEAR
- FISCAL_PERIOD
- ACCOUNT_INDEX
- FUND
- ORGANIZATION_CODE
- ACCOUNT
- ACCOUNT_DESC
- PROGRAM
- ACTIVITY

Step 4: From the existing Data Items, choose which fields you wish to filter by and drag them to Detail Filters container, building your conditions, one field at a time;

Exercise: set the FISCAL_YEAR equal to '2017';

Building filters span from simple to complex. In its simplest form filters are composed by a field, an operator and a value, as is the example in figure 19. Things can get complicated from there by using Boolean operators, different data types, conversions, variables, etc.



There are two basic considerations when creating a filter:

1. What am I filtering for: this indicates what operator you should choose;
2. What is the data type I'm working with: this indicates the syntax of your filter statement; when comparing strings or dates use " (single quotes), omit the quotes when working with numbers. And remember, the data content may be misleading, so it is important to check the data dictionary to determine what the data type of a given field is. In the example above, FISCAL_YEAR not numeric (as the data may lead a writer to believe), rather, a string of 63 characters, as indicated in table 1.

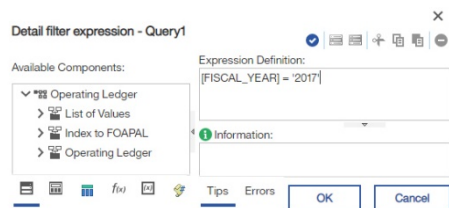


Figure 20: filter expression

Table 1: ODS data dictionary for Operating Ledger

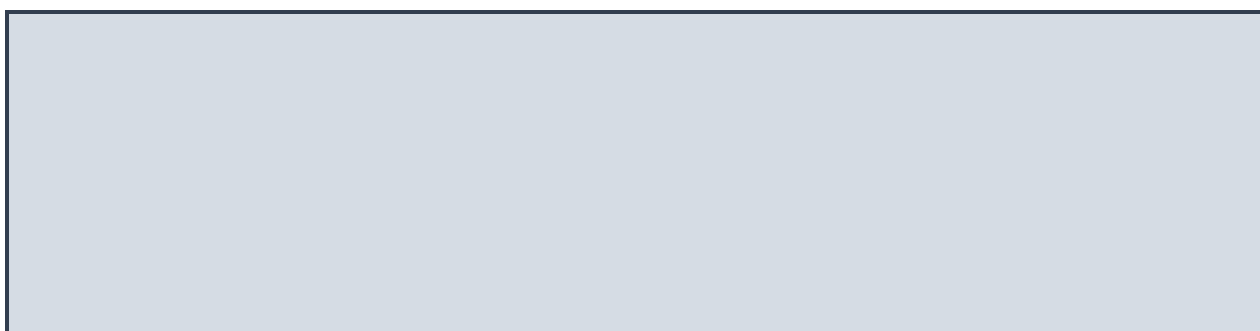
Target Column	Business Definition	Database Data Type
FISCAL_YEAR	Unique identifier or code for the fiscal year.	VARCHAR2(63)

Table 2: Common Operators

Comparison	
Operator	Description
=	Equal to
<>	Different than
>	Greater than
<	Less then
>=	Greater or equal to
<=	Less or equal to
Between ... and	Values between two arguments. Ex: [value1] <i>between</i> [value2] <i>and</i> [value3]
In (...)	Compares to list. Ex: [value1] <i>in</i> ([value2], [value3], [valuen])
Like ... %	Compares using wild cards, % (string fields only). Ex: [value1] <i>like</i> '%[value2]%'
Math (numeric fields only)	
+	Add
-	Subtract
/	Divide
*	Multiply
Boolean	
And	Returns true if all conditions are true
Or	Returns true if any condition is true
Not	Returns true if condition is false
Grouping	
()	Group operations

Other filtering considerations:

- [] are reserved symbols, indicating a field name;
- " (single quotes) are reserved symbols, indicating string or date. Do not use "" (double quotes) when indicating string or date;
- Spaces separating fields and operator are ignored: both [FISCAL_YEAR]='2017' and [FISCAL_YEAR] = '2017' are the same for Cognos;
- Spaces within brackets or quotes matter: [FISCAL_YEAR]='2017' and [FISCAL_YEAR]='2017 ' are not the same for Cognos;
- Cognos is case sensitive. '3ADM' is not the same as '3adm';



6.2.4 Beyond common operators

Cognos leverages Oracle SQL (PL/SQL) and proprietary operators, methods and functions report writers can use to enhance report development. Writers can access these tools in the functions tab of the expression builder (figure 21, [a]) when creating filters or data items. This material is more thoroughly covered in the advanced report writer training.



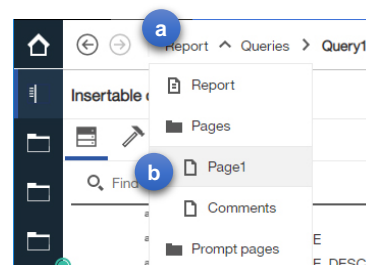
Figure 21: expression builder tabs

6.2.5 Designing your page

Report pages are the visible portion of a report, and are composed of tables, crosstabs, graphics and other objects. Pages present the information contained in queries.

Design reports by following these steps:

Open the report designer by clicking Pages (figure 22, [a]) and the page you wish to edit (figure 22, [b]).



Exercise: click Page1;

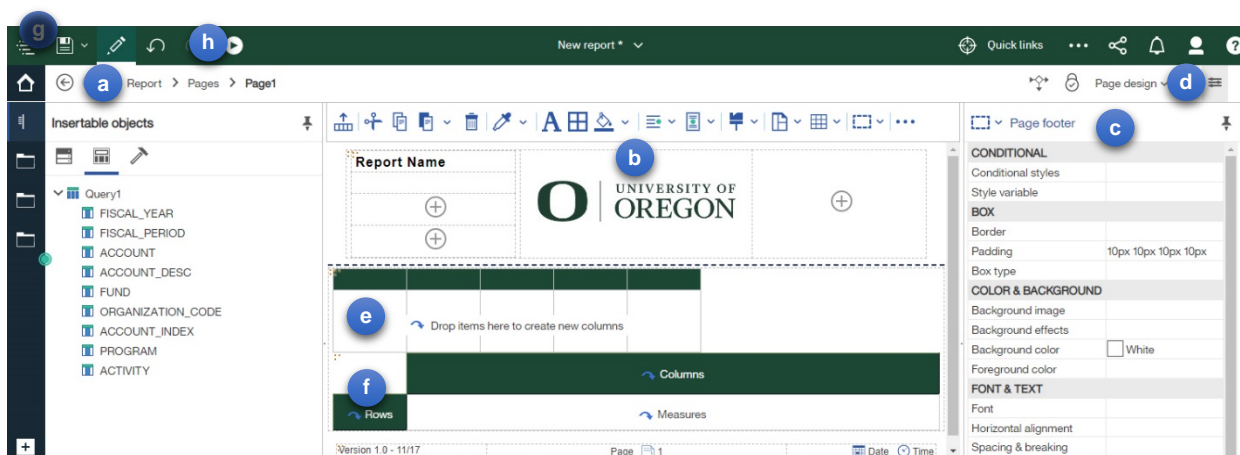


Figure 23: Cognos report designer mode

Cognos present three main sections when in report designer mode:

- The report navigation drop-down menu contains all report objects, including queries and pages. Open different objects by clicking the chevron (>) and selecting the desired query or page;
- Page design area. Template UO comes pre-loaded with UO report header, body with table and crosstab objects and footer. Writers can configure the contents of this area suit the report's needs.
- Page properties, presenting all attributes of the selected page or object.

To toggle Cognos properties on or off, click the properties icon (figure 23, [d]).

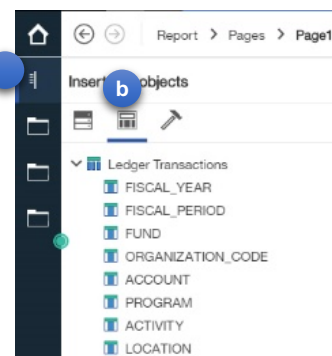
Selecting different report objects, such as the data list or crosstab, will load different sets of properties which may be used to set report behavior and appearance.

Step 1: Connect a report object to a query by clicking on the upper left corner of the desired object (look for three gold dots). Locate the property Query, and set it to the desired query;



Exercise: click the list and connect to Query1;

Step 2: To add fields to your report object, click Insertable Objects menu (figure 24, [a]) and select Data items (figure 24, [b]). Cognos presents a list of all available queries and their content;



Step 3: Drag and drop the desired fields over the report object. You can select multiple fields with the Ctrl or Shift keys;

Exercise: Add all query fields to the List object (figure 23, [e]).

Let's clean up the template: select the crosstab object (figure 23, [f]) and remove the object by hitting the Delete key;

Also remove the prompt page by clicking Pages (figure 22, [a]), followed by clicking on Prompt page1. Remove the page by hitting the Delete key;

Save your report by clicking the save button (figure 23, [g]). Select the folder "My Content" and enter the report name;

Now you are ready to run your report. Click the Run Options button (figure 23, [h]) and select Run HTML, making sure popup blocker is disabled for this site. The report should load on a new tab;

FISCAL_YEAR	FISCAL_PERIOD	ACCOUNT_INDEX	FUND	ORGANIZATION_CODE	ACCOUNT	ACCOUNT_DESC	PROGRAM	ACTIVITY
2017	06		016007	152220	10988	OPE Student Other	07003	BNILI
2017	06		016006	152046	92001	Transfer Out To Other Funds	07002	KMAT
2017	06	KMSIO	016007	152046	9B000	Budget Designated for Future FYs	07003	KGEN
2017	06		016007	152183	9B000	Budget Designated for Future FYs	07003	KMTRO
2017	07	FPPAY	435734	227210	10922	OPE Blended 12 mth Faculty/OAs	0OAPAY	
2017	06	FFEES	001265	227100	79392	Miscellaneous Service Reimbursement	01001	
2017	07		001100	227100	20000	Services & Supplies Expense	OASA	YSENB
2017	07	FTLFEE	001265	227173	06003	Services	0OTH	
2017	07	FFEES	001265	227100	06398	Miscellaneous Fees	01001	
2017	07	FASRGF	001100	227070	9B000	Budget Designated for Future FYs	0RCTG	
2017	07	FTRFBA	435757	227070	9B000	Budget Designated for Future FYs	0REMB	
2017	06		001100	227065	20106	Books Publication & Other Ref. Mat.	OASA	YSTH

Figure 25: financial report

6.2.6 Improving reports

Creating reports require three simple steps:

- a. Connect to a data source;
- b. Create a query;
- c. Add report visualizations connected to queries to the report;

There are many ways to improve reports, and this section explores some of them.

6.2.6.1 Object properties and context menu

Much like in common office tools such as Excel or Word, Cognos offers users the ability to change how data is presented, and every element (object) has their own properties that users can control, such as a list, a field header, a data field, report header and footer or the whole report.

All available properties can be altered in the object's property settings, which can be viewed by clicking the desired object. If the properties list is hidden, click "Show properties" (figure 22, [d]) to show.

When an object is clicked, Cognos also presents a context menu with shortcuts to some of the most used properties for the selected object.



Exercise: in report designer, click the list header ACCOUNT. Cognos presents the context menu.



Figure 26: context menu

Through the context menu it is possible to filter, sort, summarize (total, average, count, etc.), group and format, among other functions. Hovering the mouse over the icons shows their tips.

6.2.6.2 Sorting

To sort the report list, click on a field header and then click  (sort). Choose ascending or descending. It is also possible to sort on multiple fields by selecting the sort option "Edit layout sorting...". Select the desired fields by double clicking the field name, use  to change the sort order.

Exercise: click the list header ACCOUNT, click  and select Ascending to sort the list by Account in ascending order.

6.2.6.3 Grouping

Another useful property in Cognos is grouping. Grouping merges repeating row values into a single cell making it easier to read the information, as exemplified in figure 26.

Exercise: click the list header ACCOUNT and click  to group the list by account code.

ACCOUNT	ACCOUNT
10500	10500
10501	10501
10501	
10501	
10503	10503

Figure 27: ungrouped vs grouped

6.2.6.4 Rows per page

Lists, by default, show 20 rows per page, which is done to speed up report execution (there is a direct relationship between the number of lines Cognos presents and the time it takes for the report to load). Paging can be changed by altering the property “Rows per page”, and setting the number of rows. This property is commonly set to larger numbers, such as 10,000, to prevent pagination.

Exercise: select the list object and change the “Rows per page” property to 9999.

6.2.6.5 Adding fields to a report

As mentioned before, reports present data contained in queries. To add fields to a report it is necessary to ensure the fields are available in the report object’s source query.

To review how to add fields to a query, refer to section 6.2.2 in this document.


Exercise: Add current activity to the report following the steps below.

- Open query view (figure 17, [1]);
- Select your Query1 (figure 17, [b]);
- Click data source (figure 17, [f]);
- Click Source, then locate “Current YTD Activity Sign Adjusted” (figure 18);
- Drag field and drop into data items list (figure 17, [c]);

The field is now a part of the query.

- Click Pages and select Page1 (figure 22);
- Click the corner of the List object (figure 23, [e]);
- Click data source and data items (figure 24);
- Drag “Current YTD Activity Sign Adjusted” and drop into List. Look for the “drop indicator”, bar separating the data fields in the field list;

6.2.6.6 Adding a summary

Cognos allows writers to add summaries to list fields. This is done by clicking the field header, the button  (Summarize), and selecting the desired type of summary. Summaries can be totals, averages, counts or custom calculations.

Exercise: Add a total to “Current YTD Activity Sign Adjusted”

- a. Click the header for “Current YTD Activity Sign Adjusted”;
- b. Click summarize and select Total;

6.2.6.7 Other report visualizations

Cognos Analytics has many visualization tools available for writers to leverage in their reports. To view Cognos report tools, click Page design (figure 21, [a]) and Toolbox (figure 28, [a]).

There are many options to choose from, and here are some of the most used in U of O reports.

- Text Item: fixed content label to the report, such as the report name in the page header;
- Hyperlink: adds a “clickable” link into a report;
- Date: date field;
- Page number: adds a page count;
- Row number: adds a line count to a list;
- Image: links to an image in a given URL;
- Crosstab: equivalent to a pivot table in Excel;
- Visualization: allows writers to select among a number of graphics visualizations, such as like graphs, bar graphs, pie charts, scatter plots, among others;
- Repeater: allows users to create a set of repeating fields. An example of application are form letters;
- Repeater table: creates a repeating set of fields that can be used to create, for example, mailing labels;

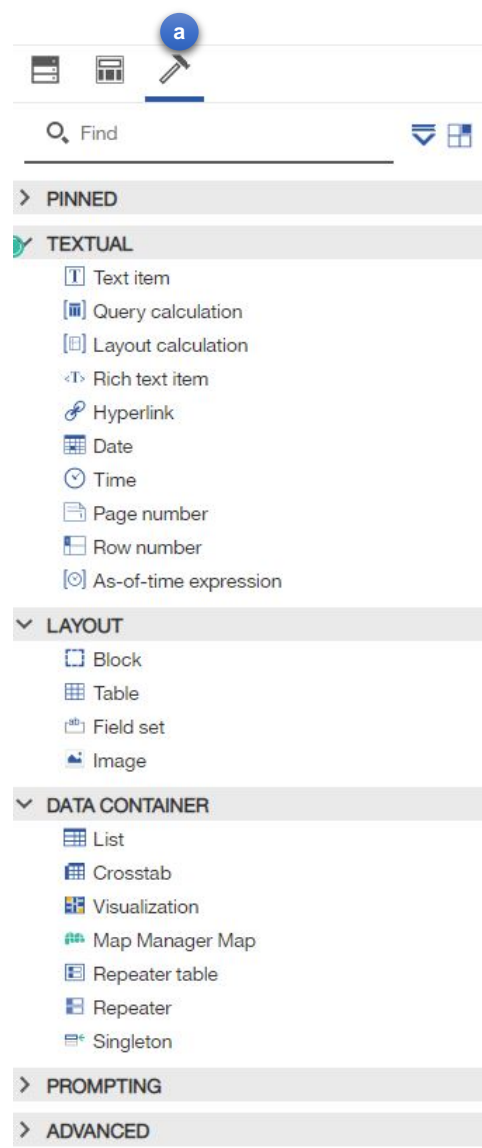
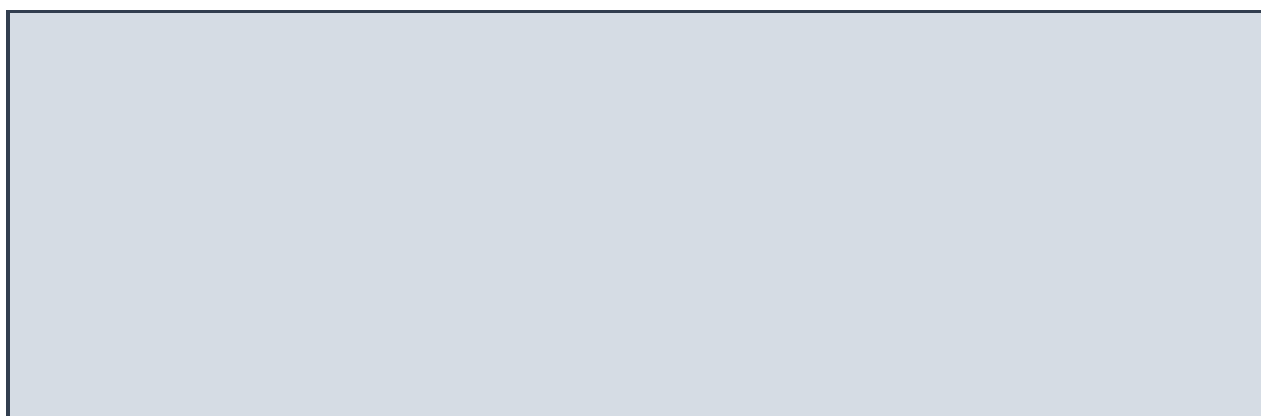


Figure 28: toolbox menu

6.2.6.8 Tidying up

Attention to detail takes reports to a higher level of quality. These are a few steps that can be taken to make sure reports run well and are easily maintainable:

- a. Name queries, pages and reports by editing the Name property. Well labeled objects makes it easier to understand what each part of the report does;
- b. Add header and footer to reports with report title, page number, run date and time;
- c. When saving reports, give them meaningful names even if they turn out to be somewhat long. Often, the meaning behind codes and abbreviations are forgotten;



7 Classes and further training

IDR offers additional training for U of O faculty and staff. The next training step is intended for individuals who wish to learn how to write more complex reports in Cognos, leveraging parameters for flexibility, custom data fields, graphics, drill through, complex queries and other advanced features.

After completing this class the trainee will become proficient in writing complex reports for departmental and enterprise use.

Classes and schedules are posted in MyTrack Talent Management System. For more information please visit <https://hr.uoregon.edu>.

"The goal is to turn data into information, and information into insight."
Carly Fiorina