Common Analytics Procedures

Note
For a list of How To Analytics documents, see Presentations and Documents - Analytics.

This section contains a cookbook of procedures that illustrate of how to use Analytics.

Formatting Procedures

Logo in Analytics Report Title

For information on adding a logo to the title of an Alma Analytics report, see How to add a logo to the top of an Alma Analytics report.

Number of Decimal Places

You can set the number of decimal places for numbers in an Analytics report.

To set the number of decimal places for sums:

1. From the Analytics dashboard, select New > Analysis and then select Select Subject Area > Fines and Fees.
2. Select the following columns from the Fines and Fees Transactions dimension:
   ◦ Fine and Fee Status
   ◦ Fine Fee Transaction Modification Date
   ◦ Original Amount
3. From the User Details subject area select the following:
   ◦ User Name
   ◦ First Name
   ◦ Last Name
4. Select the Results tab. In the following example, the sums are rounded up to whole numbers. For example, 29.5 is rounded up from 28.5:
5. Select the **Criteria** tab to view the columns of the report.

6. From the column that contains the sum (in our example the Original amount column) select the More Options icon and select **Column Properties** from the drop-down list.

**Column Properties Option**

The Column Properties dialog box appears.
7. Select the **Data Format** tab.

8. Select the **Override Default Data** checkbox. Note that Decimal Places is set to 0.

9. From the **Decimal Places** drop-down list, select 2:

10. Save the report and select the **Results** tab. The sums appear as two decimal places and the report displays **28.50** instead of **29**: 
Currency Symbols

To add currency symbols to numbers:

1. From Analytics, select New > Analysis and then select Select Subject Area > Funds Expenditure.
2. Create a report with the following columns:
   - Library Name
   - Vendor Name
   - Transaction Amount
3. Select the More Options icon for Transaction Amount and select Column Properties from the drop-down list.

The following is displayed:
4. Select the **Data Format** tab.

5. Select the **Override Default Data Format** check box.

6. From the Treat Number As drop-down list, select **Currency**. The Currency Symbol drop-down list appears.

7. From the Currency Symbol drop-down list, select a currency symbol.

8. From the **Decimal Places** drop-down list, select the number of decimal places to which you want the results displayed.

9. Select the **Use 1000's Separator** check box to display the 1000's separator in the results.

10. Select **OK**.

11. Save the analysis.

12. Select the **Results** tab to display the report with a currency symbol displayed in the Transaction Amount column, for example:

```
<table>
<thead>
<tr>
<th>Library Name</th>
<th>Vendor Name</th>
<th>Transaction Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology Library (BIO)</td>
<td>The Bookhouse, Inc.</td>
<td>£74.99</td>
</tr>
<tr>
<td>Graduate Library (GRAD)</td>
<td>Baker &amp; Taylor</td>
<td>£75.35</td>
</tr>
<tr>
<td></td>
<td>Book Sense</td>
<td>£97.78</td>
</tr>
<tr>
<td></td>
<td>Coliuts Information Services</td>
<td>£80.50</td>
</tr>
<tr>
<td></td>
<td>EBSCO Electronic</td>
<td>£14.95</td>
</tr>
<tr>
<td></td>
<td>Haworth Press, Inc.</td>
<td>£126.00</td>
</tr>
<tr>
<td></td>
<td>HighWire Press</td>
<td>£19.44</td>
</tr>
<tr>
<td></td>
<td>Mostly Monographs, Inc.</td>
<td>£49.99</td>
</tr>
<tr>
<td></td>
<td>Swetswisse (Swets Information Services)</td>
<td>£43.22</td>
</tr>
<tr>
<td></td>
<td>Templar Books</td>
<td>£29.80</td>
</tr>
<tr>
<td></td>
<td>The Bookhouse, Inc.</td>
<td>£71.25</td>
</tr>
<tr>
<td></td>
<td>Yankee Book Peddler</td>
<td>£192.61</td>
</tr>
<tr>
<td></td>
<td>AAAS</td>
<td>£2,032.50</td>
</tr>
<tr>
<td></td>
<td>AR Triton, Inc.</td>
<td>£52.00</td>
</tr>
<tr>
<td></td>
<td>Antonio's Casa de Libri</td>
<td>£44.45</td>
</tr>
<tr>
<td></td>
<td>BBTG</td>
<td>£28.00</td>
</tr>
<tr>
<td></td>
<td>BAKER &amp; TAYLOR</td>
<td>£174.92</td>
</tr>
</tbody>
</table>
```

**Additional Text**

You can configure Analytics to automatically add text to the results of a report. In the following example, the characters ### are added to the results of a report.

**To add text to the results of a report:**

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.

2. Create a report with the following columns, for example:
   - Bibliographic Details > Title
3. From the field to which you want to add text, select the More Options icon and select **Edit Formula.** The Edit Column Formula page is displayed:

4. Insert the double pipe (||) symbol after the existing column formula by entering it manually or by selecting the double pipe symbol at the bottom of the page.

5. After the double pipe symbol, enter the text you want to add surrounded by single quotes, and select **OK.** In this example, we add `'###'`.

   ![Edit Column Formula](image)

   **Edit Column Formula**

   **Column Formula**

   `"Bibliographic Details","Title")||###`

   **Column Formula with Text to Be Added**

   The text is added to the results and the column name.

   ![Report with Added Text](image)

   **Report with Added Text**

6. To remove the text from the column heading, select the More Options icon and select **Column Properties > Column Format.** The Column Format tab appears:
7. Select **Custom Headings** and change the column heading name.

8. Select **OK**. The column heading is changed.

---

### License Obligation Notes

You can display the obligations note for licenses in reports from the **Licenses** subject area. This note indicates if you can cancel the license.

**To display the obligations note for licenses in reports:**

1. Create an analytics report using the **License Term Section** and **License Term Value** fields.

2. Filter **License Term Section** by **Obligation**. For example:
3. Run the report. The obligations note appears in the License Term Value field. For example:

![Obligations Note]

### Values on the Top of Each Bar of a Bar Graph

This section describes how to display values on the top of each bar of an Analytics bar graph.

![Values on Top of Each Bar]

**To display values on the top of each bar of an Analytics bar graph:**

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.

2. Create a report with the following columns, for example:
   - Loan > Loans
   - Location > Library Name

3. Select the My View icon
   - and then select **Graph > Bar > Default (Vertical)**.
4. From the Results tab, select the Edit icon

![Edit icon](image1)

to edit the graph:

![Graph with edit icon](image2)

Pencil Icon

5. Select the Edit Graph Properties icon

![Edit graph properties](image3)

Edit Graph Properties

6. From the Titles and Labels tab, select **Data Labels**:
From the Display Options tab, select **Always**:

Values are now displayed on the top of each bar of the bar graph:

**Export Link (Dashboards)**

You can add an **Export** link to reports that you put into dashboards. The dashboard is exported to Excel.
To add an Export link in dashboards:

1. Select the Page options icon
   in the top-right of the page of the dashboard and select Edit Dashboard. The dashboard moves to edit mode.

2. Select the report to which you want to add the Export link.

3. Select the Properties icon
   in the report and select Report Links. The following appears:

![Report Links](image)

4. Select Customize and Export and select OK.

5. Select the Save icon


   The Export link is added to the bottom of the report:

---

**Note**

You can add an Export link only to dashboards that you create, not out-of-the-box dashboards.
Functional Procedures

Subtotals

This section describes how to add a subtotal to your report and the impact of the order of the columns on your subtotals.

To create an analytics report with a subtotal:

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Create a report with the following columns:
   - Location > Library Code
   - Location > Location Code
   - Loan Date > Loan Year
   - Loan Date > Loan Full Month
   - Loan > Loans (a measurement)
3. Select the **Results** tab to display the report. For example:
4. Calculate a subtotal of each library for the entire range. (This is relevant because the loans per month are displayed.)

1. Select the Edit icon

   ![Edit icon](Image)

   to display Edit view.

2. For the column that you want to calculate a subtotal, select the Sigma icon

   ![Sigma icon](Image)

   and then select **After**. In the following example, this is performed in the Location > Location Code column:

   ![After option](Image)
The subtotals are now displayed:

![Subtotals](image)

**Mathematical Formulas**

In the following example, one column displays the number of loans and a second column displays the number of loan days. A third column is created that displays the number of loan days divided by the number of loans. This may be useful for seeing high and low usage of items in order to decide where new items need to be purchased and where items can be withdrawn.

**To create this analytics report:**

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Create a report with the following columns:
   - Library Name
   - Loans
   - Loan Days
   - Loan Date

The criteria for the report appear as follows:
3. Select the **Results** tab. The following is an example of the results:

<table>
<thead>
<tr>
<th>Library Name</th>
<th>Loans</th>
<th>Loan Days</th>
<th>Loan Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Library</td>
<td>23</td>
<td>95</td>
<td>1/2/2013</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>239</td>
<td>1/3/2013</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>255</td>
<td>1/4/2013</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>173</td>
<td>1/5/2013</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>23</td>
<td>1/6/2013</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>363</td>
<td>1/7/2013</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>328</td>
<td>1/8/2013</td>
</tr>
<tr>
<td></td>
<td>46</td>
<td>481</td>
<td>1/9/2013</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>146</td>
<td>1/10/2013</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>233</td>
<td>1/11/2013</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>178</td>
<td>1/13/2013</td>
</tr>
<tr>
<td></td>
<td>104</td>
<td>722</td>
<td>1/14/2013</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>582</td>
<td>1/15/2013</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>447</td>
<td>1/16/2013</td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>769</td>
<td>1/17/2013</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>360</td>
<td>1/18/2013</td>
</tr>
</tbody>
</table>

Report

4. Select the **Criteria** tab and add a new column of any kind.

5. Select the More Options icon of the new column and select **Edit Formula**. The Column Formula dialog box is displayed:
6. Delete the existing formula.

7. Enter "Loan"."Loan Days"/"Loan"."Loans"

8. Select the More Options icon
   of the new column and select Column Properties > Column Format and enter a new name for the column in the Column Heading field.

9. Select the More Options icon
   of the new column and select Column Properties. The column Properties dialog box appears:

   ![Column Properties dialog box]

   Column Properties

10. From the Data Format tab, select a number of decimal places from the drop-down list.
    
    The following is an example of the results:
In the following example, the number of days between the date an order is sent to a vendor and the date the item is received. This may be useful for seeing which vendors are the fastest to respond and which vendors are the slowest to respond.

**To create this report:**

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Create a report with the following columns:
   - PO Line > Send Date
   - Physical Item Details > Receiving Date
   - Bibliographic Details > Title
   - PO Line > Vendor Account Description

   The criteria for the report appear as follows:

3. Select the **Results** tab. The following is an example of the results:

4. Select the **Criteria** tab and add a new column of any kind.
5. Select the More Options icon
of the new column and select **Edit Formula**. The Column Formula dialog box is displayed:

![Column Formula](image)

**Column Formula**

6. Delete the existing formula.

7. Enter\[
\text{TIMESTAMPDIFF}(\text{SQL\_TSI\_DAY}, \text{"PO Line"."Sent Date"}, \text{"Physical Item Details"."Receiving Date"})
\]

The following are the elements of the formula:

- **TIMESTAMPDIFF** – display the difference of two dates
- **SQL\_TSI\_DAY** – display the unit in days
- The first value (**PO Line\.Sent Date**) – the date from which you want to subtract
- The second value (**Physical Item Details\.Receiving Date**) – the date to subtract.

8. Select the More Options icon

of the new column and select **Column Properties > Column Format** and enter a new name for the column in the Column Heading field.

The following is an example of the results:

![Report](image)

**Report**

The Days to Arrive column displays the number of days from when the item was ordered until it was received.

---

**Concatenated Fields**

You may want to put two fields together and have text between them. For example, you now have library code and item ID in two separate columns and you want to have library code, space, dash, space, and then item ID in one column. This section describes one way of doing this.
To concatenate two or more fields in an Analytics report:

1. From Analytics, select New > Analysis and then select Select Subject Area > Fulfillment.
2. Create a report with the following columns, for example:
   - Loan Details > Item ID
   - Loan Details > Barcode
   - Location > Library Code
3. From the Physical Items Subject Area, add Item Creation Date > Item Creation Date.
4. Select the Results tab and verify that the results have the columns that you want to concatenate:
5. In the Criteria tab of each column that you want to concatenate, select the More Options icon and then select Edit Formula:
The formula of the column appears:

```
"Location"."Library Code"||"Physical Item Details"."Item Id"
```

6. Select the More Options icon
   and then select **Edit Formula** for one of the fields that you want to concatenate:

**Edit Formula**

After the existing field, add a pipe and then the field (or fields) that you want to appear. For example:

```
"Location"."Library Code"||"Physical Item Details"."Item Id"
```

7. Select the **Results** tab. The column now contains both the library code and the item ID:
8. Select the More Options icon and then select Edit Formula.

9. Add a “space dash space” surrounded by single quotes and another double pipe between the Library Code and the Item ID.

   Change the following:

   "Location"."Library Code"||"Physical Item Details"."Item Id"

   To the following:

   "Location"."Library Code"| '-' ||"Physical Item Details"."Item Id"

10. Select the Results tab. The field is concatenated with a space dash space between each part:
11. Delete the non-desired field by selecting the More Options icon and selecting Delete.

12. Rename the concatenated field:
   1. Select the More Options icon and select Column Properties:
   2. Enter a new name in the Column Heading field.
   3. Select the Custom Headings check box.
13. Select the **Results** tab to see the results:

Bibliographic Records with Multi-library Holdings

This report displays all bibliographic records that have holdings in more than one library.

**To create a report of all bibliographic records that have holdings in more than one library:**

1. From Analytics, select **New > Analysis** and then select **Select Subject Area > Physical Items**.
2. Create a report with the following columns, for example:
   - Bibliographic Details > MMSID
   - Bibliographic Details > Title
   - Another field to serve as a placeholder for a column. (It does not matter what it is, because its formula will be changed.) For example, Physical Item Details > Provenance Code.
3. In the lower pane, add a filter for Physical Item Details.Lifecycle to be active so that the report does not include deleted items.
4. Edit the formula of Physical Item Details > Provenance Code (the placeholder column) to perform a distinct count of library codes related to the bibliographic record.

5. Remove the existing formula and add a function for a distinct count.
The formula is now \( \text{COUNT(DISTINCT expr)} \).

6. Change the Column Formula to count the library code by the MMS Id:

\[
\text{COUNT(DISTINCT "Location"."Library Code" by "Bibliographic Details"."MMS Id")}
\]

7. Change the column header to an appropriate name, for example, **Number of libraries**.
8. Filter the column with the count of libraries to have only rows with two or more libraries (is greater than or equal to 2):

9. Select the Criteria tab to display the results. For example:
   - MMS ID 991105780000121 Danmarks kirker – which has holdings in two libraries
   - MMS ID 991108690000121 Australian journal of botany – which has holdings in three libraries
The following is MMS ID 991105780000121 Danmarks kirker which has holdings in two libraries:

Danmarks Kirker

The following is MMS ID 991108690000121 Australian journal of botany which has holdings in three libraries:

Australian Journal of Botany

Conditional Fields

You can use the CASE condition to have an alternate text displayed as a value in an analytics report. The syntax is slightly different if the value is numerical or text. In this example, the CASE condition is used to make the following changes:

- The value for the column Time Loaned, is changed to Not< Loaned if the value is 0 and Loaned if the value is not 0
- The value for the column Publisher is changed to Reidel Publishing if the value is Reidel Pub Co; otherwise, it is not changed

To use the CASE condition:

1. Create a report using, for example, the following columns from the Physical Items subject area:
   - Bibliographic Details > MMS ID
 ◦ Physical Details > Time Loaned
 ◦ Bibliographic Details > Publisher

<table>
<thead>
<tr>
<th>MMS Id</th>
<th>Time Loaned</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>99146310300001361</td>
<td>0</td>
<td>Penguin</td>
</tr>
<tr>
<td>99146310500001361</td>
<td>0</td>
<td>World Scientific</td>
</tr>
<tr>
<td>99146310600001361</td>
<td>10</td>
<td>Doubleday</td>
</tr>
<tr>
<td>99146310700001361</td>
<td>0</td>
<td>Ferrill</td>
</tr>
<tr>
<td>99146311000001361</td>
<td>2</td>
<td>HarperPerennial</td>
</tr>
<tr>
<td>99146311100001361</td>
<td>0</td>
<td>Ryden Press</td>
</tr>
<tr>
<td>99146311500001361</td>
<td>2</td>
<td>Adams Media</td>
</tr>
<tr>
<td>99146311800001361</td>
<td>1</td>
<td>Macmillan</td>
</tr>
<tr>
<td>99146312200001361</td>
<td>1</td>
<td>Sever Saunders</td>
</tr>
<tr>
<td>99146312400001361</td>
<td>0</td>
<td>Geidel Pub Co</td>
</tr>
<tr>
<td>99146312500001361</td>
<td>0</td>
<td>Life Insurance Federation of Australia</td>
</tr>
<tr>
<td>99146312800001361</td>
<td>0</td>
<td>Duke University Press</td>
</tr>
<tr>
<td>99146313000001361</td>
<td>0</td>
<td>Gryphon</td>
</tr>
<tr>
<td>99146313300001361</td>
<td>0</td>
<td>Hans</td>
</tr>
<tr>
<td>99146313500001361</td>
<td>0</td>
<td>Methuen</td>
</tr>
<tr>
<td>99146313900001361</td>
<td>0</td>
<td>University of Queensland Press</td>
</tr>
<tr>
<td>99146342000001361</td>
<td>1</td>
<td>Doubleday Australia</td>
</tr>
<tr>
<td>99146344000001361</td>
<td>0</td>
<td>JTIS</td>
</tr>
<tr>
<td>99146347000001361</td>
<td>1</td>
<td>Springer</td>
</tr>
<tr>
<td>99146350000001361</td>
<td>0</td>
<td>Avionics Communications</td>
</tr>
</tbody>
</table>

2. From the Criteria column, select the More Options icon of the Time Loaned column and select **Edit Formula**. The Column Formula dialog box is displayed:
3. In the Column Formula box, insert one of the following formulas instead of the existing text and change the folder heading, if desired:

   ◦ CASE "Physical Item Details"."Time Loaned" WHEN 0 THEN 'Not Loaned' ELSE 'Loan' END
   ◦ CASE WHEN "Physical Item Details"."Time Loaned" = 0 THEN 'Not Loaned' ELSE 'Loan' END

4. From the Criteria column, select the More Options icon of the Publisher column and select Edit Formula.

5. In the Column Formula box, insert the following formula instead of the existing text and change the folder heading, if desired. (Note the single quotes around the conditional text):

   ```
   CASE "Bibliographic Details"."Publisher" WHEN 'Reidel Pub Co' THEN 'Reidel Publishing' ELSE "Bibliographic Details"."Publisher" END
   ```

**Note**

If you copy and paste the above text, it is recommended to manually retype the single quotes because the Windows copy and paste feature may change them to a different character, resulting in an error message.
Conditional Text

You can change the text in an analytics report to be different colors in order to identify different values at a glance. The following report will be used as an example:

To conditionally change the text format in an Analytics report:

1. From the Inv. Payment Status field, select the More Options icon and select Column Properties:
Column Properties

The Column Properties dialog box appears.

![Column Properties Dialog Box](image)

2. Select the **Conditional Format** tab > **Add Condition** > **Inv. Payment Status**:

![Conditional Format](image)

The following appears:

![New Condition](image)

New Condition
3. Select the value whose format you want to change (for example, **Not Paid**) and select the color that you want the value to be (for example, red):

![Edit Format](image)

Red Font

4. Do the same for all other values that you want to format with a color:

![Edit Format](image)

Green Font

The report now appears with the words **Not Paid** in red and **Paid** in green:

![Report with Color Formatting](image)

**Prompts**

You can create an Analytics report with prompts that ask you to select the variables with which to create a report. The report in this example is for loans in Main Library by date and location. You are prompted to enter a date range and location which are used to create the report.

**Note**

Although there are three kinds of prompts available in analytics reports (column prompt, variable prompt, and image prompt), this example only demonstrates the column prompt.

**To create this analytics report:**

1. From the Analytics dashboard, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Select the following columns:
3. From the Location Name field, select the More Options icon and select Filter.

4. Filter the results to Library Name is equal to / is in Main Library.

5. Select the Results tab. The following, for example, is displayed:

6. Select the Prompts tab and then the plus sign to add a new prompt.
7. Select **Column Prompt** and **Item Location.Location Name**. (If you want to select a column not in the report, select **More Columns...**). The following appears:

New Prompt: Location Name

8. From the **Operator** drop-down list, select **is equal to / is in** and from the **User Input** drop-down list, select **Choice List**.

9. Create a prompt for Loan Date:
   1. Select the plus sign, select **More Columns...**, and select **Loan Date > Loan Date** since it is not in the report.
   2. From the **Operator** drop-down list, select **is between**, and from the **User Input** drop-down list, select **Calendar**.
10. Run the report by selecting **Open** (not Edit).

The prompts appear:

11. Fill in the prompts and select **OK**.

The report is displayed with the criteria you entered at the prompts:
You can add the report to the Analytics menu or the dashboard as a widget and run the report from that location (for more information, see Running Analytics Reports and Displaying Them in Alma):

- From the Analytics menu:

![Report in Analytics Menu](image1)

- From the dashboard, select **Open in a new window**:

![Report in Dashboard](image2)

### Removing the NULL Value from a Prompt

You can remove the NULL value from the possible values for a prompt.

To remove the NULL value from the possible values for a prompt:

1. Select the prompt and select **Edit Prompt**. The following appears:
2. From the **Choice List Values** drop-down list, select **SQL Results**.
3. Select OK.

The NULL value does not appear in the list of possible values for the prompt.

### Prompts (Dashboard)

You can create a dashboard prompt that allows you to filter the results of a report within a dashboard.

#### Note

For more information on creating dashboards, see [Creating a Dashboard](#).

There are three steps in creating a prompt in a dashboard:

1. Create the prompt.
2. Create a report that will use the prompt.
3. Create a dashboard and associate the prompt and the report to it.

**To create a prompt in a dashboard:**

1. Create the prompt.
   1. Select New > Dashboard Prompt > Borrowing Requests.
   2. Select the New icon and select Column Prompt.
   3. Select Bibliographic Details > Material Type and select OK.
   4. Select the options you want and select OK.
   5. Save the prompt.

2. Create a report that will use the prompt.
   1. Select New > Analysis.
   2. Create a report with the Borrowing Request Details > Number of Requests and Bibliographic Details > Material Type fields.
3. Add the **is prompted** filter to the Material Type field.

4. Save the report.

3. Create a dashboard and associate the prompt and the report to it.
   1. Select **New > Dashboard > Edit**.
   2. From the left pane, select the report and prompt you created.

   The dashboard shows the report and the prompt that can be used to filter the report.
3. Save the dashboard.

---

**Using Report Output as Input Data**

It can be useful to take the output of one report and use it as input in another report. For example, a report in one subject area can be used as input for a report in a different subject area. This provides a means of combining the dimensions of various subject areas together in one report.

For example, you want to determine the effectiveness of a fund by checking the fund for the number of loans per item according to several criteria, such as arrival date and vendor.

In the Physical Items subject area, you can get a list of items and the number of loans per item for the criteria. However, the Physical Items subject area does not have a Fund field, so you cannot get a list of loans by fund from which the item was ordered.

On the other hand, in the Funds Expenditures subject area there is a Fund field, but there is no Number of Loans field.

To get the data you want, you first make a report of the PO Line reference (order line number) using the Funds Expenditures subject area and then use the results from that report as input in a second report with the Physical Items subject area. This is done using the is based on the results of another analysis filter.

**To use the output of an analytics report as the input for another report:**

1. Create a report with the **Fund Expenditure > Fund Ledger > PO Line Reference** field.
2. Apply the following filters:
   - Set the fund ledger name to Library and Information Science.
   - Set the PO line sent date to be within the last year.
   - Set the receiving status to be yes.
3. Create a report with the **Physical Items > PO Line > PO Line Reference** field.

4. Select the following filters in the **New Filter** dialog box:
   - **Operator** – is based on results of another analysis filter.
   - **Saved Analysis** – select the report you made with the Fund Expenditure subject area
   - **Relationship** – set to **is equal to any**
   - **Use Values in Column** – **PO Line Reference**

![PO Line Reference Field with Filters](image)

**PO Line Reference Report**
These settings filter the results by PO Line Reference Number based on the fund, so that the report displays the number of loans for each PO Line Reference based on the fund even though the Fund field is not in the Physical Items subject area. The following are the criteria of the report:

The following is an example of the report:

**PO Line Reference Filtered By Fund**

The following is an example of the report:
Instead of just a list of the PO Line Reference Numbers and an indication of how many times items from that PO Line were loaned you may want an indication of how many total items were ordered from that fund for the given time period. This indicates how many of these items were loaned.

If the number is relatively small you can conclude that this fund is not being used effectively. Alternatively, if there is a high number of loans for items from this fund, you can conclude that this fund is being used effectively.

**To create the report:**

1. Create a report using the following criteria:

   ![Image of report criteria]

   **Report Criteria**

   2. Remove the PO Line Reference field and add two more fields, such as the Num of Loans field. These fields are just placeholders and will be renamed.

   3. Use the Edit formula function to change the three fields to the following:

      - **First field:**
        - Column Header: **Items Not Loaned**
        - **Formula:** `FILTER("Physical Item Details"."Num of Items" USING ("Physical Item Details"."Last Loan Date" IS NULL))`

      - **Second field:**
        - Column Header: **Items Loaned**
        - **Formula:** `FILTER("Physical Item Details"."Num of Items" USING ("Physical Item Details"."Last Loan Date" IS NOT NULL))`

      - **Third field:**
        - Column Header: **Total Items**
        - **Formula:** "Physical Item Details"."Num of Items"
The following is an example of the report:

Loans According to Fund Report

You can add a graph to the report:

Graph

The following is an example of the graph:
The graph illustrates that the fund is not very effective. Only 4 out of a total of 51 items ordered in the last year have been loaned.

To see the total percentage of items loaned out of all the items ordered, use the following filter to divide the total amount of items loaned by the total amount of items ordered and then multiply by 100:

\[
\frac{(\text{FILTER}(\text{"Physical Item Details"}.\text{"Num of Items" USING ("Physical Item Details"}.\text{"Last Loan Date" IS NOT NULL)}) / \text{"Physical Item Details"}.\text{"Num of Items"}) \times 100}{100}
\]

For example:
Combining Reports

This section describes how to combine two reports by using a dummy column. In the following example, the report shows all portfolios that are not available, as well as title, collection name, and PO line reference. The report shows both rows that have values for **PO Line Reference** as well as rows that have null values for **PO Line Reference**.

When combining two reports using union, the numbers of columns, data types, and filters must be the same.

To combine two reports using union to display null values:

1. Create a report with the following fields and filters:
   
   ![Report Columns and Filters](image)

2. In the **Criteria** tab, select the combine sets icon and select the subject area of the original report (in this example – **E-Inventory**).
3. Select the arrow to check that Union is selected.

4. In the left panel, find the exact same column for each column in the report, and double-click it. This puts the column in the union report. Do this for all of the columns, except for PO Line Reference.

5. For the PO Line Reference column, select any column from the left panel, and double-click it. In this example, the ISBN column is used.

6. For the ISBN column, select Edit Formula, and enter 0. Select OK.
The **PO Line Reference** column is now substituted with a **0**.

7. Using the filter pane, add the two filters that are in the original report.

8. Select the **Results** tab to view the resulted report. The rows that do not have a value now appear with a **0**.
9. Edit the formula again in the **Criteria** tab, using null instead of 0. The rows with no PO line reference are blank.

Rows Appear Blank

Select any of the links (not the Edit button) in the criteria tab to edit the reports.

**Edit Reports**

Select **Result Columns** to sort the columns.

Sort Reports

The following is a report sorted by title:
Editing a Default Dashboard

For information on how to edit a default Alma Analytics dashboard, see How to Edit a Default Alma Analytics Dashboard.

Filtering Procedures

For more information on using relative date filters in Analytics, see Analytics - Relative Date Filters in Analytics.

Relative Dates

This section describes how to filter an Analytics report by a date that is non-fixed, such as “greater than 7 days ago” or “sometime this year”. This is useful if you want a report of orders made in the last week or the number of items loaned in the current year. There are several ways to create such filters. This section describes one way of doing this and presents four examples.

To filter by non-fixed dates in an Analytics report:

1. From Analytics, select New > Analysis and then select Select Subject Area > Fulfillment.
2. Create a report with the following columns, for example:
   - Loan > Loans
   - Loan > Renewals
   - Loan Date > Loan Date

The following examples describe several ways of filtering the results by a date that is non-fixed:

Example 1 – The Last Seven Days

The report displays any items loaned within the last seven days.

To display any items loaned within the last seven days:

1. From the Loan Date field, select the More Options icon
and select Filter.

2. Select **Convert this filter to SQL**.

3. Select **OK**. The following is displayed:

4. Change the text from:

   "Loan Date"."Loan Date" >= date '2013-12-03'

To:

"Loan Date"."Loan Date" >= TIMESTAMPADD(SQL_TSI_DAY, -7, CURRENT_DATE)

The text now appears as follows:

5. Select **OK**. The filter appears as follows:
6. Select the **Results** tab to view the report. The report includes results from Dec. 03, 2013:

```
<table>
<thead>
<tr>
<th>Loans</th>
<th>Renewals</th>
<th>Loan Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>665</td>
<td>0</td>
<td>12/3/2013</td>
</tr>
<tr>
<td>632</td>
<td>0</td>
<td>12/4/2013</td>
</tr>
<tr>
<td>574</td>
<td>0</td>
<td>12/5/2013</td>
</tr>
<tr>
<td>710</td>
<td>2</td>
<td>12/6/2013</td>
</tr>
<tr>
<td>83</td>
<td>0</td>
<td>12/7/2013</td>
</tr>
<tr>
<td>92</td>
<td>0</td>
<td>12/8/2013</td>
</tr>
<tr>
<td>731</td>
<td>0</td>
<td>12/9/2013</td>
</tr>
</tbody>
</table>
```

**Example 2 – The Current Month**

The report displays any items loaned in the current month.

**To displays any items loaned in the current month:**

1. Select the Edit icon

   ![Edit icon](image.png)

   in the filter pane of example #1.

2. Change the text to:

   ```sql
   "Loan Date","Loan Month Key" = MONTH(CURRENT_DATE)
   ```
3. This syntax includes all dates in December for every year. Add additional retrieval for the current year using the loan year:

```
"Loan Date"."Loan Year" = YEAR(CURRENT_DATE)
```

The filter appears as follows:

The report now includes results from the current month (December) and the current year (2013):
The report displays results from the current year (for example, 2013).

To display results from the current year:

1. Change the SQL filter from the previous example to the following:

   \[ "Loan Date"."Loan Year" = \text{YEAR} (\text{CURRENT\_DATE}) \]

2. Select the Results tab to display the report:

![Compound Layout](image)

Example 4 – The Last Year

The report displays results from the last year (the last 365 days).

1. Change the SQL filter from the previous example to the following:

   \[ "Loan Date"."Loan Date" \geq \text{TIMESTAMPADD} (\text{SQL\_TSI\_YEAR}, -1, \text{CURRENT\_DATE}) \]

The filter appears as follows:

![Filters](image)
2. Select the **Results** tab to view the report:

![Compound Layout](image.png)

**Items Returned 30 Days or More After Their Due Date**

Use the **Loan > Return Due Days** field of the Fulfillment subject area to create this report. This field displays the difference between the due date and the return date. If it is a positive number, the book was returned after the due date. If it is a negative number, the item was returned before the due date.

**Note**

You can also use the out-of-the-box report *Ex Libris - Items returned 30 or more days after due date (Late Returns)* located under shared/Community/Reports/Shared Reports/Reports/Fulfillment - Misc. reports.

To create this analytics report:

1. From the Analytics dashboard, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Select the following columns:
   - Loan > Return Due Days
   - Loan Date > Loan Date
3. From the Return Due Days field, select the More Options icon and select **Filter**.

4. From the **Operator** drop-down list, select **is greater than or equal to**.
5. In the **Value** field, enter 30.
6. Select **OK**.
7. Select the **Results** tab.

A report appears with the items returned 30 days or more after their due date:
You can create a report that shows patrons with an expiration date within one week of the present who have active loans.

To create this analytics report:

1. From the Analytics dashboard, select **New > Analysis** and then select **Select Subject Area > Fulfillment**.
2. Select the following columns:
   - **Borrower Details > Expiry Date**
   - **Borrower Details > Primary Identifier**
   - **Borrower Details > First Name**
   - **Borrower Details > Last Name**
3. To make the heading clearer, rename **Expiry Date** to **Borrower Expiry Date**.
2. Select the **Custom Headings** check box and enter **Borrower Expiry Date** in the **Column Heading** field.

3. Select **OK**.

4. Create an SQL TIMESTAMPADD filter on **Borrower Details.Expiry Date** using TIMESTAMPADD.
   1. From the Borrower Details field, select the More Options icon and select **Filter**.
   2. Select **Convert this filter to SQL**.
   3. Select **OK**.
   4. Change the text to:
      
      ```
      "Borrower Details"."Expiry Date" BETWEEN (CURRENT_DATE) AND 
      TIMESTAMPADD(SQL_TSI_WEEK, +1, CURRENT_DATE)
      ```
   5. Select **OK**.

5. Select the Filter icon and select **More Columns....**

6. Select **Loan Details > Loan Status** and select **OK**.

7. Set the **Operator** to **is equal to/is in** and the **Value** to **Active**.
The following is an example report:

8. To improve readability, have the Borrower Expiry Date appear on each row:
   1. Select the Edit icon
   2. Select the Table Content Properties icon
   3. Under Row Styling, select **Enable alternate styling** and **Repeat Cell Values**.
9. Select **OK**.

The report appears with the Borrower Expiry Date on each row:

![Report with Borrower Expiry Date on Each Row](image)

**Case-Insensitive Filtering**

You may want to filter a report by title starting with both an uppercase and a lowercase letter. One way to do this is to create two separate filters - one for uppercase and one for lowercase. This section describes how one filter can be created to achieve this.

**To filter by a string for both uppercase and lowercase with one filter:**

1. Select **Edit Formula** for the field you want to filter, for example, **Title**.
2. Change the column Heading to **Lower Case Title**.

3. In the **Column Formula** field, add **Lower** to the formula.

4. Filter by **feminism** (with a lowercase f), for example, on Lower Case Title. The report displays records whose title has either Feminism or feminism.

The following is an example of a report. However, all of the titles are in lowercase.

<table>
<thead>
<tr>
<th>Title</th>
<th>Lower Case Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1</td>
<td>encyclopedia of feminism /</td>
</tr>
<tr>
<td>2. 2</td>
<td>english feminism, 1780-1980 /</td>
</tr>
<tr>
<td>2. 2</td>
<td>european feminisms, 1700-1980: a political history /</td>
</tr>
<tr>
<td>2. 2</td>
<td>everyone was brave: the rise and fall of feminism in america /</td>
</tr>
<tr>
<td>1. 1</td>
<td>faces of feminism: a study of feminism as a social movement /</td>
</tr>
<tr>
<td>3. 3</td>
<td>faces of feminism: an activist's reflections on the women's movement /</td>
</tr>
<tr>
<td>2. 2</td>
<td>feminism /</td>
</tr>
<tr>
<td>1. 1</td>
<td>feminism: from pressure to politics /</td>
</tr>
<tr>
<td>2. 2</td>
<td>feminism: the essential historical writings /</td>
</tr>
<tr>
<td>1. 1</td>
<td>feminism after bourdieus /</td>
</tr>
<tr>
<td>1. 1</td>
<td>feminism and anthropology /</td>
</tr>
</tbody>
</table>
You want to display the real title and filter by the lowercase title.

5. Add the real title to the report, and delete Lower Case Title from the display, but leave it in the filter.

Delete from Display

The criteria now look like the following:

Criteria

The following is the report displaying results in both uppercase and lowercase.

Uppercase and Lowercase Report

Column-Specific Filtering

For information on using multiple filters for each column in an Analytics report, see Analytics - How to use multiple filters per column in an analytics report.

Filter by List of MMS IDs

For information on using values from a CSV file to filter a report, see How to Use a List of Values from a CSV File as a Filter in Alma Analytics.