

Craig and Steve's Tip of the Day: Day 4

How to calculate the percent change from one row to the next in a List

May 19, 2021
Beginner/Intermediate
IBM Cognos Analytics 11.2.0

Suppose you have some monthly data in a List on a report like this:

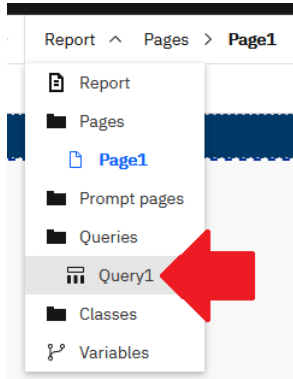
Month	Units Sold
January	1509
February	1698
March	1967
April	2451
May	2909
June	3844
July	3447
August	4665
September	5652
October	6196
November	5409
December	6324

You would like to know how much the numbers have changed from month to month by adding a new column that shows the percent change from one row to the next, like this:

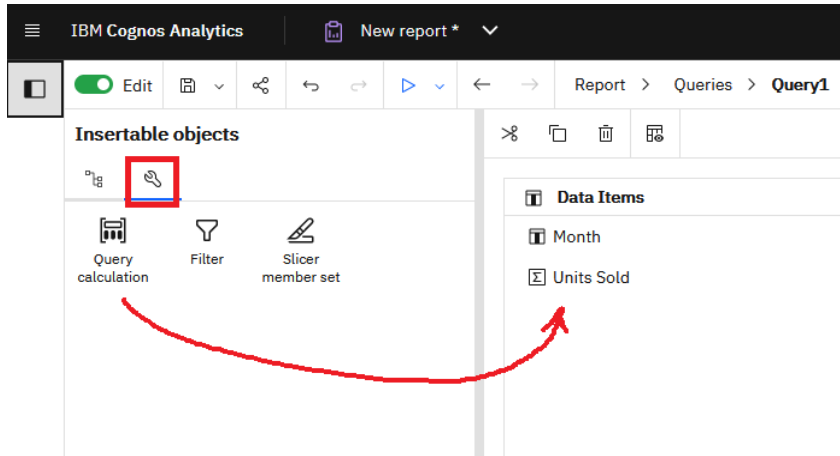
Month	Units Sold	Percent Change
January	1509	
February	1698	12.5%
March	1967	15.8%
April	2451	24.6%
May	2909	18.7%
June	3844	32.1%
July	3447	-10.3%
August	4665	35.3%
September	5652	21.2%
October	6196	9.6%
November	5409	-12.7%
December	6324	16.9%

Procedure

1. Open the query:

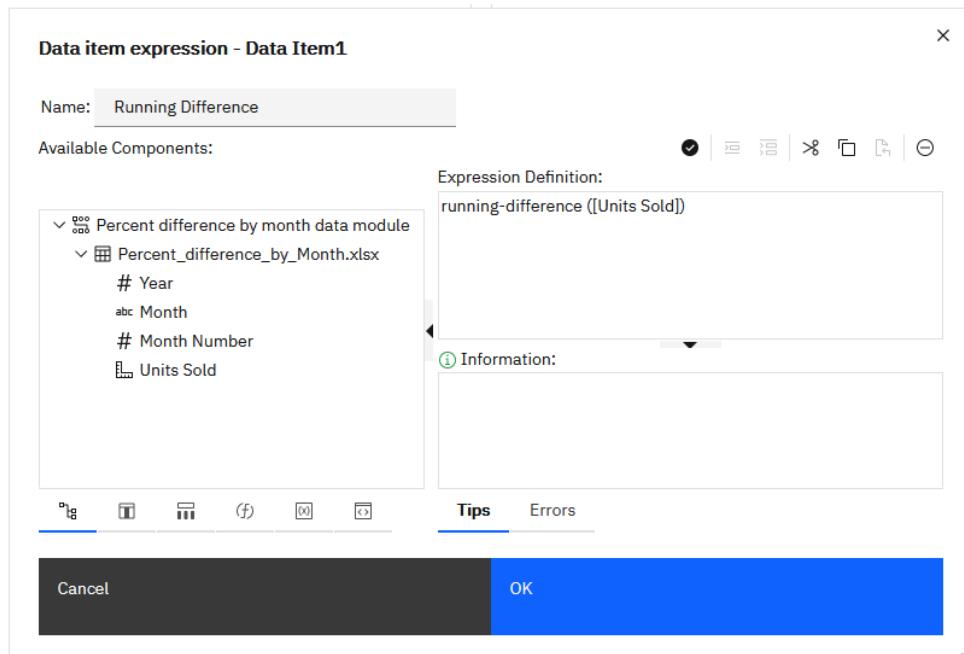


2. Open the *Toolbox* and drag a *Query calculation* object onto the *Data Items* box:

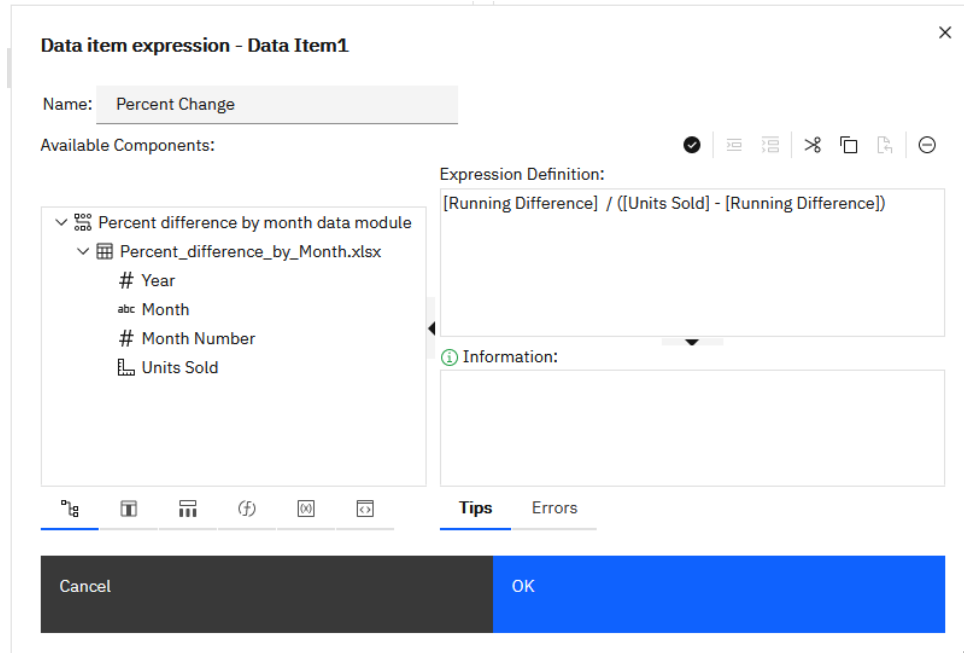


3. In the resulting dialog, enter the following:

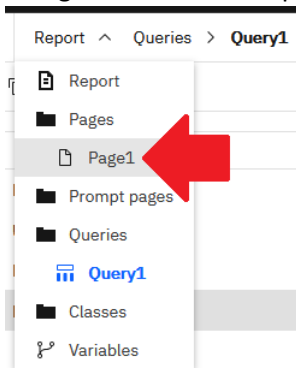
- Name: Running Difference
- Expression Definition: running-difference ([Units Sold])



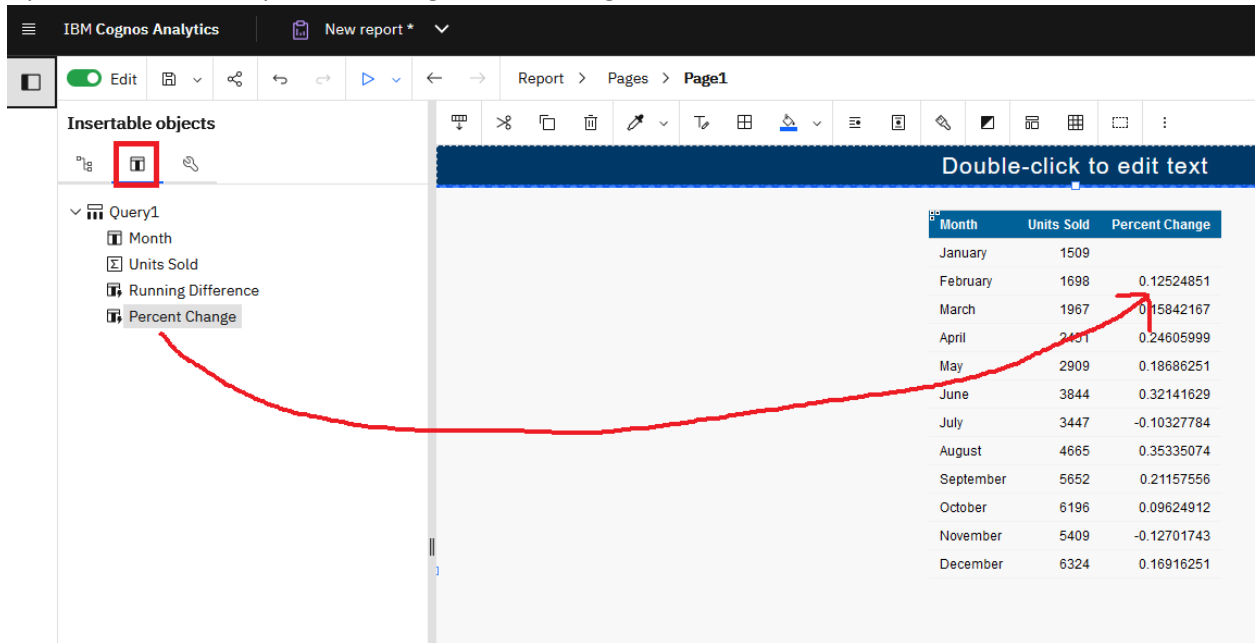
- c. Click *OK*
4. From the *Toolbox*, drag another *Query calculation* object onto the *Data Items* box.
5. In the resulting dialog, enter the following:
 - a. *Name*: Percent Change
 - b. *Expression Definition*: $[Running\ Difference] / ([Units\ Sold] - [Running\ Difference])$



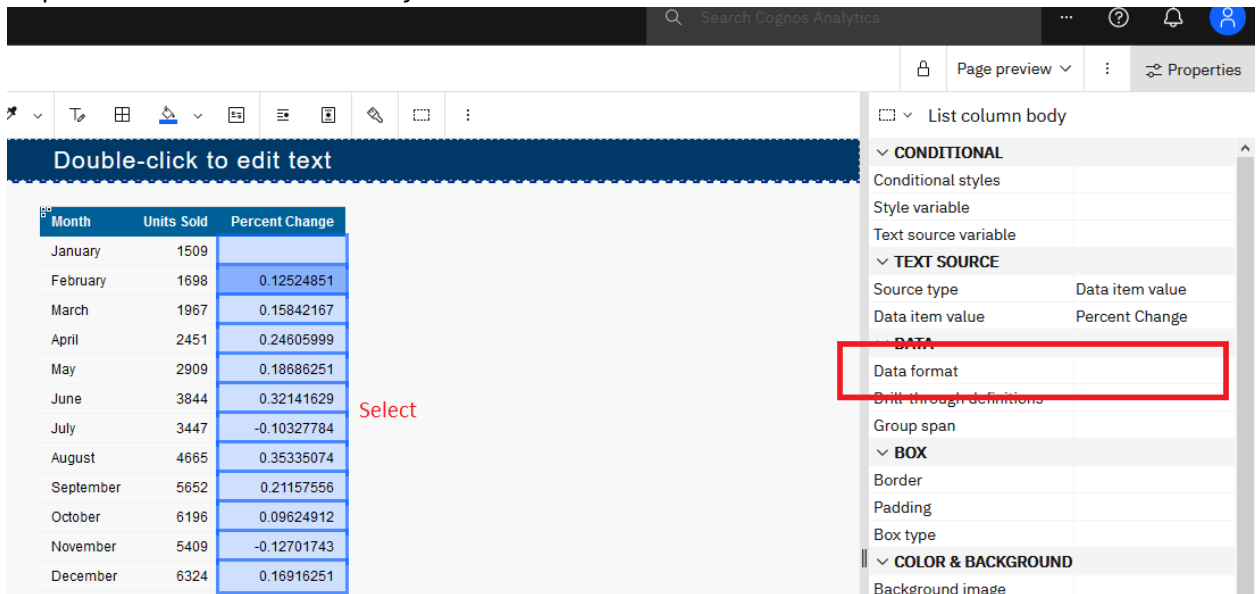
- c. Click *OK*
6. Navigate back to the report:



- Open the *Data Items* panel and drag *Percent Change* onto the List:

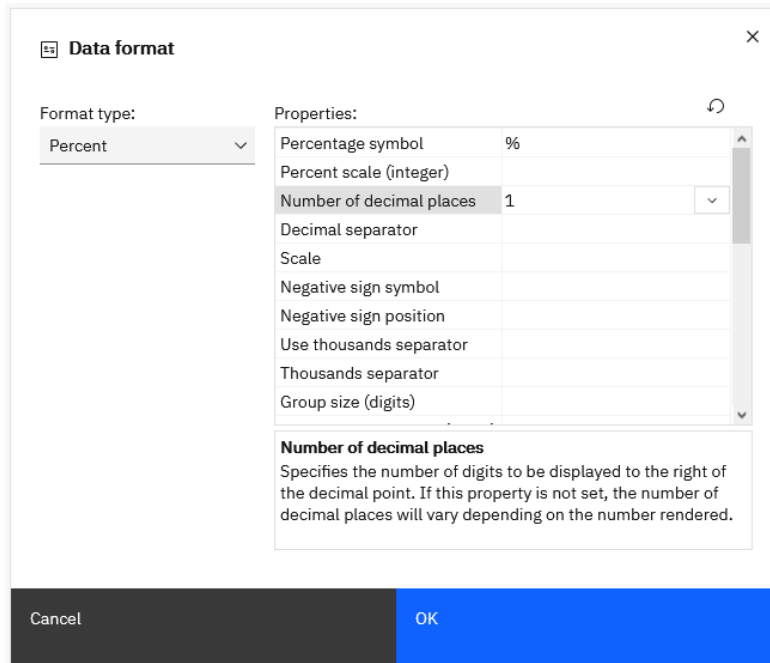


- Select any cell in the *Percent Change* column in the List, open the Properties, and click the ellipsis button at the end of *Data format*:



- In the resulting dialog, enter the following:
 - Format type*: Percent
 - Percentage symbol*: %

c. *Number of decimal places: 1*



d. Click *OK*

10. The report now looks like this:

Month	Units Sold	Percent Change
January	1509	
February	1698	12.5%
March	1967	15.8%
April	2451	24.6%
May	2909	18.7%
June	3844	32.1%
July	3447	-10.3%
August	4665	35.3%
September	5652	21.2%
October	6196	9.6%
November	5409	-12.7%
December	6324	16.9%

11. **Bonus Points:** Let's apply a Conditional Style so that all the negative numbers are red. To do that, select any of the cells in the *Percent Change* column, open the Properties, and click the

ellipsis button beside *Conditional styles*:

Double-click to edit text

Month	Units Sold	Percent Change
January	1509	
February	1698	12.5%
March	1967	15.8%
April	2451	24.6%
May	2909	18.7%
June	3844	32.1%
July	3447	-10.3%
August	4665	35.3%
September	5652	21.2%
October	6196	9.6%
November	5409	-12.7%
December	6324	16.9%

Select

Properties Panel:

- List column body
- CONDITIONAL
- Conditional styles (highlighted with a red box)
- Style variable
- Text source variable
- TEXT SOURCE
- Source type: Data item value
- Data item value: Percent Change
- DATA
- Data format: Percent
- Drill-through definitions
- Group span
- BOX
- Border
- Padding
- Box type
- COLOR & BACKGROUND
- Background image
- Background effects

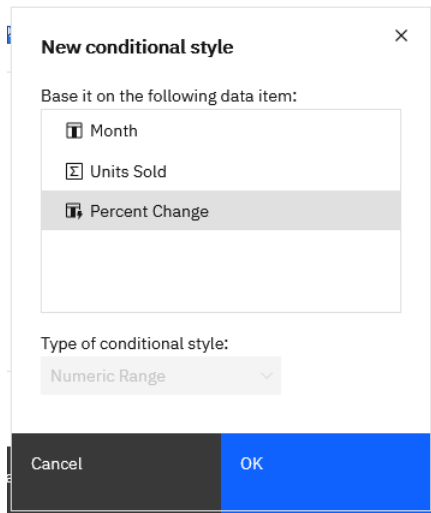
12. In the resulting dialog, click *New conditional style*:

Conditional styles

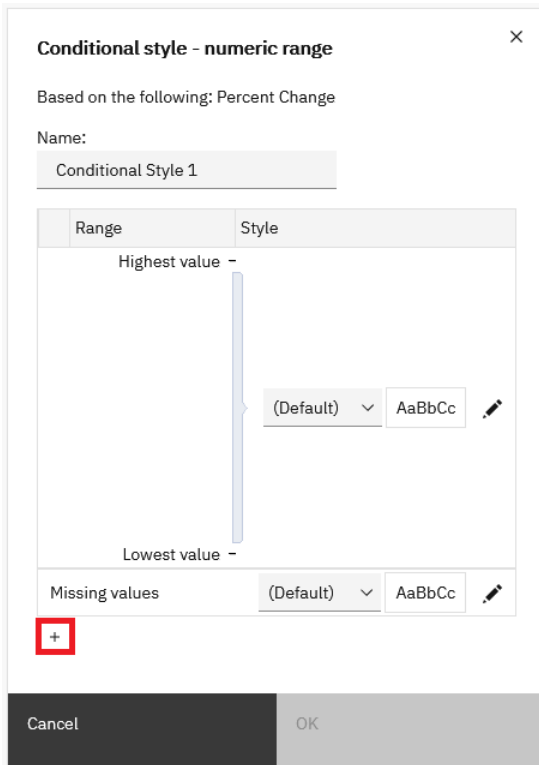
+

Cancel OK

13. Accept the defaults in the resulting dialog and click *OK*:

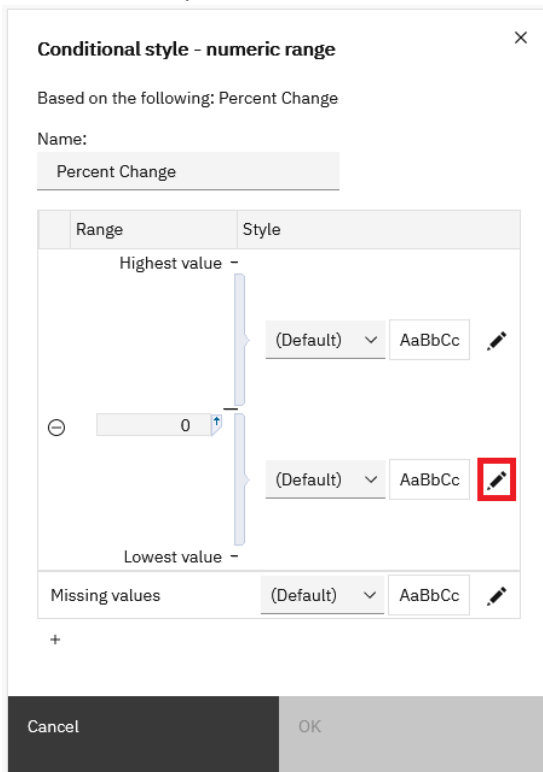


14. In the next dialog, type a Name (e.g. Percent Change) and click *New value*:

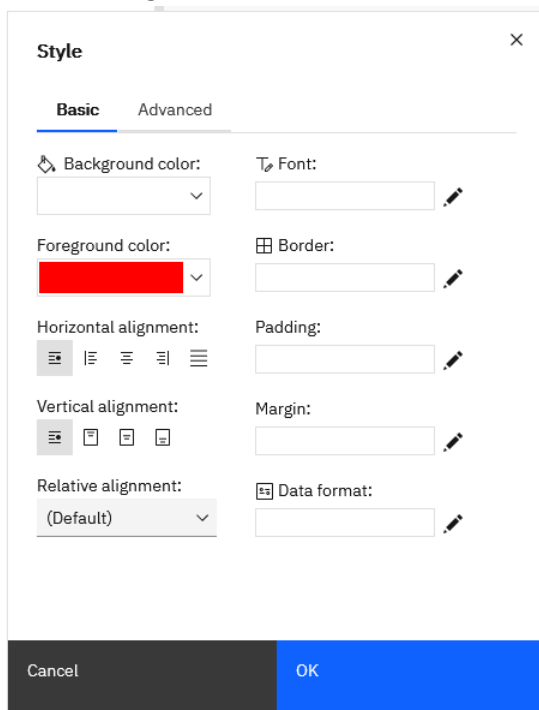


15. Type 0 and click *OK*.

16. Click the *Edit Style* icon for the values under 0:



17. Set the *Foreground color* to Red and click *OK*:



18. Click *OK* and *OK*. The report will look like this:

Month	Units Sold	Percent Change
January	1509	
February	1698	12.5%
March	1967	15.8%
April	2451	24.6%
May	2909	18.7%
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