

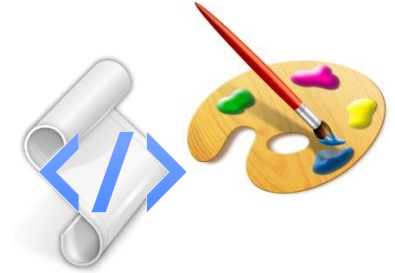


InTempo Connect 2022 User Conference

Building a Better Business with InTempo Reporter (Part 2)

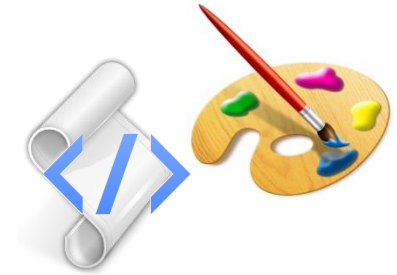
Chris Kennedy – Project Manager
Tony Tye – Sales

Take Reports To The Next Level



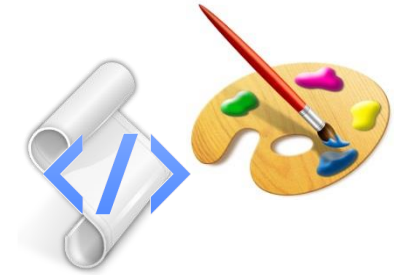
Use calculated columns to:

- Enhance/concatenate text
- Enhance reports with color coding
- Add calculations
- Add images
- Add links to other reports
- Add links to outside websites





Calculated Columns


- **Template vs. Script**
What's the difference?
- **4 Template Examples**
How to use them, HTML tricks
- **5 Script Examples**
How to use them, JavaScript tricks
- **Functions**
Establish global Scripts for your users



What is the Difference?

 **Add a Calculation** x
Add a new calculated column to your report.

 **Template**
Embed html templates such as text, links, images, or videos

 **Script**
Choose from a library of registered functions, or create your own



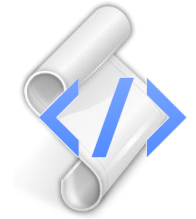
Template Columns

- Written with **plain text** and **HTML**
- Other columns can be used as placeholders for the real value (like a WordMerge letter)



Template Examples

- **Concatenation**
Joining columns together (like first and last name)
- **Website Links**
Making the perfect hyperlink for Informer
- **In-line pictures**
Show an image right in the report row



Script Columns

- Written with **JavaScript**
- More advanced -- can do anything a Template column can do, plus calculations and conditional output
- Generally, use a script column when you cannot solve your problem with a template



Script Examples

- **Color Coding**
Define thresholds and highlight low/high numbers with color coding
- **Projected Sale**
Calculate the projected dollar amount of a sale based on probability
- **Balance Due**
Show balance due on an order
- **Counting Days**
Calculate the number of days since an event
- **Total Multi-values**
Add up a list of multi-values in a column

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Template Examples



Template #1: Concatenation

One column for first and last name


Full Name
Jerald Fazio
Johnnie Rubio
Lucius Nero
Robt Amburgey
Jan Embrey
Dallas Shutts
Dion Duren
Jere Warrick
Jere Warrick
Dion Duren
Dallas Shutts

 **New Template Column** x

Embed html templates such as text, links, images, or videos

Header
Full Name

Expression
\${first_name}

 Last Name

< Back Add Calculation Close



Template #1: Concatenation

How?

- Drag & drop column headers into the Expression box:

```
${first_name} ${last_name}
```

- Produces:

Chris Kennedy



Template #1: Concatenation

Style with HTML

- Last name bold:

```
${first_name} <B>${last_name}</B>
```

- Produces:

Chris **Kennedy**



Remember...

Do not remove the original columns. Hide them instead.






Template #2: Website Link

The perfect hyperlink for Informer

- LinkedIn Profile ▾
- [Administrator's Profile](#)
- [Alex Leupen's Profile](#)
- [Andrea Dawkins's Profile](#)
- [Chris Reeves's Profile](#)
- [Doug Leupen's Profile](#)
- [Pam Barber's Profile](#)
- [Sharon Shelton's Profile](#)

- [Sharon Shelton's Profile](#)
- [Pam Barber's Profile](#)

 **New Template Column** x

Embed html templates such as text, links, images, or videos

Header

Expression

```
<a name="{first_name} {last_name}"
target="LinkedIn" href="http://www.linkedin.com/{linkedin_id}">
{first_name} {last_name}
</a>
```

< Back Add Calculation Close



Template #2: Website Link

Step 1 – Easy, a basic link

- A hyperlink in HTML:

```
<a href="http://www.linkedin.com">  
  LinkedIn  
</a>
```

- Produces:

[LinkedIn](http://www.linkedin.com)



Template #2: Website Link

Step 2 – Drag in your columns

- LinkedIn ID and the person's name

```
<a href = "http://www.linkedin.com/${linkedin_id}">  
  ${first_name} ${last_name}'s Profile  
</a>
```

- Produces:

[Chris Kennedy's Profile](#)



Template #2: Website Link

Step 3 – Choose your sorting value

- Sort by the person

```
<a name="{first_name} {last_name}" href =  
"http://www.linkedin.com/{linkedin_id}">  
  {first_name} {last_name}'s Profile  
</a>
```

- Otherwise, Informer will just sort by the HTML alphabetically



Template #2: Website Link

Step 4 – Stay on your report

- Use target=_blank to open in a new browser window

```
<a name="{first_name} {last_name}" href =  
"http://www.linkedin.com/{linkedin_id}" target="_blank">  
  {first_name} {last_name}'s Profile  
</a>
```

- You may also use target="AnyWindowNameHere" to open all links with that target in the same new window.



Template #2: Website Link

Done! The perfect Informer link


- ✓ Uses columns from the report
- ✓ Sorts by what you see
- ✓ Opens in a different window



Template #3: In-line Picture

Show an image right in the report row



 **New Template Column** x

Embed html templates such as text, links, images, or videos

Header

Expression

```

```



Template #3: In-line Picture

Step 1 – Easy, a basic image

- An image in HTML:

```
<img src= https://www.shutterstock.com/image-photo/heavy-yellow-bulldozer-isolated-1270234804>
```

- Produces:



www.shutterstock.com - 1270234804



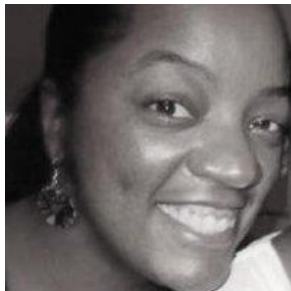
Template #3: In-line Picture

Step 2 – Drag in your columns

- An image in HTML:

```
<img src= "http://delivery.entriksik.com/icon/profiles/${first_name}.png" />
```

- Produces:





Template #3: In-line Picture

Step 3 – Control the size

- Specify the height or width

```
<img src= "http://delivery.entrinsik.com/icon/profiles/${first_name}.png"  
height=100/>
```

- But do not change **both** unless you want the image distorted!



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Scripts in Reporter



Script Examples

- **Color Coding**
Define thresholds and highlight low/high numbers with color coding
- **Projected Sale**
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Add up a list of multi-values in a column



Script Reference

JavaScript Operators

+	add
-	subtract
*	multiply
/	divide
==	is equal to
!=	is not equal
>	is greater than
<	is less than
>=	is greater than or equal to
<=	is less than or equal to
&&	and
	or
!	not



Script #1: Color Coding

AKA, how to use if/else in JavaScript to color code a value

Probability
90%
85%
85%
80%
70%
70%
70%
70%
70%
10%
10%
10%

New Script Column x

Choose from a library of registered functions, or create your own

Header
Probability

Expression

```
if(probability <=25){  
  "<div name="+probability+" style='color:red'>"+probability+"%</div>";  
}  
else if(probability >=75)  
{  
  "<div name="+probability+" style='color:green'>"+probability+"%</div>";  
}  
else  
{  
  "<div name="+probability+">"+probability+"%</div>";  
}
```

< Back Add Calculation Close



Script #1: Color Coding

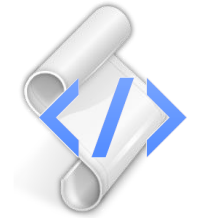
If/Else Statements

- Assign colors based on some condition.

```
if(condition1) { do this; }
```

```
else if(condition2) { do this; }
```

```
else { do this; }
```



Script #1: Color Coding

If/Else Statements

Assign colors based on some condition.

```
if( probability <= 25 ){
    "<div style='color:red'>" +probability+ "%</div>";
}
else if( probability >= 75 ){
    "<div style='color:green'>" +probability+ "%</div>";
}
else {
    "<div>" +probability+ "%</div>";
}
```



Script #1: Color Coding

Remember the sorting trick

Add **name** to the div so the column sorts on the value

```
"<div name="" +probability+ "">"  
+probability+ "%</div>";
```


Probability ▲
0%
0%
0%
0%
0%
10%
10%
10%



Script #2: Projected Sale

Calculate the projected dollar amount based on probability

Projected Amount
\$5,000.00
\$20,000.00
\$30,000.00
\$6,000.00
\$30,000.00
\$6,000.00
\$5,000.00
\$35,000.00
\$20,000.00
\$17,500.00
213'200'00
250'000'00
232'000'00

 **New Script Column** x

Choose from a library of registered functions, or create your own

Header

Expression



Script #2: Projected Sale

- Multiply by probability percentage divided by 100

amount * (probability / 100);

- Set the column as a number and apply currency formatting

The screenshot shows a configuration dialog for a data column. The settings are as follows:


- Data Type:** Numeric
- Alignment:** Right (selected)
- Width:** Auto
- Format:**
 - Style:** Includes checkboxes for Bold (B), Italic (I), and Underline (U).
 - Additional CSS:** An empty text input field.
 - Number Format:**
 - Decimal Places: 2
 - Use 1000 Separator:
 - Currency: USD \$
 - Negative Numbers: -1234.10



Script #3: Balance Due

Calculate the balance of tuition paid

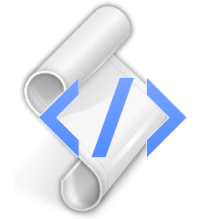
Amount Paid	Balance
\$386.00	\$114.00
\$463.00	\$37.00
\$90.00	\$410.00
\$48.00	\$452.00

 **New Script Column** x

Choose from a library of registered functions, or create your own

Header

Expression



Script #3: Balance Due

- Subtract the amount paid from the total

```
total - amount_paid
```



Script #4: Counting Days

Calculate the number of days since a date

Days Since Invoice	Current
903	Past Due
874	
858	
930	Past Due
933	Past Due

New Script Column

Choose from a library of registered functions, or create your own

Header
Days Since Invoice

Expression

```
var calendar = java.util.Calendar.getInstance();  
var rightNow = calendar.getTimeInMillis();  
calendar.setTime(INVOICE_DATE);  
var startTime = calendar.getTimeInMillis();  
var oneDayInMillis = 86400000;  
  
(rightNow - startTime) / oneDayInMillis ;
```

< Back Add Calculation Close



Script #4: Counting Days

Use Java Calendar

- Calculate up the relevant dates in milliseconds:

```
var calendar = java.util.Calendar.getInstance();  
var rightNow = calendar.getTimeInMillis();
```

```
calendar.setTime(INVOICE_DATE);  
var startTime = calendar.getTimeInMillis();
```

```
var oneDayInMillis = 24 * 60 * 60 * 1000;
```

```
(rightNow - startTime) / oneDayInMillis;
```



Script #4: Counting Days

Highlight past-due invoices

- Use both your calculated columns:


```
if(balance > 0 && daysSinceInvoice > 90) {  
  "<div style='background-color:red;color:white'>  
    Past Due  
  </div>";  
}  
else {  
  "";  
}
```



Script #5: Total Multi-values

Total up all the values in a multi-value column

Credit Hours	Total Hours
6	19
3	
3	
3	
1	
3	
3	16
3	
3	
1	
3	
3	19
3	
3	
3	
1	
6	
3	22
3	
1	
3	
9	
3	

 **New Script Column** X

Choose from a library of registered functions, or create your own

Header

Expression

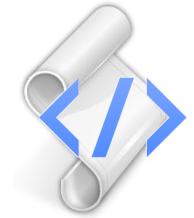
```
var total = 0;
for(var i=0; i<creditHours.length; i++)
{
if(creditHours[i] != null) total += parseInt(creditHours[i]);
}
total;
```



Script #5: Total Multi-values

Arrays

- An array is a list of values inside a single variable
- They come from Multi-value fields, Multi-key joins, Remote joins
- If you ever see this in your script column, you're dealing with an array:
`[Ljava.lang.Object;@1e07cdbte]`
- Pick an item out of an array by using square brackets:
`myColumn[3]`



Script #5: Total Multi-values

- Array Indexes start at 0

You write in...	Which gives you...
<code>myColumn[0]</code>	the 1 st multi-value
<code>myColumn[3]</code>	the 4 th multi-value
<code>myColumn[myColumn.length-1]</code>	the last multi-value
<code>myColumn[myColumn.length]</code>	error, out of range.



Script #5: Total Multi-values

Looping

- To process every item in an array, you will need to use **for loops**

```
for (var i=0; i< mvColumn.length; i++) {  
    mvColumn[i];  
}
```



Script #5: Total Multi-Values

Calculate total

- Add each value up in the for loop

```
var total = 0;
```

```
for(var i=0; i<creditHours.length; i++) {
```

```
    if(creditHours[i] != null) {
```

```
        total += parseInt(creditHours[i]);
```

```
    }
```

```
}
```

```
total;
```



Remember...

Check for `null` values, or your script might break.



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Functions in Reporter



Functions

Set up under Mappings tab

Function Details

Edit Save and Close Save Cancel Reset

Function Name * totalMultivalues

Description Totals a list of numerical multi-values

Parameters

Data Type	Variable Name	Label
Numeric	valueToTotal	Value to Total

Expression *

```
var total = 0;
if(valueToTotal!=null) {
for(var i=0; i<valueToTotal.length; i++) {
if(valueToTotal[i] != null) total +=
```


Definition

```
Function totalMultivalues(valueToTotal)
{
var total = 0;
if(valueToTotal!=null) {
for(var i=0; i<valueToTotal.length; i++) {
if(valueToTotal[i] != null) total += parseInt(valueToTotal[i]);
}
}
return total;
}
```




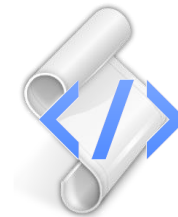
Functions

Now users can access it from any report

 **Add a saved function** x
Select a saved function

Function ...

Parameters  Value to Total: Credit Hours



Resources

- HTML http://www.w3schools.com/html/html_examples.asp
- JavaScript http://www.w3schools.com/js/js_examples.asp
- CSS (styles) http://www.w3schools.com/css/css_examples.asp
- Forums: <http://www.entrinsik.com/forums/>

Sub-forum for Calculated Columns has more examples

InTepo

Questions?

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