

TECH TIP

CONDITIONAL RUNNING TOTAL USING VARIABLES BI PUBLISHER

BI Publisher allows the use of variables in a template. The variable is assigned, updated, and displayed using the `set_variable` and `get_variable` syntax. This Tech Tip outlines a simple example to create a running total variable and then how to provide further flexibility by applying a condition to it.

The following is the custom report sample XML used for this Tech Tip.

```
<?xml version="1.0" encoding="UTF-8"?>
<DATA_DS>
  <uuu_p_p_record_no></uuu_p_p_record_no>
  ...
  ...
  <uuu_p_dateTimeFormatF></uuu_p_dateTimeFormatF>
  <CO>
    <PROJECT_ID>1160</PROJECT_ID>
    <PROJECT_NO>P-0023</PROJECT_NO>
    <PROJECT_NAME>Hospital Manhattan Expansion</PROJECT_NAME>
    <RECORD_NO>CO-0001</RECORD_NO>
    <TITLE>Change Order 1</TITLE>
    <STATUS>Approved</STATUS>
    <INITIAL_AMT>9000.0</INITIAL_AMT>
    <ADJUSTED_AMT>500.0</ADJUSTED_AMT>
  </CO>
  <CO>
    <PROJECT_ID>1160</PROJECT_ID>
    <PROJECT_NO>P-0023</PROJECT_NO>
    <PROJECT_NAME>Hospital Manhattan Expansion</PROJECT_NAME>
    <RECORD_NO>CO-0002</RECORD_NO>
    <TITLE>Change Order 2</TITLE>
    <STATUS>Approved</STATUS>
    <INITIAL_AMT>3500</INITIAL_AMT>
    <ADJUSTED_AMT>300.0</ADJUSTED_AMT>
  </CO>
  <CO>
    <PROJECT_ID>1160</PROJECT_ID>
    <PROJECT_NO>P-0023</PROJECT_NO>
    <PROJECT_NAME>Hospital Manhattan Expansion</PROJECT_NAME>
    <RECORD_NO>CO-0003</RECORD_NO>
    <TITLE>Change Order 3</TITLE>
    <STATUS>Approved</STATUS>
    <INITIAL_AMT>3000.0</INITIAL_AMT>
    <ADJUSTED_AMT>-700.0</ADJUSTED_AMT>
  </CO>
  <CO>
    <PROJECT_ID>1160</PROJECT_ID>
    <PROJECT_NO>P-0023</PROJECT_NO>
    <PROJECT_NAME>Hospital Manhattan Expansion</PROJECT_NAME>
    <RECORD_NO>CO-0004</RECORD_NO>
    <TITLE>Change Order 4</TITLE>
    <STATUS>Approved</STATUS>
    <INITIAL_AMT>4000.0</INITIAL_AMT>
    <ADJUSTED_AMT>1000.0</ADJUSTED_AMT>
  </CO>
</DATA_DS>
```

CONDITIONAL RUNNING TOTAL USING VARIABLES

The initial RTF design template includes a Repeating Group (form fields F and E) for each <CO> row in the XML. Sorted in ascending order by Record No.

Record No	Title	Initial Amount	Adjusted Amount	Final Approved Amount
F rec_no	TITLE	\$999.00	\$999.00	\$999.00 E

Example for BI Publisher Properties for form field F in the Record No column.

Form Fields:

Column	Form Field	Code in Advanced tab
Record No	F	<?for-each:CO?><?sort:RECORD_NO;'ascending';data-type='text'?>
Record No	rec_no	<?RECORD_NO?>
Title	TITLE	<?TITLE?>
Initial Amount	\$999.00	<?INITIAL_AMT?>
Adjusted Amount	\$999.00	<?ADJUSTED_AMT?>
Final Approved Amount	\$999.00	<?INITIAL_AMT+ADJUSTED_AMT?>
Final Approved Amount	E	<?end for-each?>

Final Approved Amount is the sum of INITIAL_AMT and ADJUSTED_AMT.

The previewed output in PDF:

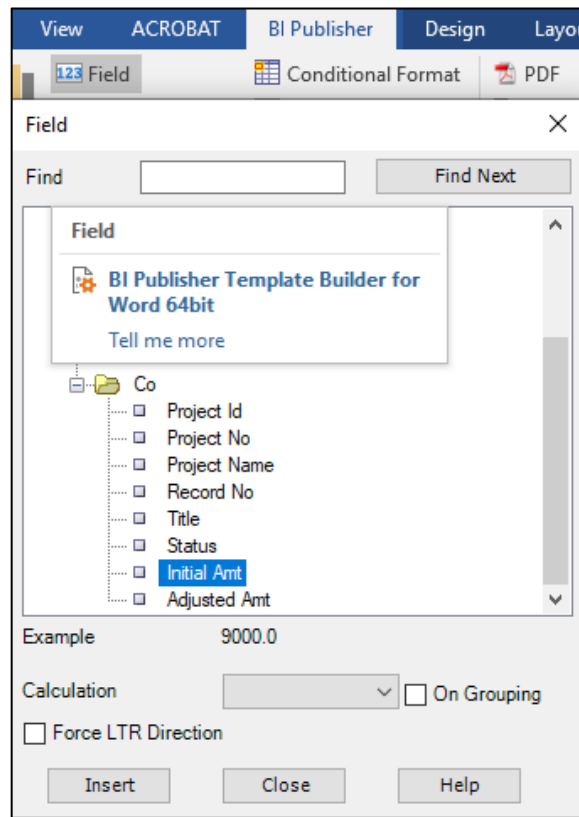
CONDITIONAL RUNNING TOTAL USING VARIABLES

Record No	Title	Initial Amount	Adjusted Amount	Final Approved Amount
CO-0001	Change Order 1	\$9,000.00	\$500.00	\$9,500.00
CO-0002	Change Order 2	\$3,500.00	\$300.00	\$3,800.00
CO-0003	Change Order 3	\$3,000.00	(\$700.00)	\$2,300.00
CO-0004	Change Order 4	\$4,000.00	\$1,000.00	\$5,000.00

Running Total using a Variable

This example will provide a running total for the Initial Amount.

Create a new form field selecting the Initial Amt tag



The variable INITIAL_RUN_TOT is declared and set (assigned) to a value of 0. The \$_XDOCTX syntax allows the variable to be accessible throughout the RTF template (global document text).

```
<?xdoxslt:set_variable($_XDOCTX, 'INITIAL_RUN_TOT', 0)?>
```

Once declared the variable value can be updated accordingly using the following code. In this example, INITIAL_RUN_TOT is updated within the repeating group. Using the set_variable syntax, the variable is retrieved for each row in the repeating group and the INITIAL_AMT value is added to the INITIAL_RUN_TOT value.

CONDITIONAL RUNNING TOTAL USING VARIABLES

```
<?xdoxslt:set_variable($_XDOCTX, 'INITIAL_RUN_TOT', xdoxslt:get_variable($_XDOCTX, 'INITIAL_RUN_TOT') + INITIAL_AMT)?>
```

To display the INITIAL_RUN_TOT value the get_variable syntax is used.

```
<?xdoxslt:get_variable($_XDOCTX, 'INITIAL_RUN_TOT')?>
```

A new form field is used to display the Initial Amount Running Total. In the Properties tab, select any 'Data Field' with Number as the 'Type' selection. Enter an appropriate 'Format' (format mask) and 'Text to display' (as below). The key addition is the display code to enter in the Advanced tab.

BI Publisher Properties

Properties: General

Data Field: INITIAL_AMT

Text to display: \$999.00

Formatting

Type: Number

Format: \$#,##0.00;(\$#,##0.00)

Force LTR

Data Aggregation

Function: []

Scope: Normal

Word Properties OK Cancel

BI Publisher Properties

Properties: Advanced

Code

```
<?xdoxslt:get_variable($_XDOCTX, 'INITIAL_RUN_TOT')?>
```

Word Properties OK Cancel

The variable declaration syntax is placed at the top of the report outside of the reporting group. The updated code is placed within the repeating group. For easier viewing for this example, the code is entered directly rather than within a form field. The display form field is included in an additional column.

```
<?xdoxslt:set_variable($_XDOCTX, 'INITIAL_RUN_TOT', 0)?>
```

Record No	Title		Initial Amount	Initial Amount Running Total	Adjusted Amount	Final Approved Amount
F rec_no	TITLE	<?xdoxslt:set_variable(\$_XDOCTX, 'INITIAL_RUN_TOT', xdoxslt:get_variable(\$_XDOCTX, 'INITIAL_RUN_TOT') + INITIAL_AMT)?>	\$999.00	\$999.00	\$999.00	\$999.00 E

Previewing the output in PDF:

CONDITIONAL RUNNING TOTAL USING VARIABLES

Record No	Title	Initial Amount	Initial Amount Running Total	Adjusted Amount	Final Approved Amount
CO-0001	Change Order 1	\$9,000.00	\$9,000.00	\$500.00	\$9,500.00
CO-0002	Change Order 2	\$3,500.00	\$12,500.00	\$300.00	\$3,800.00
CO-0003	Change Order 3	\$3,000.00	\$15,500.00	(\$700.00)	\$2,300.00
CO-0004	Change Order 4	\$4,000.00	\$19,500.00	\$1,000.00	\$5,000.00

Conditional Running Total using a Variable

This example will include a condition of adding to the running total if the Adjusted Amount value is greater than 0. The variable ADJUST_RUN_TOT is declared as before but the update code is modified to support the condition. The value ADJUSTED_AMT is enclosed within an if else condition. If ADJUSTED_AMT is greater than 0 then this value is added to the retrieved ADJUST_RUN_TOT variable otherwise 0 is added (remains the same).

```
<?xdoxslt:set_variable($_XDOCTX, 'ADJUST_RUN_TOT', xdoxslt:get_variable($_XDOCTX, 'ADJUST_RUN_TOT')) + xdoxslt:ifelse(ADJUSTED_AMT > 0, ADJUSTED_AMT, 0)?>
```

A new form field is added as in the previous example with the display code referencing the new variable.

```
<?xdoxslt:get_variable($_XDOCTX, 'INITIAL_RUN_TOT')?>
```

The additional code has been added just like the previous example.

Record No	Title	Initial Amount	Initial Amount Running Total	Adjusted Amount	Adjusted Amount Running Total	Final Approved Amount
F rec_no	TITLE	\$999.00	\$999.00	\$999.00	\$999.00	\$999.00 E

Previewing the output in PDF:

Record No	Title	Initial Amount	Initial Amount Running Total	Adjusted Amount	Adjusted Amount Running Total	Final Approved Amount
CO-0001	Change Order 1	\$9,000.00	\$9,000.00	\$500.00	\$500.00	\$9,500.00
CO-0002	Change Order 2	\$3,500.00	\$12,500.00	\$300.00	\$800.00	\$3,800.00
CO-0003	Change Order 3	\$3,000.00	\$15,500.00	(\$700.00)	\$800.00	\$2,300.00
CO-0004	Change Order 4	\$4,000.00	\$19,500.00	\$1,000.00	\$1,800.00	\$5,000.00