

TECH TIP

LIMIT NUMBER OF LINE ITEMS IN A TAB ORACLE PRIMAVERA UNIFIER

There can be a requirement where the number of line items in a tab must not exceed a certain number. A simple example is a report which includes a fixed height text area where there is a maximum number of lines.

This Tech Tip outlines how to provide this functionality.

Two Data Elements are required. One for the line items counter, and one for the value set on each line item creation. Both Data Elements are created using the Decimal Amount Data Definition with 0 decimal places.

Go to Data Structure Setup > Data Elements from the Navigation Pane and click New. Enter the Name, Data Definition Source, Form Label, and Decimal Places selection. This is the Data Element for the line item value (LinItem_Value).

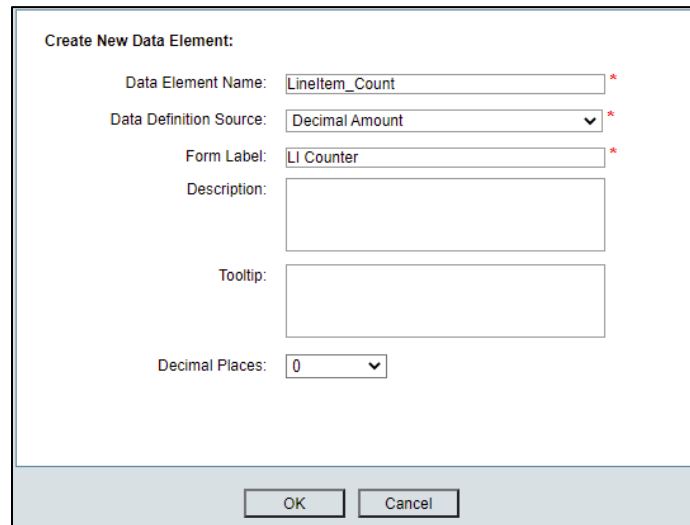
The screenshot shows the 'Create New Data Element' dialog box in the Oracle Primavera Unifier application. The dialog is titled 'Create New Data Element:' and contains the following fields:

- Data Element Name:** LinItem_Value
- Data Definition Source:** Decimal Amount
- Form Label:** 1
- Description:** (Empty text area)
- Tooltip:** (Empty text area)
- Decimal Places:** 0

The 'OK' and 'Cancel' buttons are located at the bottom of the dialog. The background shows the application's navigation pane with 'Data Elements' selected.

LIMIT NUMBER OF LINE ITEMS IN A TAB

Create another Data Element which will be the Data Element for counting the line items (LinItem_Count).



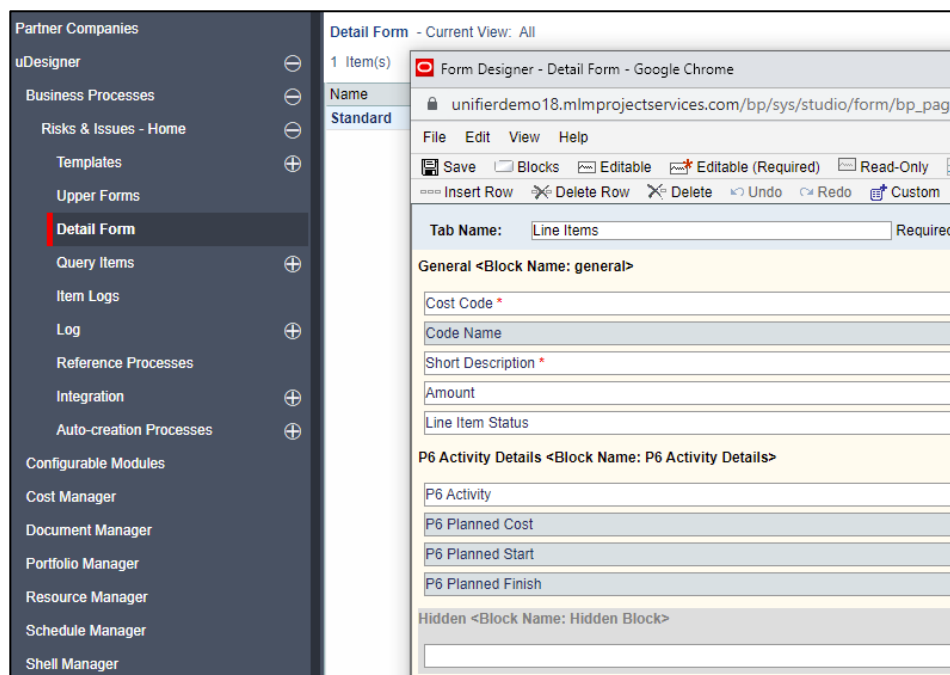
The 'Create New Data Element' dialog box contains the following fields:

- Data Element Name:** LinItem_Count *
- Data Definition Source:** Decimal Amount *
- Form Label:** LI Counter *
- Description:** (empty text box)
- Tooltip:** (empty text box)
- Decimal Places:** 0

Buttons: OK, Cancel

These Data Elements LinItem_Value and LinItem_Count will be added to a BP's Upper and Detail forms respectively. The Risks and Issues BP is used in this Tech Tip.

Go to uDesigner > BP > Detail Form from the Navigation Pane and open the Standard Detail Form.



The uDesigner interface shows the 'Detail Form' configuration for the 'Standard' view. The left navigation pane lists various modules, with 'Detail Form' selected. The main area displays the form configuration for the 'Line Items' tab.

Detail Form - Current View: All

1 Item(s)

Name
Standard

Tab Name: Line Items Required

General <Block Name: general>

- Cost Code *
- Code Name
- Short Description *
- Amount
- Line Item Status

P6 Activity Details <Block Name: P6 Activity Details>

- P6 Activity
- P6 Planned Cost
- P6 Planned Start
- P6 Planned Finish

Hidden <Block Name: Hidden Block>

LIMIT NUMBER OF LINE ITEMS IN A TAB

Select a row in the Hidden block and click Custom. The Data Element is placed in the Hidden block as the user does not need to see this.

Find

Select Find Close Window

Data Element contains lineitem_value

Form Label contains

Data Definition contains

Reset Search

Custom Data Elements - Current View: <filtered by Find attributes>

1 Item(s) Page 1 of 1 Display 100 Items Per Page

Used	Data Element	Form Label	Data Definition	Pre-Defined
	LineItem_Value	1	Decimal Amount	

Each added line item will have a value of 1 using this Data Element. This acts as the count. Click Properties to open the Element Properties window. Select the Data Element and click Formula at the bottom of the window.

File Edit View Help

Save Blocks Editable Editable (Required) Read-Only

Insert Row Delete Row Delete Undo Redo Custom

Tab Name: Line Item Elements Properties - Google Chrome

General <Block Name: g> unifierdemo18.mlmprojectservices.com/bp/sys/s

Cost Code *

Code Name

Short Description *

Amount

Line Item Status

P6 Activity Details <Block Name: P6 Activity>

P6 Activity

P6 Planned Cost

P6 Planned Start

P6 Planned Finish

Hidden <Block Name: H>

1

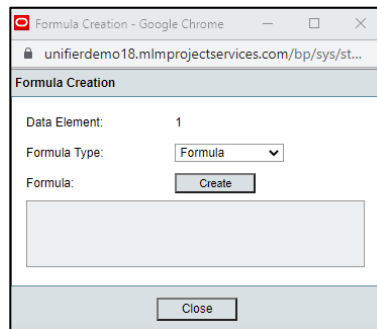
Elements Properties

Element Label	Element Name	Data
1	LineItem_Value	Deci
Amount	amount	Curre
Code Name	bi_item	SYS
Cost Code	blitemID	WBS
Line Item Status	uuu_line_item_status	Desig
P6 Activity	ugenActivityDPK	P6 A
P6 Planned Cost	ugenP6PlannedCostCA	Curre
P6 Planned Finish	ugenP6PlannedFinishDC	Date
P6 Planned Start	ugenP6PlannedStartDOF	Date
Short Description	short_desc	Short

Manual Formula Advanced Formula Trigg

LIMIT NUMBER OF LINE ITEMS IN A TAB

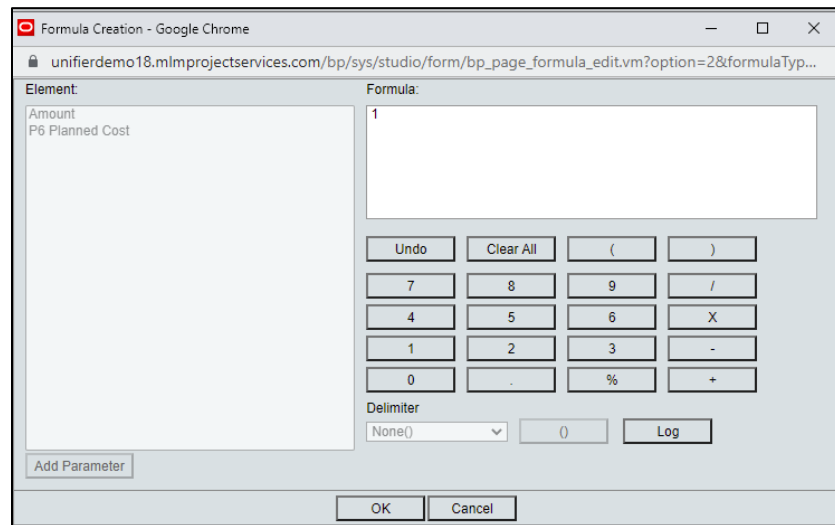
The Formula Creation is opened.



The screenshot shows a web browser window titled "Formula Creation - Google Chrome". The address bar shows the URL "unifierdemo18.mlmprojectservices.com/bp/sys/st...". The main content area is titled "Formula Creation" and contains the following fields and buttons:

- Data Element:** A dropdown menu with the value "1" selected.
- Formula Type:** A dropdown menu with the value "Formula" selected.
- Formula:** A large text area for entering the formula.
- Create:** A button to create the formula.
- Close:** A button at the bottom of the dialog.

Click the 1 button to assign this value to the Data Element and click OK. Close the Formula Creation and Element Properties window.



The screenshot shows a web browser window titled "Formula Creation - Google Chrome". The address bar shows the URL "unifierdemo18.mlmprojectservices.com/bp/sys/studio/form/bp_page_formula_edit.vm?option=2&formulaTyp...". The main content area is titled "Formula Creation" and contains the following fields and buttons:

- Element:** A list of elements including "Amount" and "P6 Planned Cost".
- Formula:** A large text area for entering the formula, currently containing the value "1".
- Calculator:** A numeric keypad with buttons for digits 0-9, decimal point, percentage, and arithmetic operators (+, -, *, /). It also includes buttons for "Undo", "Clear All", "(", and ")".
- Delimiter:** A dropdown menu with the value "None()" selected.
- Log:** A button to log the formula.
- OK:** A button to confirm the formula.
- Cancel:** A button to cancel the formula.

LIMIT NUMBER OF LINE ITEMS IN A TAB

The Data Element is now included in the row and its properties can be checked by double-clicking the Data Element. Click Save and close the form window.

The screenshot displays the 'Form Designer - Detail Form' window in Google Chrome. The main form area on the left shows a 'Tab Name' of 'Line Item' and a 'General <Block Name: ge' section. Below this, there are fields for 'Cost Code *', 'Code Name', 'Short Description *', 'Amount', and 'Line Item Status'. The 'P6 Activity Details <Block' section includes 'P6 Activity', 'P6 Planned Cost', 'P6 Planned Start', and 'P6 Planned Finish'. A 'Hidden <Block Name: Hid' section contains a field with the value '1'. The 'Element Properties' dialog box is open on the right, showing the following details:

- Name: LineItem_Value
- Label: 1
- Type: Custom Data Element
- Data Definition: Decimal Amount
- Access: Read-Only
- Block: Hidden Block
- Data Entry: Formula
- Formula: 1
- Auto-Populate Source: (empty)
- Source Element: (empty)
- Reverse Auto-Populate: (empty)
- Destination: (empty)
- Destination Element: (empty)
- Status(es): (empty)
- Notes: (empty)
- Mobile: (empty)
- Trigger: (empty)

A 'Close' button is located at the bottom right of the dialog box.

The Upper Form is where the line item counter will be included as well as the line item count validation is set.

LIMIT NUMBER OF LINE ITEMS IN A TAB

Go to uDesigner > BP > Upper Forms from the Navigation Pane and open the Upper Form.

As before, the Data Element will be included in the Hidden block.

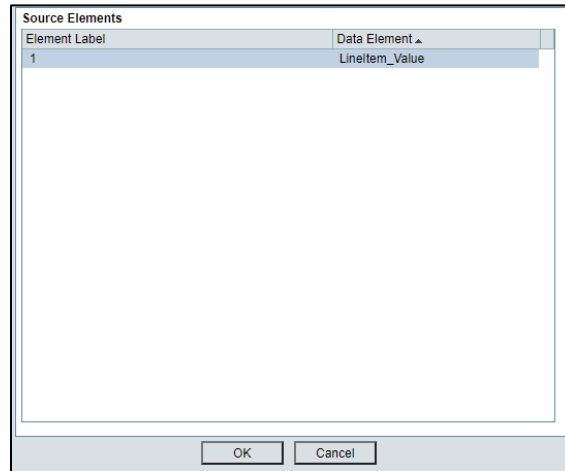
The screenshot shows the uDesigner interface. On the left is a navigation pane with a tree view containing 'Partner Companies', 'Designer', 'Business Processes', 'Risks & Issues - Home', 'Templates', 'Upper Forms' (selected), 'Detail Form', 'Query Items', 'Item Logs', 'Log', 'Reference Processes', 'Integration', 'Auto-creation Processes', 'Configurable Modules', 'Cost Manager', 'Document Manager', 'Portfolio Manager', 'Resource Manager', 'Schedule Manager', 'Shell Manager', 'User Administration', 'Data Structure Setup', and 'Access Control'. The main area displays the 'Form Designer - Upper Form' window. The form is titled 'AF 01-Initiate Request' and contains several blocks: 'Change Request Required', 'Resolution <Block Name: Resolution>', 'Action to Resolve', 'Issue Origin Information <Block Name: Issue Origin Information>', 'Daily Reports Record #', 'Drawing', 'Drawing Revision', 'Meeting Number', 'Potential Change Record #', 'Punch List Record #', 'RFI Record #', 'RFI-Subcontractor Record #', 'P6 Activity Details <Block Name: P6 Activity Details>', 'P6 Activity', 'P6 Planned Cost', 'Hidden <Block Name: DM Publish Path>', and 'Publish Path'.

Add the Data Element to the Hidden block but this time click Auto-Populate to open the Auto-populate window. Choose 'Detail form for this BP (sum of all lines)' as the Source Name and the correct tab.

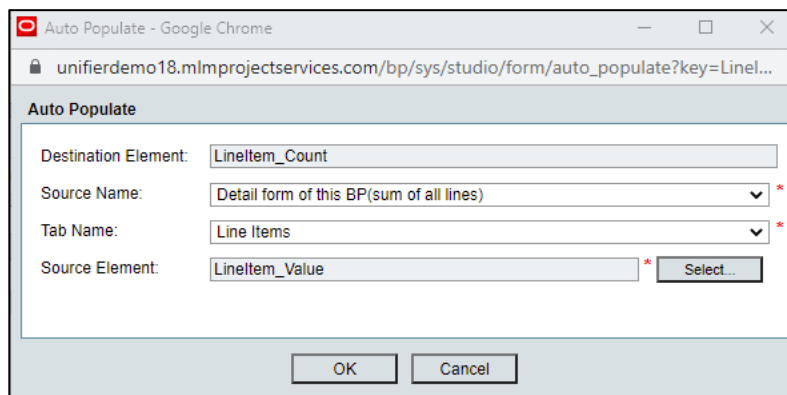
The screenshot shows the 'Auto Populate' dialog box. The 'Destination Element' is 'LineItem_Count'. The 'Source Name' is 'Detail form of this BP(sum of all lines)'. The 'Tab Name' is 'Line Items'. The 'Source Element' is empty. The dialog has 'OK' and 'Cancel' buttons. Below the dialog, there are buttons for 'Manual', 'Formula', 'Advanced Formula', 'Trigger Elements', 'Auto-Populate', and 'Reverse Auto-Populate'.

LIMIT NUMBER OF LINE ITEMS IN A TAB

Click Select and highlight Lineltem_Value Data Element as the Source Element. Click Ok to close the window. Also, close the Properties window.



This Upper Form Data Element automatically sums the Lineltem_Value values for each Line Item.



LIMIT NUMBER OF LINE ITEMS IN A TAB

As before by double-clicking the Data Element opens its properties.

Element Properties

Name:

Label:

Type:

Data Definition:

Access:

Block:

Data Entry:

Formula:

Auto-Populate Source:

Source Element:

Reverse Auto-Populate Destination:

Destination Element:

Status(es):

Notes:

Mobile:

Trigger:

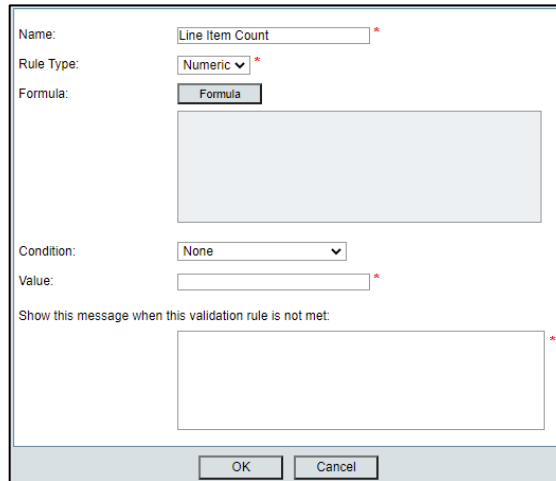
The next step is to add the validation. Click the Validation menu item in the Form window to open the Validation Rules. Click the Add button to create the validation rule.

Validation Rules

Name	Rule Type	Condition	Value
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LIMIT NUMBER OF LINE ITEMS IN A TAB

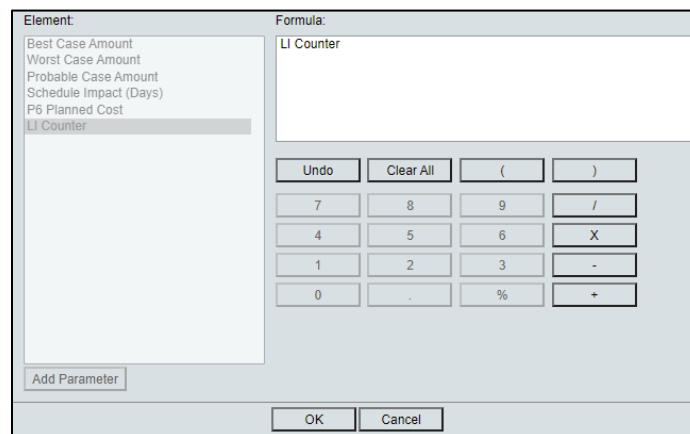
Add a Name and set the Rule Type to Numeric.



A dialog box for creating a validation rule. It contains the following fields and controls:

- Name:** A text box containing "Line Item Count" with a red asterisk to its right.
- Rule Type:** A dropdown menu showing "Numeric" with a downward arrow and a red asterisk to its right.
- Formula:** A button labeled "Formula" to the right of the label.
- Condition:** A dropdown menu showing "None" with a downward arrow.
- Value:** A text box with a red asterisk to its right.
- Show this message when this validation rule is not met:** A large text area with a red asterisk to its right.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

Click the Formula button to open the Formula window. Select the Data Element counter and click the Add Parameter button. The Data Element name will display in the Formula text area. Close OK to close this window.

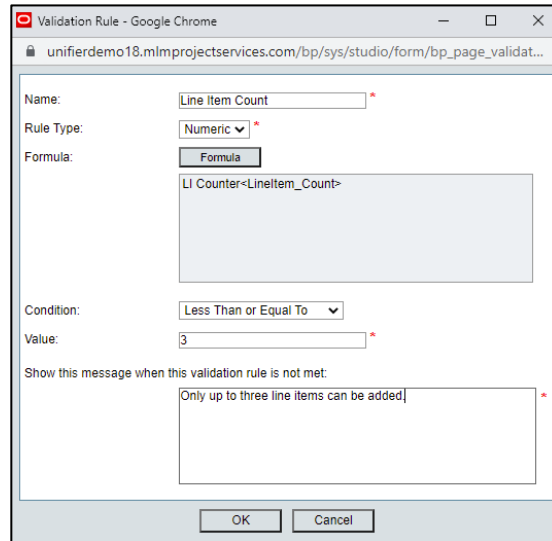


A dialog box for creating a formula. It contains the following elements:

- Element:** A list box on the left containing the following items: "Best Case Amount", "Worst Case Amount", "Probable Case Amount", "Schedule Impact (Days)", "P6 Planned Cost", and "LI Counter". "LI Counter" is selected and highlighted.
- Formula:** A text box on the right containing "LI Counter".
- Buttons:** "Undo", "Clear All", "(", ")", "7", "8", "9", "/", "4", "5", "6", "X", "1", "2", "3", "-", "0", ".", "%", and "+" buttons arranged in a grid.
- Add Parameter:** A button at the bottom left.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

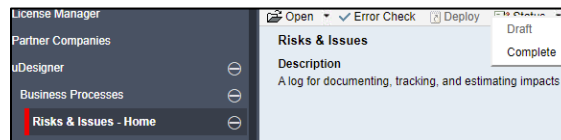
LIMIT NUMBER OF LINE ITEMS IN A TAB

Select the 'Less than or Equal to' condition. Enter a max number of line items for the tab. Add a message for the user if the validation is triggered. Click OK to close this window.

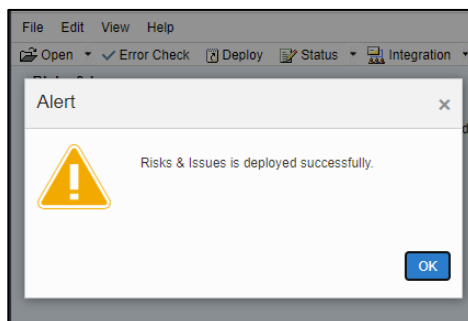


A screenshot of a 'Validation Rule' dialog box in a web browser. The dialog has the following fields: 'Name' with the value 'Line Item Count', 'Rule Type' set to 'Numeric', and 'Formula' set to 'LI Counter<LineItem_Count>'. The 'Condition' dropdown is set to 'Less Than or Equal To', and the 'Value' field contains '3'. A text area for the message says 'Only up to three line items can be added'. At the bottom are 'OK' and 'Cancel' buttons.

Close the Properties window, and Save and close the Form window. The BP Status can be set to Complete.

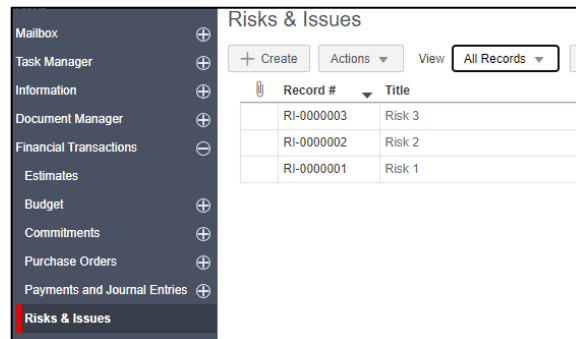


The BP is then deployed.



LIMIT NUMBER OF LINE ITEMS IN A TAB

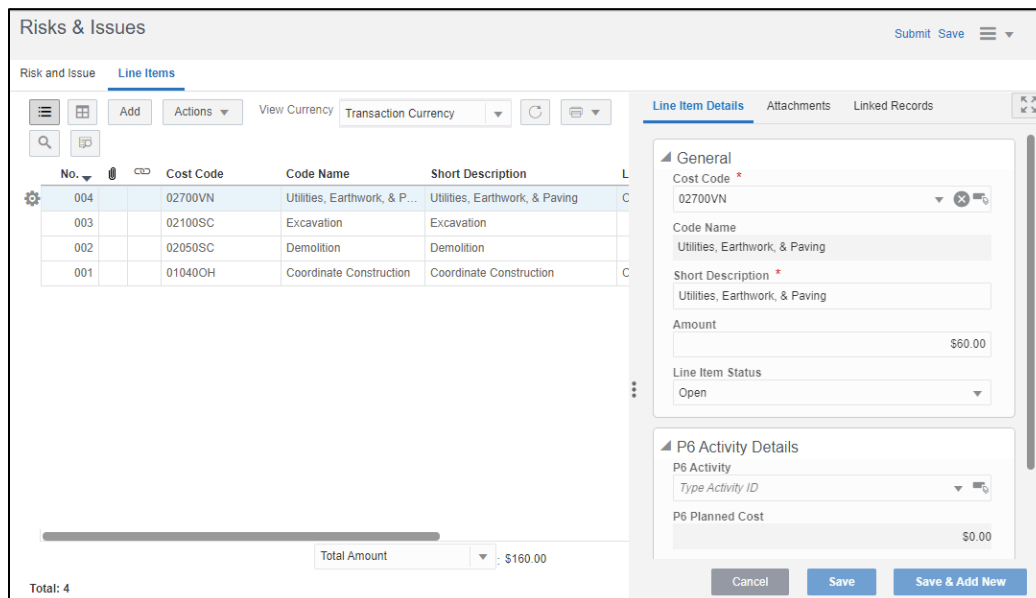
Locate the Risk and Issues BP in a shell.



The screenshot shows the 'Risks & Issues' interface. On the left is a sidebar with navigation links: Mailbox, Task Manager, Information, Document Manager, Financial Transactions, Estimates, Budget, Commitments, Purchase Orders, Payments and Journal Entries, and Risks & Issues (highlighted). The main area has a header with '+ Create', 'Actions', and 'View: All Records'. Below is a table with two columns: 'Record #' and 'Title'.

Record #	Title
RI-0000003	Risk 3
RI-0000002	Risk 2
RI-0000001	Risk 1

A record has already been created but more line items to the tab. In this case four in total.



The screenshot shows the 'Risks & Issues' interface with the 'Line Items' tab selected. The main area contains a table with columns: No., Cost Code, Code Name, Short Description, and L. The table has four rows of data. To the right is a 'Line Item Details' panel with sections for 'General' and 'P6 Activity Details'.

No.	Cost Code	Code Name	Short Description	L
004	02700VN	Utilities, Earthwork, & P...	Utilities, Earthwork, & Paving	C
003	02100SC	Excavation	Excavation	
002	02050SC	Demolition	Demolition	
001	01040OH	Coordinate Construction	Coordinate Construction	C

At the bottom left, a 'Total: 4' label is shown. At the bottom right, a 'Total Amount' dropdown shows '\$160.00'. The 'Line Item Details' panel on the right includes fields for Cost Code (02700VN), Code Name (Utilities, Earthwork, & Paving), Short Description (Utilities, Earthwork, & Paving), Amount (\$60.00), Line Item Status (Open), P6 Activity (Type Activity ID), and P6 Planned Cost (\$0.00). Buttons for 'Cancel', 'Save', and 'Save & Add New' are at the bottom right of the panel.

LIMIT NUMBER OF LINE ITEMS IN A TAB

If the Submit button is clicked, the 'less than or equal to' validation rule is triggered with a warning message to the user the maximum number of line items cannot be more than three.

The screenshot displays the 'Risks & Issues' form with a modal window titled 'Errors and Warnings' open. The modal contains a table with one error message:

Error Location	Description
Risk and Issue	Line Item Count : Only up to three line items can be added.

Below the table, it shows 'Total: 1'. The background form has a table with four line items:

No.	Cost Code	Code Name	Short Description
004	02700VN	Utilities, Earthwork, & P...	Utilities, Earth...
003	02100SC	Excavation	Excavation
002	02050SC	Demolition	Demolition
001	01040OH	Coordinate Construction	Coordinate C...

At the bottom of the form, the 'Total Amount' is displayed as '\$160.00'. The modal also shows 'P6 Activity Details' with fields for 'P6 Activity', 'Type Activity ID', and 'P6 Planned Cost' (\$0.00). Buttons for 'Cancel', 'Save', and 'Save & Add New' are at the bottom of the modal.

In summary, this tech tip outlined using the Validation functionality with a simple example to limit line items in a tab.

