AUTODESK INVENTOR Trial Projects

iLogic Workflow

Design a custom wheel assembly

Autodesk A360	Look in: 퉬 11 - Wheel Assembly 👻	G 🤌 🖻 🛄 🗸		
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Content Center Files	No. 1 Templates	1/27/2017 12:23 PM	File folder	
	Workspaces	1/27/2017 1:34 PM	File folder	
	Brake caliper CP7600 LHL.ipt	1/27/2017 12:09 PM	Autodesk Inventor	
	cp7600-122_cp7600-122 fitted.ipt	1/27/2017 12:09 PM	Autodesk Inventor	
	M-BR-0003-A 5 Stud Disc bell.ipt	1/27/2017 12:09 PM	Autodesk Inventor	
	M-BR-0025-A Brake disc CP4456.ipt	1/27/2017 12:09 PM	Autodesk Inventor	
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	M-FS-0002-A Upright.ipt	1/27/2017 12:09 PM	Autodesk Inventor	
	M-RS-0019-A OZ Racing Alleggerita Wheel (1/27/2017 12:09 PM	Autodesk Inventor	
	🚮 M-RS-0022-A Kumho Tyre (Left).ipt	1/27/2017 12:09 PM	Autodesk Inventor	
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00	Hie name: WheelAssembly.iam		•	
	Files of type: Autodesk Inventor Files (*iam;*.dwg;*idv	v;*.ipt;*.ipn;*.ide)	-	
	Project Electronic Line and Annual Content			
	Project File: WheelAssembly.ipj		 Projects 	
Quick Launch				

In Inventor, click the 'Projects' icon in the ribbon. Navigate to where you saved the project files and select *WheelAssembly. ipj*. Then open *WheelAssembly.iam*.

A.I	wheelsize		2211	*
10.1	NumberOfSpokes	ul	8 ul	Ψ
1	- BrakeMaterial	Text	Cast Iron	-
	WheelFinish	Text	Chrome -	Polished v
	- CaliperFinish	Text	Black Cas	t 👻
	TotalPrice	Text	\$1030	
	BrakePrice	Text	\$700	
L	WheelPrice	Text	\$330	
7	Add Numeric 1		ipdate	Purge Unused
2	Add Nume	ric	e Upd	iate
	Add Text			
	Add True/E	alea		

Select 'Parameters' from the 'Manage' pane. Select A'dd True/ False' from the drop-down in the dialog to create the new parameter.



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Start by activating the iLogic Browser, located in the iLogic pane on the ribbon's 'Manage' tab.

	WheelSize	in	22 in	*	22	
	NumberOfSpokes	ul	8 ul	Ŧ	8.0	
-AS.	BrakeMaterial	Text	Cast Iron			
	WheelFinish	Text	Chrome - Polished	-		
	CaliperFinish	Text	Black Cast	-		
	TotalPrice	Text	\$1030			PricingRule
100	BrakePrice	Text	\$700			PricingRule
1022	WheePrice	Text	\$330			PricingRule
► See	Slot	True/F	False	Ŷ		
			True		10.000	
8	Add True/False	- Up	False Purgeru	nu (re		
2	Link	Imm	ediate Update	v		

Name the parameter *Slot*, and then set it's equation to 'False' using the drop-down.



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PricingRule			$\overline{\mathbf{v}}$		
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					-

Ensure the parameter is defined as a 'Key Parameter', and then click 'Done' to exit the dialog.

 Image: Solution of the second sec

Click below the 'Slot? note in the edit window to begin defining a new rule adding a slot feature option for the wheel spokes.



6.

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Double-click the 'WheelConfig' rule in the iLogic browser to edit it.



Double-click the 'IsActive' system snippet, within the 'Features' category, to add the logic to the window.



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12.

Copy the **wheelOcc** definition from the existing snippet, and then paste it inline with the new snippet as shown, ensuring a comma is used to separate the text.



Add an equal sign (=) to the end of the snippet text, access 'User Parameters' from the 'Model' tab, and then double-click the Slot parameter to insert it.



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Highlight the **featurename** text, select the wheel part's **SpokeSlot** feature from the 'Model' tab, and then double-click the feature in the 'Names' tab to ensure the correct reference is inserted.



Click 'Save', then 'Close' to complete the rule edit and close the dialog. Double-click the 'PricingRule' in the iLogic browser to edit it next.







Highlight the My_Expression logic in the edit window, and then double-click 'Slot User Parameter' to replace the definition.



Move your cursor to the end of the string, press 'Enter', and **type SlotPrice = 75** to start the 'Then' statement.



Da 18 2 10 6E If.... Then.... End If X C= 4 X 🕒 遇 2 If....Then....End If 10 6 G If Slot=True Then If Slot=True Then SlotPrice = 75 SlotPrice = 75 Else SlotPrice = 0 End If Press 'Enter', and then type Else. Press 'Enter' again, typing **SlotPrice = 0** (zero). 20. Logic Browser Event Triggers Add Rule iTrigger Add Form Regenerate All Rules Delete All Rules -1:1 iLogic

> Click 'Save', then 'Close 'to complete the rule and exit the dialog. Save your progress to continue. Expand the iLogic panel in the ribbon and select 'Add Form'.



- 12

Else

End If

17.

WheelPriceValue = WheelSizePrice-SlotPrice+SpokePrice

If BrakeMaterial = "Ceramic" Then BrakePriceValue = 2500 Else BrakePriceValue - 700

Finish the rule by inserting the text SlotPrice+ into the price definition as shown.

Name:	
Wheel Configuration	
Type of Form In this document For all documents (global)	
OK Cancel	
Name the new form 'Wheel Configuration' and click 'OK'.	
	2
Label Wheel Configuration f_x WheelSize f_x NumberOfSpokes	
► J _X Siot	
	Type of Form In this document For all documents (global) OK Cancel Name the new form 'Wheel Configuration' and click 'OK'. Image: State of the state of t



Label		
- 💽 W	heel Configuration	
f_{i}	WheelSize	
f_{i}	NumberOfSpokes	
f	Slot	_
	Empty Space 1	
•	Splitter 1	
	Empty Space 2	

Continue defining the form by dragging an 'Empty Space', a 'Splitter' and another 'Empty Space' into the configuration from the 'Toolbox'.



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guite	tion	x
WheelSize	22	-
NumberOfSpokes	8	-
Slot	False	
<u>↓</u>		
TotalPrice	\$1030	

Complete the form by dragging over the 'TotalPrice' Parameter.

	Parameter Name	TotaPrice	
	Label	Total Price	
×	Appearance		
	TextLocation	Left	_
	Tooltip		
	Font	Tahoma, 8pt	
	R.L.		
The	label or name of this element in the	Preview ON	Cance

Repeat the prior step for the remaining Inventor names, and then click 'OK' to complete the form.

Pro	operties	WheelSize Parameter	
~	(Name))	
	Paramet	er Name	WheelSize
	Label		Wheel Size
v	Appear	ance	
	TextLoc	ation	Left 🕇
	Tooltip		
	Font		Tahoma, 8pt

26.

Select the 'WheelSize' listing under Inventor Name, and then add a space to the corresponding 'Label' listing within 'Properties'.

iLogia	2			0
Rules	Forms	Global Forms	External Rules	
		Wheel Con	figuration	
			13	

Open the new form by selecting it in the 'Forms' tab in the iLogic browser.



Wheel Configurati	on	
Wheel Size	22	•
Number Of Spokes	5	•
Slot	True	*
Total Price	\$1075	
10	ors.	

Apply '22' for the 'Wheel Size,' '5' for the 'Number of Spokes', 'True' for the 'Slot' and then click 'Done' to update the assembly.

Re Wheel Configuration fy Wheel Size WheelSize Number Of Spokes NumberOfSpokes Slot Slot fy WheelFinish WheelFinish Empty Space 3 BrakeMaterial BrakeMaterial CaliperFinish CaliperFinish Empty Space 1 Empty Space 2 E. Takal Drive

Add the 'WheelFinish', 'BrakeMaterial' and 'CaliperFinish' parameters to the form as shown, ensuring an 'Empty Space' divides the wheel and break items.

iLogic								
Rules	Forms	Global Forms	External Rule	s				
		Wheel Con	figuration	-Edit				
				Delete				
				Copy For	m			

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32.

Begin making a change to the form by right-clicking it in the iLogic browser and selecting 'Edit'.

Wheel Size 22 Number Of Spokes 5 Slot True Wheel Finish Glossy - Black Brake Material Cast Iron Caliper Finish Black Cast Image: Spoke Spok			
Number Of Spokes 5 Slot True Wheel Finish Glossy - Black Brake Material Cast Iron Caliper Finish Black Cast Total Price \$1075	Wheel Size	22	•
Slot True Wheel Finish Glossy - Black Brake Material Cast Iron Caliper Finish Black Cast	Number Of Spokes	5	•
Wheel Finish Glossy - Black Brake Material Cast Iron Caliper Finish Black Cast Total Price \$1075	Slot	True	•
Brake Material Cast Iron Caliper Finish Black Cast	Wheel Finish	Glossy - Black	•
Caliper Finish Black Cast	Brake Material	Cast Iron	•
Total Price \$1075	Caliper Finish	Black Cast	•
Total Price \$1075			
	Total Price	\$1075	
		Done	

Ensure the label for each new parameter is updated to include a space, and then click 'OK' to complete the edit. Open the form again and change the 'Brake Material' to 'Glossy – Black'. Save all your files to complete the project.



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