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Adding Formulas to an Object Type

Overview

A Formula uses numeric and variable values (e.g., select lists, numeric or date fields, or workflow states) to generate Incident Severity, Estimated Damage, or Incident Likelihood. Formulas are added to an Object Type through a Relationship or Reference.

A formula appears on a form as a number, label (e.g., Low, Medium, High), numbers and labels, gauge, or as a formula card.

Related Information/Setup

For more information on formulas, see the following articles:

- Formulas Overview
- Variables, Operators & Functions
- Time Functions
- Null Values in Formulas
- Formula Examples
- Formulas on Forms

Navigation

1. From the *Home* screen, click the **Administration** icon.

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Home ~	My Tasks		_
			-

Administration Icon

2. From the Admin Overview screen, click the Object Types tile on the Data Models



section.

Admin Overview ~	Q		···· ይ 🕲
Data Model		Views	
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Fields	Data Definitions		ţ

Object Types Tile

- 3. From the *Object Types* screen, enter an **Object Type Name** in the **Search** field to narrow down the Object Types list.
- 4. Click the Object Type's Name you want to edit.

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AT	Activity Type						
F	Finding Results or evidence from	m a specific audit <mark>acti</mark>	vity				
L	Log Single entry of related	<mark>activity</mark> to an Investiga	tion or Case, used for evid	entiary purpos	ses, including times	and costs.	
T	Task Actionable record for ke	ey data objects (Incide	ent, Case, <mark>Activity</mark>) with use	er assignment.	date tracking and	email notifications.	
						NIEW OBJECT TY	PE UNIVERSE

Click the Object Type's Name

5. From the *Edit Object Type* screen, scroll down and select the *Formulas* tab.



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Summary inform		bject Type: related	d forms, object type gro	oups, activities / applie	cations, Reports	s, report definitions		
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Activity Ty	pe - CC - Edit	t						Priority: none
Activity Ty	pe - IRM - Lik	orary						Priority: none
Related Data	a Definitions							
Activity Ty	ре							
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Formulas Tab

6. From the *Formulas* tab, click on the **+ Add Formula** button.

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On Site T							ť	Ì
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Time Spe				reader with a New-			ť	Ì
2 Formula HOU	KS==!NULL?HOURS:	timeDiff(CLEAREDDAT, .	ASSIGNEDDA, "hours") will	render with a None			10	
							✓ DOI	NE

Add Formula Button

Adding a Formula to an Object Type

 From the *Create New Formula* screen, enter a formula name in the Name field (e.g., Estimated Vehicle Damage).



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Admin: Edit Object Type				_	
Create New Activity	^r Formula			×	1
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	a: ×				
CONFIGURE DESCRIPTION CONC	ATENATION				

Name Field

- 2. Click the **Create** button.
- 3. The *Formulas* tab will appear, listing the newly created formula.
- 4. Click the new formula to open the **Edit Formula** pop-up.

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Data Mode		Object Types	Object Type Groups	Fields	Assessments	Data Definition							
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	Σ Formula MAXCDV will render with a None Lowest Single Calculated RCN Value Σ Formula MINRCN will render with a None				Number of Properties								
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	Number of Valuatio				+ ADD VARIABLE								
	Total Client Declare ∑ Formula SUMCDV will rende		ngs	FO	RMULA					-			

Edit Formula Pop-up

- 5. **(Optional)** Enter a description documenting the Formulas internal use in the **Description** field.
- 6. From the *Variables* section, Click the + Add Variable button.



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	Number of Projects ∑ Formula pro will render with								li		
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	Total Client Declare ∑ Formula SUMCDV will rende		igs	FO	RMULA					-	

+ Add Variable Button

- 7. From the *Variables* section, select a **Variable Type** from the drop-down list. A **Variable** is a value in which the formula calculations are performed.
 - Field: After selecting the Field variable, the following field will appear:
 - Available Components: Select a field or formula from the Available
 Components drop-down field adding it directly to the Object Type.

Note:

Fields can be added to formulas after they are added to an Object Type or if they are associated through a relationship or reference. Only numeric fields, date fields, and select lists with numeric values are accepted. For more information, see the Fields article.

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					[VARIABLES						•
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	 Formula -VAL will render with a None 96 Under Insured Σ Formula (CDV-RCN)/CDV will render with a None 					Description						
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	Estimated Vehicle Damage ∑ Formula will render with a None				l		5 65 140		✓ CREATE	۲		
		ngle Calcul RCN will render v	lated RCN Value vith a None									. .

Variable Type = Field

- **Relationship:** After selecting the **Relationship** variable, the following fields will appear:
 - **Relationship:** Select the Object Type **Relationship** from the drop-down list.



Relationships connect two or more objects. The user must add a Relationship to an Object Type to appear on the Relationship drop-down list. See the Add Relationships to an Object Type article for further information on adding a Relationship to an Object Type.

- Available Components: Select a field or formula from the Available
 Components drop-down field adding it directly to the Object Type.
- Sub Type: Select a Sub Type from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed. For more information on Subtypes, see the Sub Type Table in the Variables, Operations, & Functions article.
 - Array: Creates a set of values from the variable.
 - **Sum:** Calculates a total from the variable's set of values and returns a single number. Select list variables cannot use Sum Sub Types.
 - **Count:** The number of times a variable has been added to an object.
 - Average: Calculates an average number from the variable's set of values. Select list variables cannot use Average Sub Types.
 - **Every:** Checks if the variable contains a value on the objects in the relationship/reference.
 - Min: Calculates the lowest number from the variable's set of values.
 Select list variables cannot use Min Sub Types.
 - Max: Calculates the highest number from the variable's set of values.
 Select list variables cannot use Max Sub Types.

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	Lowest Sin		ted RCN Value						CANCEL	V CREAT	TE	
	Number of	Locations										

Variable Type = Relationship

- **Reference:** After selecting the **Reference** variable, the following fields will appear:
 - **Reference:** Select the Object Type **Reference** from the drop-down list.



References indicate that an object is connected to another object through a relationship. References are automatically created when a relationship is created. For further information on adding a Relationship to an Object Type, see the Add References to an Object Type article.

- Available Components: Select a field or formula from the Available
 Components drop-down field adding it directly to the Object Type.
- **Sub Type:** Select a **Sub Type** from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed.

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On Site Time						
∑ Formula timeDiff(MAXCLEAREDDATE, M	INARRIVEDDAT,"mi					······································

Variable Type = Reference

- **Property:** After selecting the **Property** variable, the following field will appear:
 - **Property:** Select a **Property** type from the drop-down list:
 - Is Submitter Confidential: This property type creates a formula that compares the number of confidential submissions against the number of not confidential submissions for customers that use the

Confidential Reporting Portal.



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		Vehicle Dai render with a None							CANCEL	✓ CRE	EATE		
		ingle Calcula RCN will render w	ated RCN Value										

Variable Type = Property

- The system will automatically populate the Name field with the field or formula's unique ID by default.
- 9. (Optional) Enter a Variable name in the Name field.



Warning:

Using a function name (Sub Type Name) in the name field will cause an error.

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	Highest Single Custo Σ Formula MAXCDV will render		Value	* Variable Type	* Available Components	
	Lowest Single Calcu		ie	*Name @		
	Number of Location: Σ Formula loc will render with a	-		NUMBEROFLOCATIO	ONS	
	Number of Projects S Formula pro will render with a	a None		Description		— I
	Number of Propertie Σ Formula will render with a No			Treat empty values	s as Null	
	Number of Valuation 5 Formula Val will render with a				CANCEL	
	Total Client Declared Σ Formula SUMCDV will render		ngs	FORMULA		

Variable Name

- 10. (Optional) Enter a Variable description in the Description field.
- 11. **(Optional)** Select the **Treat empty values as Null** checkbox to exclude blank objects from a formula calculation. For more information, see the Null Values in Formulas article.
- 12. Click the **Create** button to add the variable. The system will perform the Syntax Validation function, and an error message will appear under the **Formula** field, reminding the user to add the variable name to the **Formula** field.



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	st Single Calcu a MINRCN will render	ulated RCN Value	ae	1	Formula: Number of Lo		ity values as null: false		×		
	er of Location	-		FC	RMULA						1
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	er of Propertie a will render with a No				8					* *	
	er of Valuation			Er	ror: Please remove	numberoflocation	s or add them to	the formula.	,		
	Client Declare	d Value - Buildi rwith a None	ngs		SAVE FORMULA	√× RECA		ORMAT			
Total F	Replacement (Cost Amount -	Buildings	_							

Variable Error Message

13. Click the **Insert Variable** button and select a Variable from the dropdown menu. The selected Variable will be added to the Formula field.

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Data Mod	el V Object Types Object Type Groups	Fields Assessments Data Definition
	Σ Formula -VAL will render with a None	EDIT FORMULA X
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	Amount Under Insured Σ Formula CDV-RCN will render with a None	
	Highest Single Calculated RCN Value	Treat empty values as Null
	Highest Single Customer Declared Value	CANCEL V CREATE
	Lowest Single Calculated RCN Value 2 Formula MINRCN will render with a None	NUMBEROFLOCATIONS X Formula: Number of Locations Treat empty values as null. false
	Number of Locations ∑ Formula loc will render with a None	FORMULA
	Number of Projects ∑ Formula pro will render with a None	INSERT VARIABLE 👻
	Number of Properties 2 Formula will render with a None	
	Number of Valuations Σ Formula Val will render with a None	Error: Please remove numberoflocations or add them to the formula.
	Total Client Declared Value - Buildings Σ Formula SUMCDV will render with a None	SAVE FORMULA
	Total Replacement Cost Amount - Buildings	

Insert Variable Button

14. Click the **Save Formula** button. The **Formula** field will indicate if the Formula syntax is correct. If the Formula syntax is correct the Formula will be saved.



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	Amount Under Insu										
	Highest Single Calc		lue		Treat empty valu	ies as Null					
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	Lowest Single Calcu		ue	1	Formula: Number of Lo		ty values as null: false			×	
	Number of Location			FO	ORMULA						_
	Number of Projects				INSERT VARIABLE	*				2	
			None		NUMBEROFLOCATION	50				÷	
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	Total Client Declare		ings		SAVE FORMULA	√× RECA	LCULATE AND REF	ORMAT			
	Total Replacement	Cost Amount -	Buildings								

Formula Syntax

Note:

Click the **Expand** *icon on the Formula field to open the* **Expandable** *screen mode.*

Data Mode		Object Types	Object Type Groups	Fields	Assessments	Data Defin	tion			
	Σ Formula -VAL will render wit	h a None		EDIT F	ORMULA					
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	Highest Single Cust ∑ Formula MAXCDV will rende		Value					CANCEL	✓ CREATE	
	Lowest Single Calcu		ue	'	Formula: Number of Lo		empty values as null: fa	lse	×	
	Number of Location	-		FC	ORMULA					
	Number of Projects ∑ Formula pro will render with				INSERT VARIABLE	~			2	1
	Number of Propertie		None		NUMBEROFLOCATION	58			_	÷
	Number of Valuation			Fo	ormula syntax is cor	rect. Formula :	aved.			
	Total Client Declare ∑ Formula SUMCDV will rende		ngs		SAVE FORMULA	√× R	ECALCULATE AND R	EFORMAT		
	Total Replacement	Cost Amount -	Buildings							

- 15. Repeat steps 11 16 to add additional variables.
- 16. Click the \mathbf{x} icon next to the variable to delete the variable.



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Data Model 🗸 🗸	Object Types	Object Type Groups	Fields	Assessments	Data Definition				
		EDIT FORMULA						×	
All of the formulas that have been built	t Activity.	VARIABLES						1	•
ACTCOUNT Σ Formula ACT will render with a None		Variable Type							
Activity DoW	'hours")+TimeZone	Select one Name Ø	Ÿ						
Activity ToD	hours")+TimeZoneł	Description					*		
Count E Formula COUNT will render with a None		Description							
Earliest Response Time	DDA,"minutes") w	Treat empty value	ues as Null		CANCEL	✓ CREATE			
		REPORTEDDA	A			Ľ	2		
Linked Incident Count Σ Formula IncExists will render with a Label		Field: Reported Date/	Time Treat e	empty values as null: fals	e				

X Icon - Delete a Variable

- 17. From the *Formula* section, enter a Formula using the variable name(s) you entered in the Name field under the *Variables* section. Include operators and functions in the Formula field (e.g., INCIDENTSE==3). For more information on Operators, see the Operators Table in the Variables, Operators, & Functions article.
- A system notification will appear under the Formula field, indicating that Your formula is not saved.
- 19. The **Recalculate and Reformat** button will be greyed out, preventing invalid formulas from being sent to the processing queue and causing a potential slowdown.

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ata Model 🗸 🗸	object types	Object Type Groups Fields Assessments Data Definition
Internal Audit Project - Co	ontrol Workflow	EDIT FORMULA X
Control Self-Assessment	Workflow (Risk &	
Control Status		FORMULA
IT Compliance Assessme	nt Control Workfl	w
Internal Controls Assessn	nent - Control Wo	rkflow
Compliance Testing Work	flow (Prototype)	SUM(COUNT
IT Risk Assessment Contr	rol Workflow	Your formula is not saved.
Concatenations		SAVE FORMULA
CONFIGURE NAME CONCAT	ENATION	DISPLAY
CONFIGURE DESCRIPTION C Overview Fields (46)	CONCATENATION Formulas (11)	Relation

System Notification - Your Formula is Not Saved

20. Click on the Save Formula button. The system will perform a Syntax Validation on the



formula if the formula is:

A

Warning:

The **Autosave** function was removed from the **Edit Formula** pop-up. Changes to the **Formula** field require a user to click the **Save Formula** button.

Changes not manually saved will be discarded, and the system will revert to the previously saved state.

• Valid: A system notification will appear under the Formula field; Formula syntax is correct. Formula saved. The Recalculate and Reformat button will be active.

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Data Model 🗸 🗸 🗸	Object Types	Object Type Groups Fields Assessments Data Definition	
Internal Audit Project - Cor	ntrol Workflow	EDIT FORMULA	×
Control Self-Assessment V	Vorkflow (Risk 8		
Control Status		FORMULA	
IT Compliance Assessment	Control Workfl		
Internal Controls Assessme	ent - Control Wo	INSERT VARIABLE ~	
Compliance Testing Workfl	ow (Prototype)	SUM(COUNT) ↓	
IT Risk Assessment Contro	l Workflow	Formula syntax is correct. Formula saved.	
Concatenations		SAVE FORMULA V RECALCULATE AND REFORMAT	ļ
CONFIGURE NAME CONCATEN	NATION	DISPLAY	
CONFIGURE DESCRIPTION CO Overview Fields (46)	NCATENATION	Relation	

System Notification - Valid Formula

 Invalid: A system notification will appear under the Formula field; Error Syntax error in part (char 1). The formula is not saved. The error will indicate the character (char) location of the error in the formula and that the formula is invalid and not saved. The Recalculate and Reformat button will be greyed out, preventing invalid formulas from being sent to the processing queue and causing a potential slowdown.



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Data Model 🗸 🗸	Object Types	Object Type Groups	Fields	Assessments	Data Definition				
Internal Audit Project - Con Control Self-Assessment W		EDIT FOI	RMULA					×	
Control Status		FORM	IULA						1
IT Compliance Assessment	Control Workflo								l
Internal Controls Assessme	nt - Control Wor	kflow	ISERT VARIABLE	~		2			l
Compliance Testing Workfl	ow (Prototype)	SUN 4	I(COUNT			•	•		l
IT Risk Assessment Contro	l Workflow		: Parenthesis) e formula is not s	expected (char 10). aved.					
Concatenations		s	AVE FORMULA	√× RECAL	LCULATE AND REFORMAT				
CONFIGURE NAME CONCATEN		DISPI	AY						
Overview Fields (46)	Formulas (11)	Relation No		ge as					
		4	REFORMAT						•

System Notification - Invalid Formula

- 21. (**Optional**) Click the **Recalculate and Reformat** button to recalculate all the formulas in your organization.
- 22. In the *Display* section, select a format from the **Format** drop-down list:
 - None: Uses no display formats.

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Σ Formula ACT will render with a None Activity DoW Σ Formula mod((((timediff(SUPPLIED_DT,0,"	'hours")+TimeZone	REPORTEDDA Field: Reported Date/T		npty values as null: fal:	ie -	ж		ų	
Activity ToD Σ Formula mod(((timediff(SUPPLIED_DT.0.*	hours")+TimeZone!	FORMULA							
Count Σ Formula COUNT will render with a None		REPORTEDDA							
Earliest Response Time Σ Formula timeDiff(ARRIVEDDAT, ASSIGNE	DDA,"minutes") w	Formula syntax is con SAVE FORMULA	_	a saved.	FORMAT				
Estimate Vehicle Damage ² Formula REPORTEDDA will render with a M	None	DISPLAY		_				.	
Linked Incident Count			ge as						
On Site Time ∑ Formula timeDiff(MAXCLEAREDDATE, MI	NARRIVEDDAT,"mi	None ~ No	one ~						
Priority Σ Formula PRIORITY will render with a Label		2 REFORMAT							
Time Crent								-	-

Format = None

• **Numeric:** Allows the user to choose how the numbers will be displayed using the options on the table.



- Num: Displays numbers in numeric format.
- %: Displays numbers using percentage format.
- **\$:** Displays numbers using dollar format.
- **0.00:** Displays numbers using decimal format.
- Layout: Previews the number format selected.

Search 000	\$? L ^
Object Type Groups Fields Assessments Data Definition	
Relation FORMULA	×
INSERT VARIABLE V SUM(COUNT)	2 }
Formula syntax is correct. Formula saved.	
DISPLAY	
Format Layout Range as	
Numer > 0 None > None >	ľ
	_
c	Object Type Groups Fields Assessments Data Definition Relatio EDIT FORMULA FORMULA INSERT VARIABLE ~ SUM(COUNT) SUM(COUNT) SAVE FORMULA ✓ Recalculate and Reformat DISPLAY Format Layout Range as

Format = Numeric

• Range as:

- **None:** The formula will display the numeric results only.
- **Label:** The formula will display the range labels only (e.g., Low, Medium, High) in the color selected for that range.
- Label and Result: The formula will display the numeric results and labels (e.g., Low – 1000) in the color selected for that range.
- **Result:** The formula will display the numeric results only in the color selected for that range.
- 23. If a user selects **Label**, **Label and Results**, or **Results** from the **Range as** drop-down list, the system will automatically add three default formula labels **Low**, **Medium**, and **High**.



ata Model v Object Types	Object Type Groups Fields Assessments Data Definition			
E	DIT FORMULA			>
All of the formulas that have been built Activity. ACTCOUNT 5 Formula ACT will render with a None	REPORTEDDA Formula syntax is correct. Formula saved.			
Activity DoW ∑ Formula mod((((timediff(SUPPLIED_DT.0, "hours")+TimeZone	SAVE FORMULA V ^X RECALCULATE AND REFORMAT			
Activity ToD ∑ Formula mod(((timediff(SUPPLIED_DT,0,"hours")+TimeZonet	DISPLAY			
Count Σ Formula COUNT will render with a None	Format Layout Range as Numeric' 0 -Num % \$ 0.00 -Num -% -\$ -\$ -\$ -0.00 Label and			
Earliest Response Time ∑ Formula timeDiff(ARRIVEDDAT, ASSIGNEDDA, "minutes") w				
Estimate Vehicle Damage 2 Formula REPORTEDDA will render with a Label and Result	Low everything up to, and including, 33	ø t	Ì	
Linked Incident Count 2 Formula IncExists will render with a Label	Medium above 33; up to, and including, 66	1 í	Ì	
On Site Time Σ Formula timeDiff(MAXCLEAREDDATE, MINARRIVEDDAT,"mi	High above 66; up to, and including, 100 and above	/ ť	Ì	
Priority 5 Formula PRIORITY will render with a Label	ADD LABEL			

Formula Labels

24. Click the Edit icon next to the Formula Label you want to edit.

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ta Model 🗸 🗸	Object Types	Object Type Groups	Fields	Assessments	Data Definition		
	E	DIT FORMULA					
All of the formulas that have been built	Activity.	REPORTEDDA					
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$\boldsymbol{\Sigma}$ Formula ACT will render with a None		SAVE FORMULA	√× RI	ECALCULATE AND RE	EFORMAT		
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Activity ToD ∑ Formula mod(((timediff(SUPPLIED_DT,0,"hd	ours")+TimeZonet	DISPLAY					
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Earliest Response Time Σ Formula timeDiff(ARRIVEDDAT, ASSIGNED	DA,"minutes") w	${oldsymbol {\mathcal C}}$ reformat					
Estimate Vehicle Damage ∑ Formula REPORTEDDA will render with a La	bel and Result	Low everything up to, an	d including, 3	3		1	Ô
Linked Incident Count ∑ Formula IncExists will render with a Label		Medium above 33; up to, and	l including, 6	5		din .	Û
	ARRIVEDDAT,"mi	High above 66; up to, and	l including, 10	00 and above		din .	Û
Priority Σ Formula PRIORITY will render with a Label		ADD LABEL					

Edit Icon

- 25. The **Formula Label** fields will appear, allowing the user to edit the field values:
 - Color: Click the Color drop-down to reveal the color picker and select a new color for



the label. You can also type a hex color into this field to select a color.

- Label: Enter a new name for the label in the Label field.
- Max Value: Enter a maximum value in the Max Value field, creating a numeric value range for the Formula Label.

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ata Model 🗸 Objec	ypes Object Type Groups Fields Assessments Data Definition			
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ACTCOUNT § Formula ACT will render with a None	SAVE FORMULA			
Activity DoW ∑ Formula mod(((timediff(SUPPLIED_DT,0,"hours")+T	Zone DISPLAY			
Activity ToD Σ Formula mod(((timediff(SUPPLIED_DT,0,"hours")+Ti	zonel Format Layout Range as			
Count Σ Formula COUNT will render with a None	Numeric' 0 Num 5 C.C.O Label and C REFORMAT C REFORMAT			
Earliest Response Time Σ Formula timeDiff(ARRIVEDDAT, ASSIGNEDDA,"min		.	Ŵ	
Estimate Vehicle Damage Σ Formula REPORTEDDA will render with a Label and R	#00a591 ~ Low 33			
Linked Incident Count ∑ Formula IncExists will render with a Label	Medium above 33, up to, and including, 66	đ	Û	
	High above 66; up to, and including, 100 and above	din .	Û	
Priority 5 Formula PRIORITY will render with a Label	ADD LABEL			

Formula Label Fields

26. Click the **Save** icon to save your changes.

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Data Model 🗸 🗸	Object Types	Object Type Groups	Fields	Assessments	Data D	efinition			
All of the formulas that have been built ACTCOUNT § Formula ACT will render with a None		DIT FORMULA Formula syntax is co SAVE FORMULA		saved. CALCULATE AND R	REFORMAT				×
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On Site Time	IARRIVEDDAT,"mi	High above 66; up to, and	d including, 100) and above			dan .	Û	
Priority ∑ Formula PRIORITY will render with a Label		ADD LABEL							



Save Icon

27. Click the **Delete** icon to delete a Formula Label.

EDIT	ject Type Groups CORMULA pormula syntax is correct SAVE FORMULA	Fields Assessmen ct. Formula saved. √R RECALCULATE AM			
All of the formulas that have been built Activity. F ACTCOUNT Σ Formula ACT will render with a None	ormula syntax is correc	1.20	ND REFORMAT		
Activity DoVA/					
S Frank and William difficul DDI IED, DT 0 "haves" (Time 7am)	ISPLAY				
Activity ToD Σ Formula mod(((timediff(SUPPLIED_DT,0,"hours")+TimeZonet	ormat Layout	Num %	Range as		
Count Σ Formula COUNT will render with a None	Numeric 0	-Num -%	-\$ -0.00 Label and		
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On Site Time Σ Formula timeDiff(MAXCLEAREDDATE, MINARRIVEDDAT,"mi	High above 66; up to, and inc	cluding, 100 and above		Ø	Ê
Priority Σ Formula PRIORITY will render with a Label	ADD LABEL				

Delete Icon

28. Click Add Label button to add a new label.

ta Model ~ Object Types	Object Type Groups Fields Assessments Data Definition			
Il of the formulas that have been built Activity. ACTCOUNT Σ Formula ACT will render with a None	DIT FORMULA Formula syntax is correct. Formula saved. Save formula VR recalculate and reformat			;
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Estimate Vehicle Damage Σ Formula REPORTEDDA will render with a Label and Result	🛑 #00a591 v			
Linked Incident Count [®] Formula IncExists will render with a Label	Medium above 33; up to, and including, 66	Ø	Û	
On Site Time ∑ Formula timeDiff(MAXCLEAREDDATE, MINARRIVEDDAT,"mi	High above 66; up to, and including, 100 and above	đ	Ŵ	
Priority 5 Formula PRIORITY will render with a Label	ADD LABEL			

Add Label Button



 If changes are made to the Formula Label on the *Display* section, you must click the Reformat button before the changes are displayed.

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Linked Incident Count		Medium above 33; up to, and	d including, 66	i)			an an	Ô		
On Site Time Σ Formula timeDiff(MAXCLEAREDDATE, MIN	JARRIVEDDAT,"mi	High above 66; up to, and	d including, 10	0 and above			San .	Û		
Priority 2 Formula PRIORITY will render with a Label		ADD LABEL								
Time Crent										-

Reformat Button

30. Click the **x** in the **Edit Formula** pop-up header to close the pop-up.

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Data Model 🗸 🗸 🗸	Object Types	Object Type Groups	Fields Asse	essments Data Definition			
		DIT FORMULA					×
All of the formulas that have been buil ACTCOUNT § Formula ACT will render with a None	t Activity.	Formula syntax is co		LATE AND REFORMAT			
Activity DoW 5 Formula mod((((timediff(SUPPLIED_DT,0,1)))))	'hours")+TimeZone	DISPLAY					
Activity ToD ∑ Formula mod(((timediff(SUPPLIED_DT.0.")	hours")+TimeZone!	Format Layo	out	Range as			
Count 5 Formula COUNT will render with a None		Numeric ^o 0	-Num	-% -\$ -0.00 Label a	nt		
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Estimate Vehicle Damage	abel and Result	#00a591 ~	Low	33]		
Linked Incident Count		Medium above 33; up to, and	including, 66		di	Ŵ	
On Site Time Σ Formula timeDiff(MAXCLEAREDDATE, MI	NARRIVEDDAT,"mi	High above 66; up to, and	l including, 100 and a	above	ø	Ŵ	
Priority ∑ Formula PRIORITY will render with a Label		ADD LABEL					
Time Creat							

x Closes the Edit Formula Pop-up



Add a Condition to a Transition

Overview

A **Condition** controls an object's movement to different states or performs a specific action. A **Condition** consists of fields, formulas, and workflow states that create a formula. The formula uses a set of parameters to control whether a transition or action can occur.

Related Information/Setup

For more information on formulas, see the following articles:

- Formulas Overview
- Variables, Operators & Functions
- Null Values in Formulas
- Formula Examples

Before adding a Condition to a Transition, you must create a State and a Trigger. See the following articles for more information on creating States and Triggers.

- Create a New State
- Add a Trigger and Transition to a State

Example

The following example outlines an everyday scenario where you would want to add a condition to a transition.

Your company's policy for severe incidents is to skip the typical review process and transition to the investigation stage. Create a Condition on the Incident object type workflow for the **Submit for Review** trigger. If the "Severe" option is selected. The object is automatically transitioned to the **Investigation Required** state once the **Submit for Review** trigger is selected on a form.

Navigation

1. From the *Home* screen, click the **Administration** icon.



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Home ~	My Tasks		_

Administration Icon

2. From the **Administration Settings** menu, click the **Admin: Overview** link.

		(Q Search	•••	\$ \$
Home	✓ My Tasks			Admin Overview
				Settings
				20 User Management
				Branding
				Languages

Admin: Overview Link

3. From the *Admin Overview* screen, click the **Object Types** tile on the *Data Models* section.



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Admin Overview	~			
Data Model			Views	
Object Types		Object Type Groups	Configurable Forms	Data Visualizations
e Helds	Assessments	Data Definitions		
People			Application Management	
Q	User Groups	Roles	Org Manager Application	

Object Types Tile

- 4. From the *Object Types* screen, enter an **Object Type Name** in the **Search** field to narrow down the list.
- 5. Click the **Object Type's Name** you want to edit.

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Data Mod	el ~	Object Types	Object Type Groups	Fields	Assessments	Data Definiti	on	
Admin:	Object Types					+ CREA	TE OBJECT TY	'PE
Q Con	trol							8
BU	Business Unit A segment or subset of th hierarchy providing secur reports are anchored at th	ity and ownership to	key data objects includin					
С	Certification Statements signed off on	by business users to	o certify on the effectivene	ess of <mark>control</mark> e	s.			
C	Control The method an organizat can be of administrative,	-	risk, including policies, pro ent or legal nature.	cedures, guid	delines, practices, or	r organization str	ucture, which	ı
М	Market Alternate organizational I Types, most often used w				-			ent
R	Region Alternate organizational I Types, most often used w		ecurity and ownership to n use cases. Includes link		-			ent
R	Request VRM: A request allows m internal audit/ <mark>control</mark> s tea testing.							
1	Test A method used to test th	e operating and desi	gn effectiveness of a <mark>cont</mark>	<mark>rol</mark> , which ma	y include various te	sting methods or	strategies.	
					N V	IEW OBJECT TY	PE UNIVERS	SE

Click the Object Type's Name

6. From the *Edit Object Type* screen, click on a workflow under the *Workflow* section.



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Control Self-Assessment								
Control Status								
IT Compliance Assessmer	it Control Work	flow						
Internal Controls Assessm	ient - Control V	Vorkflow						
Compliance Testing Work	flow <mark>(</mark> Prototype	2)						
IT Risk Assessment Contr	ol Workflow							

Click on a Workflow

7. If there are no workflows listed, click on the **Configure Workflow** button.

Configure Workflow Button

8. From the *Edit Workflow* screen, click a **Trigger** under the *State* section.



Note:

You must already have a Trigger added to a State before you can add a condition to a transition.

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Data Model 🗸 🗸	Object Types	Object Type Groups	Fields	Assessments	Data Defi	nition		
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Internal Audit Project - Cont	rol Workflow						ø	
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IN PROGRESS TRIGGERS + ADD TRIGO Complete = Tri	SER ansitions to Complete				0 REQUIRE	ED COMPON	ENTS	
COMPLETE		Transitions to Archive			0 REQUIRE	ED COMPON	ENTS	
Send Back to In Pr	ogress ≓ Transitio	ns to In Progress						
ARCHIVE TRIGGERS + ADD TRIGC This State has no Triggers	SER				0 REQUIRE	ED COMPON	ENTS	
						v	DON	E

Click on a Trigger

9. From the *Edit Trigger* pop-up, click the **Edit** icon next to the transition.



	(Q Search		\$ @ L
Data Model	✓ Object Types Object Type Groups Fields As	sessments Data Definition	
Admin:Edit Workflow		EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	Create	ø
	States	TRANSITIONS	
	States	Create	o; x
		+ ADD TRANSITION	
	TRIGGERS + ADD TRIGGER		
	Create # Transitions to In Progress		
	IN PROGRESS		

Click the Edit Icon

Adding a Condition on a Transition

1. From the *Condition* section, click the **+Add Condition** button.

	(Q Search	•••	\$ \$ \$
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
Admin: Edit Workflow		EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	Create	1
		TRANSITION DETAILS	
	States	Name	
		Create	
	CREATION	Destination State	
	TRIGGERS + ADD TRIGGER	In Progress	~
	Create = Transitions to In Progress	Bypass Required Fields. 0	
	IN PROGRESS	CONDITIONS	
	TRIGGERS + ADD TRIGGER	+ ADD CONDITION	
	Complete = Transitions to Complete		*

+ Add Conditions Button

 (Optional) Enter a condition name in the Name field under the *Details* section. By default, conditions are named **Default Condition Formula**.



	(Q Search	•••	\$ @ L
Data Model	✓ Object Types Object Type Groups Fields As	sessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	CONDITIONS	*
	States	*Name Default Condition Formula	
	CREATION	Description	
	TRIGGERS + ADD TRIGGER		
	Create		6
	IN PROGRESS	VARIABLES	
	TRIGGERS + ADD TRIGGER	+ ADD VARIABLE	
	Complete == Transitions to Complete		*

Name Field

3. **(Optional)** Enter a brief condition description in the **Description** field.

	(Q Search		\$ @ L
Data Model	✓ Object Types Object Type Groups Fields A	ssessments Data Definition	
Admin: Edit Workflow		EDIT TRIGGER	×
		CONDITIONS	A
	Internal Audit Project - Control Workflow	DETAILS	
		* Name	
States	States	Default Condition Formula	
	CREATION TRIGGERS + ADD TRIGGER Create = Transitions to In Progress	Description	
	IN PROGRESS TRIGGERS + ADD TRISGER	VARIABLES	

Description Field

4. From the *Variables* section, click the +Add Variable button.

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Data Model	✓ Object Types Object Type Groups Fields A	ssessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	CONDITIONS	<u></u>
		DETAILS	
	States	*Name Default Condition Formula	
		Description	
	TRIGGERS + ADD TRIGGER		
	Create # Transitions to In Progress		
	IN PROGRESS	VARIABLES	
	TRIGGERS + ADD TRIGGER	+ ADD VARIABLE	
	Complete		

+Add Variable Button



- 5. From the *Variables* section, select a **Variable Type** from the drop-down list. A **Variable** is a value in which the formula calculations are performed.
 - Field: After selecting the Field variable, the following field will appear:
 - Available Components: Select a field or formula from the Available Components drop-down field adding it directly to the Object Type.



Note:

Fields must be added to a formula after an Object Type or through an association (Relationship or Reference).

Only numeric fields, date fields, and select lists (numeric values) are accepted. For more information, see the Fields article.

	(Q Search	•••	\$ @ L
Data Model	✓ Object Types Object Type Groups Fields A	Assessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
		VARIABLES	Î
	Internal Audit Project - Control Workflow	* Variable Type * Available Components	
		Field ~ Select one	~
	States	*Name 🛛	
	CREATION TRIGGERS + ADD TRIGGER Create # Transitions to in Progress	Description Treat empty values as Null CANCEL	REATE
	IN PROGRESS		

Variable Type = Field

• Relationship: After selecting the Relationship variable, the following fields will appear:

- Relationship: Select the Object Type Relationship from the drop-down list.
 Relationships connect two or more objects. Relationships must be added to an
 Object Type to appear on the Relationship drop-down list. See the Add
 Relationships to an Object Type article for further information on adding a
 Relationship to an Object Type.
- Available Components: Select a field or formula from the Available
 Components drop-down field adding it directly to the Object Type.
- Sub Type: Select a Sub Type from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed. For more information on Subtypes, see the Sub Type Table in the Variables, Operations, & Functions article.
 - Array: Creates a set of values from the variable.
 - Sum: Calculates a total from the variable's set of values and returns a



single number. Select list variables cannot use Sum Sub Types.

- **Count:** The number of times a variable has been added to an object.
- Average: Calculates an average number from the variable's set of values.
 Select list variables cannot use Average Sub Types.
- **Every:** Checks if the variable contains a value on the objects in the relationship/reference.
- **Min:** Calculates the lowest number from the variable's set of values. Select list variables cannot use Min Sub Types.
- Max: Calculates the highest number from the variable's set of values.
 Select list variables cannot use Max Sub Types.

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Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
۵	Admin:Edit Workflow	EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	VARIABLES * Variable Type * Relationship Relationship Select one	~
	States	*Available Components Select one	~
	CREATION TRIGGERS + ADD TRIGGER	Sub Type Array *Name @	~
	Create = Transitions to In Progress		
	IN PROGRESS	Description	
	7 Inducers + ADD Inducert Complete = Transitions to Complete	Treat empty values as Null	✓ CREATE

Variable Type = Relationship

- **Reference:** After selecting the **Reference** variable, the following fields will appear:
 - Reference: Select the Object Type Reference from the drop-down list.
 References indicate that an object is connected to another object through a relationship. References are automatically created when a relationship is created.
 For further information on adding a Relationship to an Object Type, see the Add References to an Object Type article.
 - Available Components: Select a field or formula from the Available
 Components drop-down field adding it directly to the Object Type.
 - **Sub Type:** Select a **Sub Type** from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed.



(Q Search		\$ \$ \$
Data Model v Object Types Object Type Groups Fields	Assessments Data Definition	
Admin:Edit Workflow	EDIT TRIGGER	×
Internal Audit Project - Control Workflow	VARIABLES *Variable Type *Reference Reference Select one	~
States	*Available Components Select one	~
CREATION	Sub Type Array	~
TRIGGERS + ADD TRIGGER Create = Transitions to In Progress	*Name 😡	
IN PROGRESS	Description	
Complete ≓ Transitions to Complete	Treat empty values as Null CANCEL CANCEL	✓ CREATE

Variable Type = Reference

- **Property:** After selecting the **Property** variable, the following field will appear:
 - **Property:** Select a **Property** type from the drop-down list:
 - Is Submitter Confidential: This property type creates a formula that compares the number of confidential submissions against the number of not confidential submissions for customers that use the
 - **Confidential Reporting Portal**.

	() Q Search	•••	\$ @ L
Data Model	✓ Object Types Object Type Groups Fields Address A	ssessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	VARIABLES	
		*Variable Type *Property Property Select one	~
	States	*Name O	
	CREATION	Description	
	7 TRIGGERS + ADD TRIGGER		
	Create == Transitions to In Progress	Treat empty values as Null CANCEL 🗸 O	REATE
	IN PROGRESS		Į

Variable Type = Property

- 6. The system will automatically populate the Name field with the field or formula's unique ID by default.
- 7. (Optional) Enter a Variable name in the Name field.





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Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition
	Admin:Edit Workflow	EDIT TRIGGER ×
	Internal Audit Project - Control Workflow	VARIABLES *Variable Type *Available Components Field Control Type
	States	*Name TYPEOFCONT
	CREATION TRIGGERS + ADD TRIGGER	Description
	Create	Treat empty values as Null CANCEL
	IN PROGRESS	

Variable Name

8. (Optional) Enter a Variable description in the **Description** field.

	Q Search		\$ @ L
Data Model	✓ Object Types Object Type Groups Fields A	ssessments Data Definition	
Admin:Edit Workflow		EDIT TRIGGER	×
	Internal Audit Project - Control Workflow	VARIABLES * Variable Type * Available Components Field Control Type	~
	States	*Name YYPEOFCONT	
	CREATION	Description	
	TRIGGERS + ADD TRIGGER		
	Create = Transitions to In Progress	Treat empty values as Null	REATE
	IN PROGRESS		

Description Field

9. **(Optional)** Select the **Treat empty values as Null** checkbox, to exclude blank objects from a formula calculation. For more information, see the Null Values in Formulas article.

	Q Search		2 3
Data Model	✓ Object Types Object Type Groups Fields As:	sessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
		VARIABLES	*
	Internal Audit Project - Control Workflow	*Variable Type *Available Components	<u> </u>
	States	Field Control Type *Name TYPEOFCONT	
	CREATION	Description	
	TRIGGERS + ADD TRIGGER Create =: Transitions to In Progress	Treat empty values as Null	
	IN PROGRESS	CANCEL 🗸 CREATE	

Treat Empty Value as Null Checkbox

10. Click the **Create** button to add the variable.



	(Q Search	••• के Ø 2
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition
	Admin:Edit Workflow	EDIT TRIGGER ×
	Internal Audit Project - Control Workflow	VARIABLES * Variable Type * Available Components Fiel Control Type
	States	*Name TYPEOFCONT
	CREATION TRIGGERS + ADD TRISGER	Description
	Create == Transitions to In Progress	Treat empty values as Null CANCEL CREATE
	IN PROGRESS	

Create Button

- 11. Repeat steps 7 16 to add additional variables.
- 12. Click the \mathbf{x} icon next to the variable to delete the variable.

	⊕ Q Search	···	2
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
	Admin: Edit Workflow	EDIT TRIGGER	×
		[★] Variable Type	*
	Internal Audit Project - Control Workflow	Select one V	
		*Name 🛛	_
	States	Description	_
	CREATION	Treat empty values as Null	
TRIGGERS + ADD TRISER Create = Transitions to in Progress	CANCEL 🗸 CREATE		
	Create = Transitions to In Progress	TYPEOFCONT	
	IN PROGRESS	Field: Control Type Treat empty values as null: failse	v

X Icon - Delete a Variable

13. **(Optional)** Click the **Insert Variable** button and select a variable from the dropdown list to use within the **Formula** field.

	(Q)	earch		•••	\$\$ @ L
Data Model	✓ Object Types Object Type Group	s Fields Assessments	Data Definition		
	Admin:Edit Workflow	EDIT TRI	GGER		×
	Internal Audit Project - Control Workflow		FORMULA INSERT VARIABLE ~		2
	States		VPEOFCONT ula syntax is correct. Form	nula saved.	
	CREATION	s	AVE FORMULA		
	TRIGGERS + ADD TRIGGER				🛱 DELETE
	Create Transitions to In Progress				U DELETE

Insert Variable Button

 From the *Formula* section, enter a Formula using the variable name(s) you entered in the Name field under the *Variables* section. Include operators and functions in the



Formula field (e.g., **INCIDENTSE==3**). For more information on Operators, see the Operators Table in the Variables, Operators, & Functions article.

15. A system notification will appear under the **Formula** field, indicating that **Your formula is not saved.**

	⊕ Q Search	•••	\$ @ L
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
	Admin:Edit Workflow	EDIT TRIGGER	×
Internal Audit Project - Control Workflow States	FORMULA	2	
	States	TYPEOFCONT *TYPEOFCONT Your formula is not saved.	
	CREATION	SAVE FORMULA	
	TRIGGERS + ADD TRIGGER Create at Transitions to In Progress		DELETE

System Notification - Your Formula is Not Saved

- 16. Click on the **Save Formula** button. The system will perform a Syntax Validation on the formula if the formula is:
 - Valid: A system notification will appear under the Formula field; Formula syntax is correct. Formula saved.

	Q Search		\$ @ L
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
Admin:Edit Workflow		EDIT TRIGGER	×
Internal Audit I	Internal Audit Project - Control Workflow	FORMULA	
		INSERT VARIABLE V	2
	States	TYPEOFCONT*TYPEOFCONT Formula syntax is correct. Formula saved.	
	CREATION	SAVE FORMULA	
	TRIGGERS + ADD TRIGGER		🛱 DELETE
	Create == Transitions to In Progress		

System Notification - Valid Formula

 Invalid: A system notification will appear under the Formula field; Error Syntax error in part (char 1). The formula is not saved. The error will indicate the character (char) location of the error in the formula and that the formula is invalid and not saved.



	Q Search		\$ \$ \$
Data Model	✓ Object Types Object Type Groups Fields	Assessments Data Definition	
	Admin:Edit Workflow	:Edit Workflow	
Internal Audit Project - Control Workflow		FORMULA	
		INSERT VARIABLE ~	2
	States	түреоғсонттүреоғсонта Error: Syntax error in part "@" (char 22). Your formula is not saved.	
	CREATION	SAVE FORMULA	
	TRIGGERS + ADD TRIGGER		
	Create # Transitions to In Progress		DELETE

System Notification - Invalid Formula

- 17. Syntax Validation helps to prevent users from saving invalid formula expressions, which can negatively impact APIs.
- 18. Click the **Done** button to add the Variables to the Object Type.