

HCL Domino Volt 1.0.5 Step by Step Tutorial

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1. Introduction

This step by step guide helps understand how to develop Web applications using HCL Domino Volt.

It is assumed that the reader will have access to an HCL Domino Volt server, or has downloaded the Docker Workstation, container image and related files to this step-by-step guide.

Before we delve on with each of the steps, let's deal with some basics, in an effort to help make the steps easier to comprehend.

1.1. Design Overview

This is the part of the product you will spend most of your time. It consists of

- 1. The top left side shows you an outline of your app which can consist of App Pages and Forms.
- 2. In the upper right you will find icons to save and preview your work.
- 3. The properties panel on the right lets you set properties for what is currently selected.
- 4. The design canvas in the middle is where you design forms and app pages.
- 5. The design palette on the lower left includes items that be can be added to you design canvas.
- 6. On the left side you are able to select between different design modes design, access, workflow stages, style and more.

F	Course Catalog	and Registration App	> Catalog > Page 1 ~	2 ▶ 🛛	?~ 9 ~
& Ľ	App Pages Catalog View Forms	+ ~	Course #	D Page 1 ID: P_NewPage1	
تا م	✓ Catalog	1	Title	Description: ^①	
\$	Page 1 > Requests	Θ	Date		
Ē			□ Time □	Width: Range	~
ŝ	Layout	~	Cost	Min width Max width	400 px 800 px
	🗅 Tabs		Location	Enable dynamic layout	700 px
6	Display T. Text Display Text Image - Line	5 ~	Boston 4 Chicago Miami New York Raleigh	Change to single column mode Display stage action buttons on th Accessibility - Page Role: ① Application Custom CSS class names: ③	
	HTML		Instructor		

1.2. Design Palette

Below is a list of all the items on the palette which you can add to your app.

Layout Items

Section	Provides a way to group items together and change the properties, rules, visibility, and visual layout of the entire group.
🗋 Tabs	Creates a tabbed folder containing one of more sections for adding form items.

Display Items

រ៉ិញ Text	Provides information to guide users, such as header, or instructions.			
즈 Image	Displays images in your app, such as company logos. A list of supported file types is provided.			
– Line Inserts a line as visual element to help in app design.				
HTML	Allows for advanced display and visual formatting in your app, with HTML markup.			
🐻 Media	Adds a media file such as .avi, .mpg, and .mp4 into your application, and creates a media object to show the file.			

Action Items

 Button 	Inserts a button in the app. You can set the button to navigate to another page in the app, trigger a service call, display an image, advance a workflow, or any custom event.
⊘ Link	Places a link on the app for navigating to another page in the app, or a URL when clicked. The link opens in a new browser window or tab.
→ Page Navigation	Inserts Back and Next buttons for moving users through pages in the form.

Entry Items

-	Single Line Entry	Capture short pieces of information from users, such as names, or addresses.
=	Multi-Line Entry	Capture longer blocks of information from users, such as descriptions of events, or feedback.

₽Ē	Rich Text Entry	Capture formatted rich text from users that can include links, lists and tables			
လိ	Name Picker	Lookup and select names of user and groups from the directory			
\square	Email	Capture e-mail addresses. The field validates that an email address format is entered.			
#	Number	Capture decimal and integer number such as amount, quantities and ages.			
•••	Currency Capture currency amounts. Displays a currency symbol, based on the form's regional settings or item's currency type.				
\oplus	Website Allows users to enter Web URLs, and checks that the provided URI valid format.				
ŵ	Password	Capture a value that is visually indicated on the form by asterisks.			
Cale	ndar Items				
Ë	Date Captures a date through direct entry or calendar picker. You can set a date range and modify the style of the displayed date.				
U	① Time Captures time values through manual entry, or selection from a tim picker. You can set a time range and modify the style of the displatime.				
6	Time Stamp	Capture date-time combination. Time stamps can have a range set and are useful when forms are required by a specific deadline.			
Selec	tion Items				
\checkmark	Check Box	Captures a single confirmation-related input. For example, "I approve" or "I confirm".			
Ē	Drop Down	Creates a drop-down menu. Users select one of the provided options from the list.			
• — • —	Creates a radio button list of options. Users must select one option fr the list of choices.				
;	Select Many	Creates a check mark list of options. Users can select multiple options from the list of choices.			
÷.	Choice Slider	Creates a visual slider with a set of choices defined.			
Ч ⊷	H Numeric Slider Creates a visual slider to gather a number. The range can include decimplaces.				

Ø	Survey	Creates a question, a list of options, and a range of responses for the question. Users can rank each option by choosing one of the provided responses.
Adva	enced Items	
⊞	Table	Creates a table which captures user input. Users can add as many columns to the table as required. For example, dependent's first names, last names, and ages.
Ø	Attachment	Allows users to attach files to the app, such as scanned images and other documents.
	Data Grid	Creates a view of information from any form in the app. The grid can be sorted and filtered. Double clicking on an item in the grid opens to form document.

When we'll show a new control, concept, step, we'll endeavor to illustrate it. Once done, we'll assume the knowledge acquired and only provide the steps that need to be taken. This will help avoid this document being overly long.

2. Create the course catalog app from a spreadsheet

• Create a <u>New Application</u> / <u>From Spreadsheet</u> using *coursecatalog.xlsx*. Accept all the defaults.

	Choose your Excel spreadsheet	Choose fields, names, and types	Enter new application details
	5. • Sciences speer 445	oose your Excel spreadsh	
		Spreadsheet (.xls or .xlsx): File Course Catalog.xlsx	
	Contraction		
Da	How ta needs to be in table forma	to structure your spreads	sheet Use the first row as a header.
Ea	ch column will become a field	d in the	Use multiple sheets for more than one
ap	plication.		table.

- From the Manage page, click on <u>View Responses</u> for viewing the imported spreadsheet data.
- Customize the view by showing the form in right hand panel. Scroll down and select <u>View form in the right panel in Application viewing options</u>.
- View records by clicking in them.

esponses	Summary							
Customize	Create Filters	Refresh Data	Export Data	Import Data			Launch Previous Next	Sheet1 - Su Print Delete Reco
	Course #	Title	Date	Time	Cost	Location	Instructor	Course #
	1	Security Training	4/18/2020	9:00 AM	\$2,000.00	Chicago	Sylvia Woods	2
	2	New Hire Orientati	5/23/2020	8:30 AM	\$3,000.00	Boston	Mary Jones	Title New Hire Orientation
- -	3	Leadership	5/12/2020	8:30 AM	\$5,000.00	Boston	Ted Monson	New Hire Orientation
	4	Advanced Domino	4/26/2020	9:00 AM	\$1,000.00	New York	Marty Lechleider	Date 5/23/2020
- -	5	Intro to Domino	5/26/2020	8:30 AM	\$3,000.00	Chicago	Mary Jones	5/23/2020
	6	JavaScript Basics	7/14/2020	9:00 AM	\$2,000.00	New York	Ted Monson	Time 8:30 AM
- -	7	JavaScript Advanc	8/1/2020	9:00 AM	\$1,500.00	Boston	Marty Lechleider	8:30 AM
- -	8	Node.JS	8/15/2020	9:00 AM	\$1,000.00	Miami	Sylvia Woods	Cost \$3,000.00
- - -	9	Styling with CSS	9/14/2020	8:30 AM	\$2,000.00	Raleigh	Marty Lechleider	
iow 5 10 2	0 25 Items						Previous Next	New York

3. Create an App Page for viewing the catalog data

- Go back to the HCL Domino Volt management page.
- Edit the new Course Catalog application you just created.
- Add a new App Page by clicking on the + in the application outline.

App Pages	+
Forms	+ ~
∽ Sheet1	
Page 1	\odot

• Name the new App Page 'Catalog and Register' and accept Default Layout.

New App Page	
*Provide a name for	
Catalog and Registe Specify layout for th	
Default layout	\bigcirc T layout
○ Reverse T layout	◯ I layout
Create	Cancel

• Rename "Sheet1" to "Catalog" by clicking on the "Sheet1" text in the outline.

App Pages	+ ~
Catalog and Regi	\odot
Forms	+ ~
✓ Catalog	
Page 1	

- With the App Page 'Catalog and Register' selected add a title the top of the canvas using the Text item on the palette. Hint: The Text item can be found un 'Display
- Drag the lower right handle of the Text item so it spans the entire page.
- Add 'Training Course Catalog & Registration' to the Text items and style it with Heading 1. Note: Text editing is done in place with 1.0.4

gister ~	Insert - A A				
	Headi • Font • S	ize - B I <u>U</u> S A A Ⅰ			
	Paragraph Format]		ΟĠΧ
-	Normal	Catalog & Registration			
	Heading 1			4	
	Heading 2				
	Hooding 3				

3.1. Adding a Data Grid

• Add a Data Grid item on to the canvas below the title. You will find the Data Grid under 'Advanced' at the bottom of the palette.

Adva	nced	~
::	Data Grid	

• Select Title, Date and Location fields to display from the Catalog Form. Note: The catalog is the only data option at this point since it is the only form in the app.

Configure Data Grid		×
	Select Data Source Define Columns Customize View	
	Select a form from this application to populate the data grid: Catalog •	
	Choose which columns you want to appear in the data grid: Meta Data	
	Stage Created By Created On	
	Last Updated By	
	Form Inputs Title	
	Date Time Cost	
	✓ Location	
Cancel	Back Next	

- Click 'Next' twice to skip setting a sort order and filters and then click 'Create'.
- Drag the lower left corner of the Data Grid so that it spans the entire width of the page. Note: The Data Grid is populated with dummy data in Design for preview purposes. Actual data from

the catalog is fetched and displayed when the app is deployed.

Data Grid			0 ²
Title	Date	Location	
Value 0	1/8/2021	Value 0	
Value 1	2/12/2021	Value 1	
Value 2	10/3/2020	Value 2	
Value 3	2/20/2021	Value 3	
Value 4	9/20/2020	Value 4	

- Select the Catalog Form in the outline that you created from a spreadsheet.
- Find the Title, Date and Location in the form and set the Sort Options in the properties panel to 'Both' for each of the 3 fields.

ş	Course Catalog > Cata	> Page 1 ~		▶~ 🛱 ⊗ @~ �~
¢,	App Pages Catalog and Regi	Course #		Title ID: F_Title1
ജ പ്	Forms Catalog Page 1	Title Add him	0°B×	Properties Formula Events Width: ①
<₽ •		Add Init Date Time		Maximum number of characters: 30 Hover help text: Add additional information for the user about
¢;	Layout	Cost		Placeholder: ()
	Display	Location Boston Chicago		Change entry to uppercase ① Format ①
	 Image Line 	Clinago Miami New York Raleigh		Regular expression Custom error message ①
	HTML Media	Instructor		Sort Options ① Both Data Label: ③

- Go back to the 'Catalog and Register' App Page by selecting it in the outline.
- Change the title of the Data Grid to 'Course List'.
- Click to unselect 'Allow user to open record' in the bottom part of the properties panel. We are doing this since we will be using the Data Grid for course selection and do not need to open and edit course catalog records.

• Click on the ellipse and then 'Properties' in the properties panel after each of the 3 columns to set 'allow users to sort'. This will let you sort the fields in the Data Grid by clicking on the column headings.

				Properties Events
Course List 🛛 🚽			©⊕×	Configure Data Source
Title	Date	Location		Columns:
Value 0	12/7/2020	Value 0		Date Properties
Value 1	8/5/2021	Value 1		Location Move up
Value 2	8/20/2021	Value 2		Default rows per p: \downarrow Move down
value z	0/20/2021	value z		5 X Remove Column
Value 3	8/2/2021	Value 3		Dense rows ①
Value 4	4/13/2021	Value 4		Show column header (1)
Value 4	4/13/2021	Value 4		Show column header

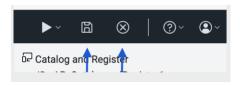
3.2. Setting the App Page to Home Page

- Click on 'Settings' (cog wheel) on the left most bar of the screen.
- On the Settings page at the bottom set the home page to the 'Catalog and Register' App Page

F	Course Catalog	
Ł	Settings	
R	General	General
€.	Files Services 을 Sheet1 교 Catalog and Register Formulas	This page defines the Language, Region, Name, and Description of the application you are creating or modifying. Application Language: ① English ✓ Application Regional Options: ③ United States ✓
	 B Sheet1 	Application Name: Course Catalog Application Description: Create full-text index Home Page: Catalog and Register

3.3. Testing the App Page and Data Grid

• Click the 'Save' icon and then the 'Close' icon on to top right part of your screen. Clicking the 'Close' icon will take you back to the Manage page.



• On the Manage page, click 'Deploy'. This will deploy saved changes to the runtime version of the app.

\sim	Course Catalog
	Last update: 9/13/21, 3:18 PM
	Edit Deploy 🕕 View Data Launch 🗸 More 🚥

- Close the success confirmation dialog once deployed.
- Click 'Launch' under 'Course Catalog. This will let you see the home page with data populated from the catalog form.

Course Catalog Last update: 9/13/21, 3:20 PM	
Edit Deploy View Data Launch ~ More •••	

• Test to see if column sorting and paging work.

Title	Date ↑	Location
Security Training	4/18/2020	Chicago
Advanced Domino Volt	4/26/2020	New York
eadership	5/12/2020	Boston
New Hire Orientation	5/23/2020	Boston
ntro to Domino	5/26/2020	Chicago

3.4. Customizing the App Page for course selection and registration

- Add a Section to the bottom of the 'Catalog and Register' App Page. The Section item can be found near the top of the palette under layout.
- Rename the Section to 'Hidden' and the Section ID to 'F_Hidden' in the properties panel.

App Pages	+ ~					60 Hidden
Catalog and Register	\odot	Training Cours	se Catalog & Registration	ID: F_Hiddden		
Forms	+ ~					Properties Events
✓ Catalog		Course List				Display title bar
Page 1		Title	Date	Location		 Make the section collapsible ① Initially display expanded
		Value 0	9/8/2020	Value 0		Hover help text: ①
		Value 1	3/6/2021	Value 1		
		Value 2	4/27/2021	Value 2		
Layout Section	~	Value 3	4/3/2021	Value 3		Show background color
		Value 4	8/13/2021	Value 4		Show border
C Tabs						Enable dynamic layout
Display	~		R	ows per page: 5 ऱ 1-5 <		Custom CSS class names: ①
រ៉្មា Text					QЪ×	Custom Attribute (1)
년 Image						
– Line						

• Add the follow Entry items to the section and name the IDs for each accordingly.

Item Type	Name	ID Name
Single Line Entry	Course	F_Course
Multi-Line Entry	Description	F_ Description
Single Line Entry	Location	F_Location
Currency	Cost	F_Cost
Single Line Entry	Instructor	F_Instructor
Single Line Entry	Course Number	F_ CourseNumber

• When done the App Page should look like below.

maining course	Catalog & Registration		ID: F_Course
			Properties Formula Events
ourse List			Width: ①
Title	Data	Lengther	Medium
Little	Date	Location	Maximum number of characters: ①
Value 0	9/8/2020	Value 0	50
Value 1	3/6/2021	Value 1	Hover help text: ①
Value 2	4/27/2021	Value 2	
Value 3	4/3/2021	Value 3	Placeholder: (1)
Value 4	8/13/2021	Value 4	
		20ws per page: 5 × 1-5 <	□ Change entry to uppercase ①
	F	Rows per page: 5 💌 1-5 < >	Format (1)
Course Ø		cription	Regular expression
Add hint			Custom error message ③
			Accessibility - Alternative label ID: ①
Location	Cos	t	
			Custom CSS class names: ①
Instructor	🔄 Cou	rse Number	

3.5. Add JavaScript to the Data Grid onRowSelect event

- Select the Data Grid and then the Event section of the properties panel. Here you will see the onRowSelect event.
- Click the onRowSelect event to open the event dialog.

Training Course	e Catalog & Registration		Dist Course List ID: F_DataGr	
			Properties Eve	nts
Course List			Run a formula, call a JavaScript from an	a service, or execute custom event.
Title	Date	Location	Client Side:	
Value 0	9/8/2020	Value 0	onDataChange onHide	
Value 1	3/6/2021	Value 1	onRowDeselect	
Value 2	4/27/2021	Value 2	▷ onShow	
Value 3	4/3/2021	Value 3		
Value 4	8/13/2021	Value 4		
		Rows per page: 5 ऱ 1-5	< >	

- Add the following JavaScript to the Data Grid onRowSelect event dialog below where it says /* Add your own JavaScript here. */.
- Note: All values from the catalog form are available via JavaScript even though only 3 fields are displayed In the Data Grid. This JavaScript will grab them to populate fields in the 'Hidden' section.

```
appPage.F_Course.setValue(rowData.F_Title1);
appPage.F_Cost.setValue(rowData.F_Cost1);
appPage.F_Description.setValue(rowData.F_Description1);
appPage.F_CourseNumber.setValue(rowData.F_Number1);
appPage.F_Instructor.setValue(rowData.F_Instructor1.savedValue);
appPage.F_Location.setValue(rowData.F_Location1.savedValue);
```

About: onRowSelect and rowData

- The onRowSelect event fires when a row in the Data Grid is selected.
- rowData is the variable tied to the onRowSelect event that represents all data for the selected row/record
- rowData includes all field and metadata data for the selected record.
- Field data is reference with rowData followed by '.' and the field ID. For example, rowData.F_Cost1
- Metadata is reference by rowData follow by '.' and the descriptor. For example, rowData.lastModifiedBy
- See the appendix of this tutorial for full list of rowData descriptors.
- Click 'Save' and then 'Close'.
- From the Manage Page click 'Deploy' to update the runtime app.
- From the Manage Page click 'Launch' to test the JavaScript. If successful you should see the values in the section populate as you click different courses.

urse List		
Title	Date	Location
Security Training	4/18/2020	Chicago
New Hire Orientation	5/23/2020	Boston
eadership	5/12/2020	Boston
Advanced Domino Volt	4/26/2020	New York
ntro to Domino	5/26/2020	Chicago
1 row selected		Rows per page: 5 ▼ 1-5 < >
Course		Description
Advanced Domino Volt		Learn how to build Leap applications that can transform your organization. Topics covered includes using
Location		Cost
New York		\$1,000.00
Instructor		Course Number
Marty Lechleider		4

3.6. Improving the presentation of selected course information

- Add a Section item below the Data Grid. The Section item can be found under Layout.
- Drag the low right handle so the Section spans the entire width of the page.
- Click the top edge of the Section so the 'row and column pop-up' appears.
- Add a new column to the Section so that there are 3.
- With the Section selected, set the properties so that the 'Show background color' and 'Show border' are turned off.

Training	Course Catalo	og & Regi	stration				쩐 Section ID: F_Section1
Data Grid							Properties Events
Stage ↑ Value 0	Create Aug 10, 2021	Last U Value 0	Last U Jun 17, 2021	Date 7/14/2021	Course Value 0		 Display title bar ③ Make the section collapsible ④ Initially display expanded
Value 1 Value 2	May 19, 2021 Feb 24, 2021	Value 1 Value 2	Aug 16, 2021 Oct 5, 2020	2/11/2021	Value 1 Value 2		Hover help text:
Value 3	Apr 29, 2021	Value 3	Jul 1, 2021	8/27/2021	Value 3		Show background color
Value 4	Aug 5, 2021	Value 4	Jun 10, 2021 Rows per page:	1/29/2021 5 👻 1-5	Value 4	>	Show border Enable dynamic layout
						©⊡×	Custom CSS class names: ③
							Custom Attribute ①
Course		7	Description				

- Add a Text item into the top left of the Section. Text items will be used to echo values from the fields in the 'Hidden' section.
- Use the 'Insert' dropdown to select the echo values. Add 'Course' with Location on the next line and 'Cost' on the 3rd line. Format 'Course to Headline1, 'Location' to Headline3 and 'Cost' to Normal.
- Grab the lower right handle and drag the Text item so it spans the first 2 columns.
- Add a second Text item below it in the first column. And add 'Instructor' to it with the Instructor echo value below it.

	R	ows per page: 5 👻	1-5	<	>
{Course}					
Insert - 🖌 🔶 🛔					
Normal 👻 Font	- Size - B <i>I</i> <u>U</u> - S	<u>A</u> • A • ()			
Instructor {Instructor}	-©⊡×				

- Add an Image item below the Instructor. This can be found in the Display section of the palette.
- In the properties panel set the height for the Image item to 100.
- Add a Text item to the right of Instructor.
- Set enter 'Details'. Below details add the echo field value for Description. Make the word 'Details' bold.
- Drag Description so it spans the to the right and down a row.

		 ,
{Course} {Location} {Cost}		
Instructor {Instructor}	Details {Description}	 ÕЪ×
Use the properties panel to the right to add an image file		
-		 4

• Select the Data Grid and add the follow line of JavaScript to the onRowSelect event. This line will get the picture URL from the Catalog and set it to the Image item.

appPage.F_Image1.setURL(rowData.F_Picture1);

• Add the following line of JavaScript to the onDataChange event of the Data Grid. This will prime the display by setting the selection to the first row when the app is opened.

```
appPage.F DataGrid1.selectFirstRow();
```

• Select the section 'Hidden' and add the following line of JavaScript to the onShow event. This will hide the section at runtime.

```
apItem.setVisible(false);
```

- Save your work, close, deploy and then launch the app to preview the updates.
- Click the column heading to sort and page icons. Notice how the first row is selected when the data changes.

Title	Date	Location
ecurity Training	4/18/2020	Chicago
New Hire Orientation	5/23/2020	Boston
eadership	5/12/2020	Boston
dvanced Domino Volt	4/26/2020	New York
ntro to Domino	5/26/2020	Chicago
1 row selected		Rows per page: 5 - 1-5 < >



GLBA, PCI, HIPAA, SarBox) normally require formal ISAT for all employees, usually once or twice a year. Many Small and Medium Enterprises (SME's) do not require ISAT for regulatory compliance, but train their employees to prevent a cyberheist. Internet Security Awareness Training at this point in time is usually provided via online courses. ISAT is a subset of general security awareness Training.

4. Create the Request Form

- From the manage page click 'edit' to open the app back up in design.
- Add a new Form by clicking on the + in the application outline.

F	Course Catalog >	Catalog > Page	•1 ~
\$	App Pages	+ ~	
~	Catalog and Regi		Course #
Ľ	Forms	+ ~	
ዱ	✓ Catalog		Title
<u>ئ</u>	Page 1		
49			■ Date

- Name the new form 'Requests' and accept Default Layout.
- Add a Text item to the top of the form and enter 'Training Request Form'.
- Set the style to Heading 1

Page 1 v Insert v ← → 1 = := := := :E = = = I ¶ ¶ · ∞ ⊡ Headi v Font v Size v B I U S A · A · O	
Training Request Form	

- Add a Section below the title. Drag the lower right corner so it spans 2 columns.
- Add the following Entry items to the section.
- Name each item and change its ID to those listed in the table. You can do this in the properties panel when the item is selected.

Item	Name	ID
Single Line	Name	F_Name
Number	Course Number	F_CourseNumber
Single Line	Manager Name	F_ManagerName
Email	Email	F_Email
Email	Manager Email	F_MgrEmail
Date	Date	F_Date1
Single Line	Course	F_Course
Single Line	Location	F_Location
Currency	Cost	F_Cost

• When you are finished your form should look like this.

App Pages	+ ~			≌ Cost
Catalog and Regi		Training Deguast Form		ID: F_Cost
Forms	+ ~	Training Request Form	Properties Formula Events	
✓ Catalog			0	Width: ①
Page 1		Name	Course Number	Short
✓ Requests				Currency type: ④
Page 1	\odot	Manager Name	Email	US Dollar
-				Hover help text: ①
Entry	~	Managher Email	Date	
Single Line Entry			Ë	
E Multi-Line Entry		Course	Location	Placeholder: ①
▲ = Rich Text Entry				
8 Name Picker		🖸 Cost 🔍 🖓	<	Range: ①
name Picker				Minimum
🖾 Email		Add hint	4	Maximum

4.1. Improving the presentation of the form items

- Add a Text item below the title and above the section.
- Enter the following text, each on its own line into the item. Course, Employee, Date, Location, Cost.
- Use the Insert dropdown to add the echo field values to the right of each.
- Set the style of Course to Headline 2
- Indent the rest of the text using the indent icon on the editor toolbar

	Ĕ∄ĒĒĒĒĒĒĒ A ▼ ¶• © ₩ ▼ B <i>I</i> <u>U</u> S A ▼ [A] ▼ 0	
Course: {Course}		ØL
Employee: {Name}		
Date: {Date}		
Location: {Location}		
Location: {Location}		

- Add a Multi-Line item below the Text and name it 'Business Justification'.
- Set the width in the properties panel to full
- Set rows displayed in the in the properties panel to 2.

App Pages	+ ~		E Business Justification
Catalog and Regi		Table Damast Fam	ID: F_Paragraphtext1
Forms	+ ~	Training Request Form	Properties Formula Events
✓ Catalog			Width: ①
Page 1		Course: {Course}	Full width 🗸
✓ Requests		Employee: {Name}	Number of rows displayed:
Page 1	\odot	Date: {Date}	4
		Location: {Location}	Hover help text: ③
ि Media		Cost: {Cost}	
Action	~	□ Business Justification Add hint □ C□ ×	Placeholder: ①
Button			
@ Link			Change entry to uppercase ①
			Data Label: ①
Entry	~	Name Course Number	Accessibility - Alternative label ID: ③
Single Line Entry			

4.2. Prepopulating values in the form

4.2.1. User and manager information

- Click on the Requests form in the outline so that the properties for the form are displayed in the properties panel.
- In the properties panel for the Requests form, click on Events and then onNew.
- Note: The onNew event fires when a new request is created.
- In the onNew event dialog select 'Call a Service' and then click 'Add/Edit Service Configuration'. This will take you to the service configuration dialog.
- In the service configuration dialog select 'Select from Service Catalog'.
- Select 'Domino Directory' under the service catalog dropdown.
- Select the 'Get User by Identifier' service.

Service Configuration X
1. Select Service 2. Inputs 3. Outputs 4. Details
Creating a Service Configuration requires that you provide a URL or select a service, then create input and output maps to move data between the form and the target service.
Select from Service Catalog
Selected Service: Get User By Identifier
Service Catalog: Domino Directory
Clear Include service description in the search
Display:
Get Group By Name Look up a group by name.
Get Related User(s) By Attribute Lookup the related user(s) by a user's attribute. For example, "Manager" or "Assistant".
Get User By Identifier Look up a user by full name, common name, short name or internet email address.
Is User In Group Find out if a user belongs to a group Show 10 20 50 100 200 items

- Click 'Next' or '2. Inputs' and then map 'Current User' on the left (source) to 'Email or User Name' on the right (target)
- To map the items, select each one and then click the 'Assign' icon on the middle.

Service Configuration		×
1. Select Service 2. Inputs 3. Outputs 4. Details		
Create Input Assignments		
Requests	Get User By Identifier	
Select source:	Select target:	~
all Current User	ab User Name or Email * ①	
> 🗅 Page 1 🕕		
	P-0	

- Click 'Next' or '3. Outputs'
- Map 'Internet Email' on the left (source) to 'Email' on the right (target). Also map 'Display Name' to 'Name' and 'Manager' to 'Manager Name'.
- Note: Mapping 'Manager' assumes that manager information is stored in the Domino directory. If that is not the case, you can skip doing so.

Service Configuration		×
1. Select Service 2. Inputs 3. Outputs 4. Details		
Create Output Assignments		
Get User By Identifier	•	Requests
Select source:		Select target:
ab Employee Number ()		🗆 Name 🗸 🕚
ab Job Title 🕚		Course Number
ab Location (1)	P~-0	🔄 Manager Name 🗸 🚯
ab Office phone ^①		🖾 Email 🗸 🚯
ab Manager 🗸 🕔		🖻 Managher Email 🕕
ab Assistant 0		View: Basic
Assigned Outputs		
Source	Target	
Internet Email	Page	1 > Section > Email
Display Name	Page	1 > Section > Name 🕸 🗙
Manager	Page	1 > Section > Manager Name 🕸 🗙

• Click 'Ok' twice to exit out of the dialogs.

4.2.2. Course information

• Click on the Request form onNew event again and enter the following JavaScript.

BO.F_CourseNumber.setValue(app.getUrlParameter('CourseNumber'));

- Note: Later in this tutorial you will add a link to the 'Catalog and Request' App Page that will open the 'Requests' form with a parameter (CourseNumber) that identifies the course the user intends to register for. The JavaScript above gets this parameter and puts it in the 'Course Number' field in the form.
- Click 'OK to exit the dialog.
- Click on the 'Course Number' field in the section.
- Click on 'Events' in the properties panel for 'Course Number' and then on the 'onItemChange' event.
- Click on 'Call Service' and then 'Add/Edit Service Configuration' in the dialog.
- Select 'Current Application from the service catalog dropdown and then 'Course Catalog / Catalog / Retrieve'.
- Click 'Next' or '2. Inputs'.
- Map 'Course Number' on the left (source) to 'Retrieve by (F_Number1) "Course #".

Service Configuration		
1. Select Service 2. Inputs 3. Outputs 4. Details Create Input Assignments	S	
Requests	•	Course Catalog / Catalog / Retrieve
Select source:		Select target:
☐ Name ① # Course Number ✓ ①		ab Retrieve by Unique Identifier ①
- Manager Name (1)		ab Retrieve by (F_Title1) "Title" (3)
🗹 Email 🕕		I Retrieve by (F_Date1) "Date" ③
🖂 Managher Email		Retrieve by (F_Time1) "Time"
View: Basic		View: Basic
Assigned Inputs		
Source	Target	
Page 1 > Section > Course Number	Retrie	ve by (F_Number1) "Course #" 🕸 🗙

- Click 'Next' or '3. Outputs'
- Map 'Title' on the left (source) to 'Course' on the right (target).

• Do the same for Date, Location and Cost by mapping them to their counterparts in the Requests form.

Service Configuration			×
1. Select Service 2. Inputs 3. Outputs	4. Details		
Create Output Assignments			
Course Catalog / Catalog / Retrieve	•	Requests	
Select source:		Select target:	
ab Record Unique Identifier (1)		✓ ➡ Page 1 ④	
ab Line ID (1)		E Business Justification	
ab Stage ID (1)	00	> 금 Section ③	
🚆 Last Updated			
ab Updater ID (3)			
ab Updater Name (1)		View: Basic	
Assigned Outputs			
Source	Targe	ət	
Result (F_Title1) "Title"	Pa	age 1 > Section > Course > Value	物 ×
Result (F_Date1) "Date"	P	age 1 > Section > Date > Value	物 ×
Result (F_Location1) "Location"	P	age 1 > Section > Location > Value	穆 ×
Result (F_Cost1) "Cost"	Pa	age 1 > Section > Cost > Value	

- Click 'OK' twice to exit out of the dialogs.
- Select the section and then click 'Events' in the properties panel.
- Click the onShow event and then enter the line of JavaScript below. This will hide the section at runtime.

```
item.setVisible(false);
```

• Click the 'Save' icon and then 'Close' icon and then 'Deploy' the updates.

5. Creating a registration link on the App Page

- Go back in to 'Edit' the app from the Manage page.
- Select the 'Catalog and Register' App Page in the outline.
- Add a Link item to the right of the Text item in the Section below the Data Grid. The Link item can be found under Action.
- Name the Link 'Register for this course'.

		Register for this course	ØЪХ
{Course}		Register for this course	
{Course} {Location}			
{Cost}			4
Instructor	Details		
{Instructor}	{Description}		
Use the properties panel to			
the right to add an image			
file			
<u></u>		П	

5.1. Adding a dynamic parameter to pass the course number

- Select the Link onClick event in the properties panel under Events.
- Add the following JavaScript. This will dynamically set the Link value to include the course number as a parameter to be passed to the request form.

```
var CourseNumber = appPage.F_CourseNumber.getValue();
var url = app.getFormLaunchURL("F_Requests1") + "&CourseNumber="
+ CourseNumber;
appPage.F StaticWebLink1.setLinkValue(url);
```

- Click 'OK' to exit out of the event dialog
- Click the 'Save' icon and then 'Close' icon and then 'Deploy' the updates.
- Launch the app to test the 'Register for this course' link. It should open the request form and prepopulate it with the course and user information.
- The link should open the form and pass it the course number. The course number field in the form then should look up the course info and populate the fields.

Fraining Request Form	
Course: Advanced Domino Volt	
Employee: Admin	
Date: 4/26/2020	
Location: New York	
Cost: \$1,000.00	
siness Justification	

6. Add workflow to the request form

• While on the Manage page, click on the name of the app 'Course Catalog' and change it to 'Course Catalog and Registration'. This is more descriptive given its modification since being initially created from a spreadsheet.

/	Course Catalog and Registration App		
	Last update: 9/15/21, 10:55 AM		
	Edit Deploy View Data Launch ~ More •••		

• Edit the app and select the workflow icon on the left and then select the Requests form on top.

#	Course Catalog and Registration App v1.0.5 $>$ Workflow $>$ Requests \sim	Workflow	Visibility	▶~ 🖺 ⊗ ⑦~ ♀~
٩	Beta Feedback			ి Requests
ß				ID: F_Requests1
er.				Properties
ぷ				Single submission per authenticated user
49		•		Upon submission
59		Start		Show the success message page +
		음 Initiator		
				Stages
Ð				▶ Start
ŵ		Submit		Submitted
		Submit		
		Add Activity		+ Add Stage

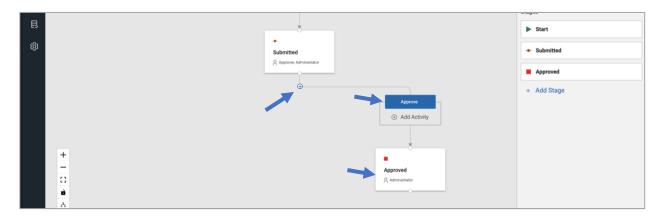
• Delete the Cancel action for the Start stage. You can do this by selecting 'Start' on the canvas and then deleting the 'Cancel' in the actions list in the properties panel on the right.

6		Properties Permissions
å		Description
	Start	
	A Initiator	
		Actions
Ð		 Submit
(C)	Submit	🗂 Cancel 🔯 🔟
		+ Add Action De
	Add Activity	

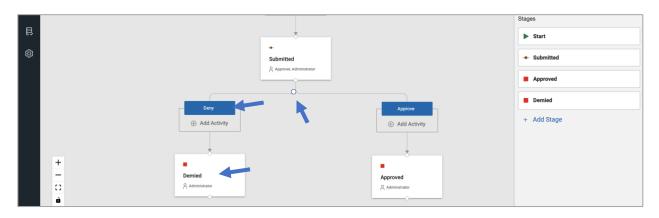
- With the Start stage selected, click on the cogwheel next to the Submit action in the properties panel.
- This will bring up the properties for the Submit action. Set the 'on action completion, redirect to' the Catalog View app page. Deselect the 'Action completion message' checkbox.

P		Proper	rties	Activities	
ぷ		Next	t Stage		
, <i>c</i> o	Start		ubmitted	ompletion, redirect to	•
\ \	2 initiator		action co atalog Vi		•
Ð			Action	Completion Message	
礅	Submit				
	Add Activity		help text nit the fo	orm for creation	

- Select the Submitted stage on the canvas and delete the 'Update' action.
- Hover below the Submitted stage and click on the + sign (which appears in a circle) to add a new action and stage. Edit the new action and stage titles in place change on the canvas. Change them to 'Approve' and 'Approved'.
- Drag to 'Approved' stage to the right as show in the picture below.



- Hover below the Submitted stage again and click on the + sign (which appears in a circle) to add another action and stage. Edit the new action and stage titles in place change on the canvas. Change them to 'Deny and 'Denied.
- Drag the 'Denied' stage to the left as show in the picture below

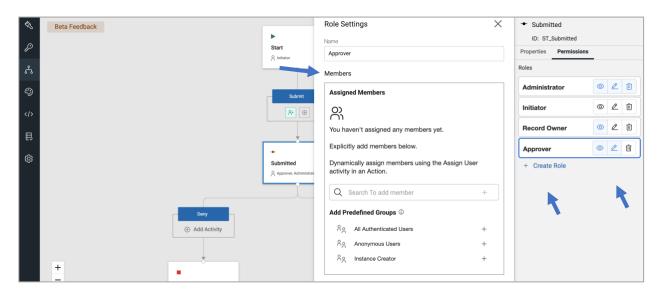


• Select the 'Submitted' stage and delete the 'Cancel' action in the properties panel.

6.1. Assign user to the workflow

This part of the tutorial assumes that manager information is stored in the Domino directory. If it is not, then a service call can be made to other sources to determine who the requestor's manager is. Note: this assignment can be also made from a value in the form.

- Select the 'Submitted' stage and then the 'Permissions' tab in the properties panel.
- Click '+ Create Role'. Name the role 'Approver'.
- Select the update permission icon (pencil) for 'Approver' in the properties panel.



• Select the 'Submit' action under Start and then click on '+ Add Activity' and select 'Assign Users'.

	Beta Feedback		■ Su	bmit
		•	ID:	S_Submit
P		Start	Propert	ies Activities
ぷ			Next	Stage
<)		Submit	Sub	omitted -
		Add Activity	On a	ction completion, redirect to f
			Cat	alog View 👻
Ð		🛱 Call a Service	ice – Before submission	Action Completion Message Edit
ŝ		🖕 🖄 Call a Service	ice – After submission	ean completion websuge Ean
~~		St A+ Assign Users	ers Hover hu	alp text
		Send an Ema	mail Submi	it the form for creation

• This brings up the activity settings for 'Assign Users'.

• Click on 'Service Call' and then 'Configure Service'.

Seta Feedback		Activity Settings	>	×	Submit
R	► Start	Activity Type		_	ID: S_Submit Properties Activities
8	A Initiator	Send an Email	🛱 Call a Service		Activities:
®	Submit	Activity Name			Before data is submitted
	A + ⊕	Assign Users			A⁺ 1: Assign Users ···
		Assign via			After data is submitted
©	+	Value in Form	Service Call		+ Add Activity
	Submitted	ැලි Configure Service	\sim		

- This brings up the Assign User service configuration dialog.
- Select 'Domino Directory' from the service catalog dropdown and then 'Select Get User Identifier'

Assign Users (by Service Call) X
1. Select Service 2. Inputs 3. Outputs 4. Details
Creating a Service Configuration requires that you provide a URL or select a service, then create input and output maps to move data between the form and the target service.
Select from Service Catalog
Selected Service: Get User By Identifier Service Catalog: Domino Directory Clear Include service description in the search Display:
Get Group By Name Look up a group by name.
Get Related User(s) By Attribute Lookup the related user(s) by a user's attribute. For example, "Manager" or "Assistant".
Get User By Identifier Look up a user by full name, common name, short name or internet email address.

- Click 'Next' or '2. Inputs'.
- On inputs map the 'Current User' to 'User Name or Email'.
- Click 'Next' or '3. Outputs.
- On outputs map 'Manager' to 'Members'

Assign Users (by Service Call)			>
1. Select Service 2. Inputs 3. Output	4. Details		
Create Output Assignments			
Get User By Identifier	•	Requests	
Select source:		Select target:	
ab Employee Number		✓ 🙎 Manager	
ab Job Title 🕚		ి ₂ Members ✓	
ab Location (1)	00		
ab Office phone (1)			
ab Manager 🗸 🕚			
ab Assistant (1)			
Assigned Outputs			
Source	Target		
Manager	Role:	Manager > Members	×

- Click 'OK' twice to exit the dialogs.
- Click the save icon and close icon and then deploy the app updates.

7. Add 'My Requests' view to the home page

7.1. Adding a Tab Section

- Note: The Tabs section will let the user click between sections to see the catalog or my requests view.
- Edit the app and select the App Page.
- Add a Tabs item to the top of the page under the title. The Tabs item can be found under layout.
- Drag the lower right handle so it spans the width of the page.
- In the properties panel for the Tab item under tabs list, rename the first tab to 'Course Catalog'.
- Add a second tab and name it 'My Requests'

Training Course Catalog & Registration	D Tabs ID: F_TabbedFolder1
②G×	Properties Events Tab List:
Course Catalog My Requests	Course Catalog +×
	My Requests +×
	Hover help text: ①
Course List	

- Select the 'Course Catalog' tab on the canvas.
- Select the 'Course List' Data Gird and drag and drop it into the 'Course Catalog' tab. section.
- Drag the lower right handle so the grid spans the width of the tab section.
- Drag the Section with the echo text, image and registration link into the 'Course Catalog' tab section below the Data Grid.
- Drag the lower right handle so the grid spans the width of the tab section.
- The 'Course Catalog' tab section should now look like below.

			□ Tabs ID: F_TabbedFolder1
Course Catalog My Reques	ats		
Course outling my hequee			Properties Events
Course List			Tab List:
Title	Date	Location	Course Catalog +
Value 0	9/7/2020	Value 0	My Requests +
Value 1	12/24/2020	Value 1	Hover help text: ① Add additional information for the user about th
Value 2	10/1/2020	Value 2	item.
Value 3	11/7/2020	Value 3	Custom CSS class names: ①
Value 4	1/28/2021	Value 4	
	Rov	vs per page: 5 💌 1-5 < >	Custom Attribute
(0,2,1,2,2)		Register for this course	
{Course}			
{Location}			
{Cost}			
Instructor	Details		
{Instructor}	{Description}		
Use the properties parties to the right to add an image file	nel		
	U		

• Delete any empty rows left behind after moving things around by clicking on the row edge to reveal to 'row and column' pop-up



7.2. Adding a 2nd Data Grid for 'My Requests'

- Select the 'My Requests' tab.
- Add a new Data Grid item into the 'My Requests' tab section.
- Select the 'Requests' form as the form to populate the grid.
- Select the following columns to appear: Stage, Created On, Last Updated by, Last Updated On, Date and Course.

Configure Data Grid		×
	Select Data Source Define Columns Customize View	
	Select a form from this application to populate the data grid: Requests	
	Choose which columns you want to appear in the data grid: Meta Data	
	 Stage Created By Created On 	
	Last Updated By Last Updated On Form Inputs	
	Manager Name Email	
	 Managher Email ✓ Date ✓ Course 	

- Click 'Next' and then 'Create'.
- Drag the lower right handle so that the Data Grid spans the width of the Tab section.

							Properties Events	
Course Catalog	My Requests						Configure Data Sou	irce
							Columns:	
Data Grid						©Ъ×	Stage	
Stage 1	Creat	Last	Last	Date	Course		Created On	(
Mahar O		Mahar O	140.0001	7/17/0001	Malua O		Last Updated By	
Value 0	Jul 16, 2021	Value 0	Mar 3, 2021	7/17/2021	Value 0		Last Updated On	(
Value 1	Mar 23, 20	Value 1	Feb 12, 20	3/20/2021	Value 1		Date	(
Value 2	Jul 21, 2021	Value 2	Jul 6, 2021	10/23/2020	Value 2	_	Course	(
							Default rows per page:	
Value 3	May 4, 2021	Value 3	Jul 10, 2021	12/19/2020	Value 3		5	
Value 4	Jun 6, 2021	Value 4	Mar 19, 20	5/5/2021	Value 4		Dense rows (1)	
							Show column header (1)	

• Click 'Save' and 'Close' and 'Deploy' the updates.

8. Test the finished app

- Launch the app, select a course and click 'Register for this course'.
- Add a 'Business Justification'.
- Click 'Submit'
- Click on 'My Requests' in the Tab folder.
- Your request should appear showing it is in the 'Submitted' stage.

Course Catalog	My Requests		
ourse List			
Title		Date	Location
Security Training		4/18/2020	Chicago
New Hire Orientatio	n	5/23/2020	Boston
Leadership		5/12/2020	Boston
Advanced Domino	/olt	4/26/2020	New York
Intro to Domino		5/26/2020	Chicago
1 row selected			Rows per page: 5 - 1-5 < >
Advanced Do New York	mino Volt		Register for this course
nstructor Marty Lechleider		Topics covered includes	applications that can transform your organization. using service calls, javascript and events, reporting, e session will also cover on integration of Leap

Training Request Form	
Course: Advanced Domino Volt	
Employee: Admin	
Date: 4/26/2020	
Location: New York	
Cost: \$1,000.00	
Business Justification	
This is my business justification.	7
Submit	

Course Catalo	My Requests			
nta Grid				
Stage 🛧	Create	Last U Last U	Date	Course
Submitted	Sep 16, 2021	Admin/Renovation Sep 16, 2021	4/26/2020	Advanced Dom

9. Appendix: rowData Schema

The JSON Schema below indicates how meta data and field data can be referenced in the Data Grid onRowSelect event.

For example:

- rowData.lastModified is how you would get the last modified date and time for the selected record.
- rowData.F_SingleLine1 is how you would get the value of the field F_SingleLine1 for the selected record.

```
{
    editUrl: "https://...",
    viewUrl: "https://....
   printUrl: "https://...",
   uid: "f308d85b-9bd6-449f-87b7-b09ea27fa23c",
    id: "F054B58209264E008825872700748692",
    stageId: "ST Submitted",
    stageTitle: "Submitted",
    lastModified: Date obj,
    lastModifiedBy: {
        displayName: "Daisy Dixon/Acme",
        email: "Daisy Dixon/Acme",
        login: "CN=Daisy Dixon/O=Acme"
    }
    created: Date obj,
    createdBy: {
        displayName: "Daisy Dixon/Acme",
        email: "Daisy Dixon/Acme",
        login: "CN=Daisy Dixon/O=Acme"
    },
    F SingleLine1: "hello world",
    F EmailAddress1: "test@example.com",
    F Number1: 56.89,
    F Currency1: 12.34,
    F CheckBox1: true,
    F RichText1: "this is some <span style=\"color:#2980b9\"><span
style=\"font-size:18px\"><strong>rich </strong></span></span>text",
    F DropDown1: {savedValue: "opt1", displayValue: "Option 1"},
    F SelectMany1: [
        {savedValue: "opt1", displayValue: "Option 1"},
        {savedValue: "opt2", displayValue: "Option 2"}
    ],
    F Attachment1: {
        uid: "abc123",
        fileName: "MyFile.png",
        viewUrl: "https://...",
        downloadUrl: "https://..."
    },
    F Name1 {
        displayName: "Doug D'Antonio",
        id: "CN=Doug D'Antonio/O=Acme",
```

```
email: "Doug D'Antonio/Acme",
   type: "user"
};
```