

# Exercise - Connect data from the canvas app

22 minutes

Now that you've created the table to store machine order requests, you'll connect your Machine Ordering canvas app to this table and then add a form to submit machine approval requests.

## ! Note

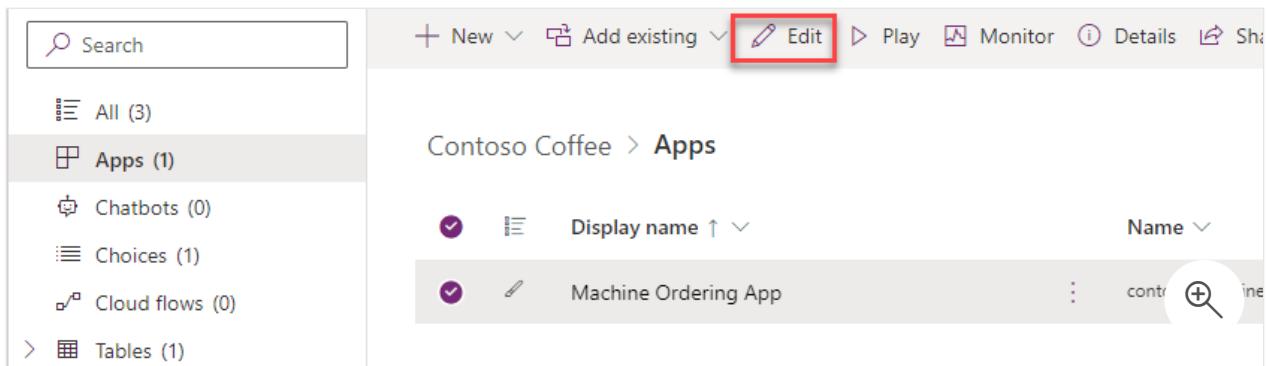
To complete the exercises, you'll need to use a few files. Download the [App in a Day files](#) for use in this module. The file folders that are in this download include:

- Completed modules with instructions - Package files to import the completed exercise steps.
- Machine-Order-Data.xlsx - File used in the exercises.

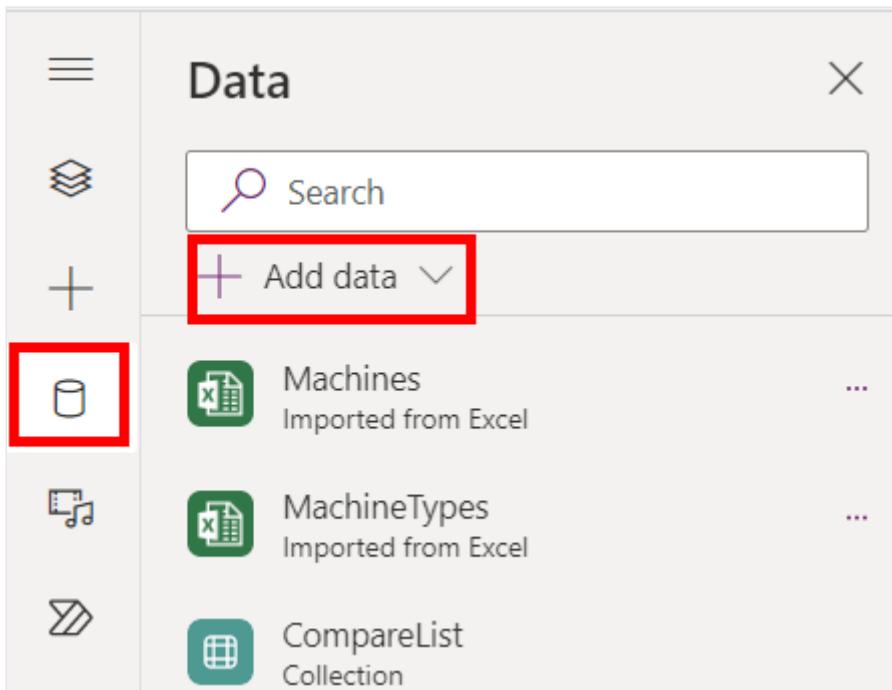
## Task - Add a Microsoft Dataverse table as a data source to the app

Open the Machine Ordering app. Make sure that you're opening the version of the app that's in the newly created environment that has the Microsoft Dataverse database instance.

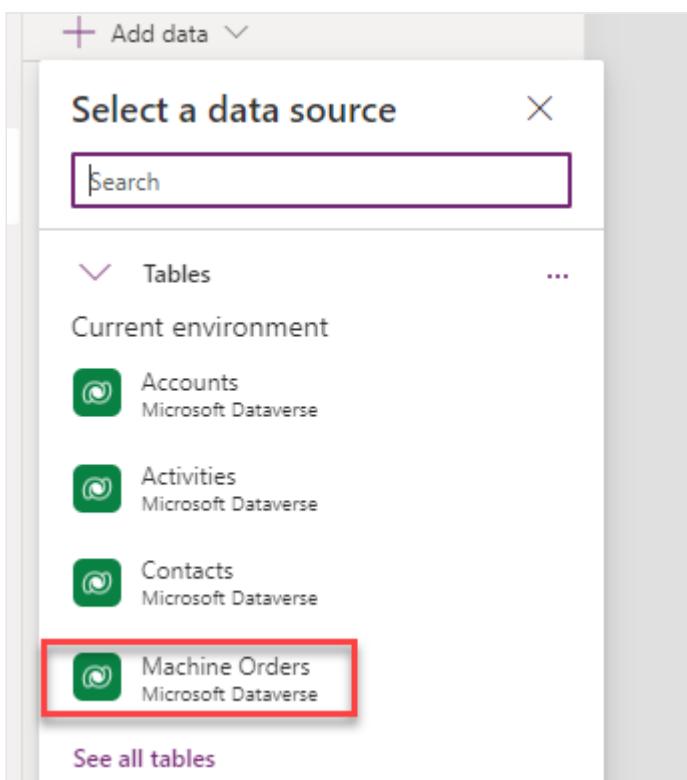
1. Select **Apps**, select **Machine Ordering App**, and then select **Edit**.



2. Select the **Data sources** to display the current sources. Select **Add data**.



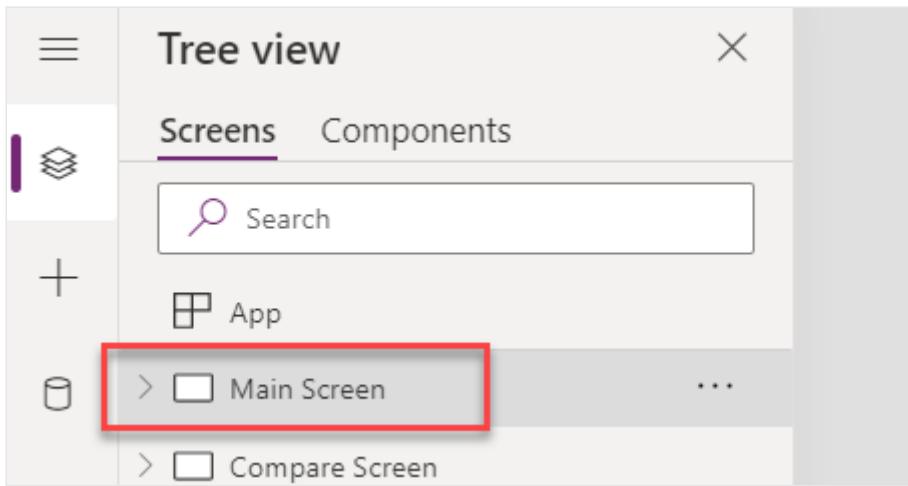
3. Select **Machine Orders** from the table list to include it as a data source for your app.



## Task - Create the edit form

Next, you'll create the edit form by following these steps:

1. Switch to the **Tree view** and then select **Main Screen**.



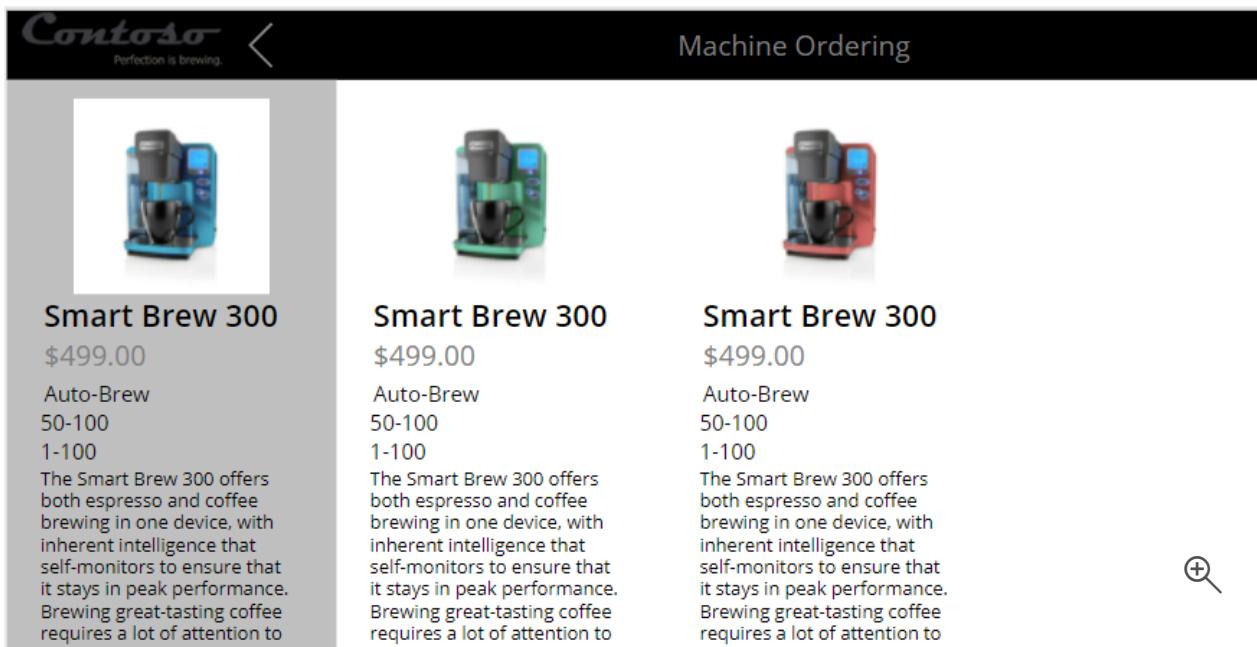
2. Select a few machines. Press and hold the **Alt** key, which will allow you to select the compare checkbox.

The screenshot shows the 'Machine Ordering' page with four coffee makers selected for comparison:

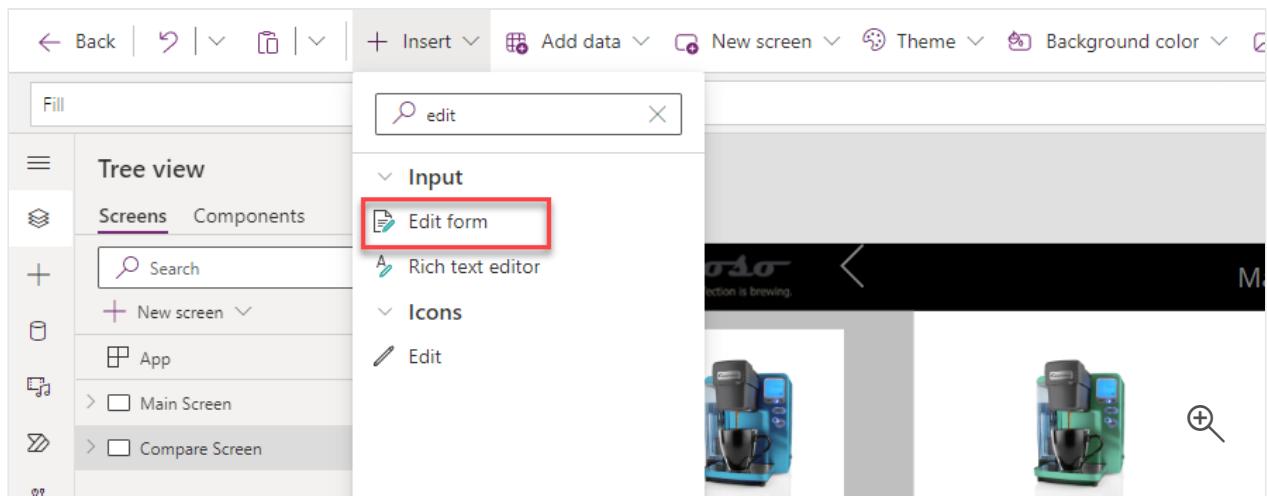
- Smart Brew 300 (\$499.00) - Checked
- Smart Brew 300 (\$499.00) - Checked
- Smart Brew 300 (\$499.00) - Unchecked
- Travel Brew 100 (\$349.00) - Unchecked

At the bottom right, there is a button labeled 'Compare 3 item(s)' with a magnifying glass icon.

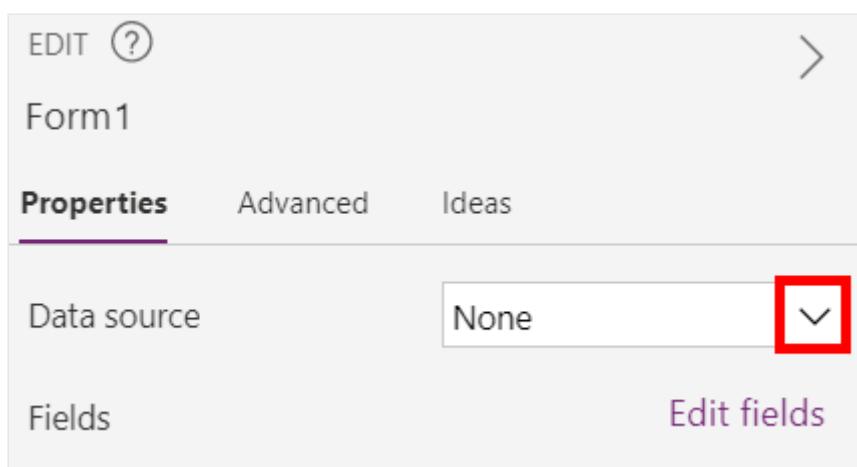
3. Select **Compare Screen** from the Tree view. The selected machines should now display.



4. Select the Insert tab, search for edit, and then select Edit form.



5. In the data pane on the right, select the Data source dropdown menu.



6. Select the Machine Orders table as the data source.

EDIT (?) >

Form1

**Properties** Advanced Ideas

Data source None

File Search

Sn Create new table

Co In your app

La Machines Imported from Excel

De MachineTypes Imported from Excel

Vi CompareList Collection

Po Machine Orders Microsoft Dataverse - Current environment

7. Select **Edit fields**.

EDIT (?) >

Form1

**Properties** Advanced Ideas

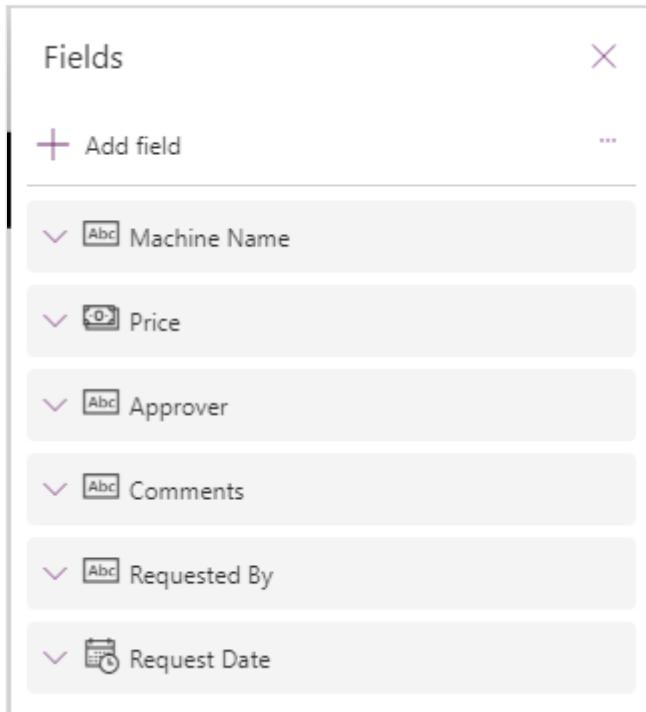
Data source Machine Orders

Fields **Edit fields**

8. Add, remove, and arrange fields as ordered in the following list. You can add the fields by using the plus (+) sign, and you can reorder them by dragging the field to the desired placement.

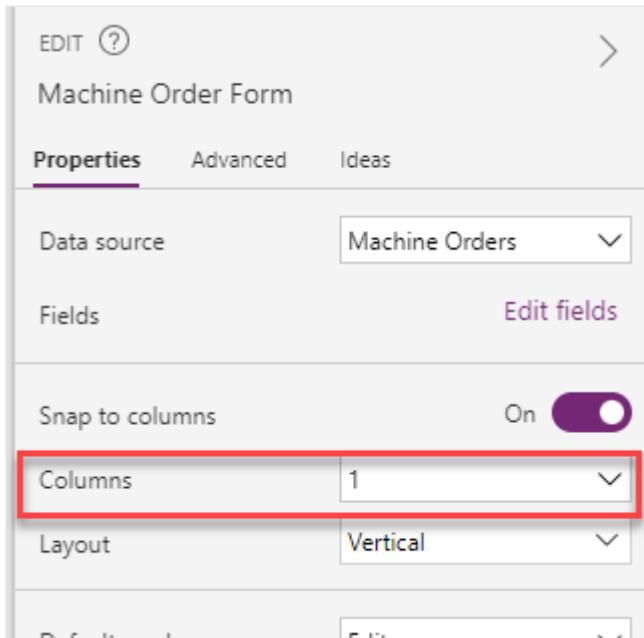
a. Machine Name

- b. Price
- c. Approver
- d. Comments
- e. Requested By
- f. Request Date

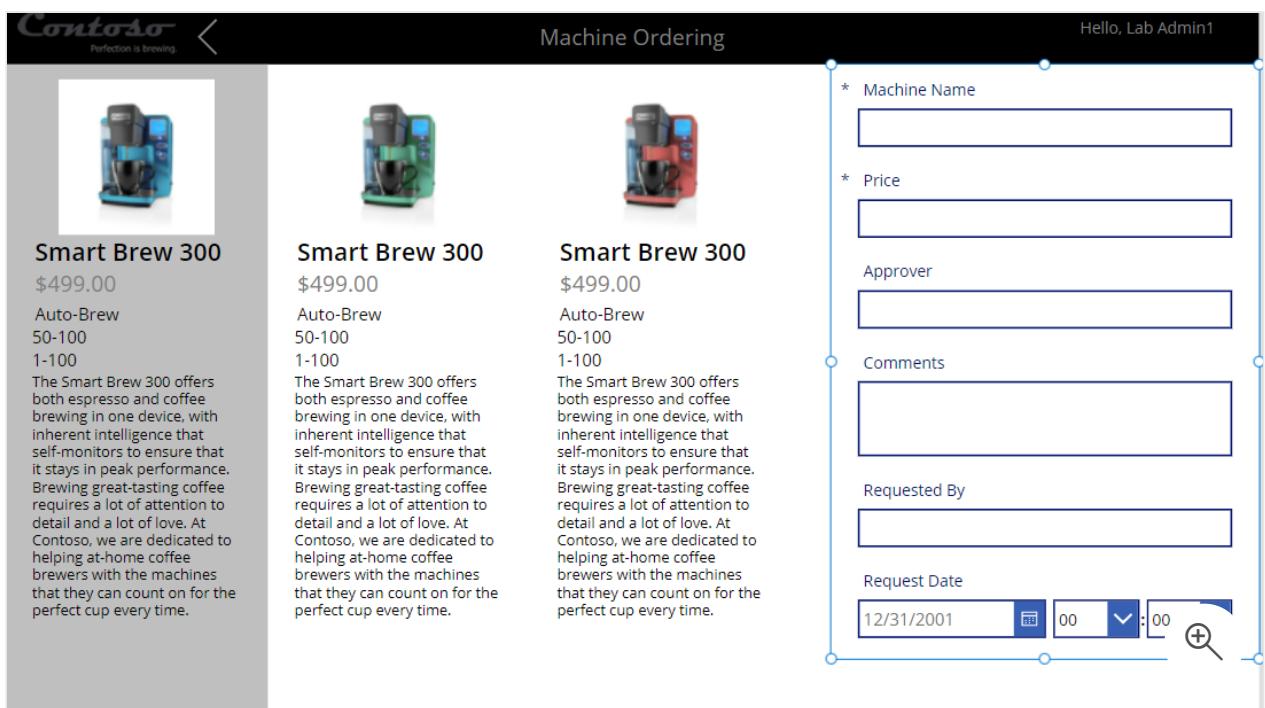


9. Close the **Fields** pane.
10. Rename the form as **Machine Order Form**.
11. Select the **Machine Order Form**.
12. Set the **X** value of the **Machine Order Form** to **840**.
13. Set the **Y** value of the **Machine Order Form** to **60**.
14. Set the **Width** value of the **Machine Order Form** to **520**.
15. Set the **Height** value of the **Machine Order Form** to **650**.

16. Change the **Snap to columns** setting from 3 to 1. This setting will modify the layout of the edit form to be a single column.



The form should now resemble the following image.

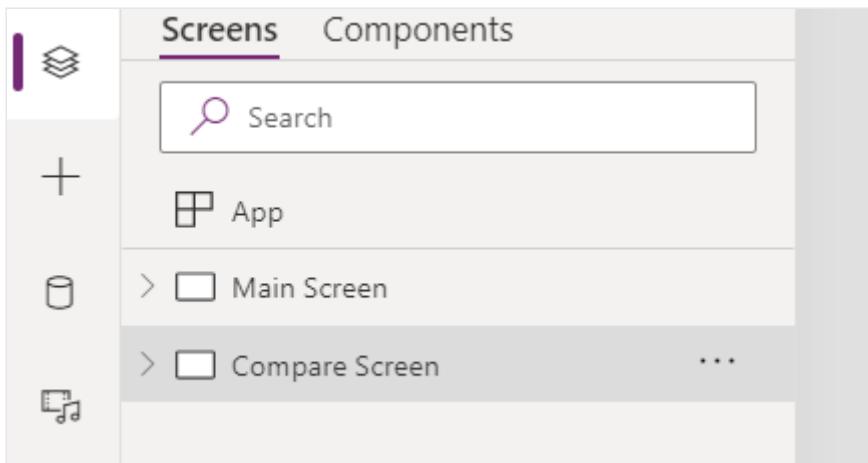


### ➊ Note

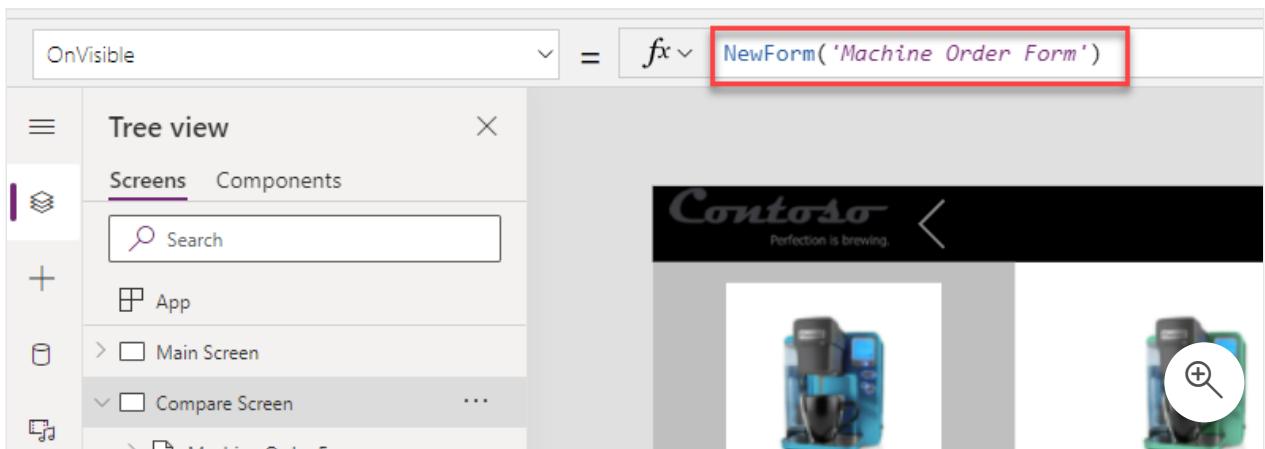
You can always select controls, such as the **Form1** control, from the tree view on the left to make sure that you're selecting the correct control. To move it, make sure that you select the form and not a control within the form.

For more information, see [Understand data-form layout for canvas apps](#).

17. To create a new instance of the form when the screen is loaded, select **Compare Screen** in left tree view pane.



18. Select the **OnVisible** property of the screen and then enter **NewForm('Machine Order Form')**.

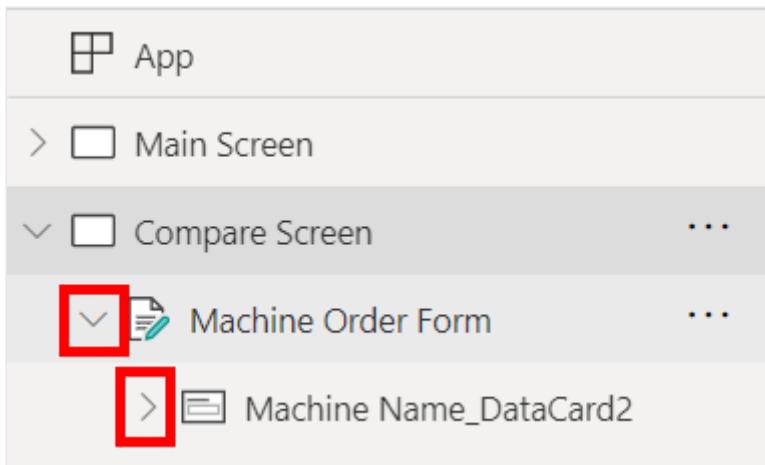


## Task - Set up the title column

In the next few steps, you'll set up each form field.

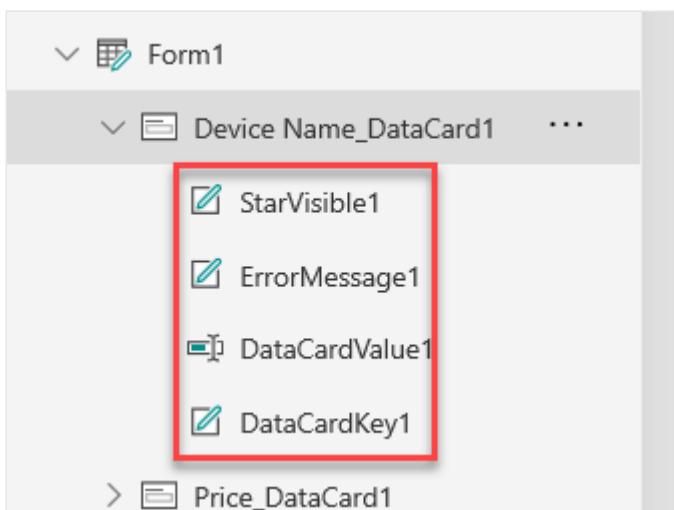
Your first task is to set up the title to display the machine type and machine name for the selected machine. For example, if the user selects the Smart Brew 300 coffee makers, you'll want the machine order to have the title of "At home coffee makers - Smart Brew 300."

1. Expand the **Machine Name** DataCard under the **Machine Order Form** in the tree view.

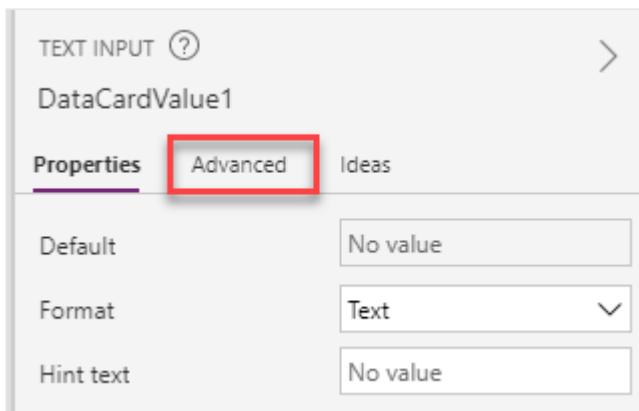


The default card contains a few controls:

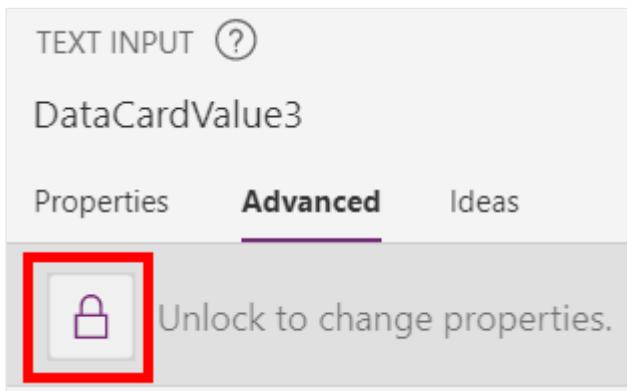
- **StarVisible1** - A label control that has an asterisk (\*) and has its **Visible** property set to true or false, depending on whether the field is required or not. Because the **Title** field was set as **Required** when you set up the table, its **Required** property is set to true.
- **ErrorMessage1** - A label that is directly below the main data entry field that displays error messages.
- **DataCardValue1** - The text input control where you can enter the title. For this scenario, you'll set the title based on the selected machine.
- **DataCardKey1** - The label that displays the title of the field.



2. Select **Machine Name DataCardValue** in the tree view. Then, open the **Advanced** tab in the right pane.



3. Select **Unlock** so that you can customize the card.

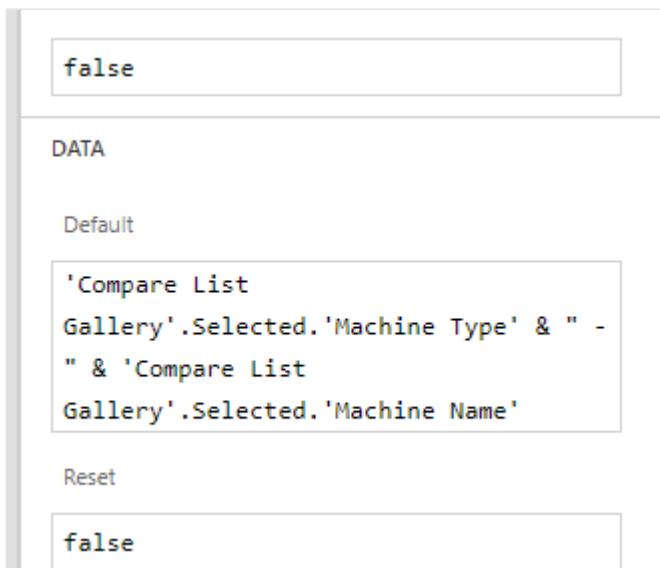


**① Note**

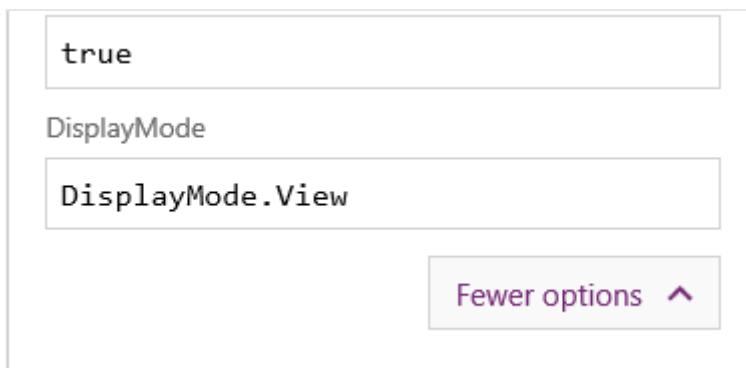
For the next few steps, you'll use the Advanced pane to customize control properties within the form. You can perform the same customizations by using the property dropdown menu and formula bar in the upper left of the studio.

4. Go to the **Data** section and set the **Default** property to:

```
'Compare List Gallery'.Selected.'Machine Type' & " - " & 'Compare List  
Gallery'.Selected.'Machine Name'
```



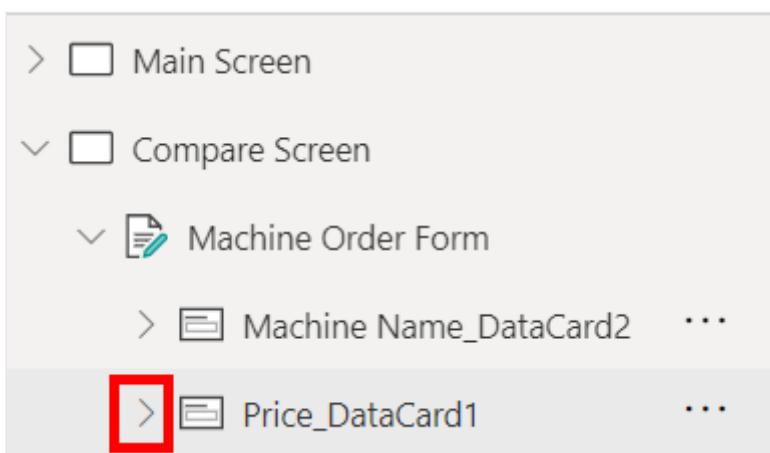
5. Change the **DisplayMode** to **DisplayMode.View**. This setting will prevent users from changing the value within the text box.



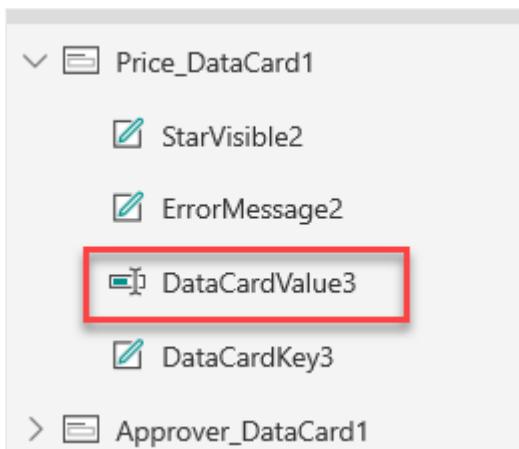
## Task - Set up the Price field

In this task, you'll set the price to the price of the item and then make it read-only.

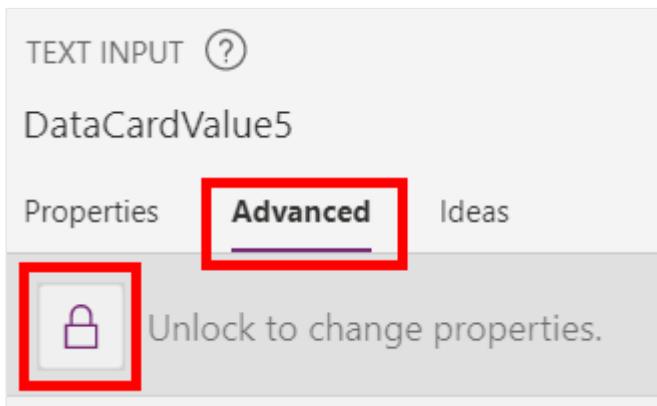
1. Expand **Price** data card.



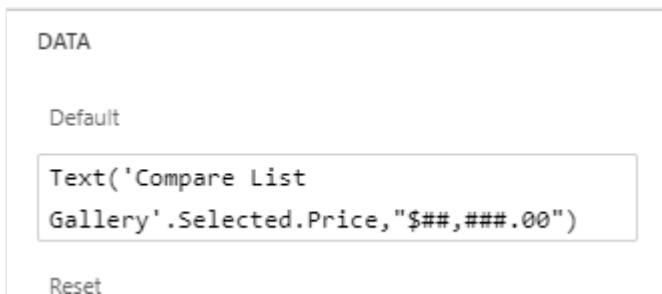
2. Select the **Data Card Value**.



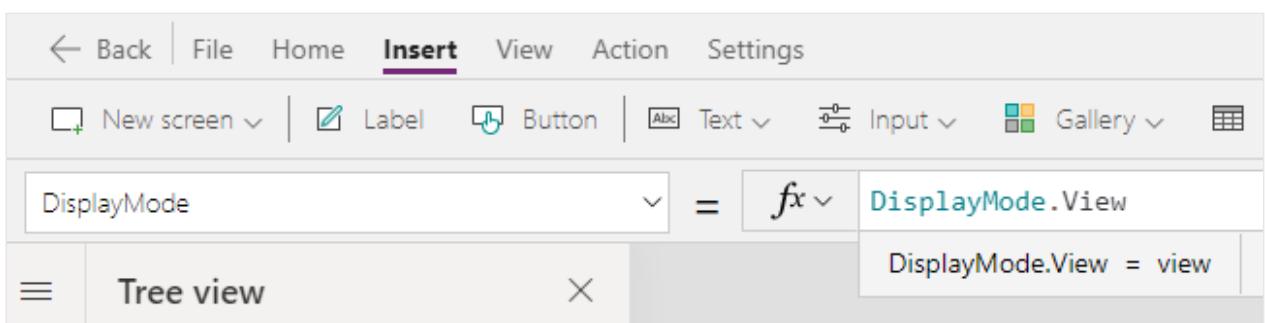
3. Select the **Advanced** tab and then select **Unlock**.



4. Change the **Default** property in the **Data** section to: `Text('Compare List  
Gallery'.Selected.Price,"$##,###.00")`



5. Select the **Price** field and change the **DisplayMode** property to **DisplayMode.View**.

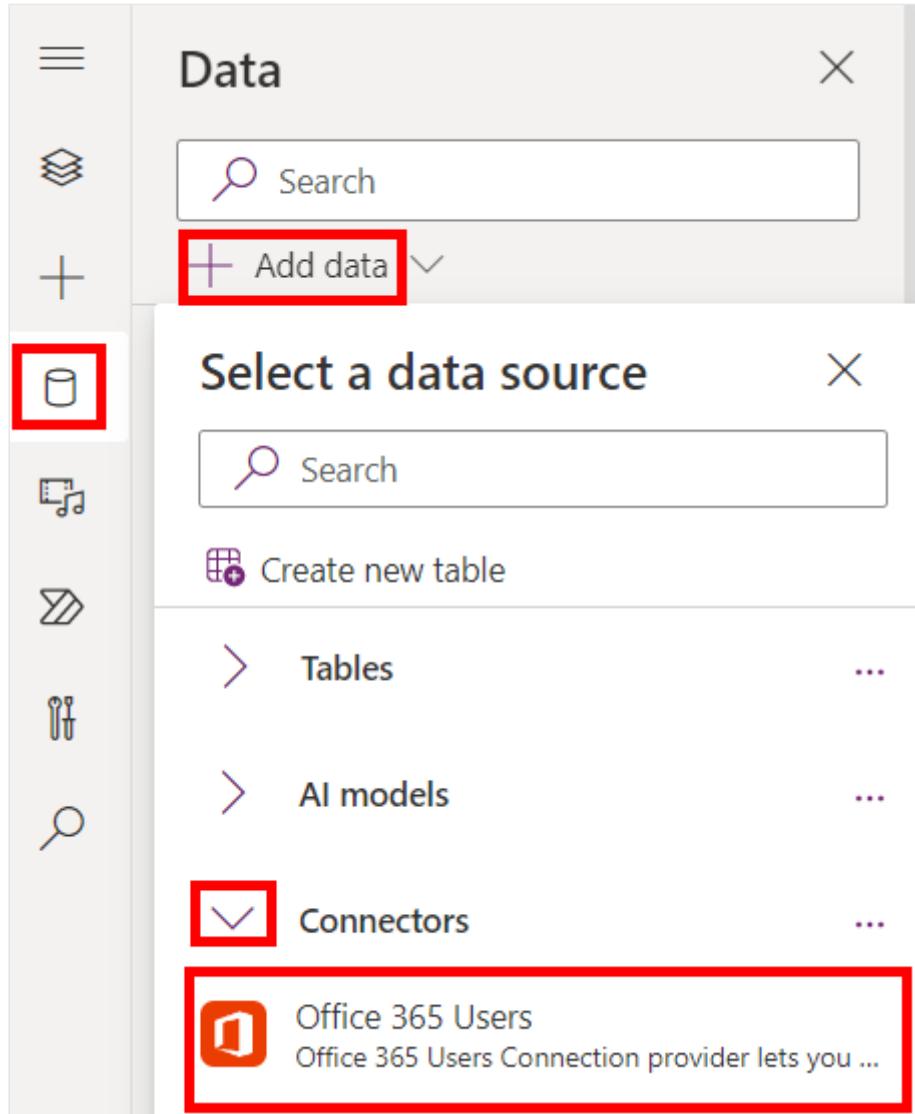


## Task - Set up the Approval field

In this task, you'll set the **default** value for the approver to be the email address of the signed-in user's manager.

You'll use Microsoft Graph to retrieve the manager's email. For more information, see [Office 365 Users Connection Provider](#).

1. Select **Data sources**. Select **Add data** and then expand **Connectors**. Select **Office 365 Users**.



2. When prompted, select **Connect**.

## Connect to data

X



### Office 365 Users

Office 365 Users Connection provider lets you access user profiles in your organization using your Office 365 account. You can perform various actions such as get your profile, a user's profile, a user's manager or direct reports and also update a user profile.

**Connect**

Cancel

3. Select the **Approver Data Card Value** from the Tree view.

A tree view of data card items:

- Price\_DataCard1
- Approver\_DataCard1
  - StarVisible3
  - ErrorMessage3
  - DataCardValue4
- DataCardKey4

The item "DataCardValue4" is highlighted with a red rectangle.

4. Go to the Advanced pane and select **Unlock**.

TEXT INPUT (?)

DataCardValue6

Properties **Advanced** Ideas

🔒 Unlock to change properties.

5. Set the **Default** value to: `User().Email`. This expression will use your user's email so that you don't accidentally email your manager to approve your testing.

In a real application, or if you wanted to try the expression to use your manager's email, it would be: `Office365Users.Manager(User()).Email`.Mail

The expression would make an API call at runtime to get the manager's email address of the signed-in user.

If you try it and get an error when calling the `Office365Users.Manager()` function, it might be because a manager isn't set up in the system for the signed-in Office 365 user. In that case, you can return to `User().Email`.

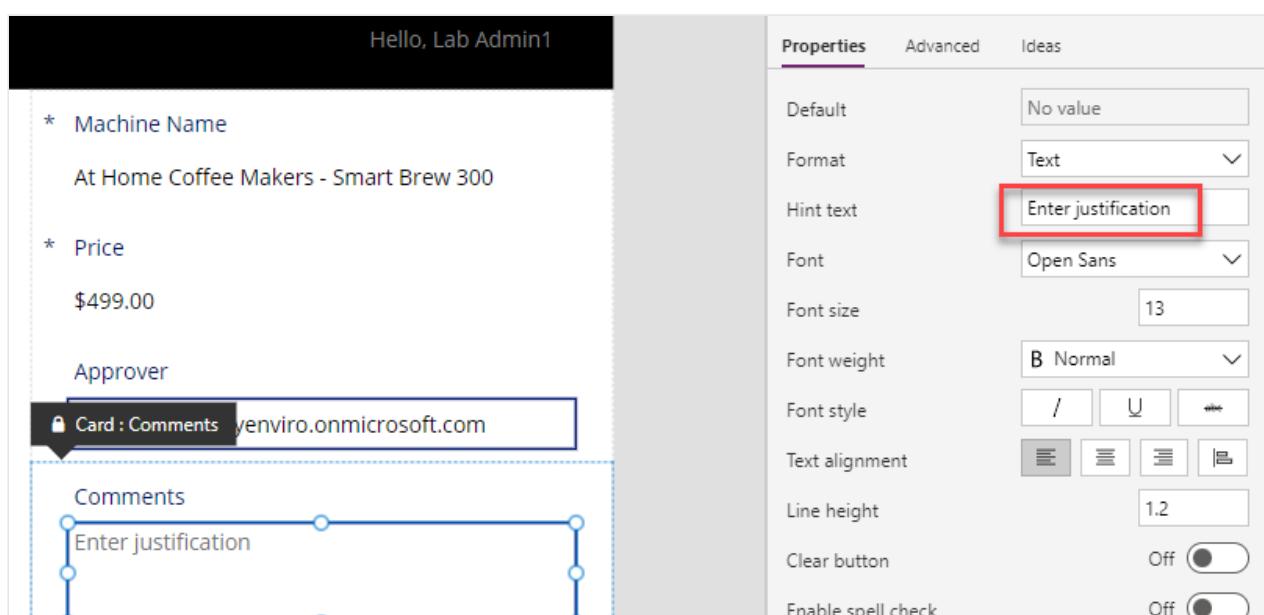
6. Save your work and return to continue editing the app.

The Office 365 User connector has access to many other valuable types of information. For more information, see [Office 365 Users Connector](#).

## Task - Set up the Comments field

Your next task is to set up the **Comments** field by following these steps:

1. Expand the **Comments** field and select the **DataCardValue**.
2. Set the **Hint text** property to **Enter justification**.



## Task - Set up the Requested By field

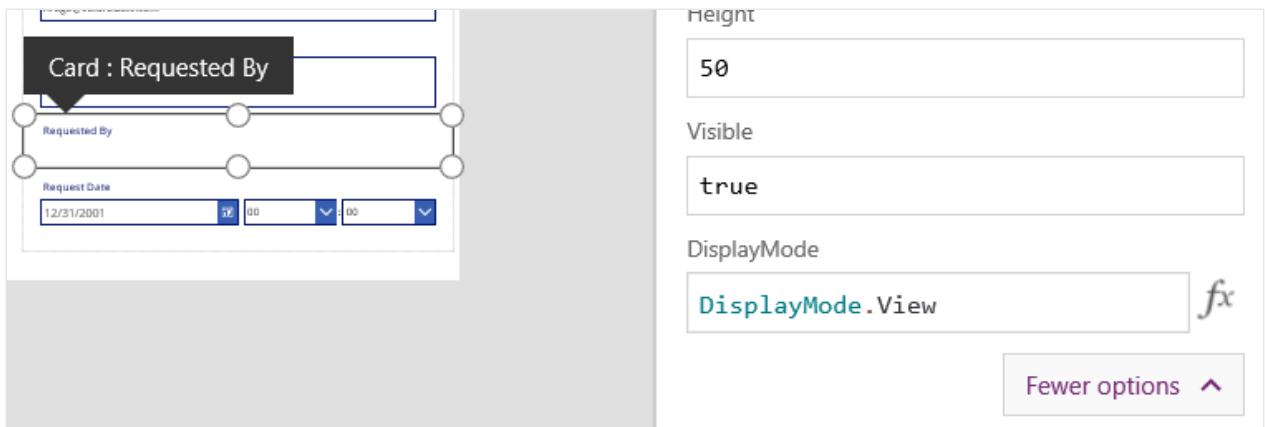
Next, you'll set the **Requested By** field to be the current signed-in user's email, and then you'll disable the control so that the user can't change this value.

1. Expand the **Requested By** card.

2. Select the **DataCardValue**.

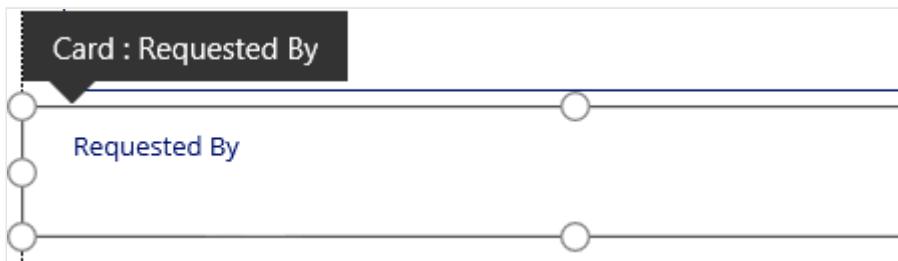
3. Go to the **Advanced** pane and **Unlock** the card.

4. Change the **DisplayMode** property to `DisplayMode.View`.



5. Set the **Default** value to `User().Email`.

The email of the currently signed-in user should display.

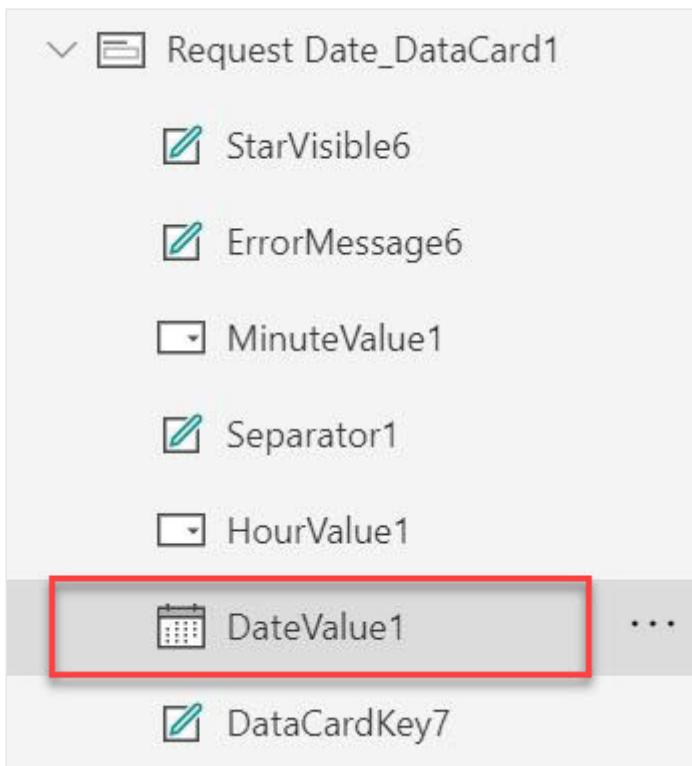


## Task - Set up the Request Date field

In this task, you'll set the **Request Date** field to be today's date.

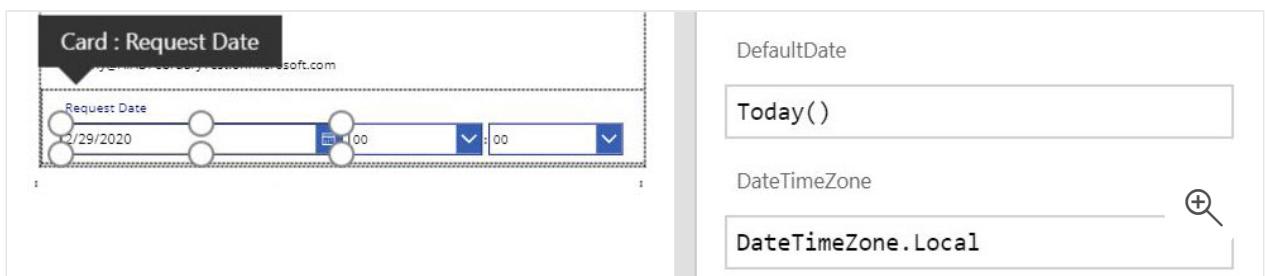
1. Expand the **Request Date** card.

2. Select the **DateValue** card.



3. Go to the **Advanced** pane and **Unlock** the card.

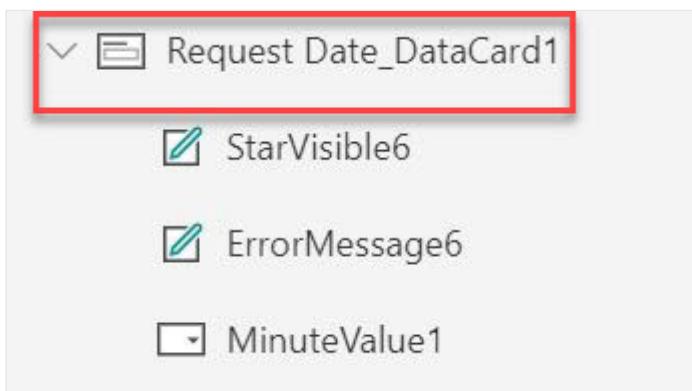
4. Change the **DefaultDate** property to `Today()`.



The date in the calendar control will change to today's date.

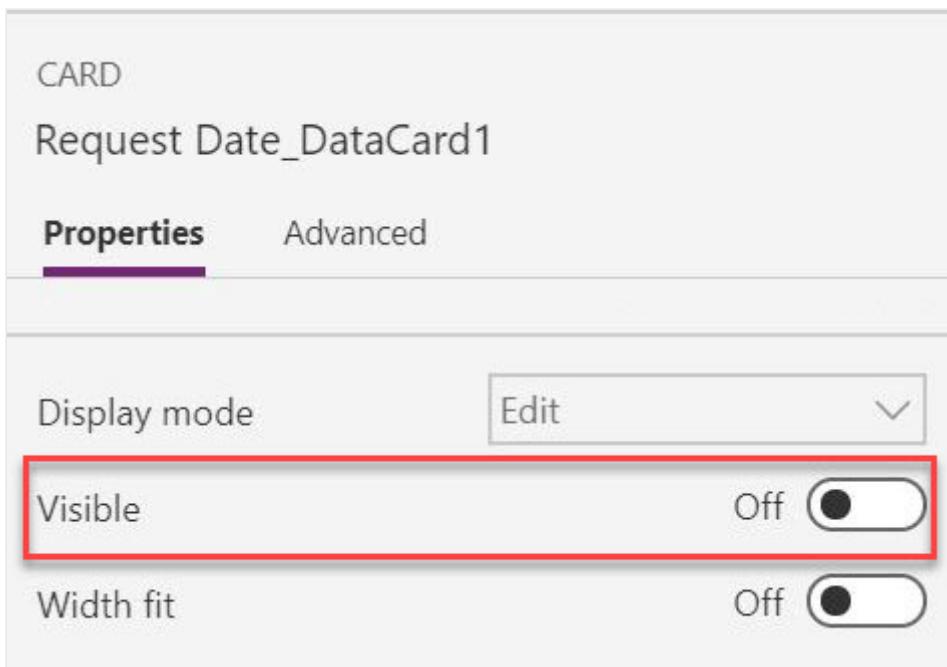
Now, you'll hide the **Request Date** card. You don't need to show this field to the user. Because you've included it as part of the form, the field will be updated as part of the form submit.

5. Select the **Request Date DataCard**.



6. Go to the **Properties** pane.

7. Set the **Visible** toggle to Off.

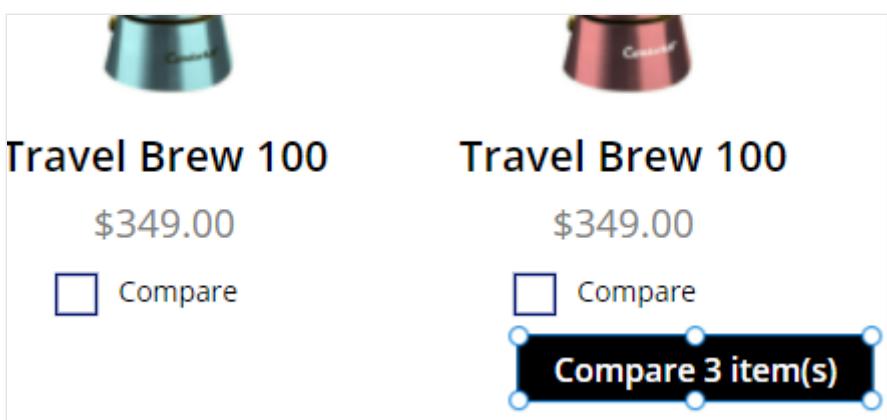


## Task - Add a button to submit the form

To add a button to submit the form, follow these steps:

1. Select the **Main Screen**.

2. Copy (**Ctrl+C**) the **Compare** button from the first screen, which has the correct color values.



3. Return to the **Compare Screen** and paste (**Ctrl+V**) the button.

The screenshot shows a card with the following content:

- Machine:** coffee machine
- Description:** It stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.
- Requested By:** labadmin1@mayenviro.onmicrosoft.com
- Compare 3 item(s)** button (highlighted with a red border)

4. Make sure that the button is larger. You can resize to **260 x 40** by using the **Properties** pane on the right.

The Properties pane shows the following settings for the button:

- Position:** X: 1096, Y: 708
- Size:** Width: 260, Height: 40 (highlighted with a red border)
- Padding:** Top: 5, Bottom: 5
- Font weight:** B Semibold
- Font style:** / U ➡
- Text alignment:** Left, Center, Right

5. Set the button's **Text** property to "Submit machine request".

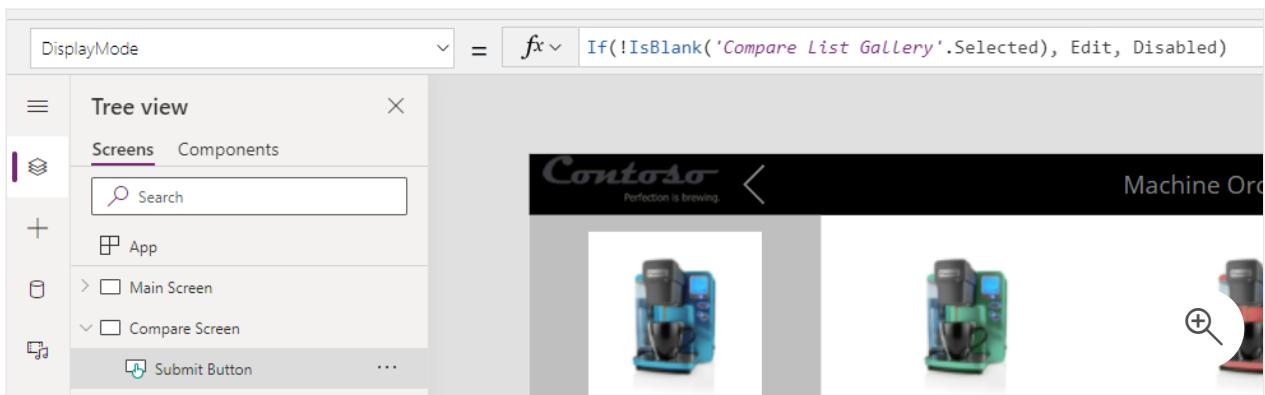
The Properties pane shows the **Text** property set to "Submit machine request".

6. Rename the button to **Submit Button**.

The Object Explorer shows the following items:

- Compare Screen (selected)
- Submit Button (renamed from 'Compare 3 item(s)')
- Machine Order Form

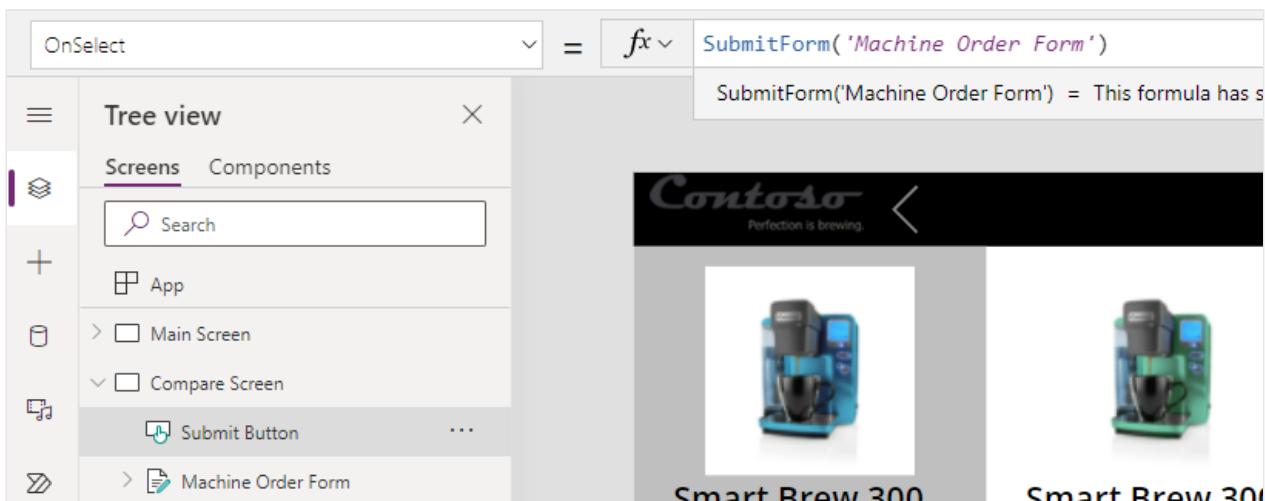
7. The button should be enabled only if a machine is selected. To do so, change the button's **DisplayMode** property to: `If(!IsBlank('Compare List Gallery'.Selected), DisplayMode.Edit, DisplayMode.Disabled)`



### ⚠ Note

You might notice the exclamation mark (!) in the formula `!IsBlank()`. Normally, if you only have `IsBlank()`, the check is for **blank** only. Adding the exclamation mark (!) in front of the formula will change it to check if it's **not blank**.

- Set up what you want to happen when the button is selected by setting the **OnSelect** property to `SubmitForm('Machine Order Form')`.



When the button has been selected, the form data will be submitted to Microsoft Dataverse.

- Save your work and then return to continue editing the app.

## Task - Test the form

Your next task is to test the form.

- Select the **Main Screen** in the left navigation and then select **Play**.



AI Builder

Mixed Reality

2. Select a few machines to compare and then select **Compare**.

**Contoso** Perfection is brewing.

### Machine Ordering

Hello, Lab Admin1

Category	Model	Price	Action
At Home Coffee Makers	Smart Brew 300	\$499.00	<input checked="" type="checkbox"/> Compare
	Smart Brew 300	\$499.00	<input checked="" type="checkbox"/> Compare
At Home Espresso Machines	Smart Brew 300	\$499.00	<input type="checkbox"/> Compare
	Travel Brew 100	\$349.00	<input type="checkbox"/> Compare
Commercial Coffee Makers	Smart Brew 300	\$499.00	<input type="checkbox"/> Compare
	Travel Brew 100	\$349.00	<input type="checkbox"/> Compare
Commercial Espresso Machines	Smart Brew 300	\$499.00	<input type="checkbox"/> Compare
	Travel Brew 100	\$349.00	<input type="checkbox"/> Compare

**Clear Selection**

**Compare 3 item(s)**

3. Select one of the machines.

**Contoso** Perfection is brewing.

### Machine Ordering

Hello, Lab Admin1

<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.

\* Machine Name  
At Home Coffee Makers - Smart Brew 300

\* Price  
\$499.00

Approver  
labadmin1@mayenviro.onmicrosoft.com

Comments  
Enter justification

Requested By  
labadmin1@mayenviro.onmicrosoft.com

**Submit machine request**

The **Machine Name**, **Price**, **Approver**, and **Requested By** fields will be filled in already.

1. Add some **Comments**, such as: "This machine will satisfy our needs."
2. Select **Submit machine request**.

The screenshot shows a list of three "Smart Brew 300" coffee makers. Each item has a small image, a title, a price, a quantity range, and a detailed description. To the right of the list is a form for submitting a machine request. The form includes fields for "Machine Name" (set to "At Home Coffee Makers - Smart Brew 300"), "Price" (\$499.00), "Approver" (an email input field containing "labadmin4@julyenviro.onmicrosoft.com"), and "Comments" (a text area with placeholder text). Below the form are "Requested By" and another email input field ("labadmin4@julyenviro.onmicrosoft.com"). A magnifying glass icon is in the top right corner of the form area, and a "Submit machine request" button is at the bottom right.

Smart Brew 300	Smart Brew 300	Smart Brew 300
\$499.00	\$499.00	\$499.00
Auto-Brew	Auto-Brew	Auto-Brew
50-100	50-100	50-100
1-100	1-100	1-100
The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.

Machine Name: At Home Coffee Makers - Smart Brew 300

Price: \$499.00

Approver: labadmin4@julyenviro.onmicrosoft.com

Comments: This machine will satisfy our needs.

Requested By: labadmin4@julyenviro.onmicrosoft.com

Submit machine request

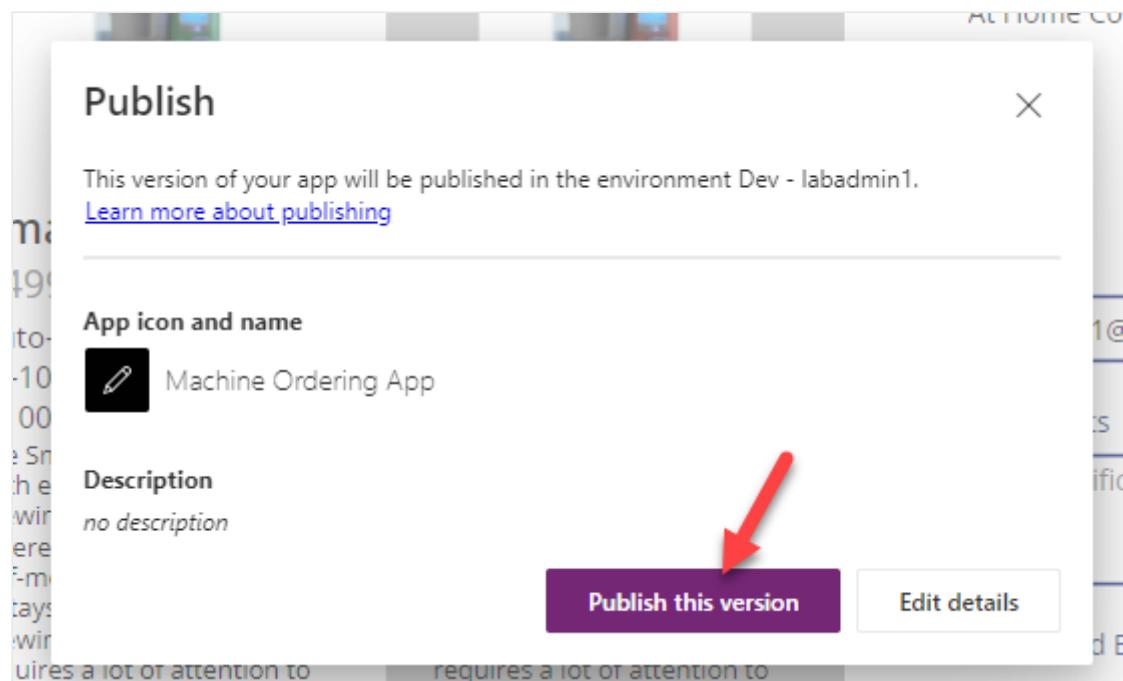
The button should turn disabled (gray) for a few seconds while it's submitting the request. If it doesn't, an error has likely occurred. Select the X in the upper-right corner to return to the design mode.

If an error has occurred, a yellow error icon will display next to the **Submit** button. You can hover your mouse cursor over the icon to check the error.

3. Exit the preview mode by selecting the X in the upper-right corner.

4. Select **Publish**.

5. Select **Publish this version** and then wait for the application to be published.



# Task - Verify that a new item was added to the Machine Order table

Your next task is to verify that a new item was added to the Machine Order table.

1. Open a browser window and then go to [Make Power Apps](#) .
2. Select **Tables** from the left hand pane.
3. Select the **Machine Order** table.

The screenshot shows the Microsoft Dynamics 365 Home page. On the left, there's a vertical navigation bar with the following items:

- Home
- Create
- Learn
- Apps
- Tables** (this item is highlighted with a red box)
- Flows
- Solutions
- More

Below the navigation bar is a section titled "Power Platform" with a icon.

## Tables

Recommended   Custom   All

Table ↑ ↓

Account
Address
Appointment
Attachment
Business Unit
Contact
Currency
Email
Email Template
Fax
Feedback
Letter
Machine Order

A newly added row with your machine order details should display. It might take a few seconds to load.

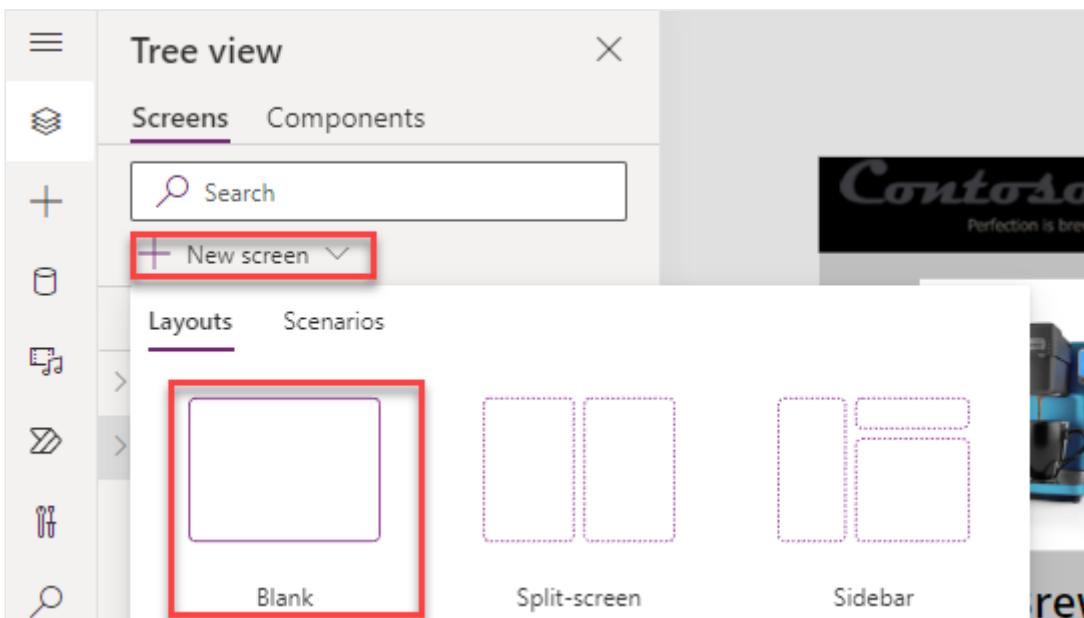
Machine Order columns and data						
	Estimated Shi...	Machine Name*	Price*	Created On	Approval S'	
		At Home Coffee Makers - Smart B...	499	5/16/2022 2:06 PM		A

## Optional task - Navigate to the confirmation screen after the form submission is successful

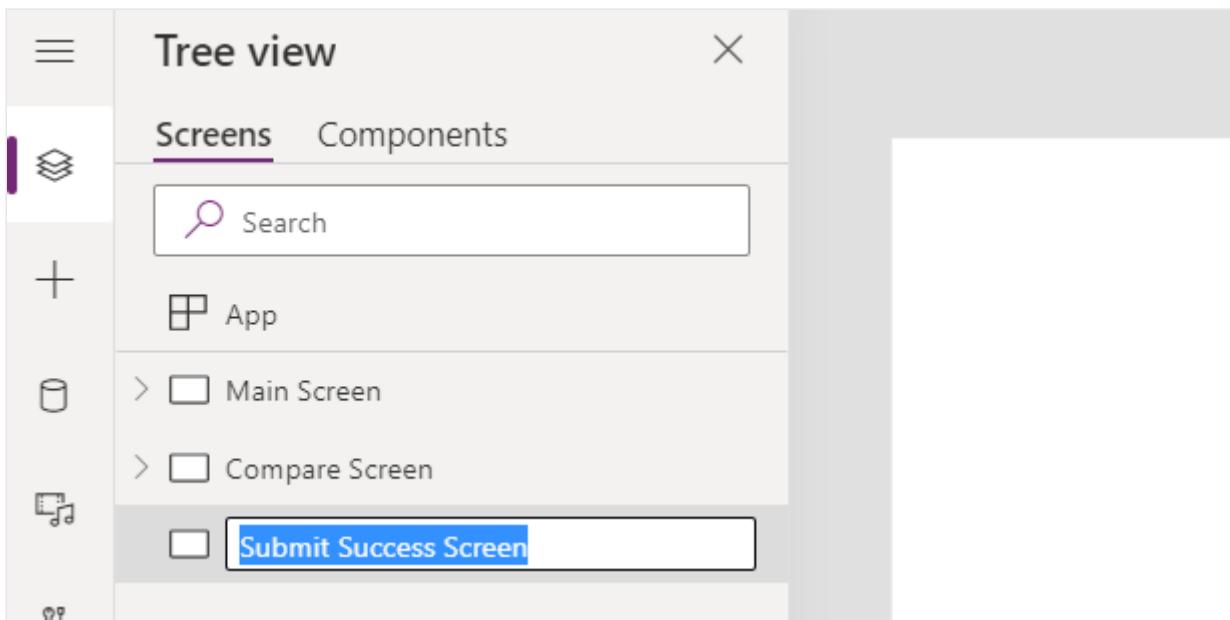
This step is optional. If you're short on time, you may skip this step and continue to the next module.

After the form has been successfully submitted, it's a good idea to show a confirmation screen and allow the user to return to the main screen.

1. Open a browser window and then go to [Make Power Apps](#).
2. Select Apps > Machine Ordering App > Edit.
3. Select New screen > Blank.

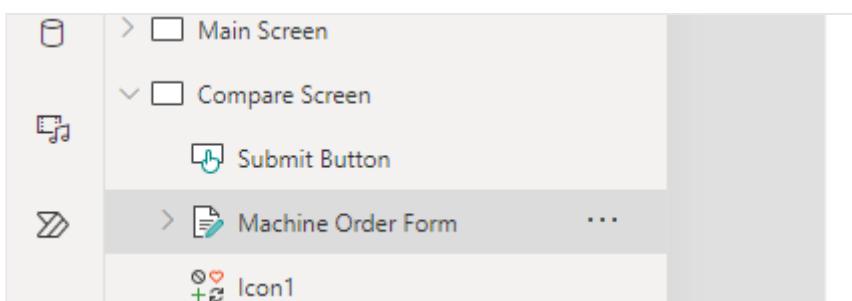


4. Rename the screen to **Submit Success Screen**.



5. Expand the **Compare Screen**.

6. Select the form. You can use the tree view on the left to select **Machine Order Form**.

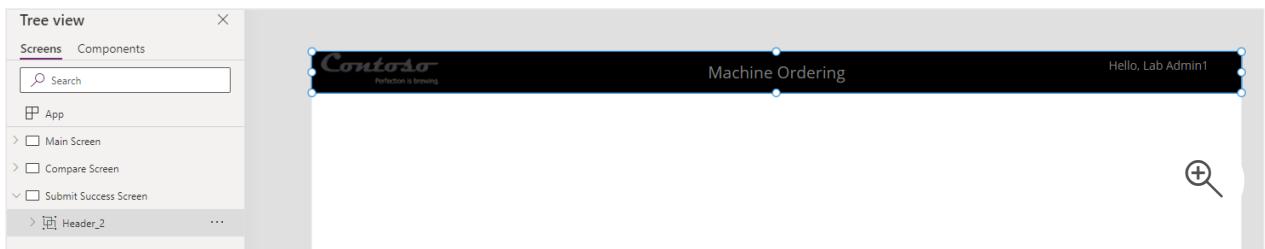


7. Set the **OnSuccess** property to: `Navigate('Submit Success Screen', ScreenTransition.None)`

OnSuccess = `fx Navigate['Submit Success Screen', ScreenTransition.None]`

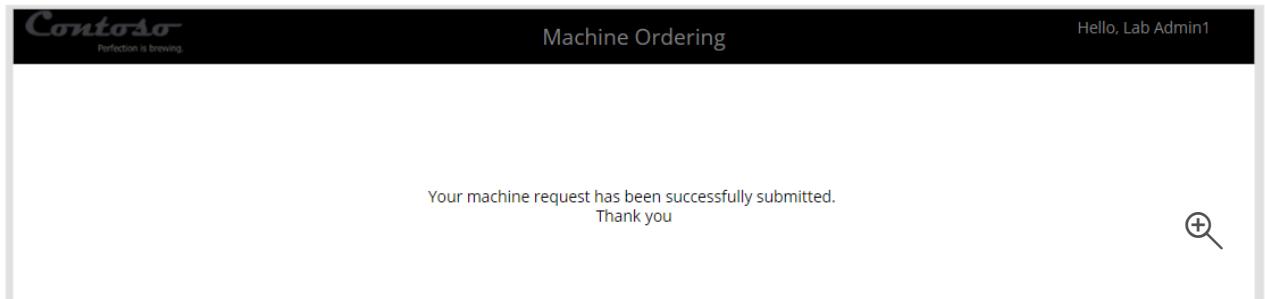
8. Copy (**Ctrl+C**) the **Header** from the **Compare Screen**.

9. Go to the **Submit Success Screen** and paste the header.



10. Insert another **label** in the middle of the screen and then set the **Text** to: **Your machine request has been successfully submitted. Thank you.**

11. Increase the font size and the size of the label, and then center the text.



12. Copy the **Submit Button** from the **Compare Screen** and then paste it in the **Submit Success Screen**.

13. Rename the button as **Success Button**.

14. Change the **Text** of the **Success Button** to **OK**.

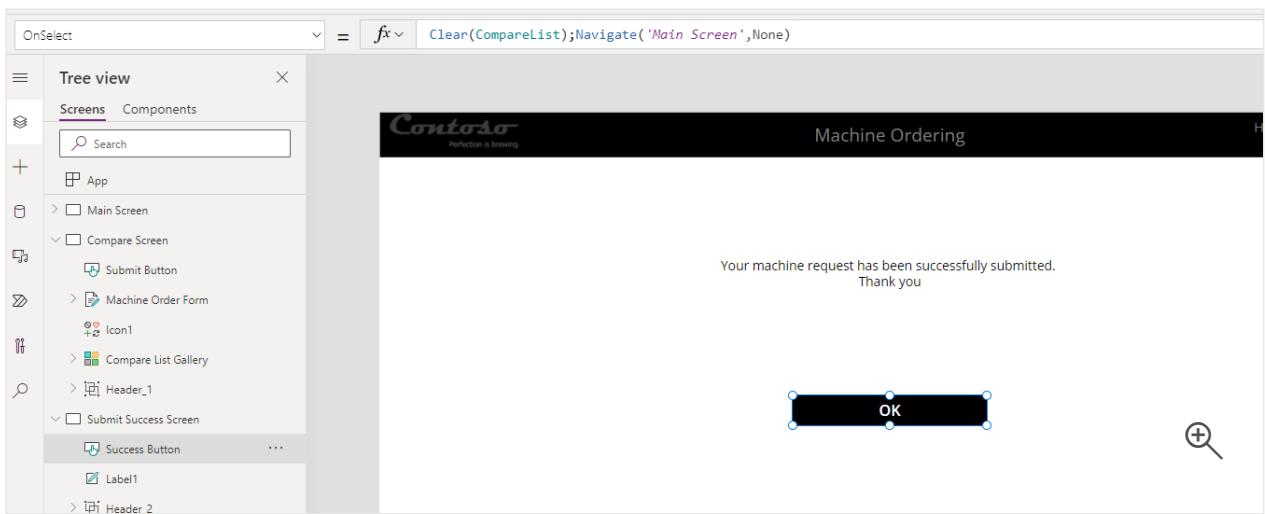
15. Change the **Display Mode** of the **Success Button** to **EditMode**.

16. Move the button to the middle of the screen.

When pressed, the button should remove items from the **CompareList** collection and navigate to the main screen.

17. Set the **OnSelect** property of the button to:

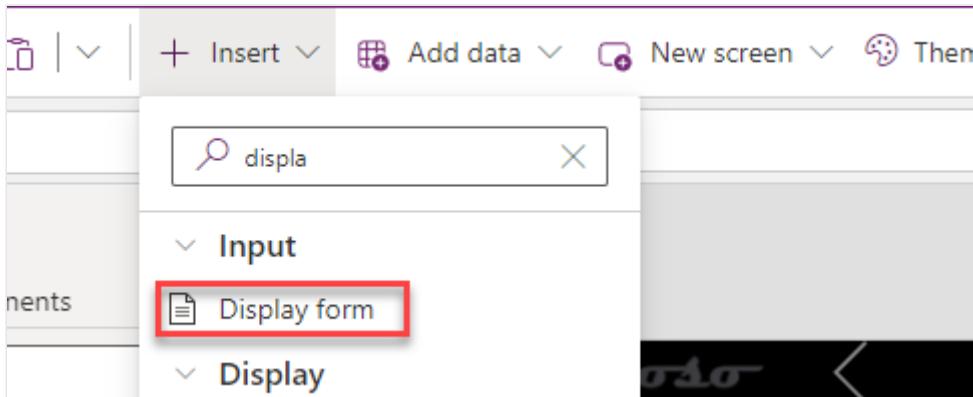
```
Clear(CompareList);Navigate('Main Screen',ScreenTransition.None)
```



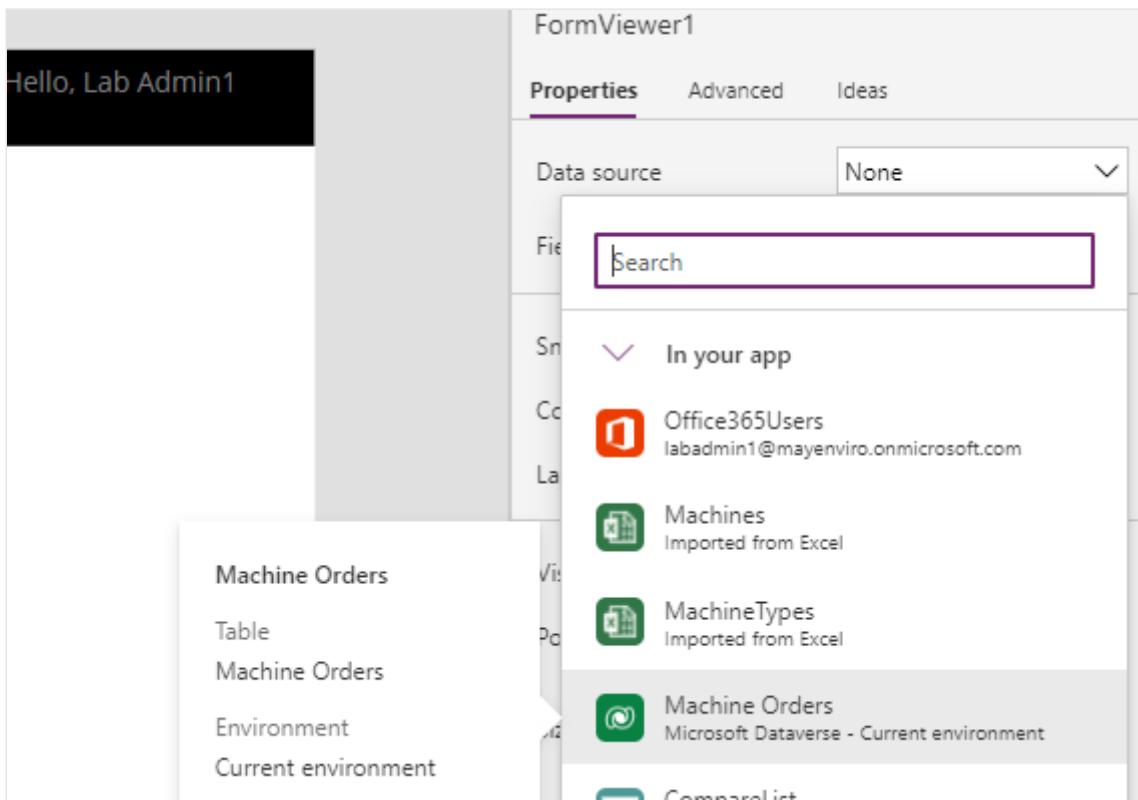
### ⚠ Note

The semicolon (;) is used as a separator when multiple functions are called one after the other. If you're in a locale where the semicolon is used as a comma separator, then use a double semicolon (;;).

18. Move the label up and add a display form by selecting **Insert**, searching for **display**, and then selecting **Display form**.



19. Set up the form's **Data source** to point to the **Machine Orders** table.

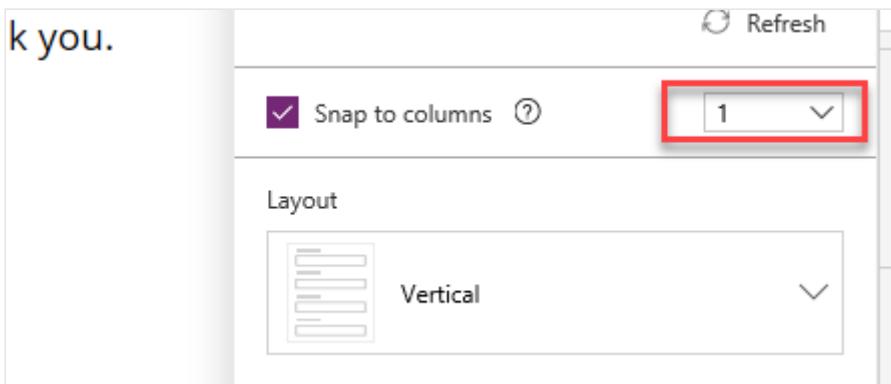


20. In the **Fields** section, select the fields to display: **Machine Name, Price, Comments, Approver, Requested By, and Request Date**. Rearrange and remove extra fields.

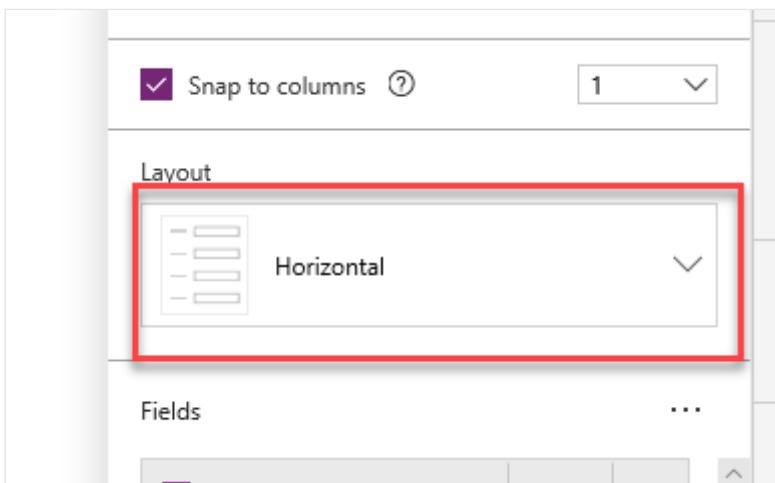
The screenshot shows the 'Fields' section of the Power Apps studio. It lists the following fields:

- Machine Name
- Price
- Comments
- Approver
- Requested By
- Request Date

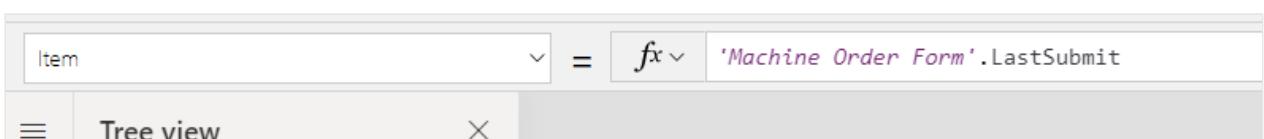
21. Change the **Snap to columns** value from **3** to **1**.



22. Change the **Layout** from **Vertical** to **Horizontal**.



23. Set form's **Item** property to '*'Machine Order Form'*.LastSubmit'.



24. Reposition and resize the form until it resembles the following image. The label will be first on the screen, centered under the header. Position the view form to be centered under the label. Then, center the **OK** button at the bottom of the page under the view form.

## Machine Ordering

Your machine request has been successfully submitted. Thank you

Machine Name

Price

Comments

Approver

Requested By

Request Date

OK

25. Save your changes and **Publish**.

26. Select the **Main Screen** and then select **Play**.

27. Select a few machines and then select **Compare**.

The screenshot shows the Contoso Machine Ordering interface. At the top, there are three categories: "At Home Coffee Makers" (with a thumbnail of a person making coffee), "At Home Espresso Machines" (with a thumbnail of a person using an espresso machine), and "Commercial Coffee Makers" (with a thumbnail of a commercial kitchen). Below these are two rows of product cards:

Product	Price	Action
Smart Brew 300	\$499.00	<input checked="" type="checkbox"/> Compare
Smart Brew 300	\$499.00	<input checked="" type="checkbox"/> Compare
Smart Brew 300	\$499.00	<input type="checkbox"/> Compare
Travel Brew 100	\$349.00	<input type="checkbox"/> Compare
Smart Brew 300	\$499.00	<input type="checkbox"/> Compare
Smart Brew 300	\$499.00	<input checked="" type="checkbox"/> Compare
Travel Brew 100	\$349.00	<input type="checkbox"/> Compare
Travel Brew 100	\$349.00	<input type="checkbox"/> Compare

At the bottom right of the grid, there is a red button labeled "Compare 3 item(s)" with a magnifying glass icon.

28. Select one of the machines, provide a comment, and then select **Submit**.

Contoso < Hello, Lab Admin1

Machine Ordering

Smart Brew 300	Smart Brew 300	Smart Brew 300
		
<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.	<b>Smart Brew 300</b> \$499.00 Auto-Brew 50-100 1-100 The Smart Brew 300 offers both espresso and coffee brewing in one device, with inherent intelligence that self-monitors to ensure that it stays in peak performance. Brewing great-tasting coffee requires a lot of attention to detail and a lot of love. At Contoso, we are dedicated to helping at-home coffee brewers with the machines that they can count on for the perfect cup every time.

\* Machine Name  
At Home Coffee Makers - Smart Brew 300

\* Price  
\$499.00

Approver  
labadmin1@mavenviro.onmicrosoft.com

Comments  
Comment

Requested By  
labadmin1@mavenviro.onmicrosoft.com

 **Submit machine request**

29. Verify that the confirmation screen shows the order details. Select **OK**.

Contoso < Hello, Lab Admin1 X

Machine Ordering

Your machine request has been successfully submitted. Thank you.

Machine Name	At Home Coffee Makers - Smart Brew 300
Price	499
Comments	Comment
Approver	
Requested By	
Request Date	7/7/2022 12:00 AM

 **OK**

The application will return to the main screen and the compare list will be cleared.



At Home Coffee Makers

**Smart Brew 300**

\$499.00

 Compare**Smart Brew 300**

\$499.00

 Compare**Smart Brew 300**

\$499.00

 Compare**Travel Brew 100**

\$349.00

 Compare

At Home Espresso Machines



Commercial Coffee Makers

**Smart Brew 300**

\$499.00

 Compare**Smart Brew 300**

\$499.00

 Compare**Travel Brew 100**

\$349.00

 Compare**Travel Brew 100**

\$349.00

 Compare

Compare 0 item(s)

Clear Selection

30. Close the application.

## Next unit: Check your knowledge

[Continue >](#)