

WorkshopPLUS – Power Platform – Introduction to Power Apps & Power Automate for Dataverse with Lab

Lab 3 - Module 4: Canvas App Lab

Student Lab Manual

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Lab 3: Create a canvas app

Introduction

In this lab, you will learn how to create a canvas app that's connected to a Dataverse table. You will also learn how to customize that app to enhance the user experience and publish it for other users.

Objectives

After completing this lab, you will be able to:

- Create a canvas app from an existing Dataverse table.
- Embed the canvas app in Dataverse.
- Create and edit screens within a canvas app.
- Work with galleries and forms in canvas apps.
- Customize and publish your app.

Prerequisites

- Basic knowledge of customizing Dataverse forms and views.
- Completion of Lab 2, Exercises 1 and 2.

Estimated time to complete this lab

45 minutes

Scenario

Contoso is asking their employees to return to the office. They are looking to build a tool for employees to report their office presence and a tool for front-desk employees at the offices to monitor the office presence.

In this exercise, we are going to create the canvas app to be used by Contoso employees to make office reservations and see which colleagues are coming into the office.

Exercise 1: Create a canvas app

Objectives

After completing this exercise, you will be able to:

- Create and edit a canvas app.
- Overwrite the default fields when working with data sources in a canvas app.
- Add a calendar view to a canvas app.
- Add navigation within a canvas app.
- Publish your app and store it inside your solution.

Prerequisites

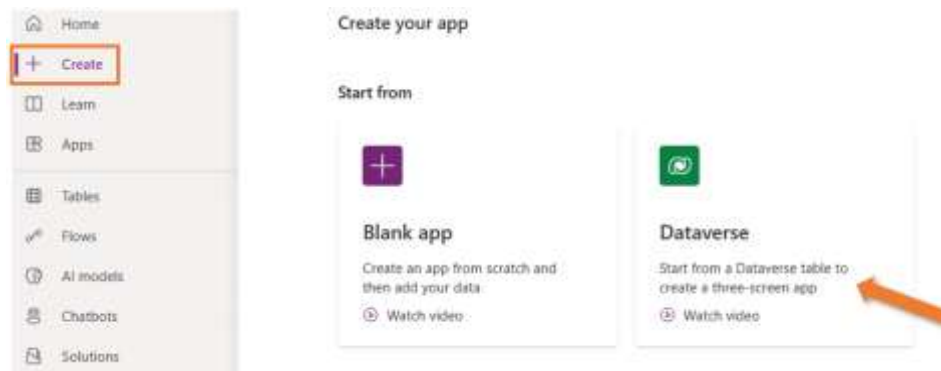
Completion of Labs 1 and 2 of this workshop.

Scenario

You have been asked to create an app for users to make office reservations, and view which of their colleagues are in the office on specific dates.

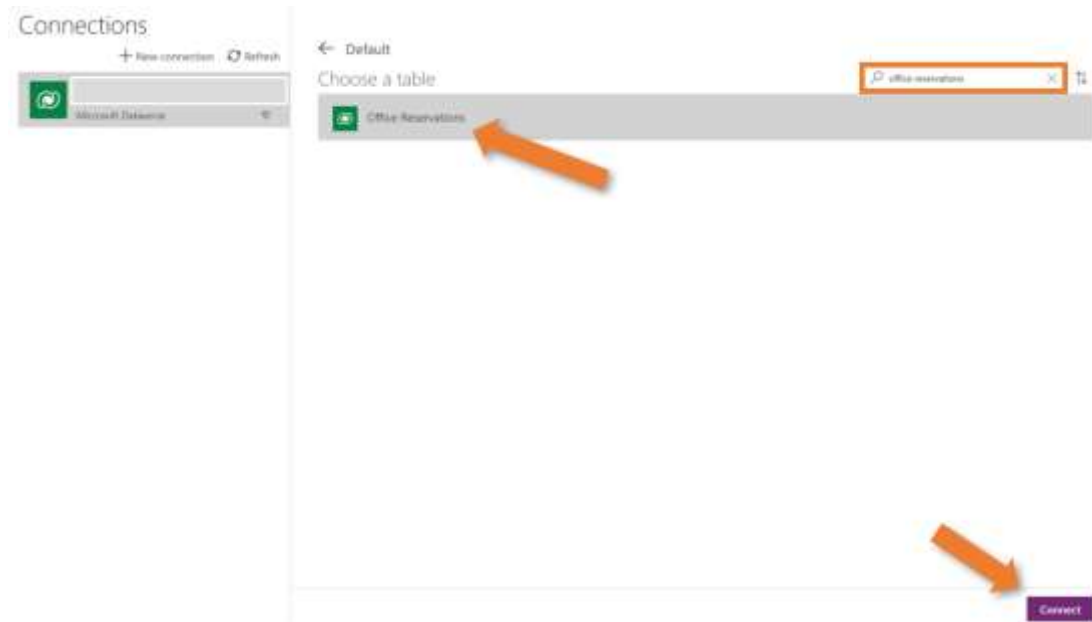
Task 1: Edit the default fields in a canvas app

1. In an In-Private window, navigate to <https://make.powerapps.com>. Sign in using your trial Office 365 credentials. Verify that you are signed into that account and not your personal account.
2. Ensure that you are in the right environment by clicking the environment button at the top of your screen and navigating to the environment you created as part of the setup process for this lab (DV_YOURINITIALS).
3. On the left pane of the Power Apps site, click the **+ Create** tab.
4. In the “Start from” section, select the **Dataverse** option.



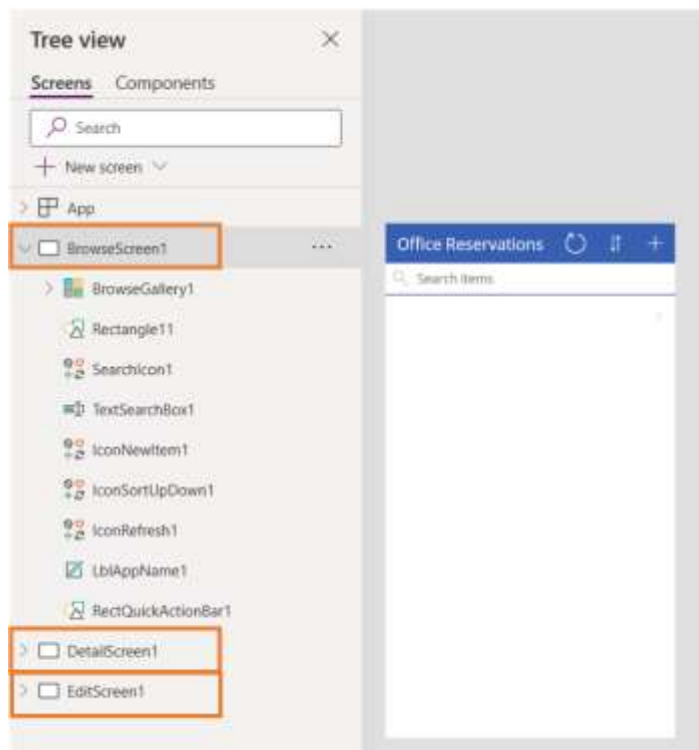
5. On the Connections page that opens, if you don't see a Dataverse connection select **+ New connection**, select the **Microsoft Dataverse** connector, and select **Create**. Allow access to this connector.

- Back on the Connections page, select the Dataverse connector you just created and search for the “Office Reservations” table in this list of tables. Select it and click **Connect** in the bottom right corner of the screen.



If you see a popup, you can click “Skip”.

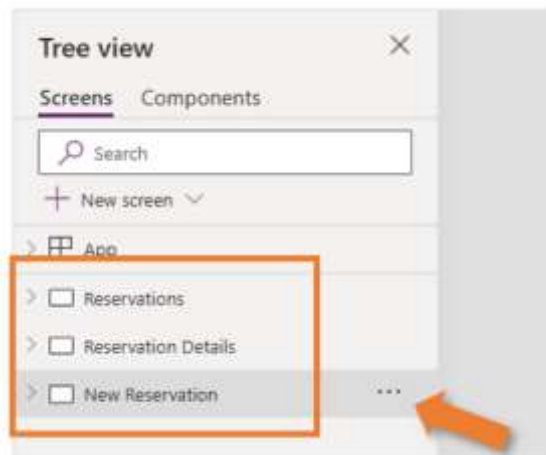
The system will automatically create a canvas app for you. In this app, you will see a mobile shaped canvas with 3 screens: BrowseScreen1, DetailScreen1, and EditScreen1.



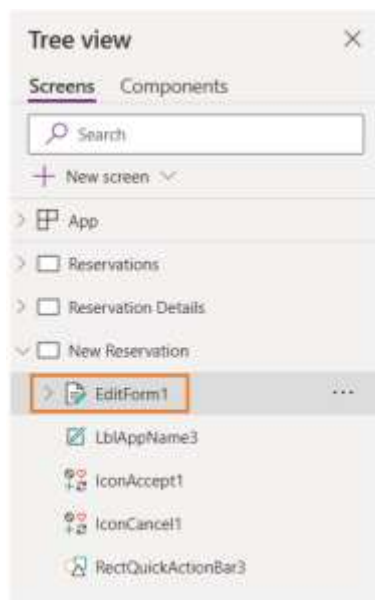
7. In the upper right corner of your screen, click the **Save** button. Name your app “**Office Reservation App**” when saving.



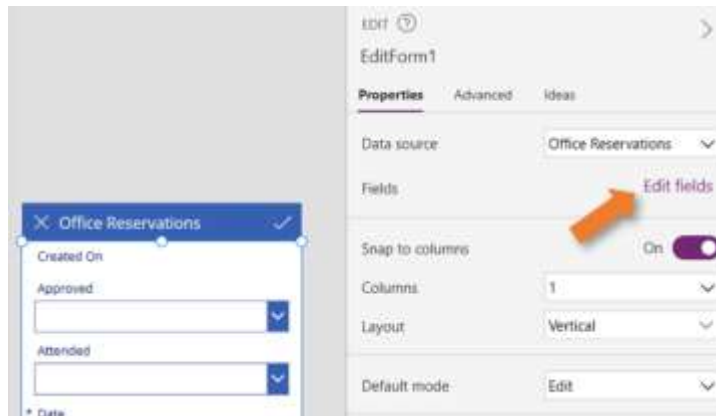
8. We want to rename the screens to something more user-friendly. To do this, in your Tree view pane on the left side of the screen, click the **3 dots next to each screen and select “Rename”**. We want to rename the screens to:
- a. BrowseScreen1 → Reservations
 - b. DetailScreen1 → Reservation Details
 - c. EditScreen1 → New Reservation



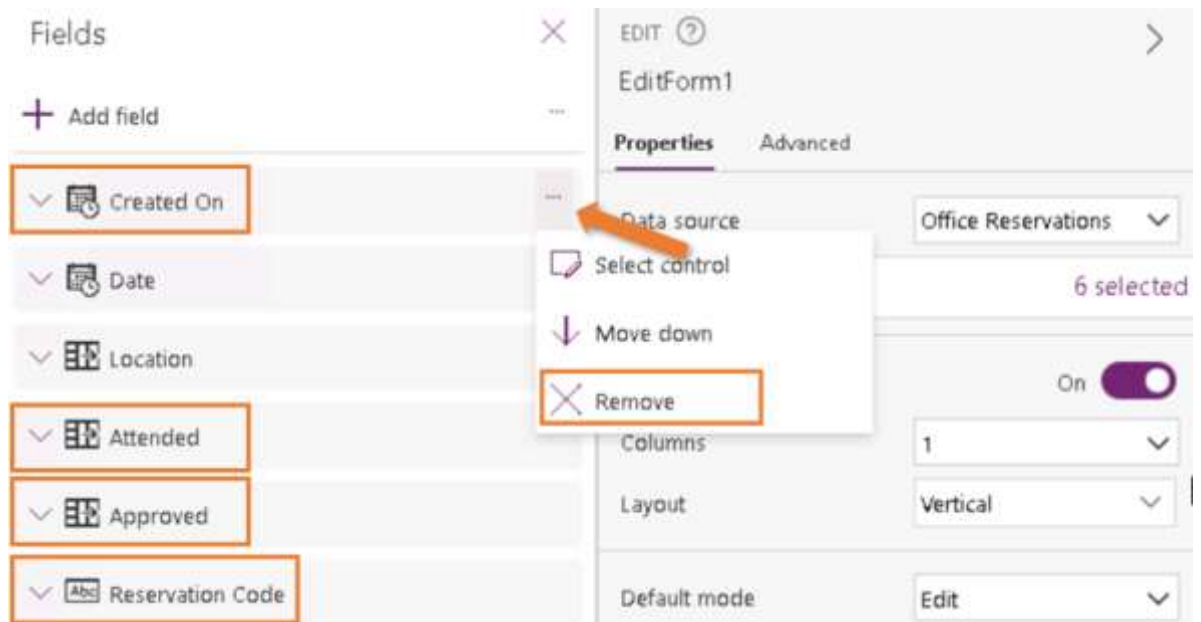
9. In your Tree view pane on the left side of your screen, expand the “New Reservation” page by clicking the chevron. On that screen, select the “**EditForm1**” control.



10. In the properties pane on the right side of the screen, select **"Edit fields"** or **"6 selected"**. If you don't see the "Edit fields" button, make sure that the "EditForm1" control is still selected in your Tree view pane on the left.



11. Remove the "Reservation code", "Created On", "Approved" and "Attended" fields by clicking the **3 dots** and then selecting **"Remove"**.



12. Do the same for all fields **except Location, Notes and Date** if anything else is present. If you don't see Location, Notes or Date, you can click the **+ Add field** button and add them. Your fields should look like this:

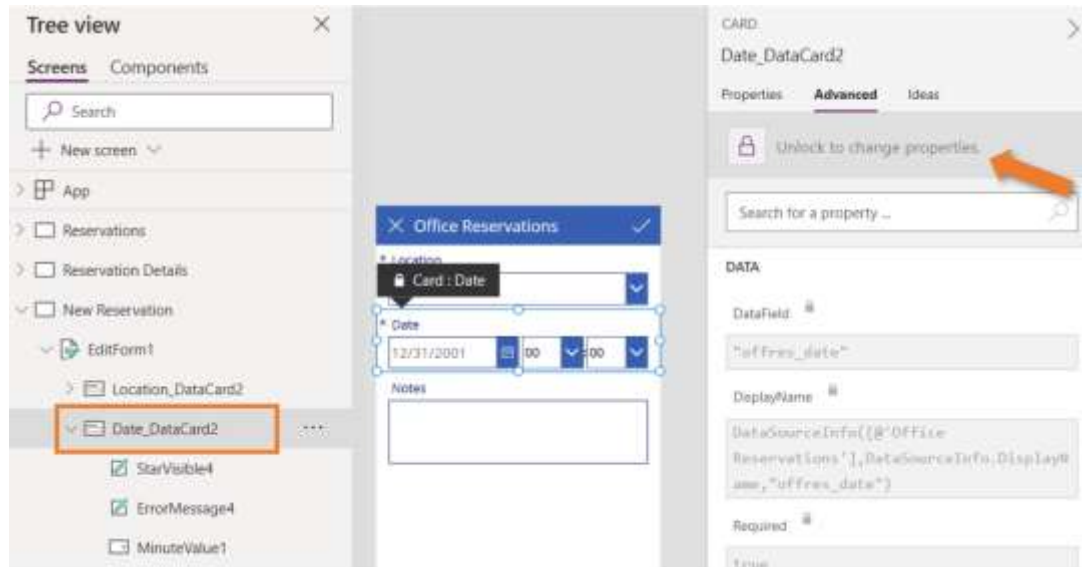


If your fields are in a different order, you can drag them around the Fields pane until they are in the order shown above.

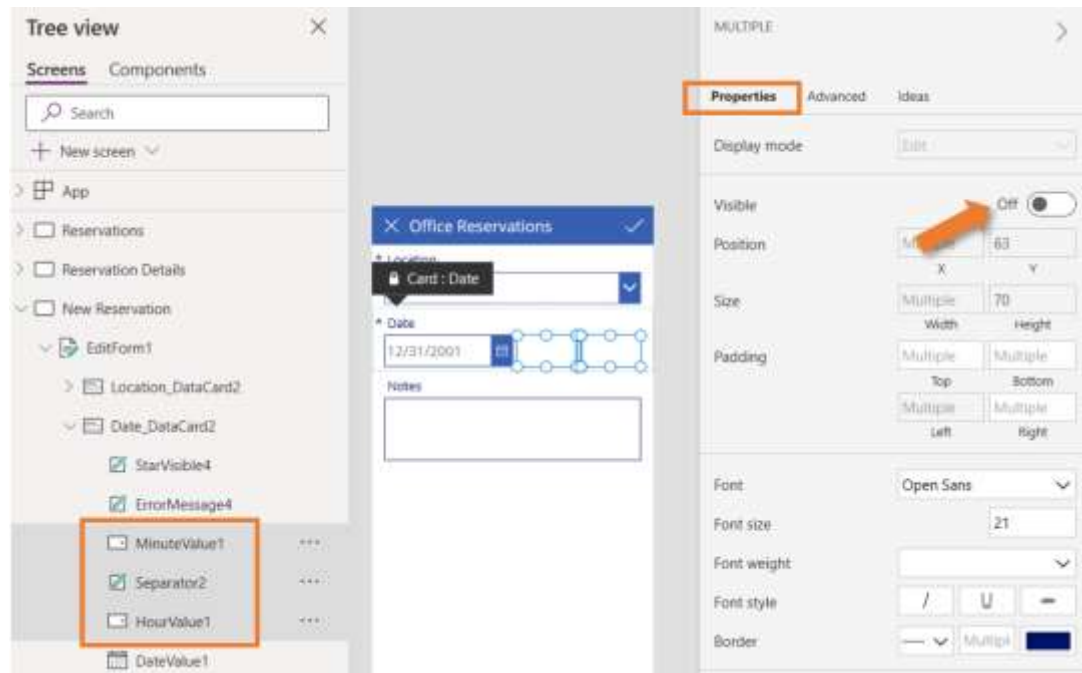
13. Your "New Reservation" page should look like this:

The image shows a 'New Reservation' form titled 'Office Reservations'. The form has a blue header bar with a close button (X) and a checkmark. Below the header, there are three fields: 'Location' (a dropdown menu), 'Date' (a date and time picker showing 12/31/2001 00:00), and 'Notes' (a text area).

14. The end user won't be concerned with time, just the date. We can hide the time fields and keep the date field on that form.
- To change this, expand the "EditForm1" control in your Tree view and select the "Date_DataCard2" control (what whatever number your Date data card got automatically), select the **"Advanced"** tab in your properties pane on the right side of the screen, and click the **Unlock to change properties** button.

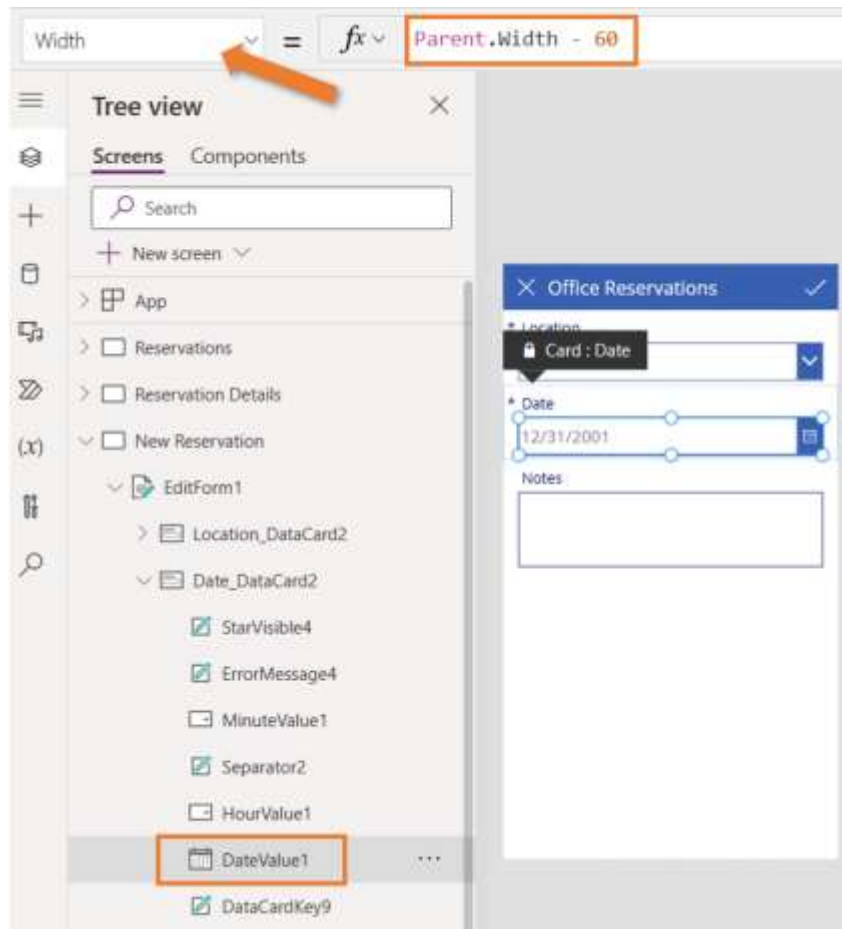


- Back in your Tree view under the "Date_DataCard2" control, hold down shift and select the "MinuteValue1", "Separator2" and "HourValue1" controls. In the properties pane on the right side of the screen, select the Properties tab and change the **Visible property to Off**.



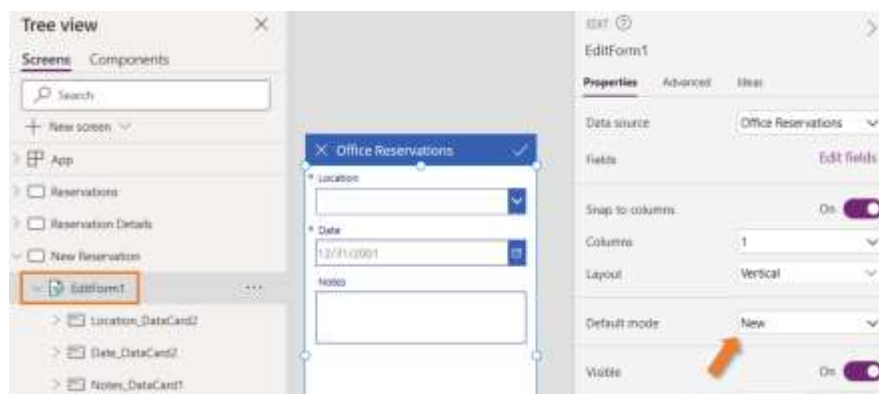
- c. Back in your Tree view under the “Date_DataCard2” control, select the “DateValue1” control. At the top of your screen in the Properties dropdown, change the selected property to **Width**. In the formula bar to the right, change the width property to:

Parent.Width - 60



You have now successfully hidden the time fields from the user and made the date field look like the other fields in the form.

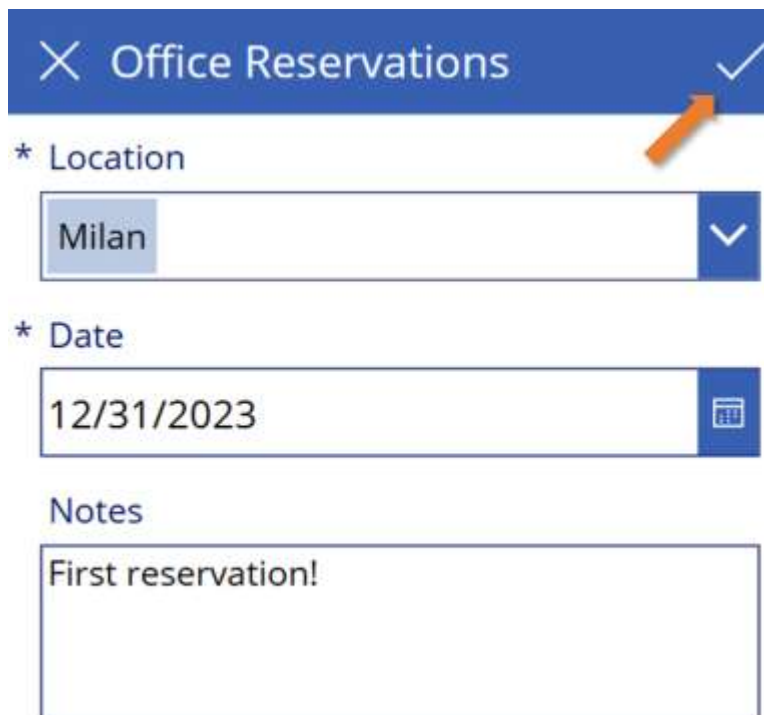
15. In your Tree view, select the “Editform1” control and change the Default mode to “New” in the properties pane on the right side of the screen.



16. Make sure your app is saved (autosave should be turned on) and click the **Publish** button in the very upper right corner of the screen.
17. Now we want to create a new office reservation. Navigate back to the “Reservations” screen and click the **Play** button in the upper right corner next to the save button.

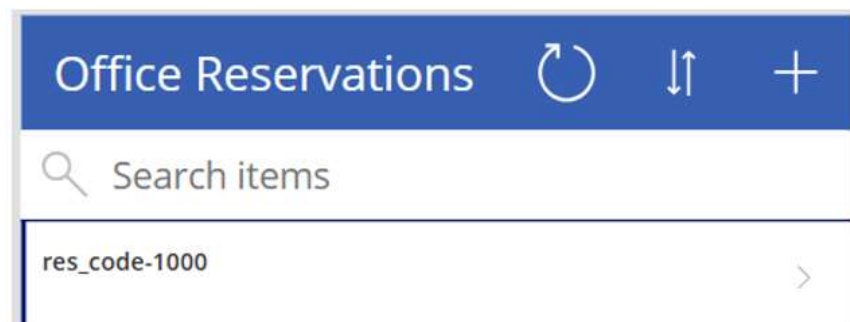


18. Click the **+ button** in the upper right corner of the player to navigate to the “New Reservation” screen. **Fill** in the “Location”, “Date” and optionally “Notes” fields, then click the **checkmark** in the upper right corner of the screen.

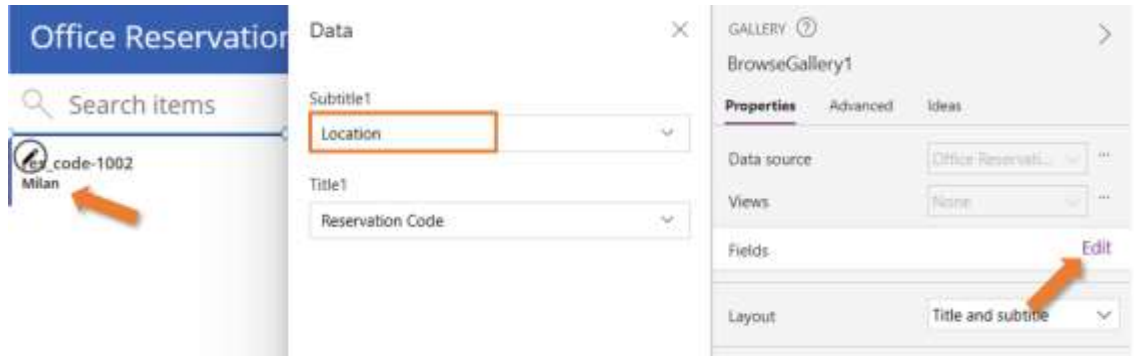


This will create a new reservation.

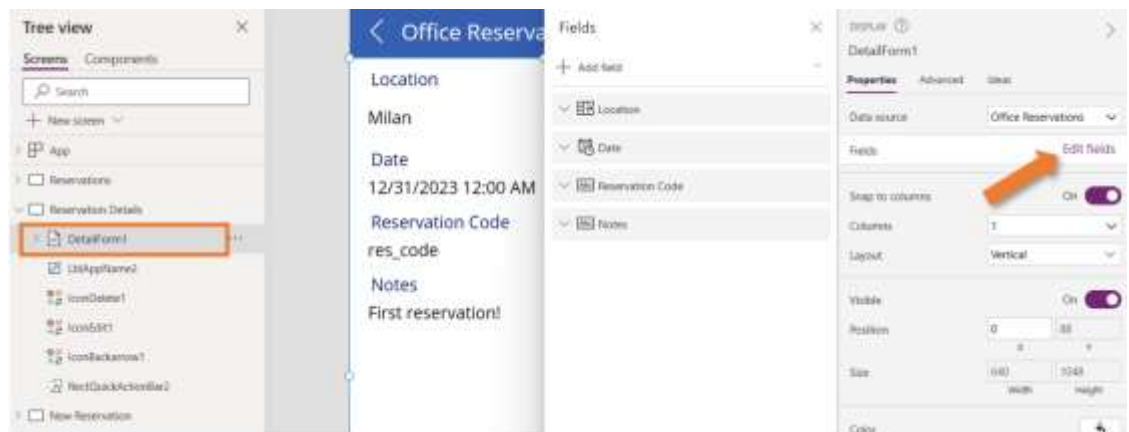
19. Click the **X** in the upper right corner of the screen to exit play mode and select the “Reservations” screen in your Tree view.
20. The reservation you just created should look like this in the gallery on that screen:



21. We want our gallery to be more user friendly and show fields the employees will care about. To do this, expand the “Reservations” screen and select the “BrowseGallery1” control.
22. Right above the Layout property, select **“Edit” or “6 selected”** next to the Fields property. You can change either of the text fields in the gallery to display different information. Change the “Subtitle1” property to **Location**.



23. In your Tree view, expand the **“Reservation Details”** screen. Select the “DetailForm1” control.
24. In the properties pane on the right side of the screen, click the **“Edit fields” or “6 selected”** button. Add, remove, and reorder fields until they look like the screenshot below:

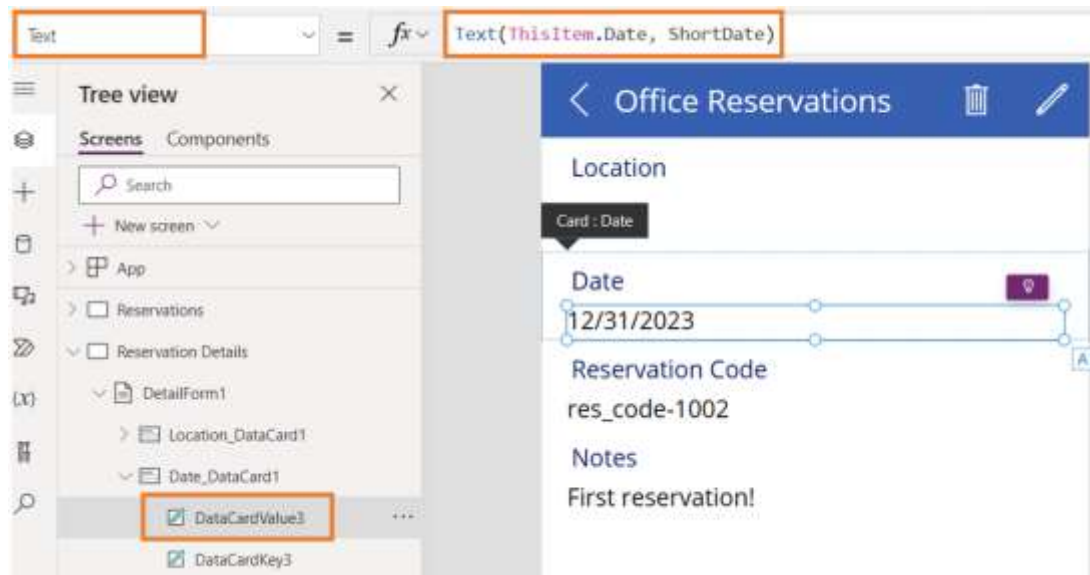


25. We want to edit the date column format to only show the date selected, not the time since that’s unimportant to our employees who are either marked as in the office for that day or not. To do this, expand “DetailForm1” in the Tree view and select the “Date_DataCard1” control.
26. In your Tree view, expand “Date_DataCard1” and select the “DataCardValue3” control. In the properties pane, click **Unlock to change properties**.



27. In the formula bar at the top of your screen, change the **Text** property to:

```
Text(ThisItem.Date, DateTimeFormat.ShortDate)
```

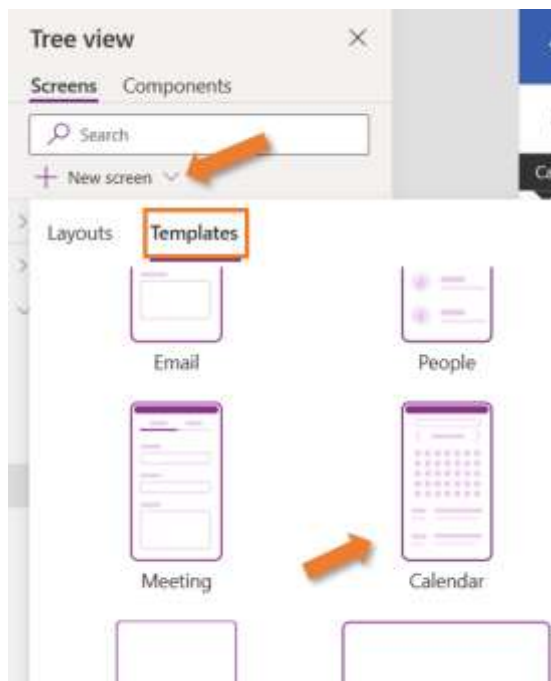


**** Note:** in this screenshot is just says “ShortDate” instead of “DateTimeFormat.ShortDate” because the platform hides enumeration qualifiers when you click out of a field. Rest assured, the “DateTimeFormat” is there.

28. **Save your app.**

Task 2: Add a new screen for checking which colleagues are coming into the office

1. In the Tree view, select **+ New Screen** → **Templates** → **Calendar**.

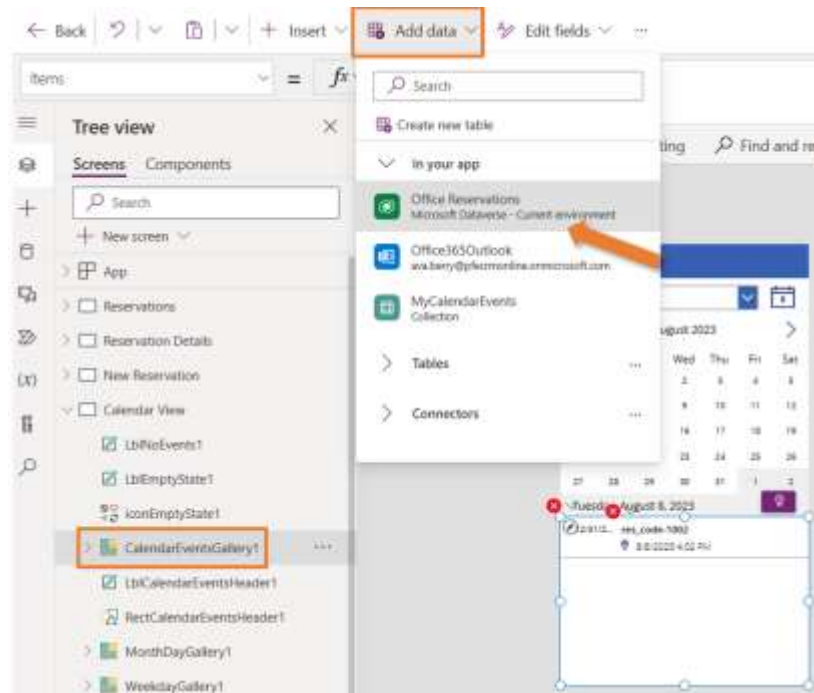


2. Rename the screen to “Calendar View”.
3. Click the **Play** button in the upper right corner of the screen and change the calendar selected to “Calendar”.



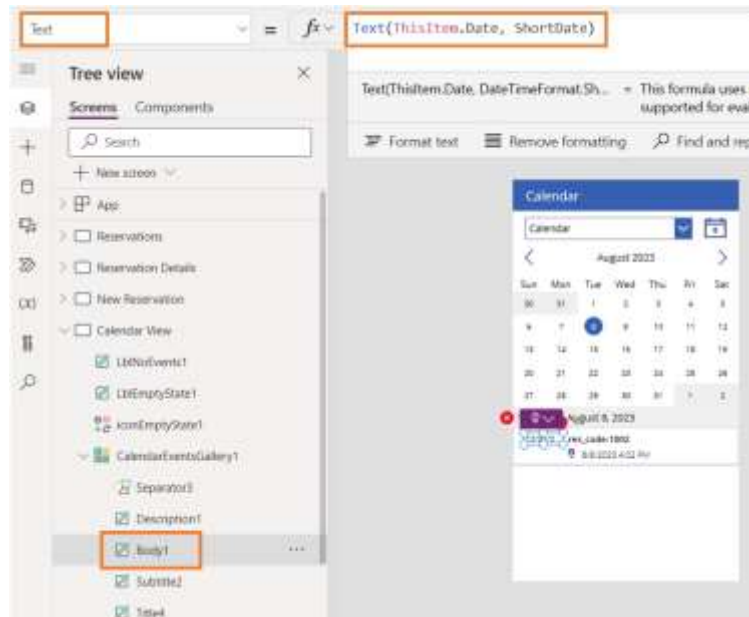
EDIT – The calendar includes some template events, so you will see dots on the dates. We will replace those with our own reservations.

4. We need to connect the **gallery** beneath the calendar to the “Office Reservations” table. In the Tree view, select the “CalendarEventsGallery1” control. Click the **Add data** button at the top of your screen and select “Office Reservations”. Your gallery will pop up with some errors.

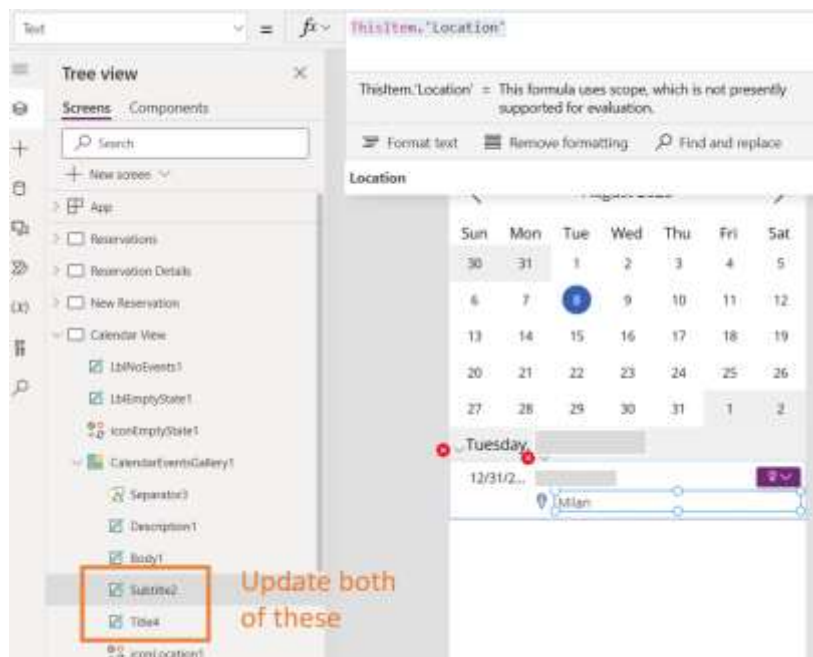


5. You will notice errors in the gallery. We will edit the fields in the gallery to remove those and enhance the user experience.
 - a. Select the **date field** by expanding “CalendarEventsGallery1” and clicking the “Body1” control. Change the **Text** property to:

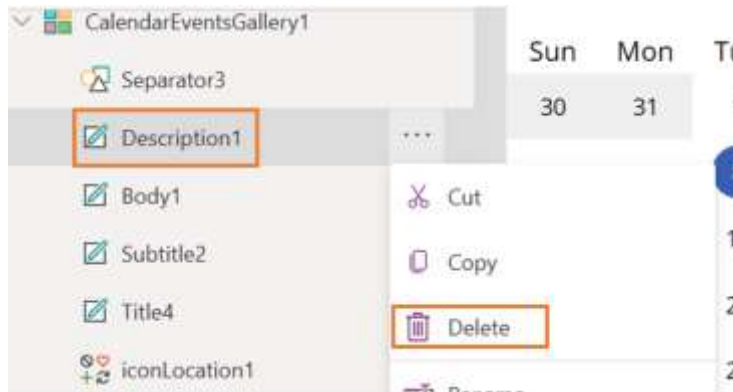
`Text(ThisItem.Date, DateTimeFormat.ShortDate)`



6. Change the **Text** property of the Title control (Title4) in that gallery to:
`ThisItem.'Created By'.Full Name'`
7. Change the **Text** property of the Subtitle control (Subtitle2) in that gallery to:
`ThisItem.'Location'`



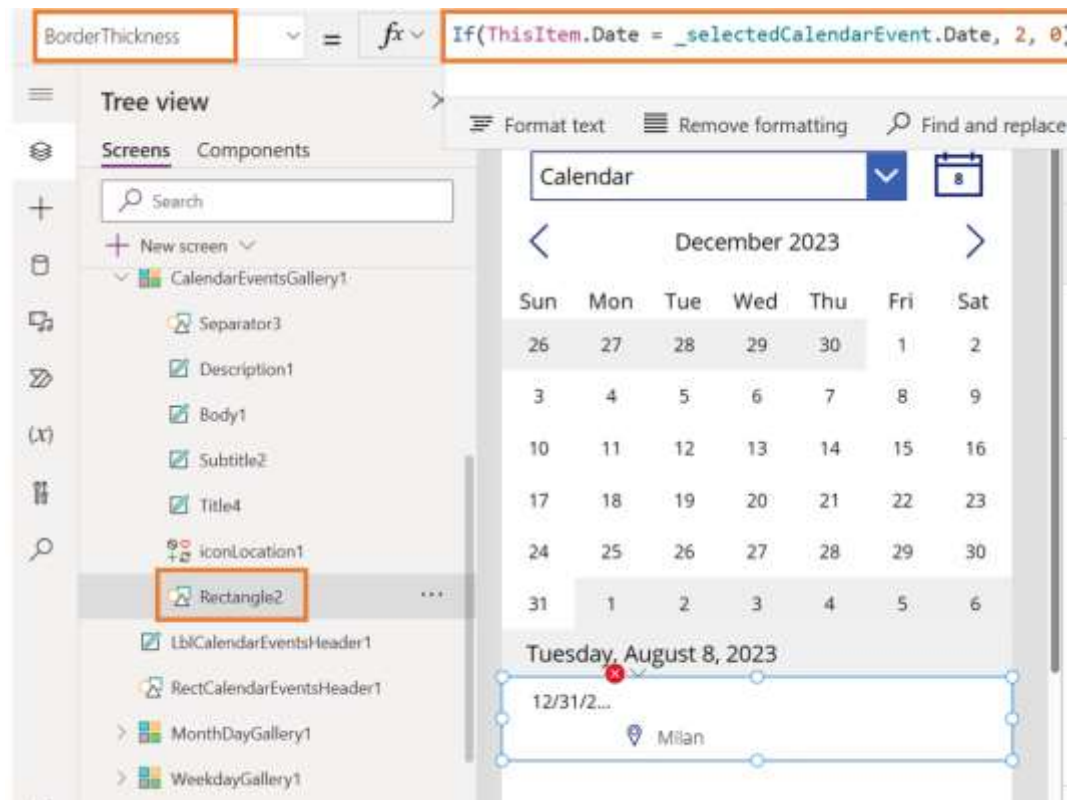
8. You can delete the “Description1” control in your Tree view.



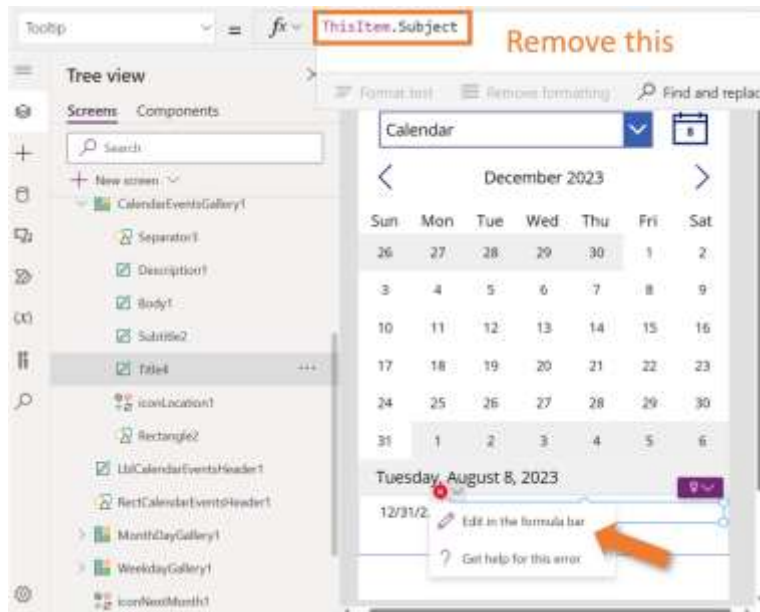
9. We need to fix the relative position of the rectangle in this gallery so that the currently selected reservation is highlighted when selected.

Select the Rectangle control in your Tree view and change the **BorderThickness** property to:

`If(ThisItem.Date = _selectedCalendarEvent.Date, 2, 0)`

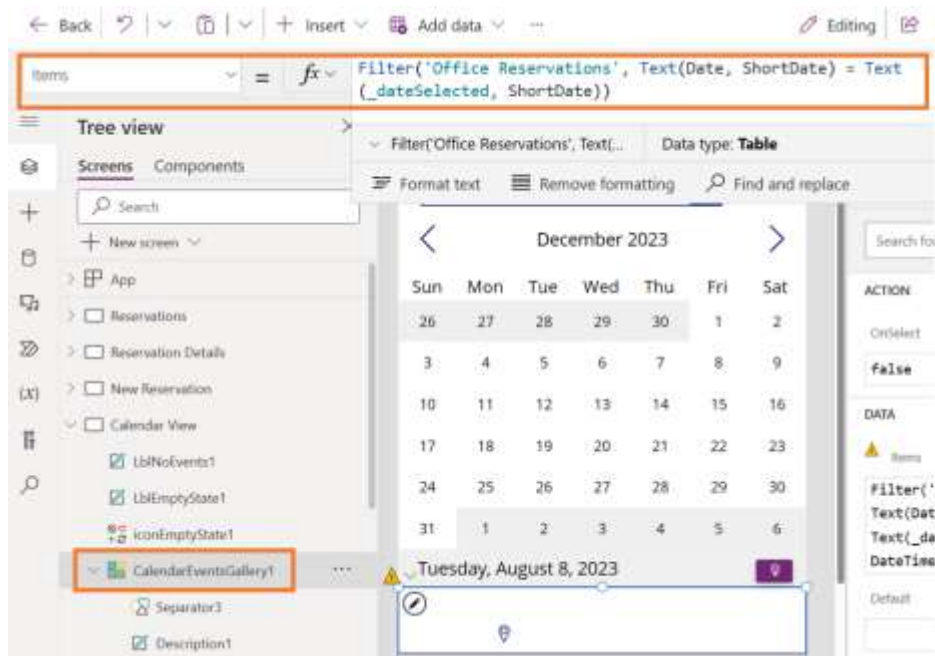


10. You will notice one remaining red X inside that gallery. Click the red X and select **“Edit in the formula bar”**. In the formula bar, **remove** the “ThisItem.Subject” text for the Tooltip property. The red X should go away.

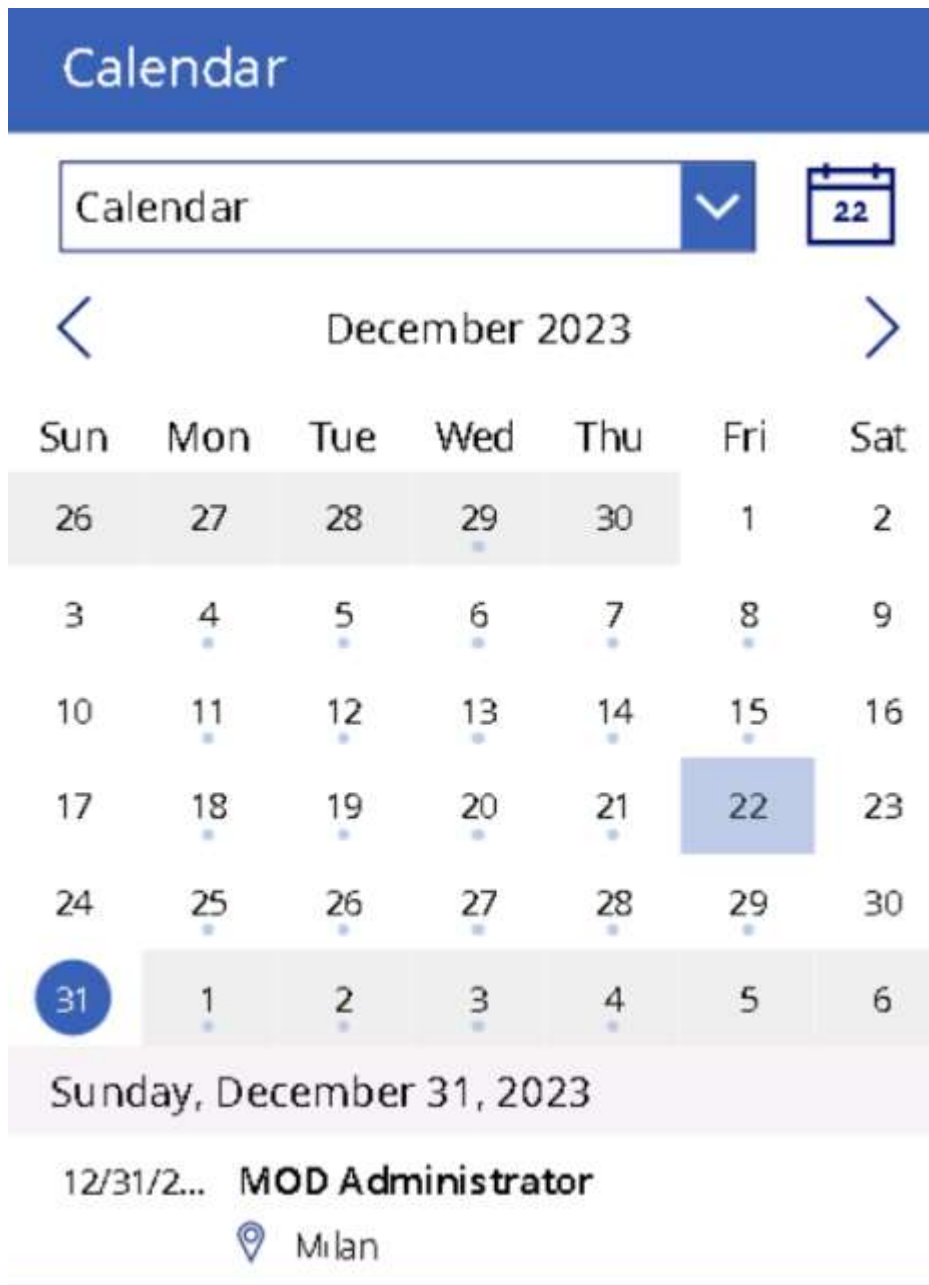


11. Next, we need to configure the gallery to only show reservations for the day that is currently selected. To do this, select the “CalendarEventsGallery1” control in your Tree view and change the **Items** property to:

```
Filter('Office Reservations', Text(Date, DateTimeFormat.ShortDate) = Text(_dateSelected, DateTimeFormat.ShortDate))
```



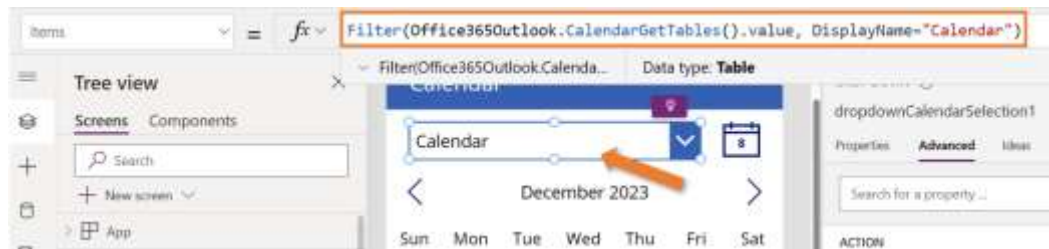
12. To test if this works, hit the **Play** button on your app and select the date you chose for your first event. It should show up in that gallery.



13. Exit play mode.

14. Select the calendar dropdown at the top of your screen, or the “dropdownCalendarSelection1” control in your Tree view. Change the **Items** property to:

```
Filter(Office365Outlook.CalendarGetTables().value,
DisplayName="Calendar")
```

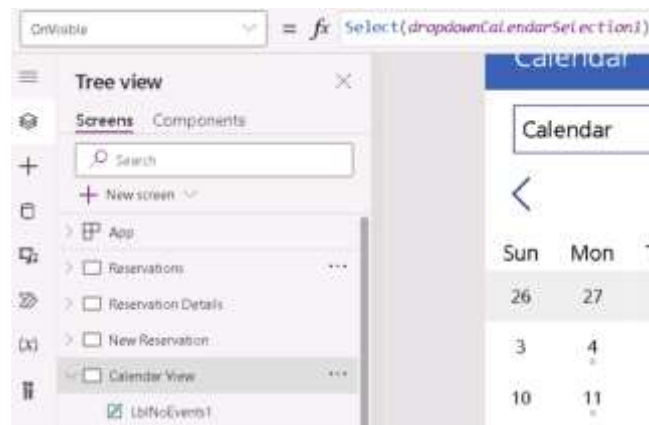


Now the calendar is the only option for the users.

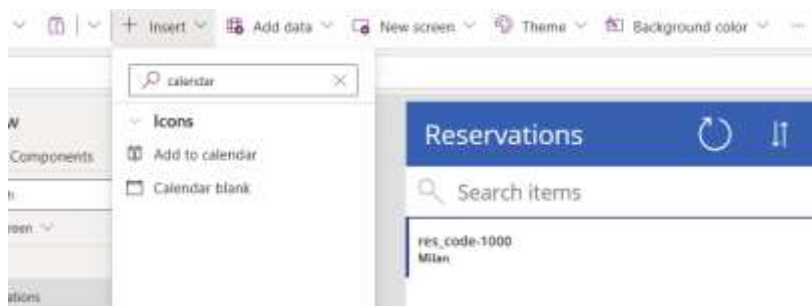
**** Note:** We could remove this field entirely since there is only one option available, but the calendar template is connected in so many ways on the screen it would be burdensome to remove it and replace all those references.

15. To make the dropdown automatically select the Calendar option when the page loads, click on the **Calendar View** screen in your Tree View and set the **OnVisible** property to:

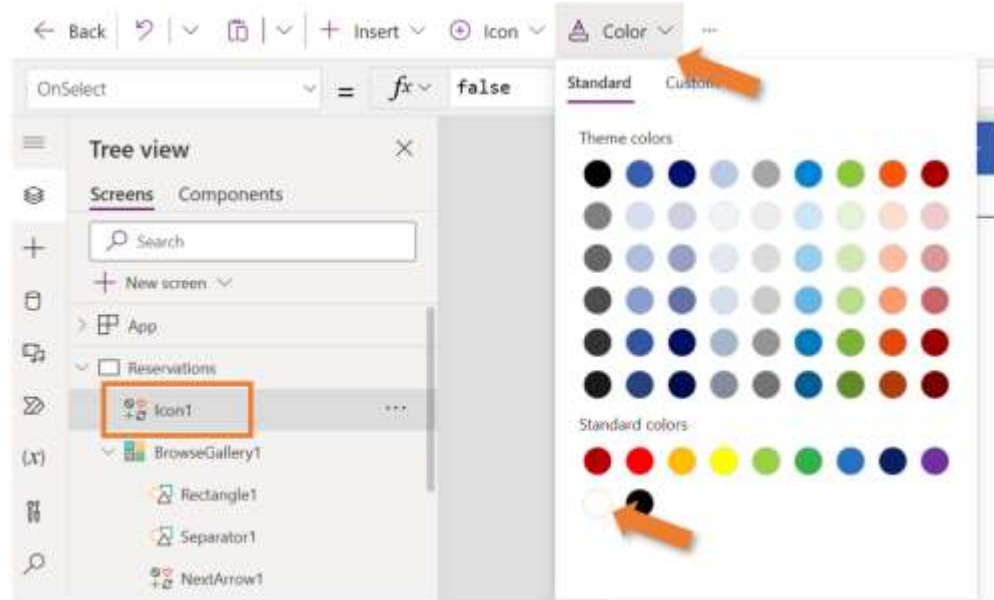
```
Select(dropdownCalendarSelection)
```



16. Click on the “**Reservations**” screen at the top of your Tree view.
17. Click on the field that says “Office Reservations” inside the app or click the “LblAppName1” control in your Tree view. Change the **Text** property to “Reservations”.
18. On the same screen, click the **+ Insert** button in the modern command bar and insert a **Calendar blank** icon.



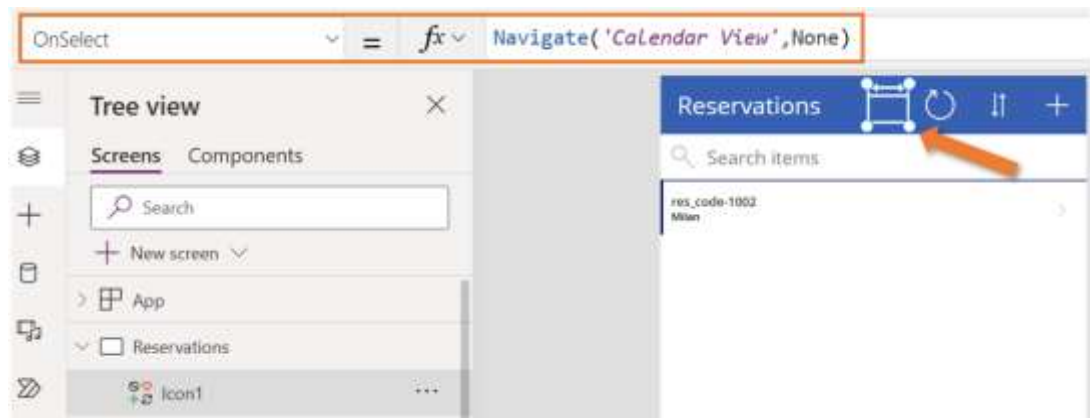
19. Select the icon and change the **Color** property to **White**.



20. Move the icon to be in line with the other icons on the screen.

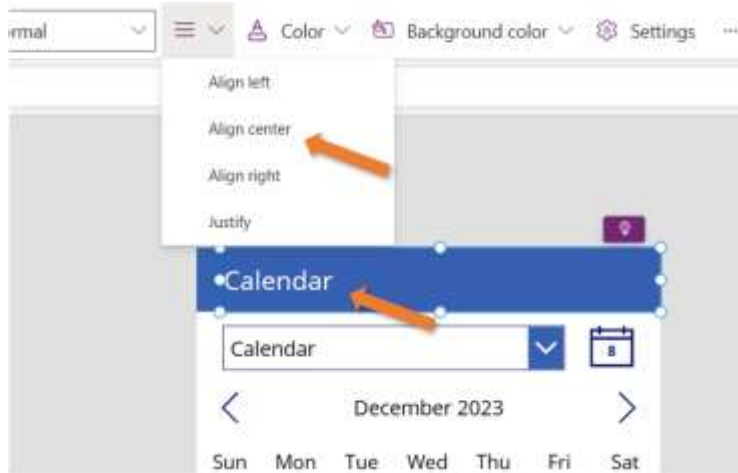
21. Change the **OnSelect** property of the calendar icon to:

`Navigate('Calendar View',ScreenTransition.None)`



22. Test if the navigation works by hitting the **Play** button and clicking the calendar icon. The “Calendar View” screen should show up.

23. On the “Calendar View” screen, select the Calendar title at the top of the screen and change the **Align** property to be centered.



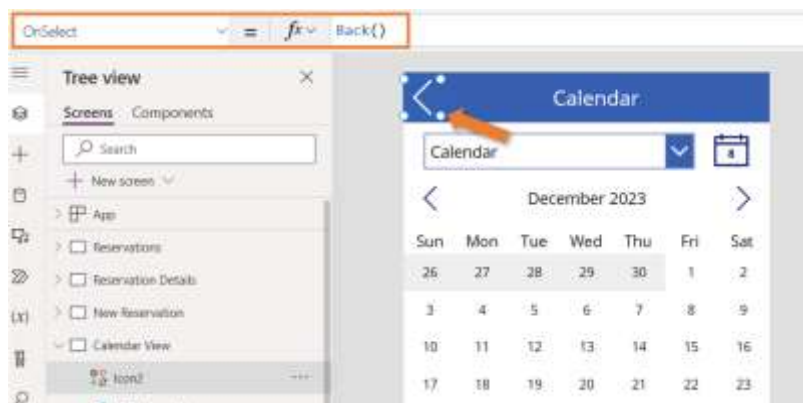
The word “Calendar” at the top of that screen should be centered.

24. Insert a **Left** icon on this screen.



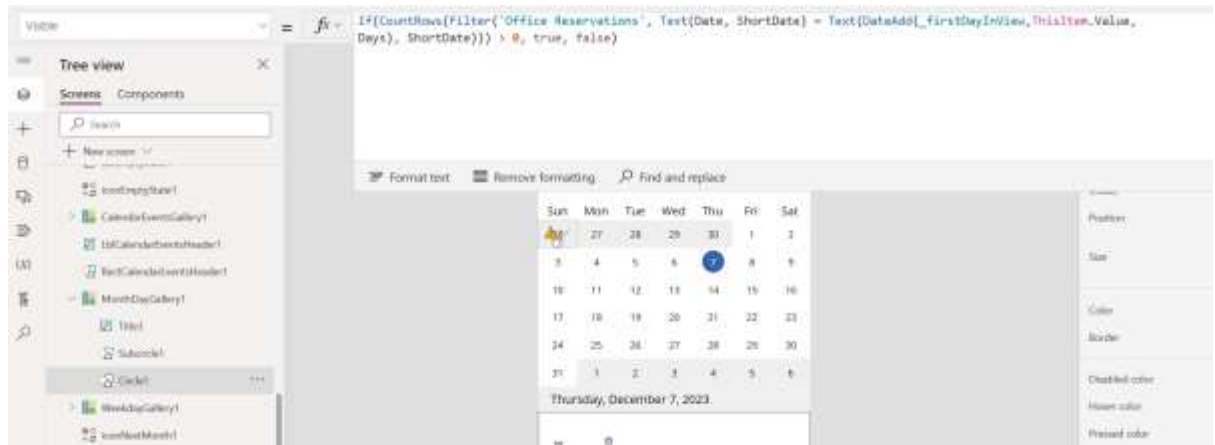
25. Change the **Color** property to **White** and move it to the upper left corner of the blue bar at the top of the screen.
26. Change the **OnSelect** property to:

Back()



27. You may notice your calendar has a bunch of dots on it. This is a recent change in the LOD environment where the default calendar is autofilled. If you see these dots, you can change the **Visible** property of **MonthDayGallery1** -> **Circle1** to:

```
If(CountRows(Filter('Office Reservations', Text(Date,
DateTimeFormat.ShortDate) =
Text(DateAdd(_firstDayInView,ThisItem.Value, TimeUnit.Days),
DateTimeFormat.ShortDate))) > 0, true, false)
```

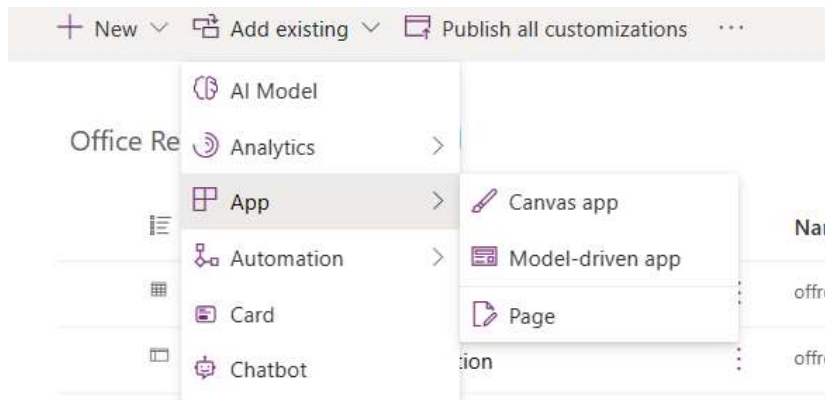


EDIT – If you want more details on this, your instructor should be able to explain the formula to you.

28. **Save your app** and **publish it** by clicking the buttons in the upper right corner.
29. Click on the **back** button in the upper left corner of the screen to exit the app.

Task 3: Add the Office Reservation canvas app to the solution

1. Back at <https://make.powerapps.com>, make sure you have the correct environment selected.
2. On the left pane, select **Solutions** and open the “Office Reservation Project” solution from the list.
3. At the top of the solution screen, select the **Add existing** button, select **App** → **Canvas app**.



4. Select **Outside Dataverse** → **Office Reservation App** and select the **Add** button at the bottom of that popout window.
5. You have successfully added an app built outside a solution to a solution.

Office Reservation Project > All

	Display name ↑	Name	Type	Managed
	Office Reservation	offres_officereservation	Table	No
	Office Reservations App	offres_officereservations_b0a7b	Canvas App	No
	Operators Office Reservation	offres_OperatorsOfficeReservation	Site Map	No
	Operators Office Reservation	offres_OperatorsOfficeReservation	Model-Driven App	No

You have successfully completed Lab 3!

In this lab, you created a canvas app from a Dataverse table template and updated much of the default functionality to make it more usable for your users. You added a new screen with custom functionality based off a template and made the forms and galleries more pertinent to the app at hand. You closed by adding the app you built to the solution we’ve been working with so everything you’ve built today will be together if you need to move it between environments.

If you have additional time, you can explore the canvas app studio to see what controls are available to you. You could also build an app from scratch and add the Dataverse connector to see how you might build your own apps from scratch.