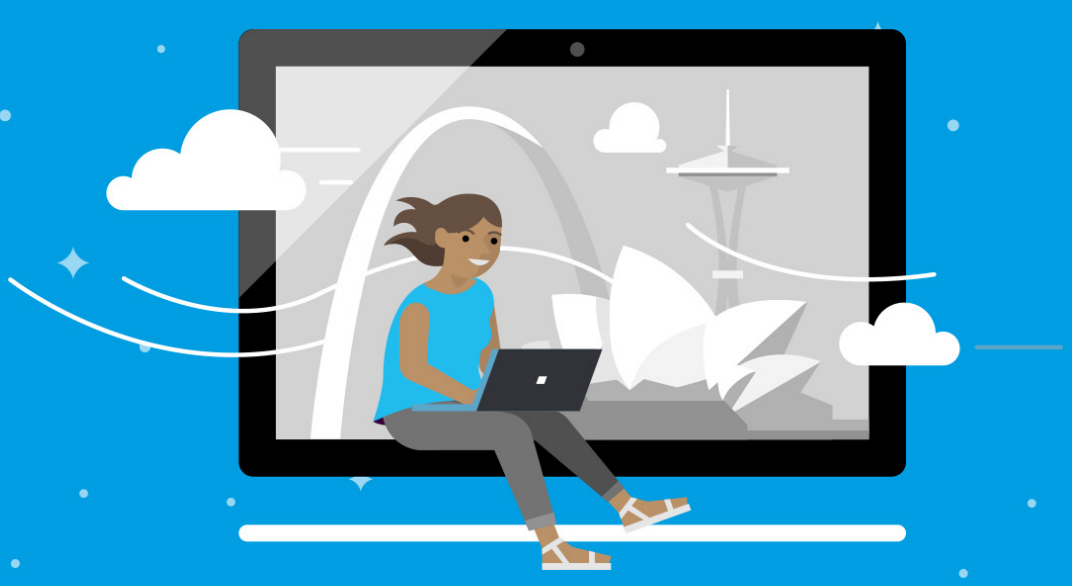

Microsoft Power Apps
In An Hour

Microsoft

CODESS

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Microsoft

CODESS

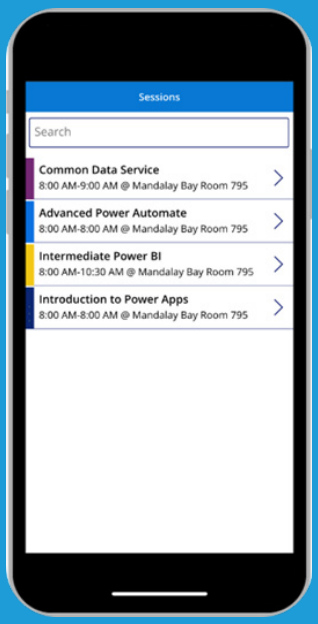
Power Apps

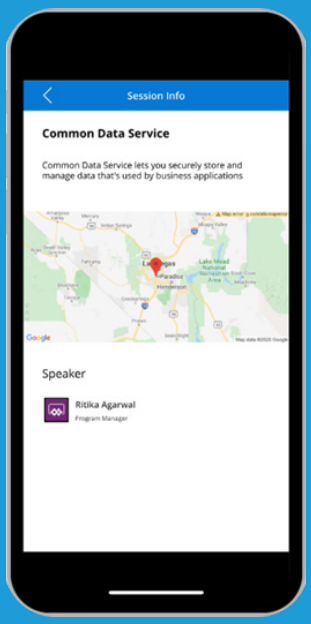
Lab Objectives

- Understand Power Apps and Data Model
- Build a Power Apps Canvas App

In this workshop, you will create an app for your own event! You will build an app to allow attendees to browse sessions and read details about the sessions. The user interface and interaction logic are created in Power Apps, and the data is stored in the Common Data Service.

The Finished Product





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Exercise 1

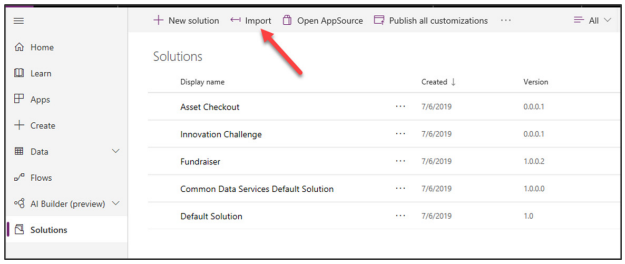
Preparing the Environment and Data Model

In this exercise, you will prepare your environment by importing a solution, and creating new entities and fields. You will also add fields to the default forms.

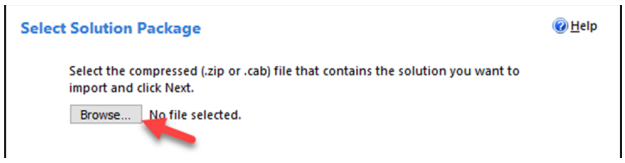
Task 1 - Import Starting Solution

In this task, you will be importing a starting solution. This solution will be used to contain all the other assets you build as part of this lab. To help speed up your progress we have also pre-created the venue data entity in this solution.

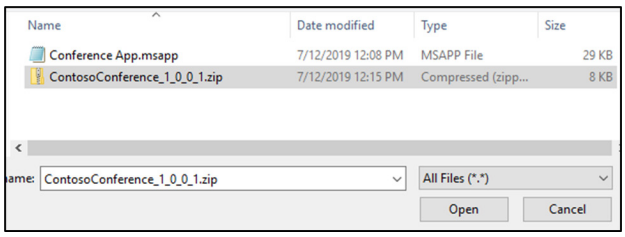
1. Navigate to https://make.powerapps.com/ and make sure you are the correct environment.
2. Select **Solutions** from the left-hand navigation and click **Import**.



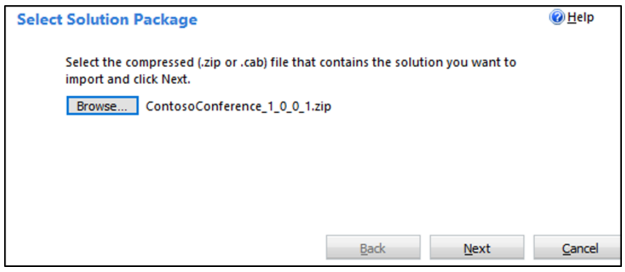
3. Click **Browse**.



4. Select **ContosoConference_x_x_x_x** zip file located in the resources folder and click **Open**.



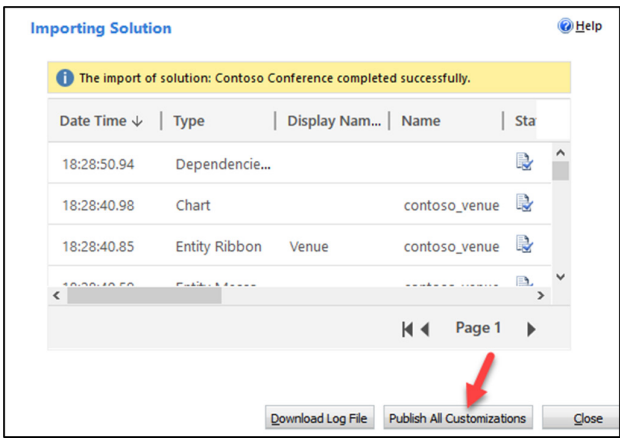
5. Click **Next**.



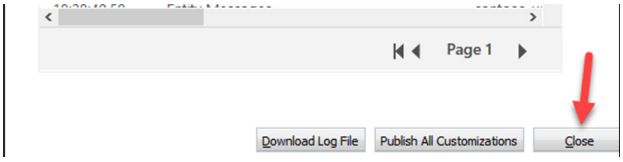
Exercise 1

6. Click **Import** and wait for the importing to complete.

7. Click **Publish All Customizations** and wait for the publishing to complete.



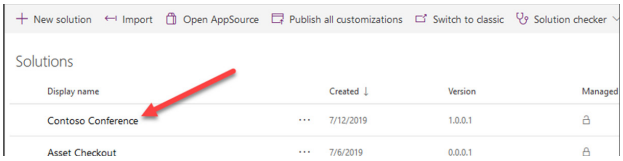
8. Click **Close**.



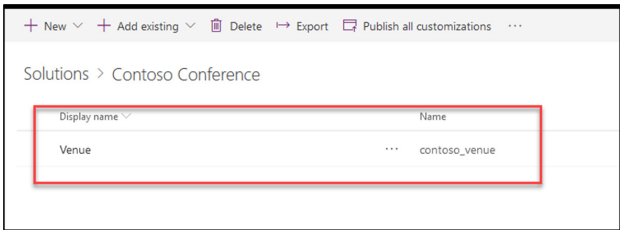
Task 2 – Create the data model

In this task, you will be creating the Session data entity. You will also be creating relationships between it and Users/Venue. Additionally, you will be doing basic edits to the forms for the session entity.

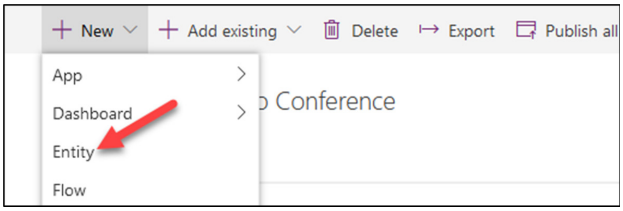
1. Click to open the solution you just imported.



2. The solution should have one entity with the name **Venue**.



3. Click **+ New** from the header and select **Entity**.

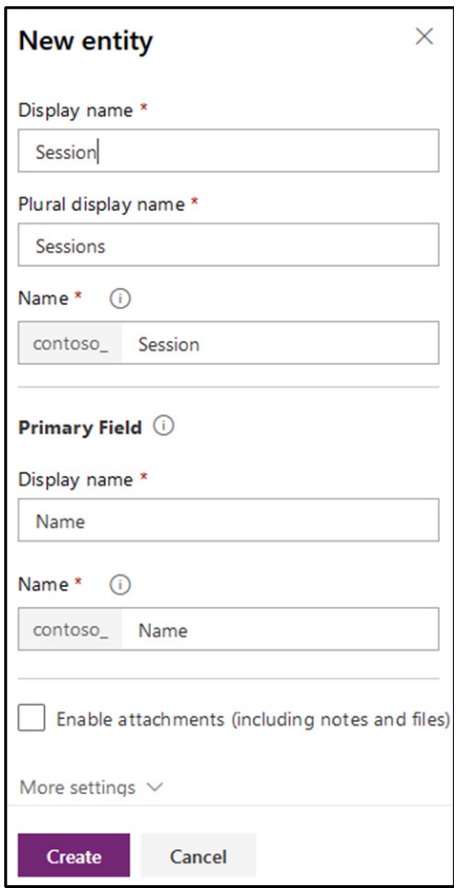


Exercise 1

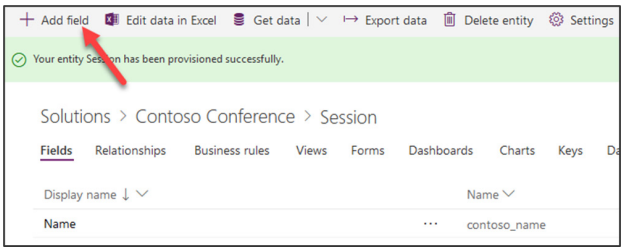
4. Enter **Session** for **Display Name** and click **Create**.

This will bring you to your newly created Session entity. You will see several tabs running along the screen, such as Fields, Relationships, and Business Rules.

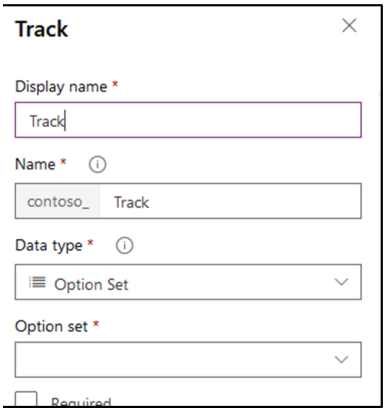
An entity has a list of fields. Each field has a data type, such as Text, Number, etc. The data type is chosen when you create a field and is not changeable. The data type also defines many of the characteristics and behaviours of the field when your application runs. For example, an Option Set allows you to have a pre-defined list of values for use in your application. When this field is used on a form in a model-driven application the visual presentation is a drop-down control. The field helps to ensure data consistency and allows for built-in support for multi-language applications.



5. Make sure the **Fields** tab is selected and click **+ Add Field.**

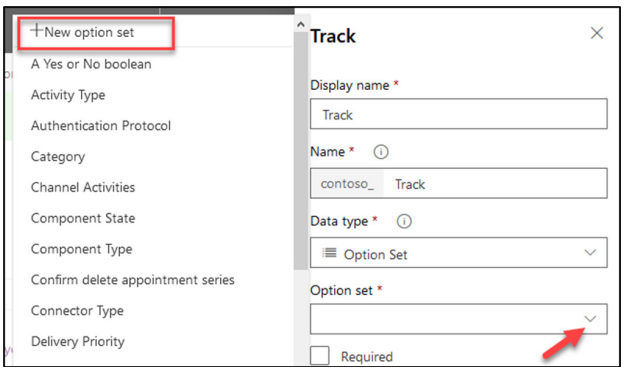


6. Enter **Track** for **Display Name** and select **Option Set** for **Data Type.**

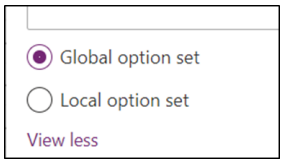


Exercise 1

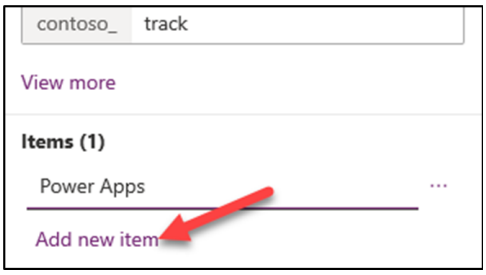
7. Click on the **Option Set** drop down and select **New Option Set.**



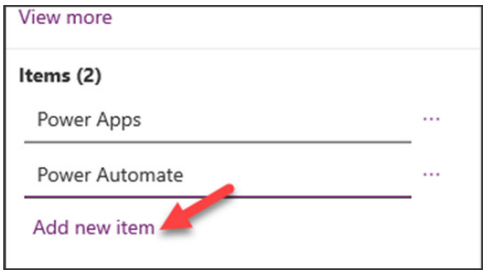
8. If prompted, **select Global Option set.**



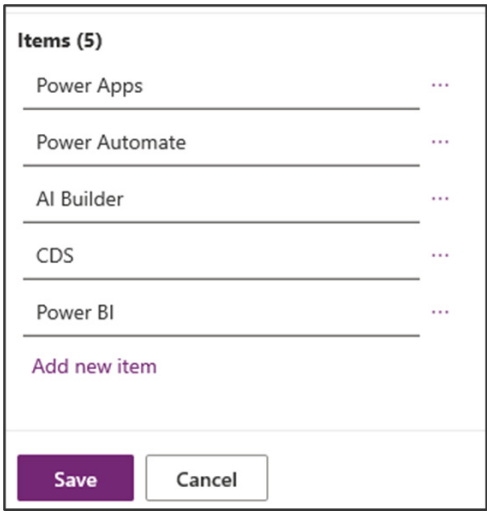
9. Enter **Power Apps** and click **Add New Item.**



10. Enter **Power Automate** and click **Add New Item.**

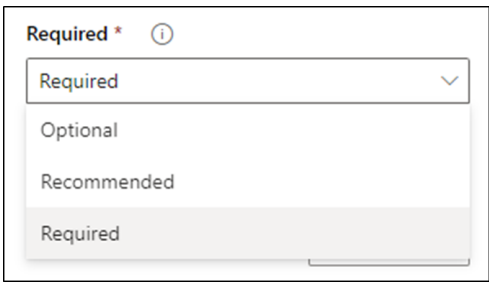


11. Enter **AI Builder** and click **Add New Item.**
12. Enter **CDS** and click **Add New Item.**
13. Enter **Power BI** and click **save** at the bottom of the form.

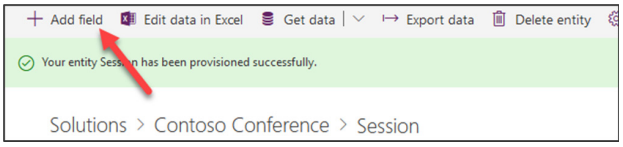


Exercise 1

14. Select the **Required** option in the "Required" dropdown, then click **Done**.



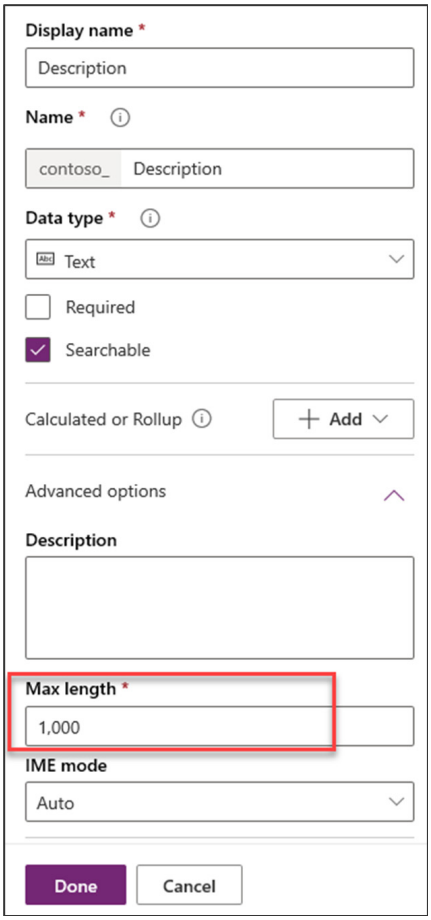
15. Click **+ Add Field.**

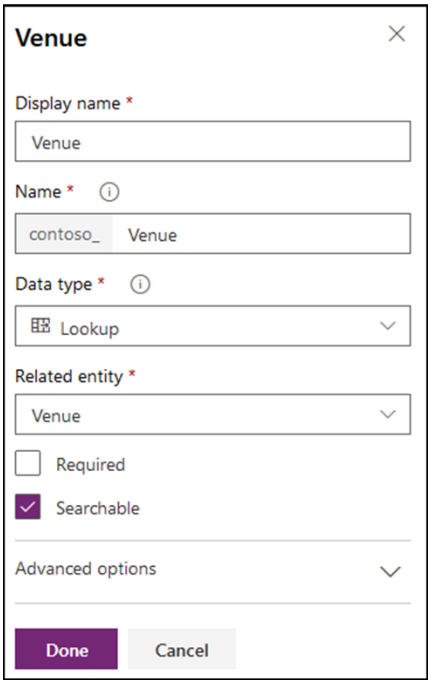


16. Enter **Description** for **Display Name**, select **Text** for **Data Type,** expand **Advanced options** and set max length to **1,000** and click **Done.**

17. Click **+ Add Field.**

18. Enter **Venue** for **Display Name**, select **Lookup** for **Data Type**, select **Venue** as the **related entity** and click **Done**.

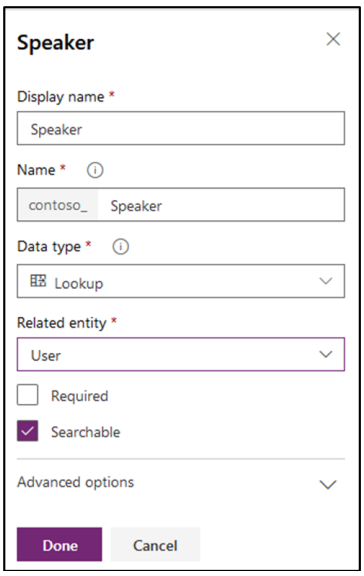




Exercise 1

19. Click + Add Field

20. Enter Speaker for Display Name, select Lookup for Data Type, select User for Related Entity, and click Done.

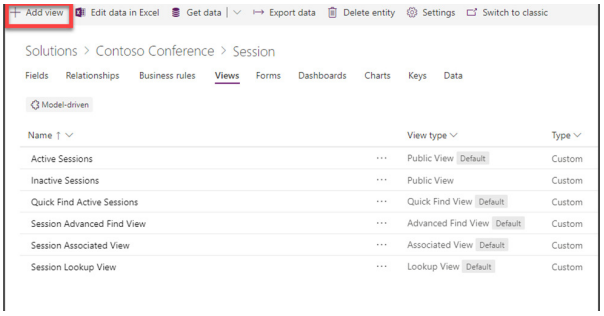


21. Add the following additional fields.

Display name	Date type	Additional details	Required value
Start Time	Date and Time		Optional
End Time	Date and Time		Optional
External Speaker	Text		Optional
Capacity	Whole Number		Optional
A/V Requirements	Text	Max length 1000	Optional
Room Setup	Text	Max length 1000	Optional
ADA Requirements	Text	Max length 1000	Optional
Session Status	Option Set	With these options: Draft, Waiting Approval, Approved, Rejected, and Published	Optional

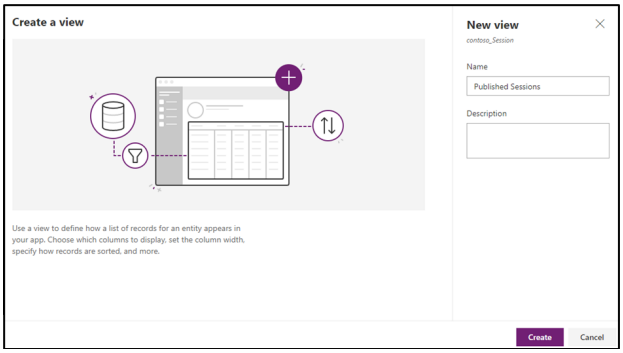
22. Click Save Entity.

23. Select the Views tab and click + Add View



Exercise 1

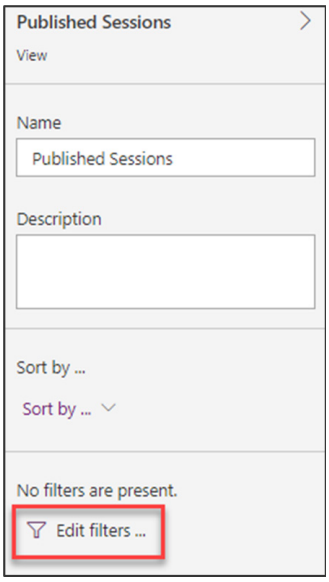
24. Enter Published Sessions into Name and click Create



25. Click on Capacity to add it as a view header.

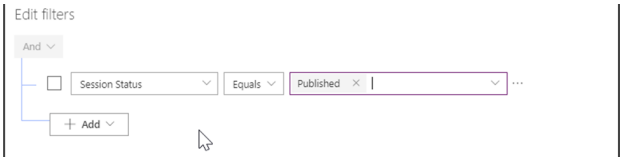
26. Add the following fields to your view: Speaker, External Speaker, and Track.

27. On the right of the screen, select Edit filters

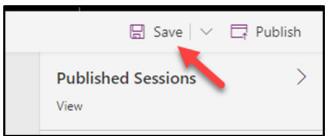


28. Click Add and select Add Row.

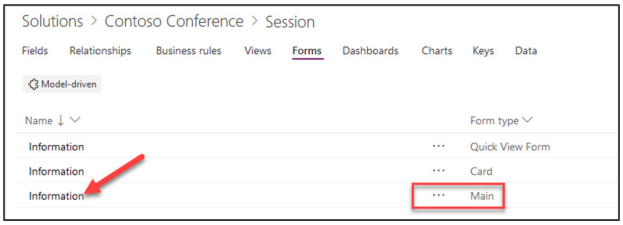
29. Set the filter as Session Status Equals Published.



30. Click OK
31. Click Save.

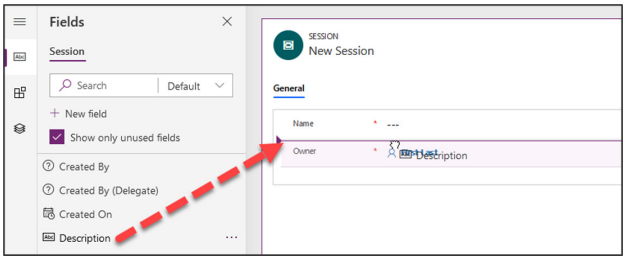


33. Close the browser tab or window.
34. Click Done.
35. Select the Forms tab and click to open the Main form.

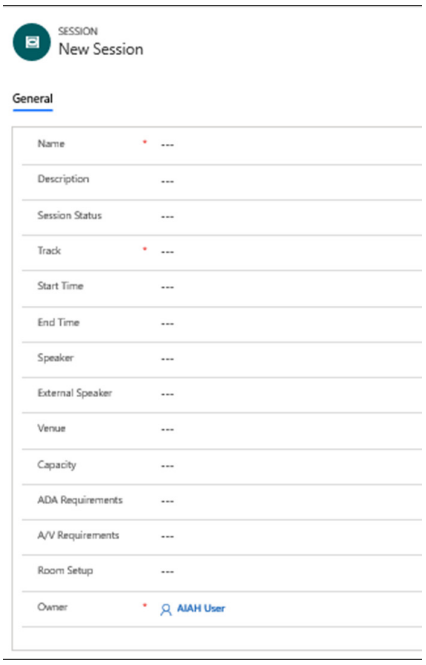


Exercise 1

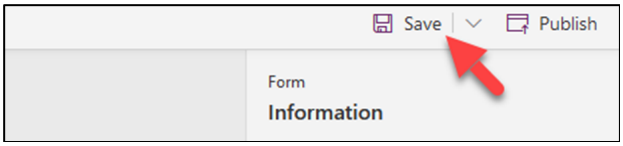
36. Drag the Description field and place it below the Name field.



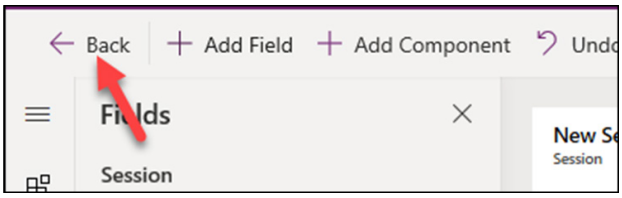
37. Add Session Status, Track, Start Time, End Time, Speaker, External Speaker, Venue, Capacity, ADA Requirements, A/V Requirements, and Room Setup to the form.



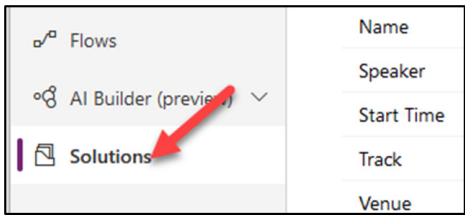
38. Click Save.



39. Click Publish and wait for the publishing to complete.
40. Return to the Power Apps maker using the <- Button.



41. Select Solutions.



42. Click Publish All Customizations and wait for the publishing to complete.

Exercise 2

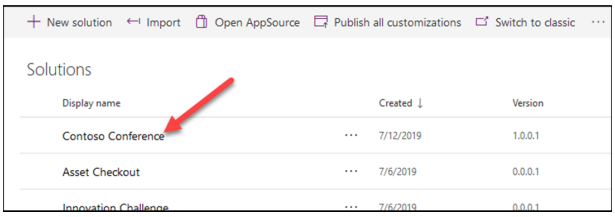
Create a Conference Admin App

In this exercise, you will create the model-driven conference administration application. Model-driven apps are built by composing multiple page types and components built using focused designers.

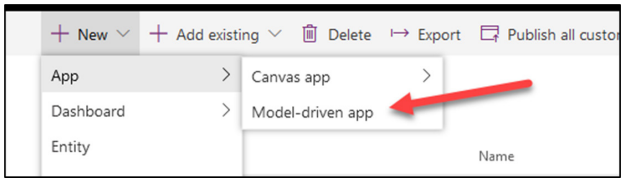
Model-driven apps are fully responsive so a single definition works from web to tablet to mobile devices. This is different from the canvas apps which need to choose the mobile vs. tablet when defining the app.

Task 1 - Create the Model-Driven App

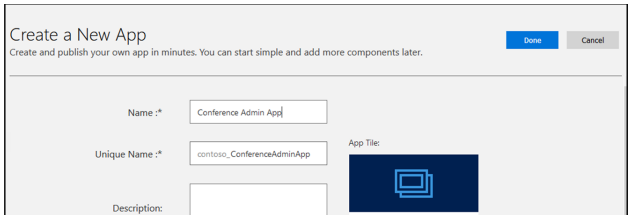
1. Navigate to https://make.powerapps.com/ and make sure you are in the correct environment.
2. Select Solutions and click to open the Contoso Conference solution.



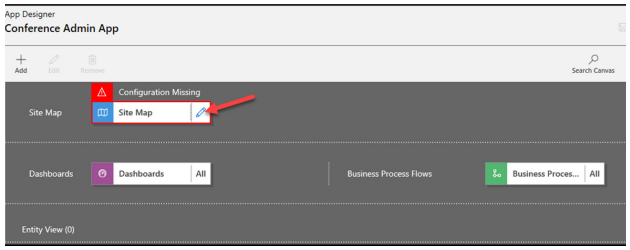
3. Click New | App | Model-Driven App.



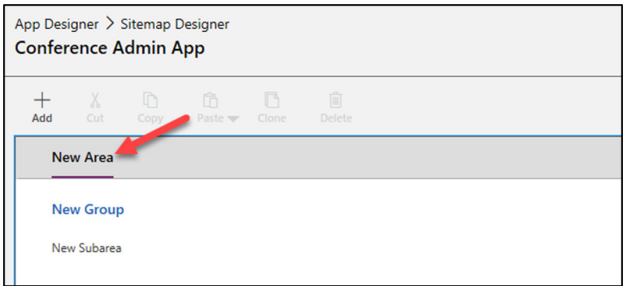
4. Enter Conference Admin App for Name and click Done.



5. Click Edit Site Map.

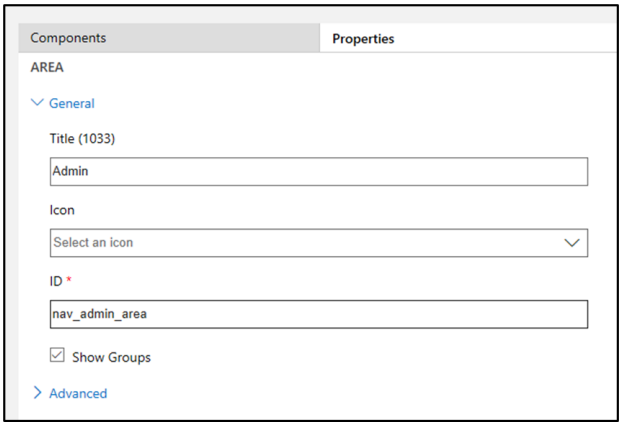


6. Click to select the New Area.

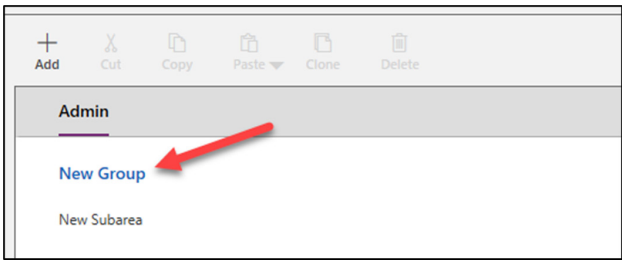


Exercise 2

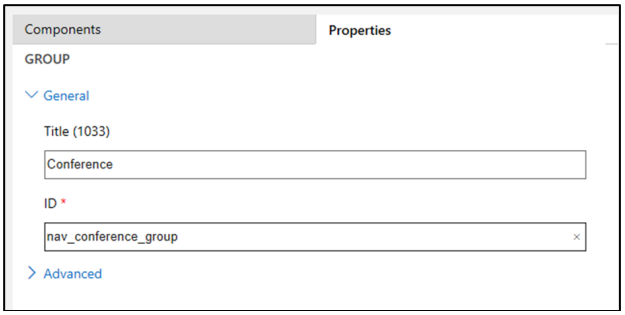
7. Go to the Properties pane, enter Admin for Title, and nav_admin_area for ID.



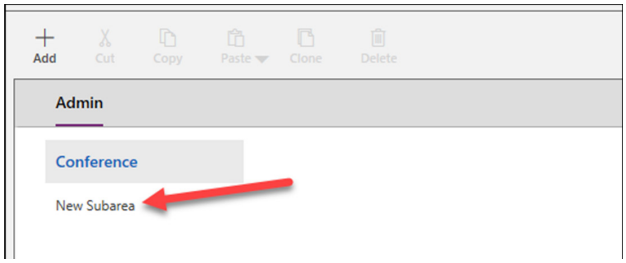
8. Click to select the New Group.



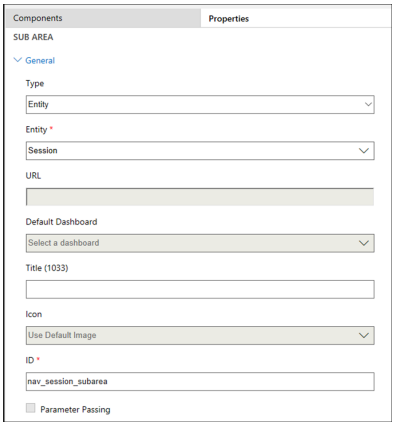
9. Go to the Properties pane, enter Conference for Title, and nav_conference_group for ID.



10. Click to select the New Subarea.

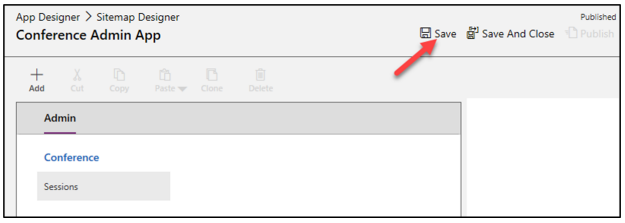


11. Go to the Properties pane and select Entity for Type, Session for Entity, and nav_session_subarea for ID.

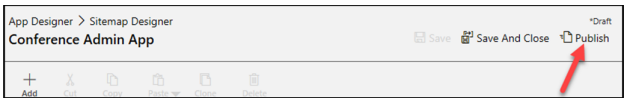


Exercise 2

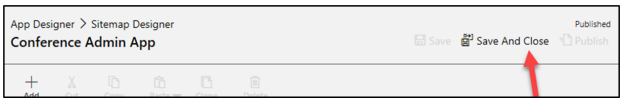
12. Your Site Map should look like the image below. Click Save.



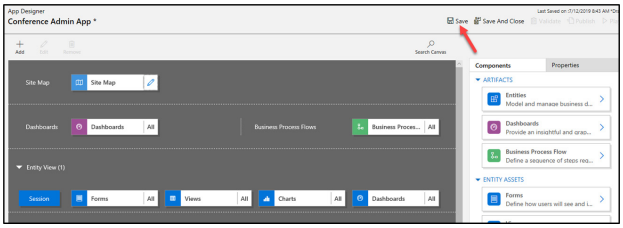
13. Click Publish and wait for the publishing to complete.



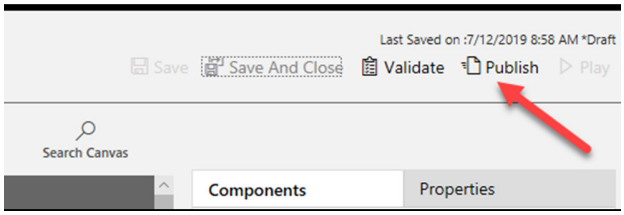
14. Click Save and Close to close the Site Map editor.



15. Your model-driven application should now look like the image below. Click Save.

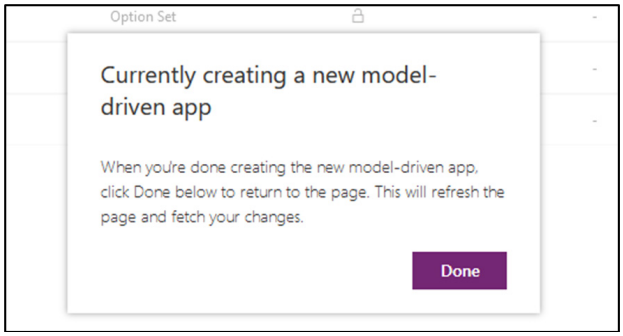


16. Click Publish to publish the application.

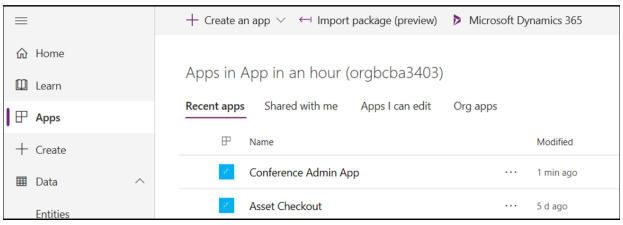


17. Click Save and Close to close the model-driven application designer.

18. Click Done.



19. Your new application should now be listed under Apps.

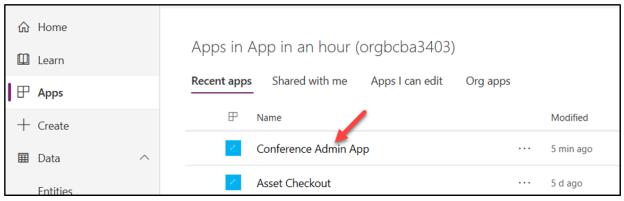


Exercise 2

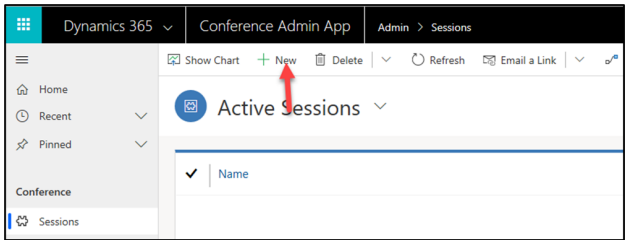
Task 2 - Test the Model-Driven Application

In this task, you will test the Conference Admin App and create Venue and Session records.

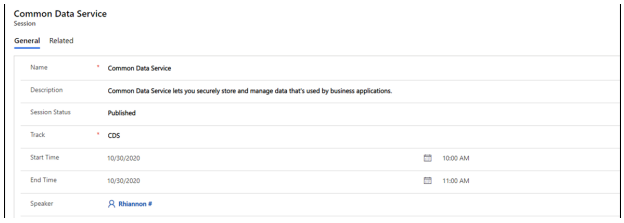
1. Select Apps and click to open the Conference Admin App.



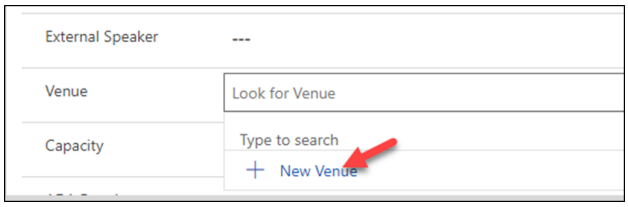
2. Your application should load. Click + New.



3. Enter Common Data Service for Name, enter Common Data Service lets you securely store and manage data that's used by business applications for Description. provide future date and time for Start and End times, select CDS for Track, and click Save.

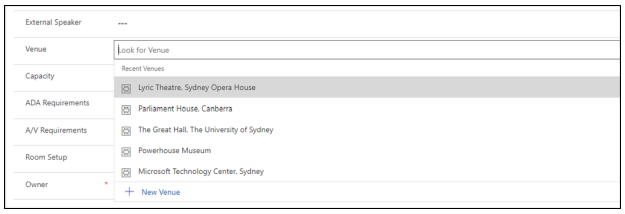


4. Click on the Venue lookup and click + New Venue.



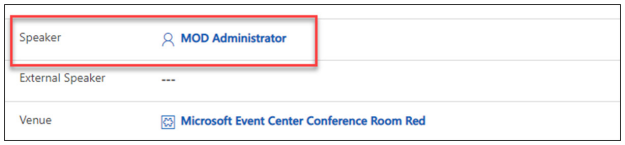
5. Provide the information below and click Save and Close.

Room: Lyric Theatre, Sydney Opera House
Address: Bennelong Point, Sydney NSW 2000



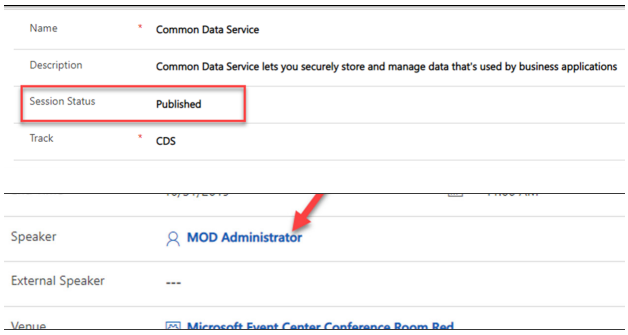
6. Click on the Venue lookup and select the venue you created.

7. Click on the Speaker lookup and select the user you are logged in as.



Exercise 2

8. Click on Session Status and Select Published.



9. Click on the Speaker Name.

10. Locate the Title field and enter Program Manager.
11. Select Sessions from the left-hand navigation and click + New. You will add the following records, make sure to choose your user as the speaker, the venue you added and start and end times in the future. Feel free to play around with capacity, external speakers, and venues!

Name	Status	Track	Description	Venue
Advanced Power Automate	Published	Power Automate	Learn advanced Flow skills using Microsoft Power Automate	Microsoft Technology Center, Sydney L15/1 Martin Pl, Sydney NSW 2000
Intermediate Power BI	Published	Power BI	Simplify Your Data. Create Custom Dashboards & Reports	Powerhouse Museum 500 Harris St, Ultimo NSW 2007
Introduction to Power Apps	Rejected	Power Apps	Power Apps lets pro developers programmatically interact with data and metadata.	The Great Hall, The University of Sydney Science Rd, Camperdown NSW 2050
How to Build an Inclusive Future	Published	Power Apps	Learn how you can use Power Platform, as well as other Microsoft Apps and Tools to create a more diverse and inclusive future for all.	Parliament House, Canberra Parliament Dr, Canberra ACT 2600

13. Close the Conference Admin App browser tab/window.

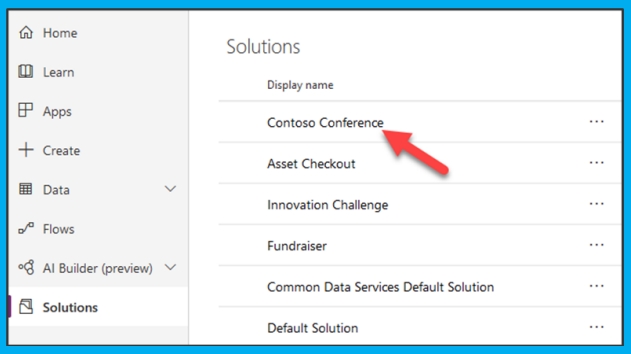
Exercise 3

Create Conference Attendee App

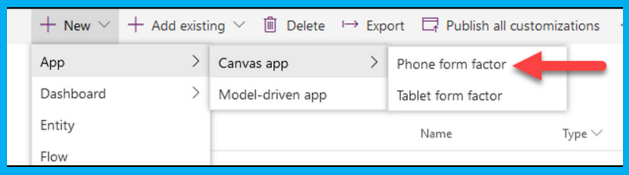
In this exercise, you will create the conference canvas application that the internal conference attendees will use.

Task 1 - Setup the App

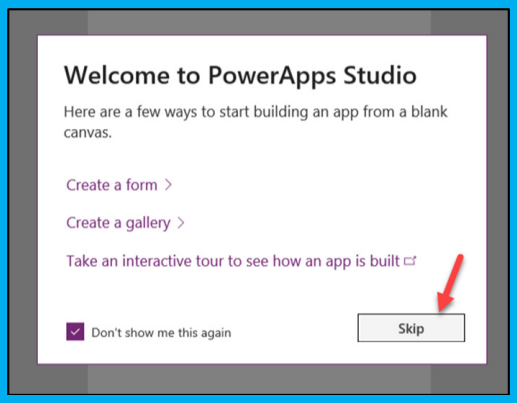
1. Navigate to https://make.powerapps.com/ and make sure you are in the correct environment.
2. Select **Solutions** and open the **Contoso Conference** solution.



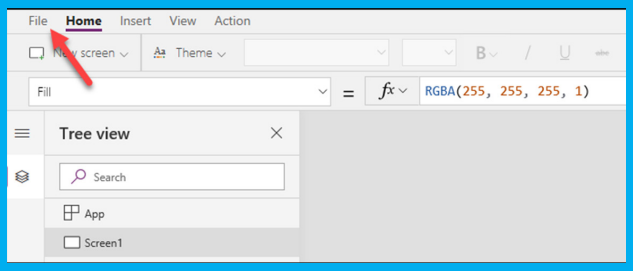
3. Click **New | App | Canvas | Phone form factor.**



4. Check the don't show me again checkbox and click Skip.

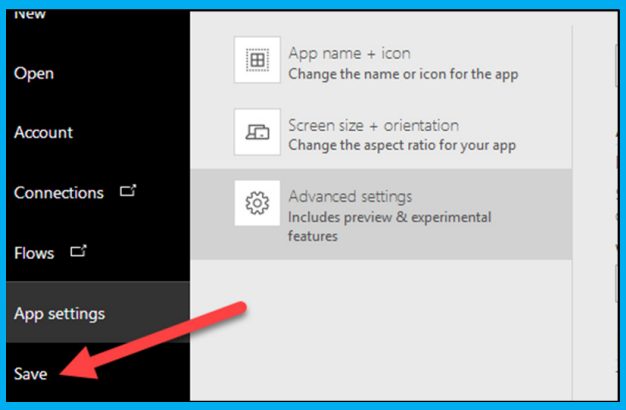


5. You will give your application a name and save it. Click File.

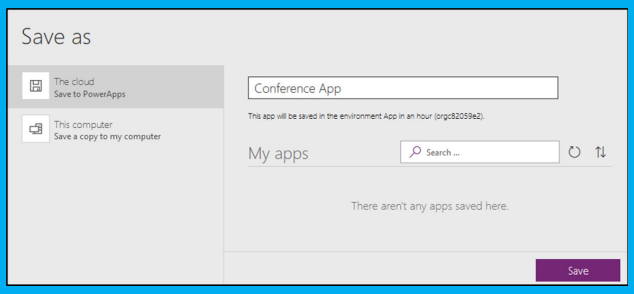


Exercise 3

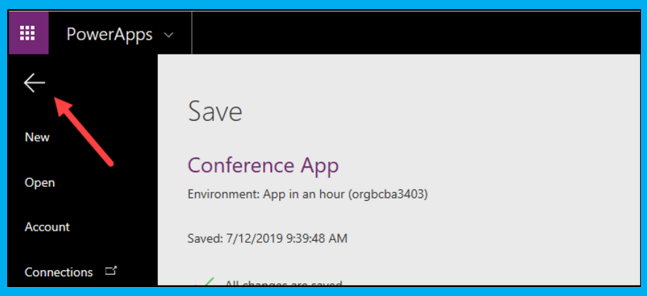
6. Select Save.



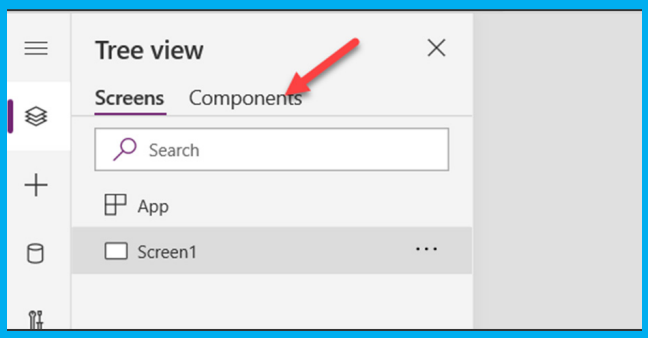
7. Enter Conference App for App Name and click Save.



8. Click on the designer back button.



9. You should now have Components tab. Click to select the Components tab.

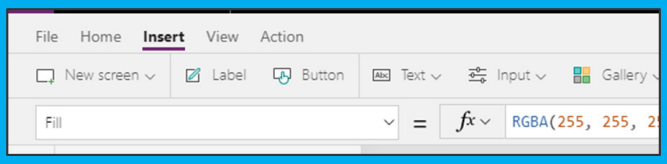


Exercise 3

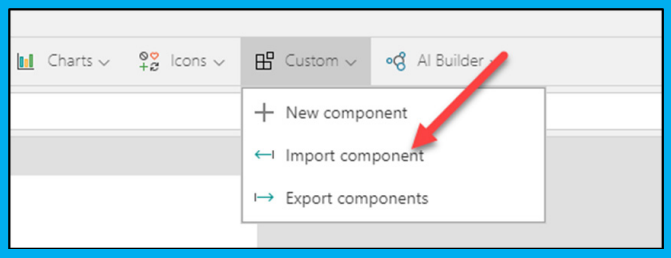
Task 2 – Import Pre-existing Components

To make it quicker to build your app, we have provided you some reusable canvas components that you will be using to compose your app.

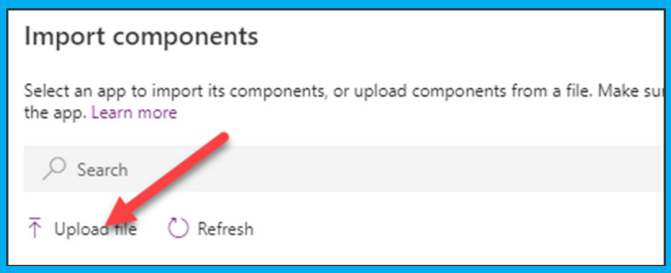
1. Select the Insert tab.



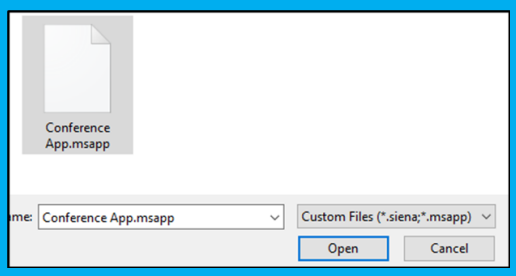
2. Click Custom and select Import Component.



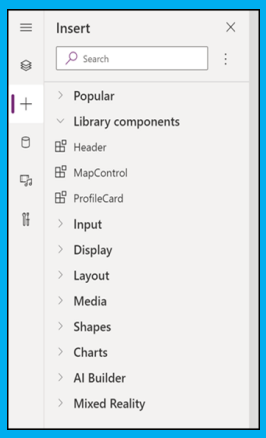
3. Click Upload File.



4. Select the **Conference App.msapp** file located in the lab resources folder and click Open.



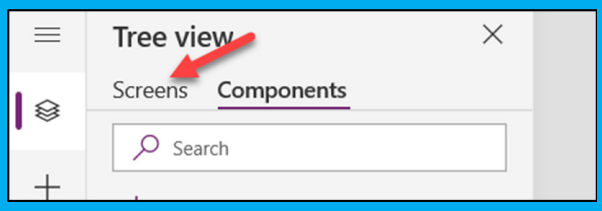
5. Three components should be added.



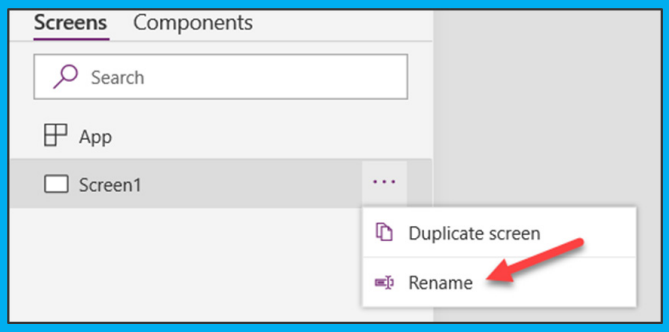
Exercise 3

Task 3 – Setup the home screen

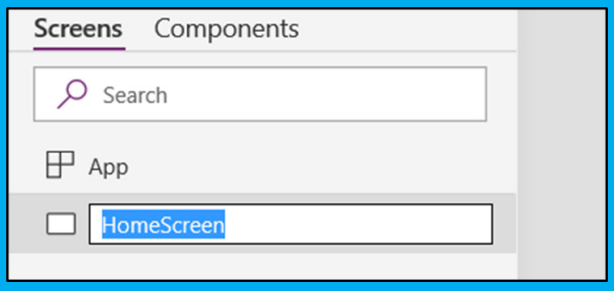
6. Select the Screens tab.



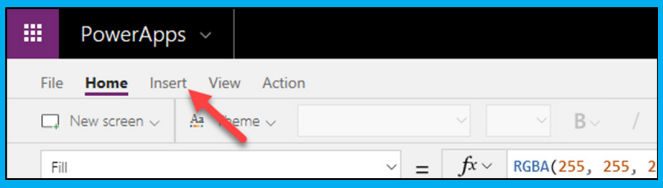
7. Click on the ... button of Screen1 and select Rename.



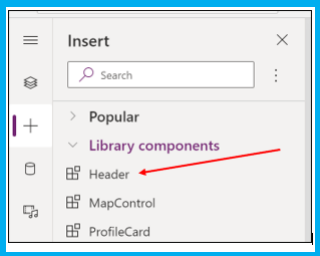
8. Rename it HomeScreen.



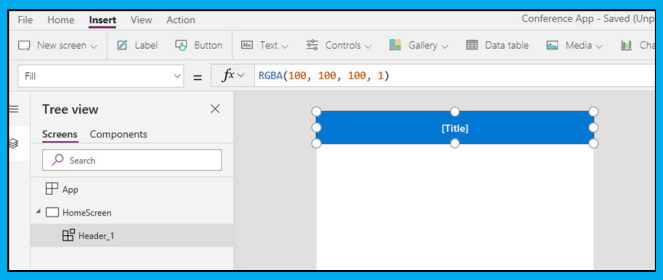
9. Select the Insert tab.



10. Click Library Components and select Header

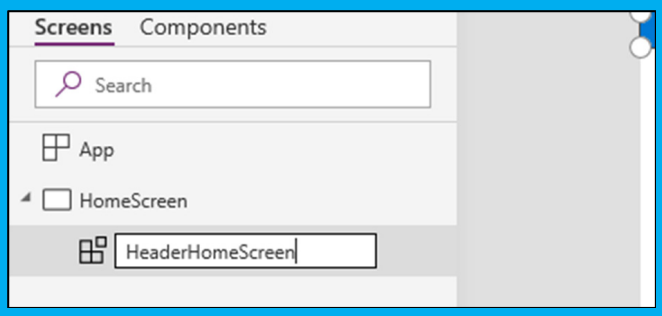


11. The Header component should be added to the screen.

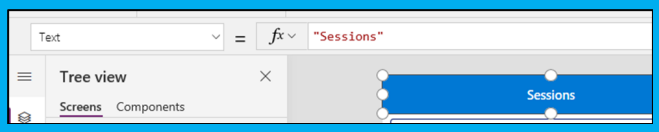


Exercise 3

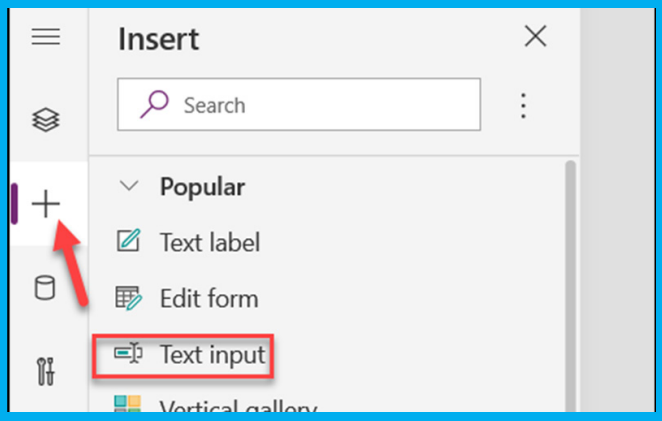
12. Rename the Header HeaderHomeScreen.



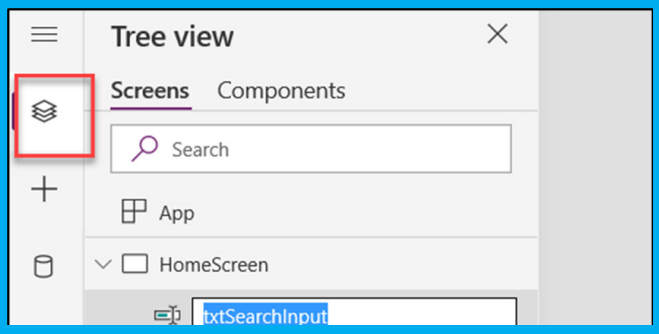
13. Select HeaderHomeScreen and change the Text value to Sessions.



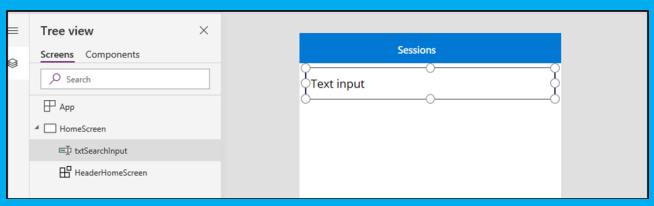
14. Click on the + button and select Text Input.



15. Select the Tree View and rename the text input txtSearchInput.

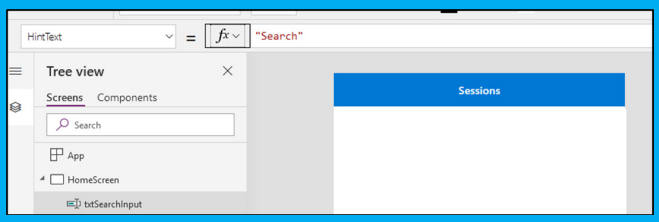


16. Resize and reposition txtSearchInput to fill the width of the screen directly below the header.



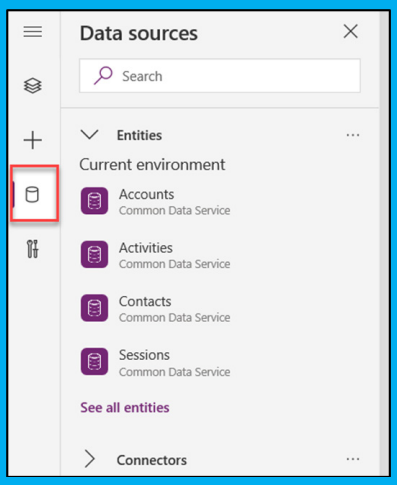
Exercise 3

17. Change the HintText value to Search; and the Default text to “”

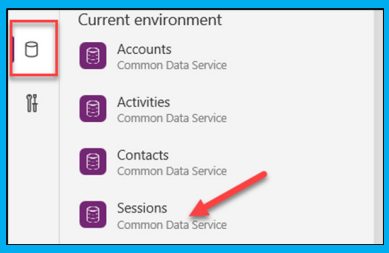


Task 4 – Add a List of Sessions

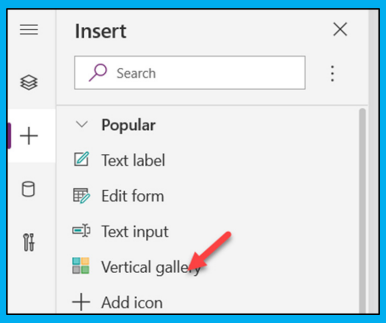
1. Select Data Sources, notice our CDS entities are already available..



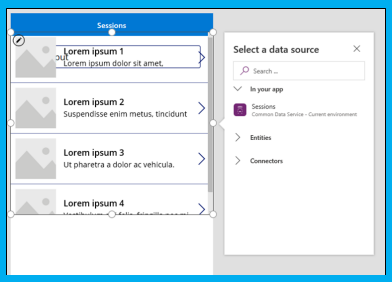
2. Select Sessions to connect it.



3. Click + and select Vertical Gallery.

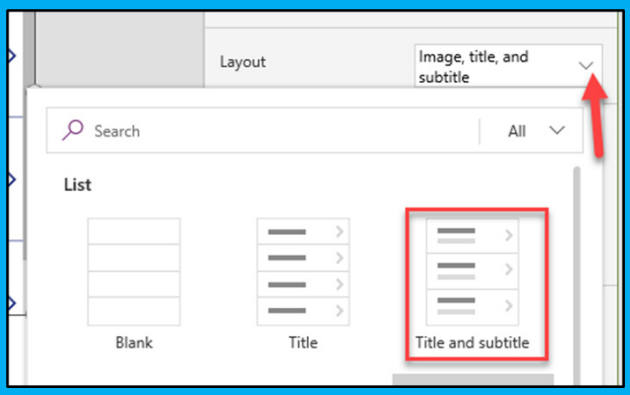


4. Close the Data pane

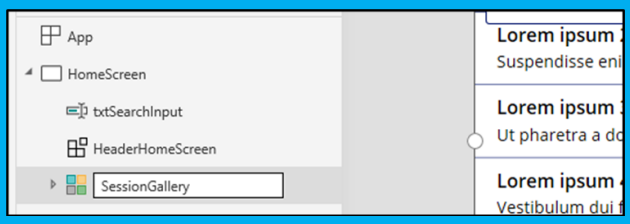


Exercise 3

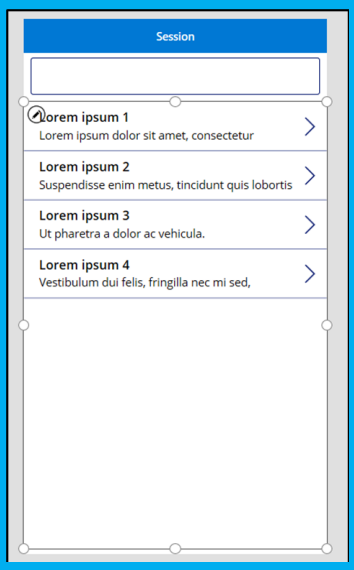
5. Click on the Layout dropdown and select Title and Subtitle.



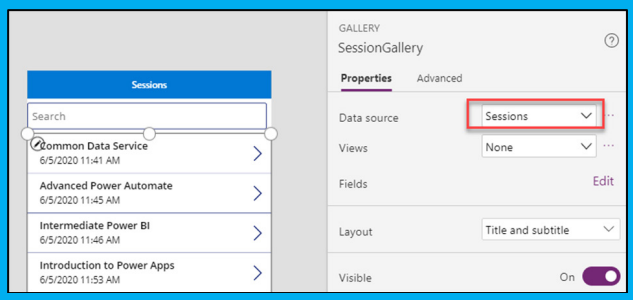
6. Select the Tree View and rename the gallery SessionGallery.



7. Resize and reposition the SessionGallery below the other items on the screen; as shown in the image below.

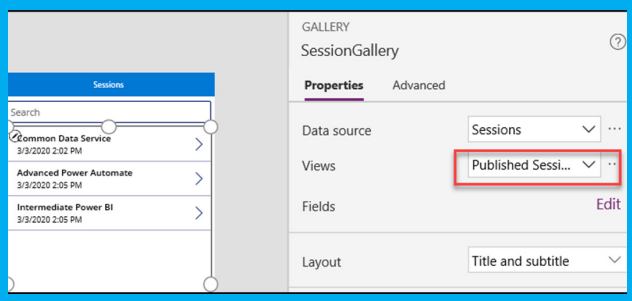


8. Select SessionGallery and from the Properties tab, change the Data Source to Sessions. Notice all the session records we created are now previewed.



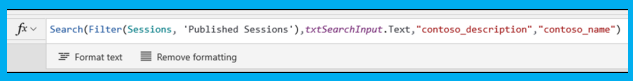
Exercise 3

9. Now change the Views to Published Sessions; and now only our published sessions are shown.

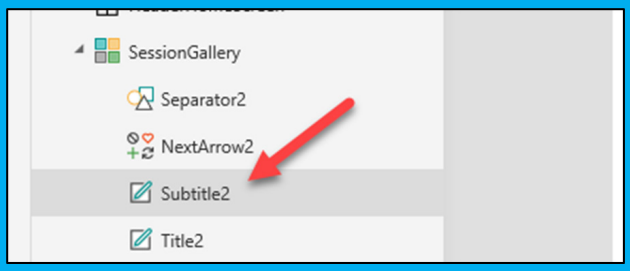


10. While this sets our data source for the gallery, we will now add the search functionality. We will search based on both session name and description. With the SessionGallery selected in the tree view, change the Items property to the following formula:"

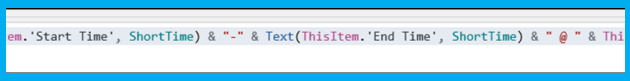
```
Search(Filter(Sessions,
'Sessions (Views)'.'Published
Sessions'),txtSearchInput.
Text,"contoso_description","contoso_
name")
```



11. Expand SessionGallery and select the Subtitle.



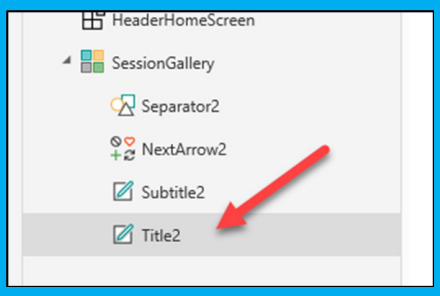
12. Set the Text value of the subtitle to the formula below.




```
Text(ThisItem.'Start
Time', ShortTime) & "-" &
Text(ThisItem.'End Time', ShortTime)
& " @ " & ThisItem.Venue.Room
```

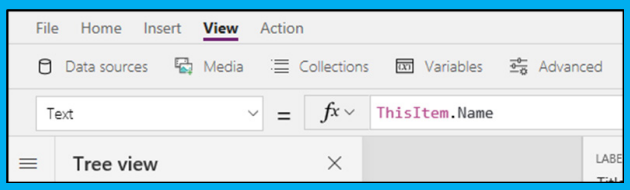
Exercise 3

13. Select the Title.

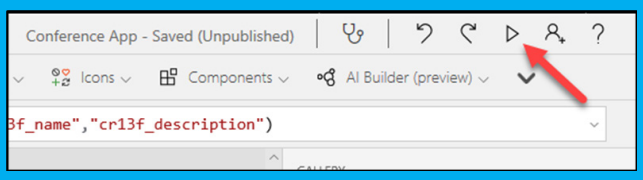


14. Change the Text value of the Title to the formula below.

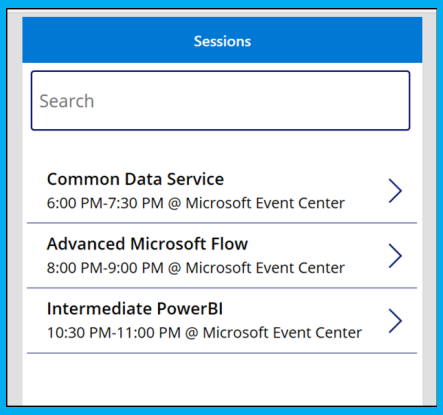
ThisItem.Name



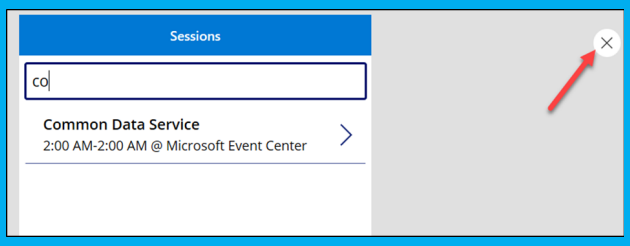
15. Click Play.



16. The application will load. Enter text in the search box.



17. Close the preview.

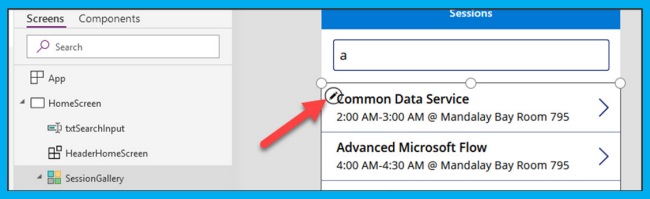


Exercise 3

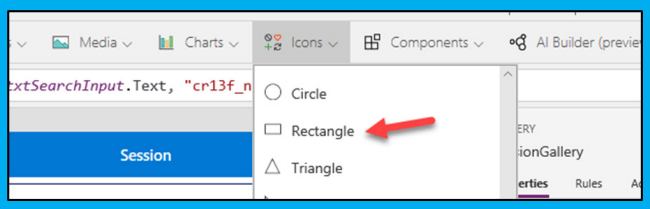
Task 5 – Colour code the sessions

In this task, you will be adding a color highlight to each session to indicate which track the session is part of.

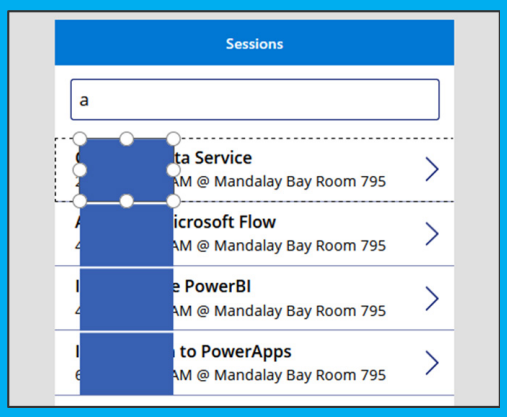
1. Select SessionGallery and click on the Edit button.



2. Go to the Insert tab, click Icons and select Rectangle.

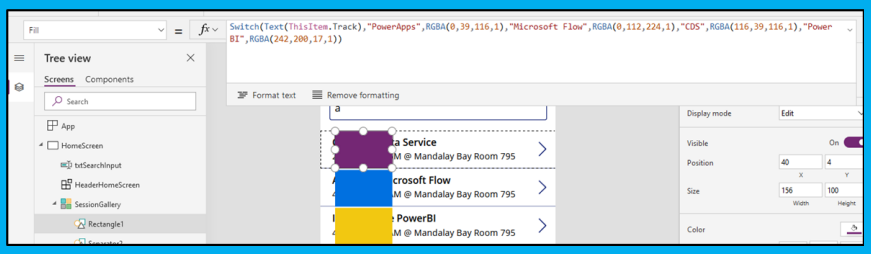


3. Rectangle should be added to the gallery.



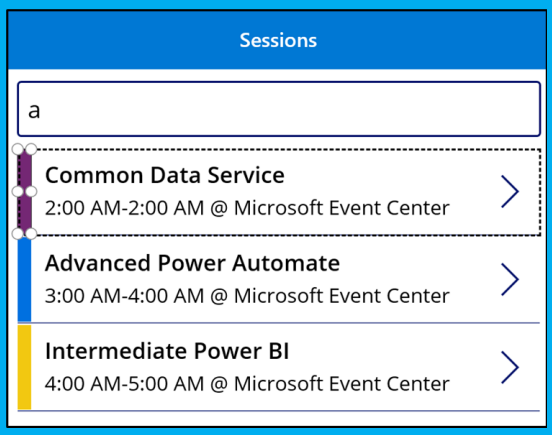
4. Set the Fill value of the rectangle to the formula below. This formula will show a different color for each session track

```
Switch(Text(ThisItem.Track),"PowerApps",RGBA(0,39,116,1),"Power
Automate",RGBA(0,112,224,1),"CDS",RGBA(116,39,116,1),"Power
BI",RGBA(242,200,17,1))
```

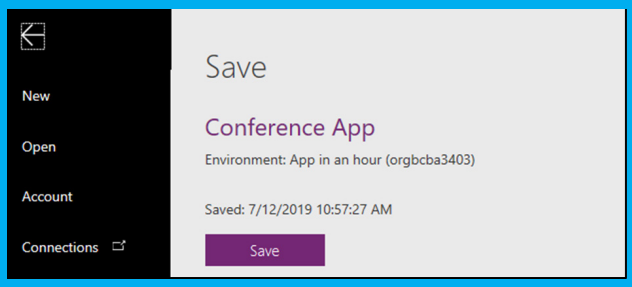


Exercise 3

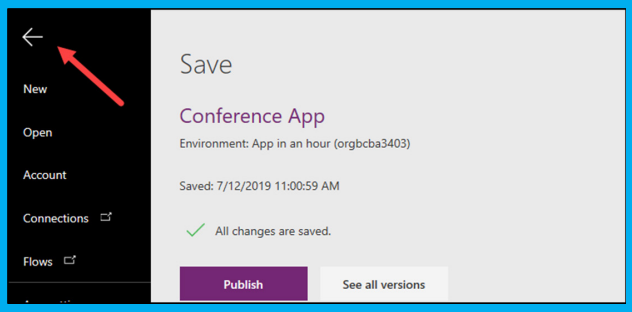
5. Resize and reposition the rectangle as shown in then image below.



6. Click File and Save.



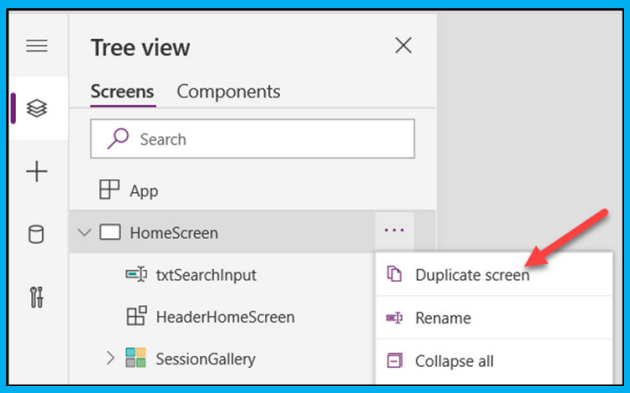
7. Click on the designer back button.



Task 6 - Add Session Details Screen

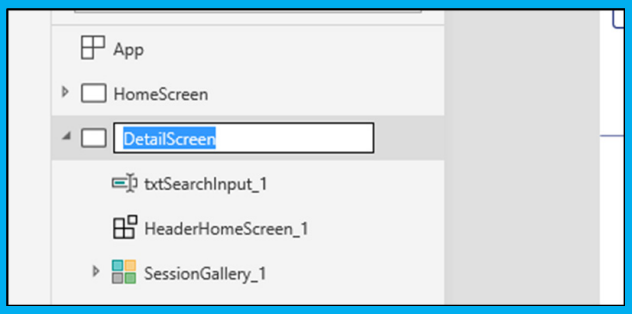
In this task, you will add the session detail screen to the canvas application.

1. Click on the ... button of the HomeScreen and select Duplicate Screen.

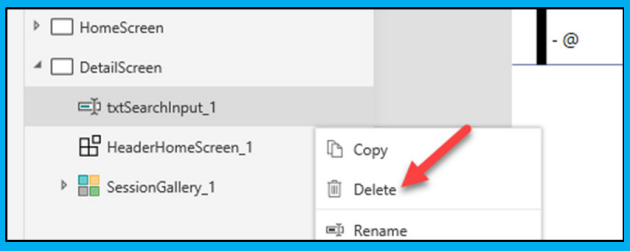


Exercise 3

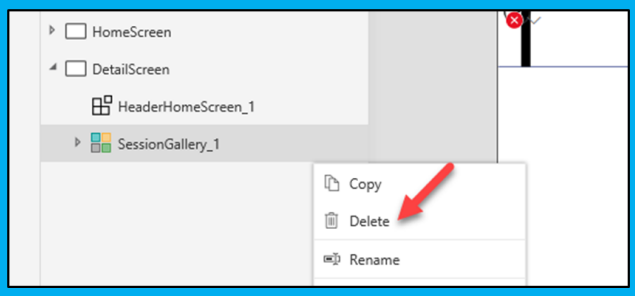
2. Rename HomeScreen_1 to DetailScreen.



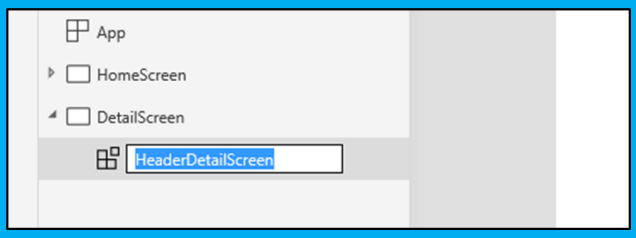
3. Delete txtSearchInput_1.



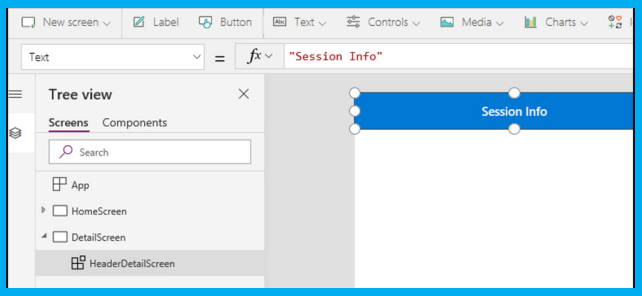
4. Delete SessionGallery_1.



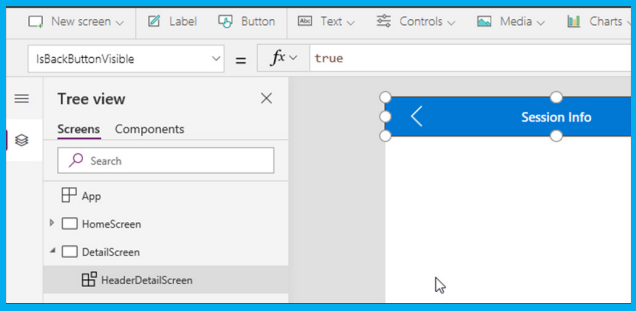
5. Rename HeaderHomeScreen_1 HeaderDetailScreen.



6. Select HeaderDetailScreen and set the Text value to Session Info.



7. Set the IsBackButtonVisible value of HeaderDetailScreen to true.

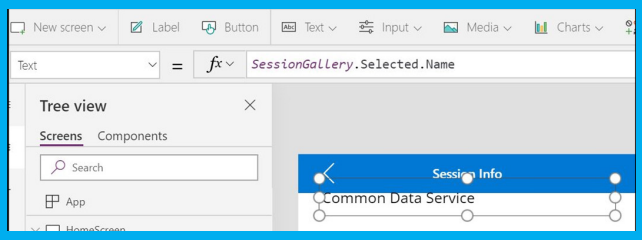


Exercise 3

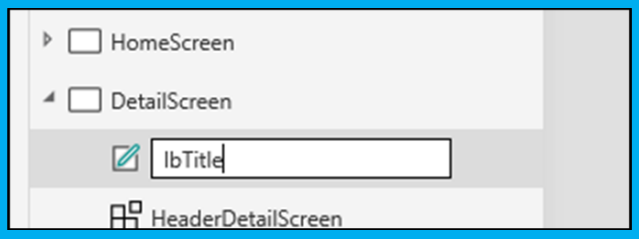
8. Go to the Insert tab and click Label.

9. Set the Text value of the new label to the formula below.

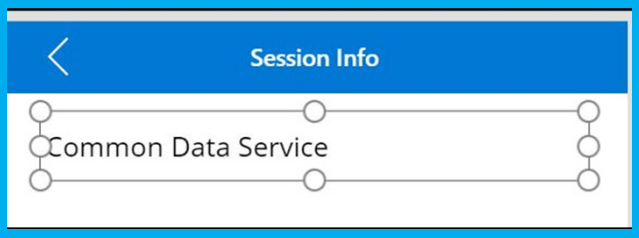
SessionGallery.Selected.Name



10. Rename the Label lbTitle.



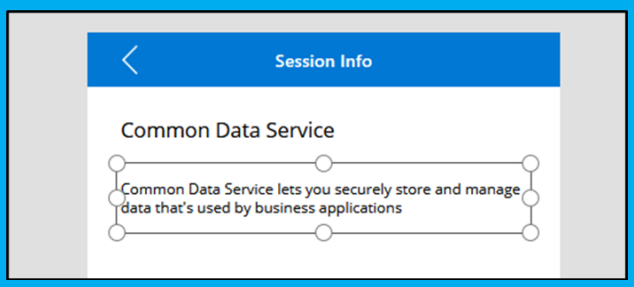
11. Resize and reposition lbTitle as shown below.



12. Go to the Insert tab and click Label again.
13. Set the Text value of the new label to the formula below.

SessionGallery.Selected.Description

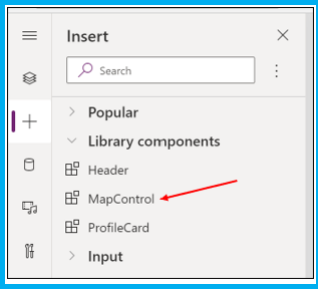
14. Rename the new label lbDescription.
15. Set the Size value of lbDescription to 16.
16. Resize and reposition lbDescription to better fill the space..



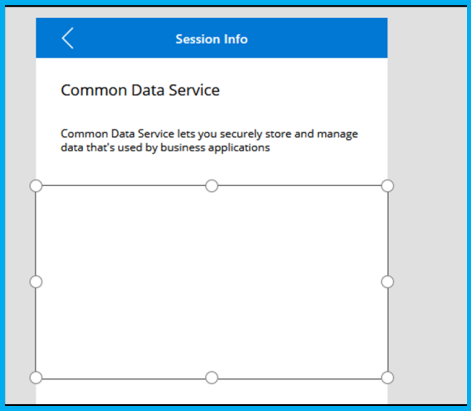
Exercise 3

Task 7 – Add a map to the session location

17. Go to the Insert tab, click Library Components and select MapControl

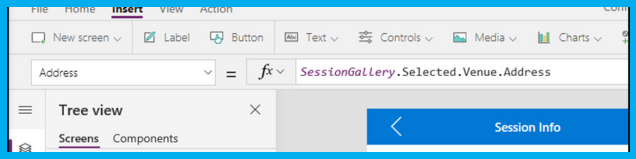


18. Resize and reposition the map control below the session description.

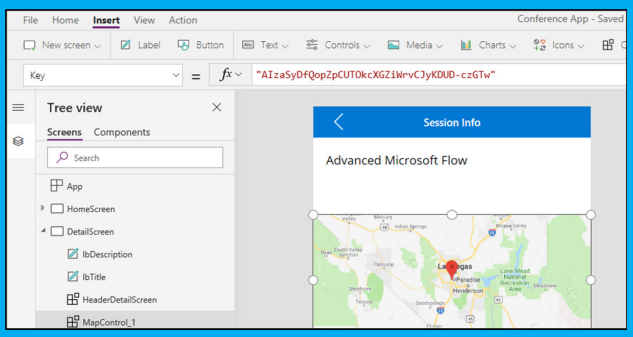


19. Set the Address value of the map control to the formula below.

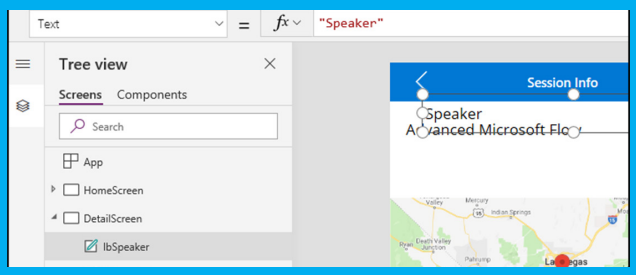
`SessionGallery.Selected.Venue.Address`



20. Set the Key value of the map control to "AIzaSyDfQopZpCUTOkcXGZiWrvCJyKDUD-czGTw"



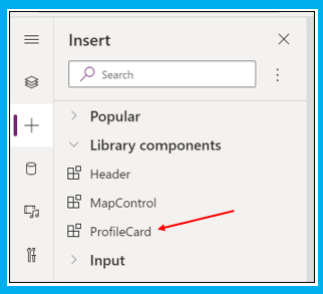
21. Go to the Insert tab and click Label.
22. Rename the new label lbSpeaker.
23. Set the text value of lbSpeaker to Speaker.



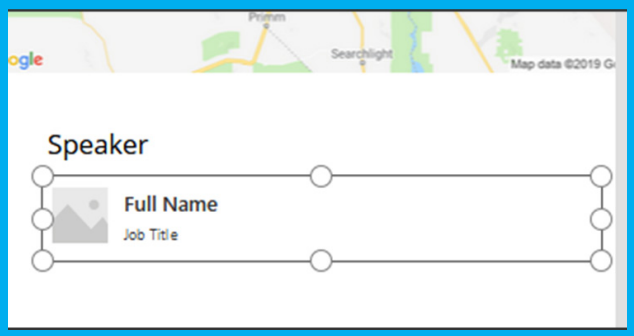
Exercise 3

24. Resize and reposition lbSpeaker as shown in then image below.

25. Go to the Insert tab, click Library Components and select ProfileCard.

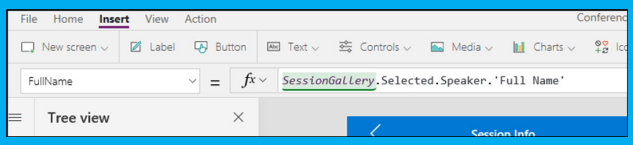


26. Resize and reposition the profile card below the map control.



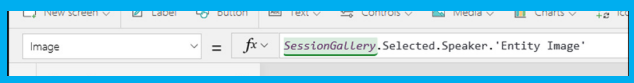
27. Select the profile card and set the FullName value to the formula below.

```
SessionGallery.Selected.
Speaker.'Full Name'
```



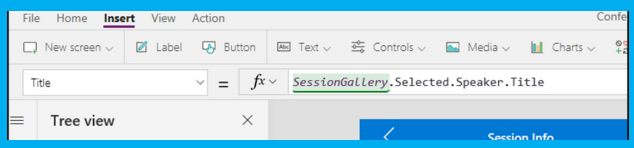
28. Set the Image value of the profile card to the formula below.

```
SessionGallery.Selected.
Speaker.'Entity Image'
```



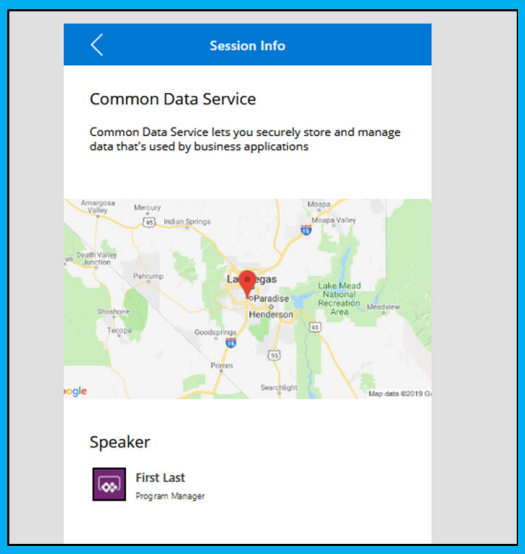
29. Set the Title value of the profile card to formula below.

```
SessionGallery.Selected.Speaker.
Title
```

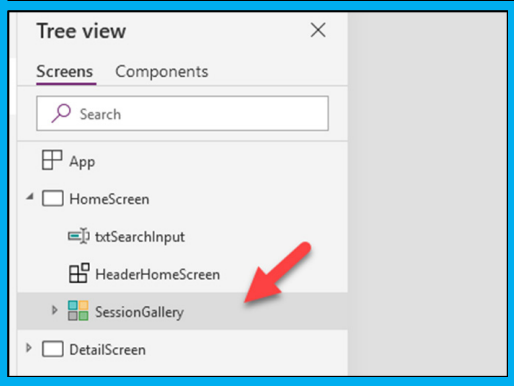


Exercise 3

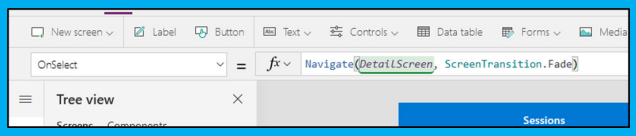
30. The Detail Screen should now look like the image below. It shows the header, session title and description, map control and information about the speaker.



31. Expand the HomeScreen and select SessionGallery.



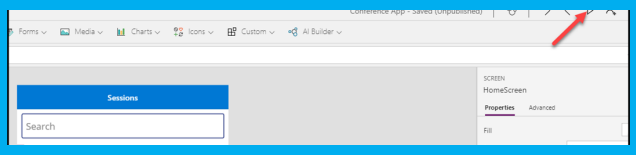
32. Set the OnSelect value of the SessionGallery to the formula below.




```
Navigate(DetailScreen,
ScreenTransition.Fade)
```

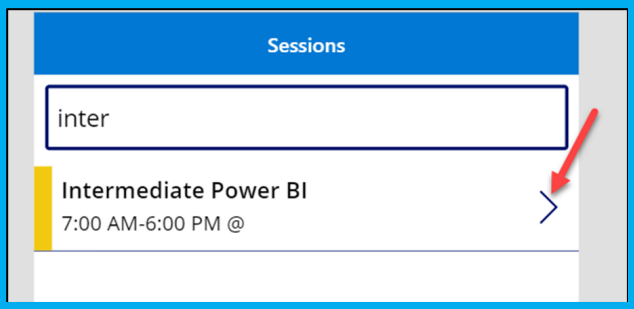
Task 8 – Test the App

1. Select the HomeScreen and click Play.

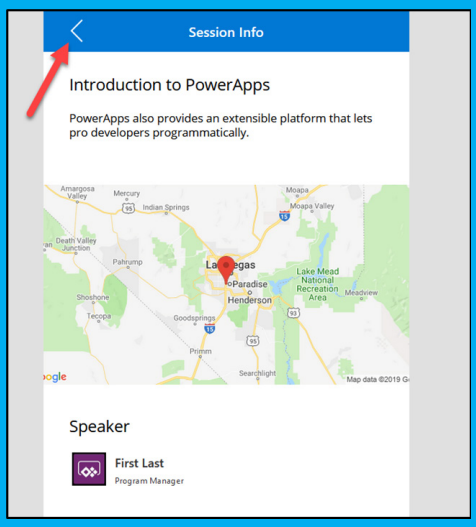


Exercise 3

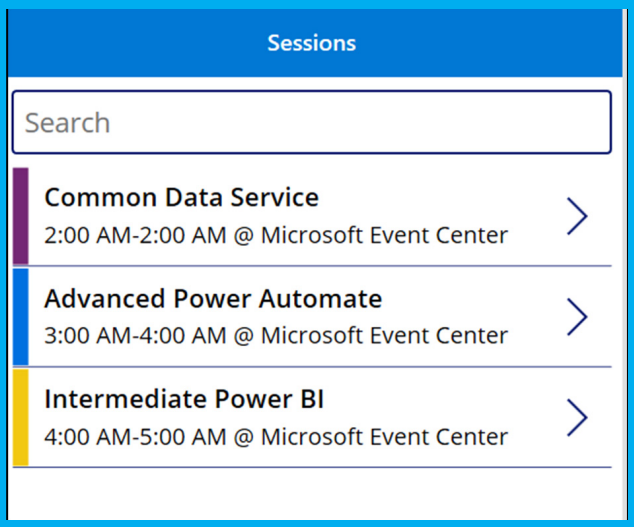
2. Select a session



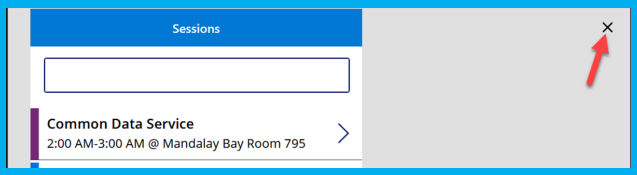
3. The session details should load. Click on the back button.



4. The app should go back to the sessions screen. Clear the search textbox.
5. All sessions should load.

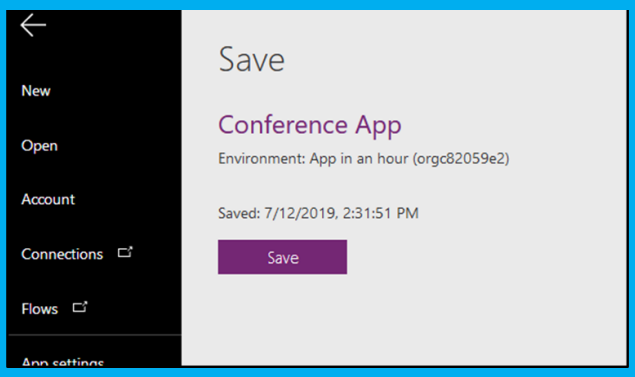


6. Close the preview.

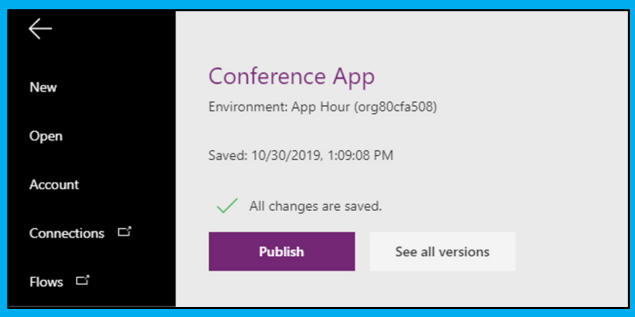


Exercise 3

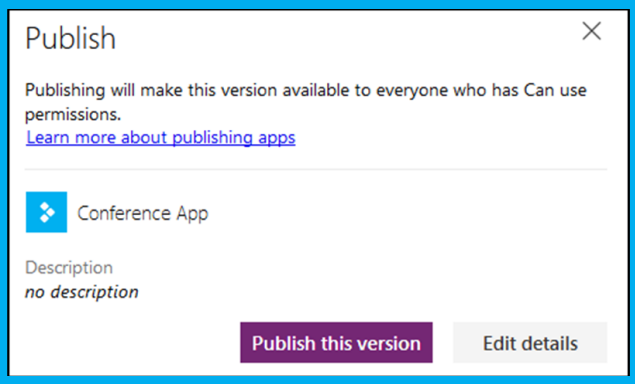
7. Click File and Save.



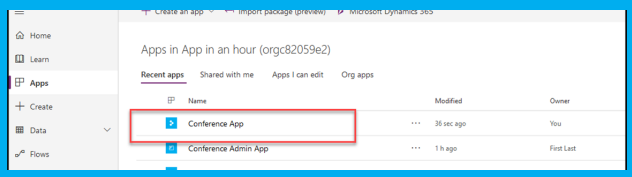
8. Click Publish.



9. Click Publish this Version.



11. Close the app designer browser tab/window.
12. Click Done.
13. Publish All Customizations for your solution
14. Your Conference App should now be listed under Apps.



Congratulations!

You've completed the App in an hour. If you have more time, continue to more exercises to add a business card reader, Power Apps Portal and automation with both a business process flow and a Power Automate flow.