



Power Platform

App in an ~Hour

App in an hour
Hands-on Lab Step-by-Step

June 2020

Contents

Overview 3

Lab Prerequisites 3

Power Apps Canvas Studio Layout 3

Introduction: Conference Management Scenario 4

Locale-specific difference in formulas..... 6

Exercise 1 Prepare the Environment and data model..... 7

Exercise 2 Create Conference Admin App 22

Exercise 3 Create Conference Attendee App 33

Congratulations!..... 58

Exercise 4 Build a flow to approve session 58

Overview


Lab Prerequisites

Follow the pre-requisite steps described in the document: **00-AppInAnHour Lab Overview.pdf**, that is included in the lab package. Before beginning this lab, confirm that you have provisioned an environment where you will save your apps, flows and database entities. If you are taking this as part of an event, you might be provided an environment that is already configured, and you may proceed.

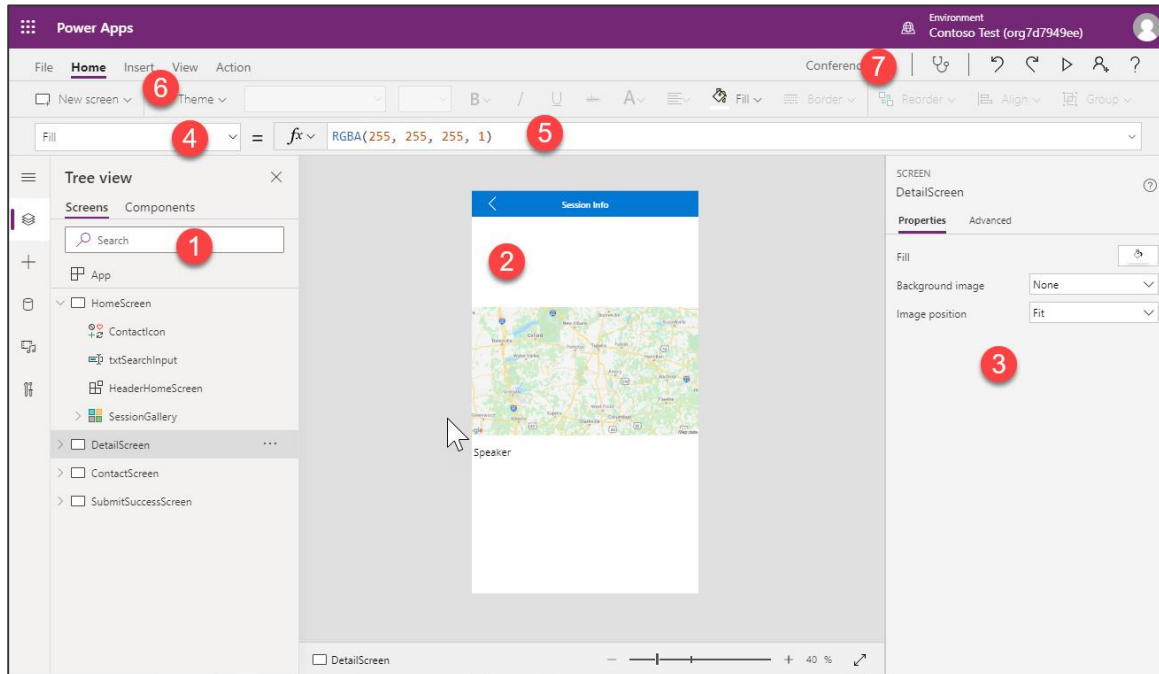
IMPORTANT: Do not proceed before going through the lab pre-requisite steps

Power Apps Canvas Studio Layout

Power Apps Canvas Studio is available as a web application (<http://make.powerapps.com>) that you can use in any modern browser.

Power Apps Studio is designed to have a user interface familiar to users of the Office suite. It has three panes and a ribbon that make app creation feel **like building a slide deck in PowerPoint**. Formulas are entered within a function  bar that is like Excel. Studio components:

1. **Left navigation bar**, which shows all the screens, data sources, and controls in your app. You can add media files here and access advanced tools.
2. **Middle pane**, which contains the app screen you are working on
3. **Right-hand pane**, where you configure properties for controls, bind to data, create rules, and set additional advanced settings
4. **Property** drop-down list, where you select the property for the selected control that you want to configure
5. **Formula bar**, where you add formulas (like in Excel) that define the behavior of a selected control
6. **Ribbon**, where you perform common actions including customizing design elements
7. **Additional items**, here you will find your environment selection, app checker, and the preview app functionality.



Introduction: Conference Management Scenario

Imagine you work for an organization where you have an internal conference and you would like to build an app to allow internal attendees to browse sessions and see the details. You also will need a way for the conference administrators to input the session and venue information.

Solution overview

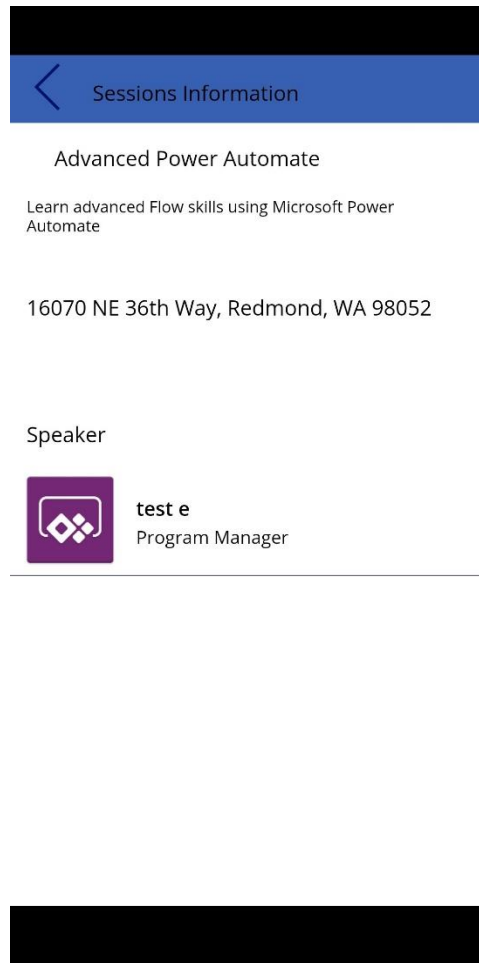
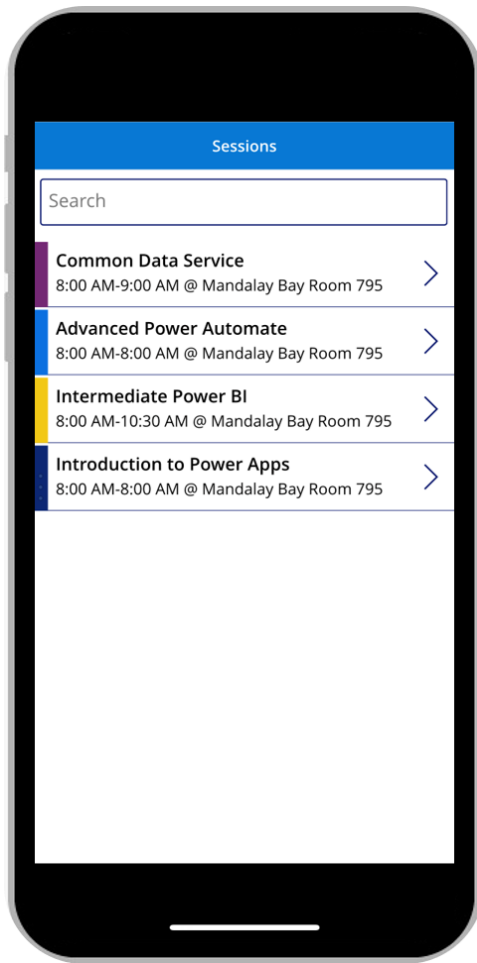
The Microsoft business application platform technologies enable tech-savvy business users (aka “citizen developers”) to build a customized conference management solution. The application user interface and interaction logic are built in Power Apps, and the data is stored in the Common Data Service.

Key features of the solution:

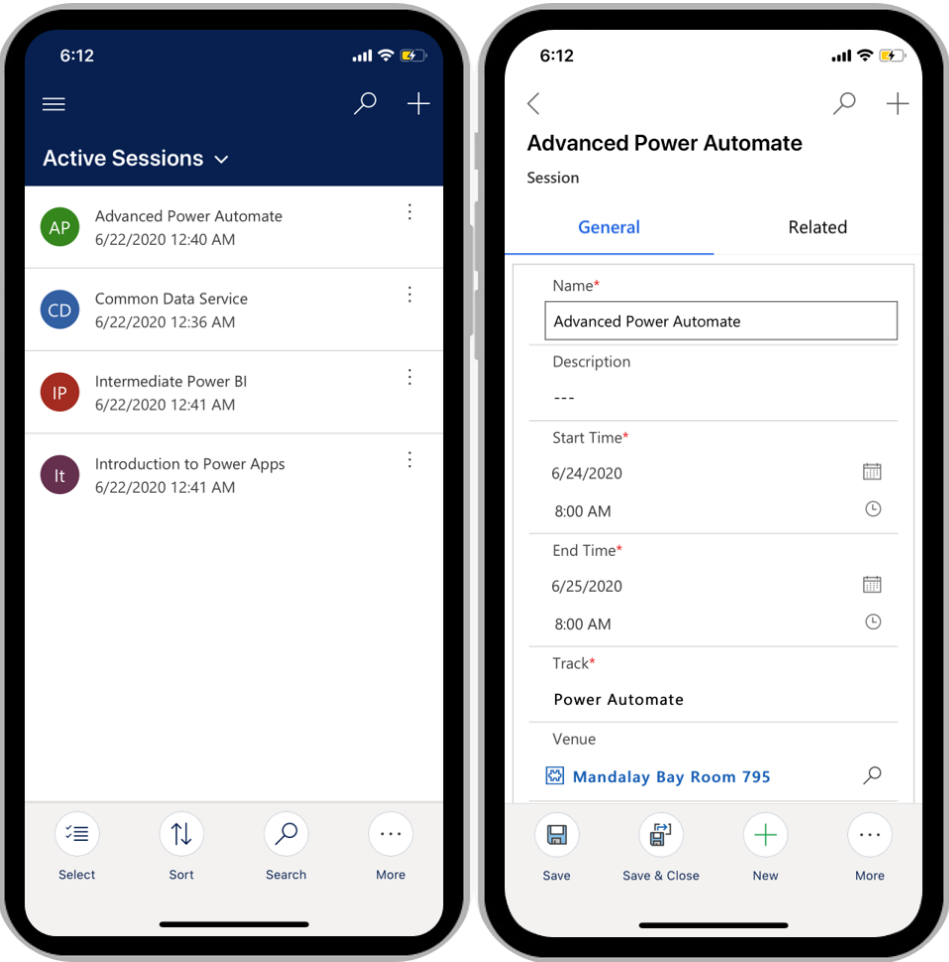
- A Power Apps canvas app that conference attendees can use
- A Power Apps model-driven app that conference admins can use to setup the data
- A Microsoft Power Automate Flow that requests approval for sessions depending on capacity

This document will walk through creating the data definitions and the apps.

When you are done your canvas app will look like this:



Your model driven app will look like this:




Locale-specific difference in formulas

Before you begin, please note that if your computer has its regional settings set to use the comma ‘,’ for its decimal separator (like in much of Europe) your formulas will need to use a semicolon ‘;’ instead of a comma in your formulas. For example:

En-US Filter(Machines, OEMsGallery.Selected.MFR=MFR)

de-DE Filter(Machines; OEMsGallery.Selected.MFR=MFR)

These localized formats are indicated with the  symbol throughout the document. If you are in the en-US locale, you can ignore any of the formulas indicated by the locale symbol.

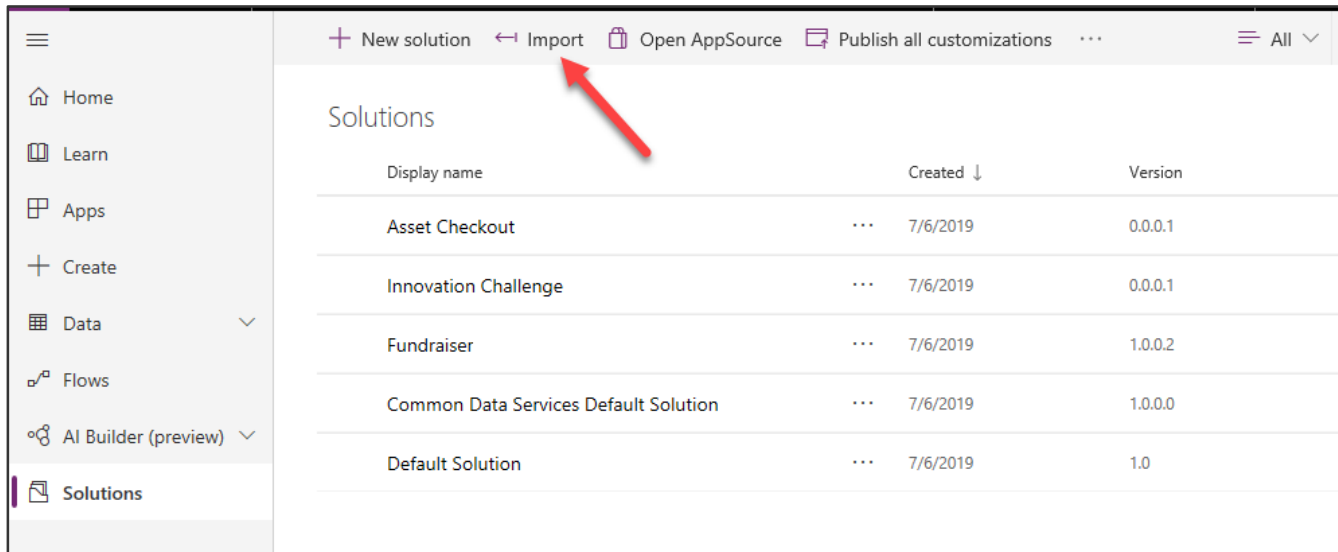
Exercise 1 Prepare the Environment and data model

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.

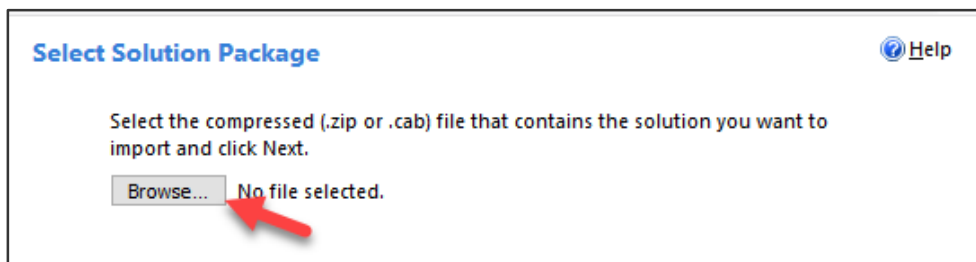
Task 1 – Import starting solution

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/table in this solution.

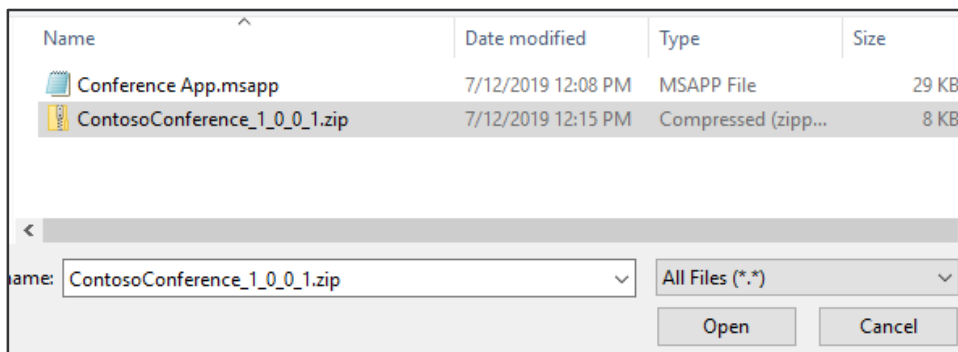
1. Navigate to <https://make.powerapps.com/> and make sure you are the correct environment.
2. Select **Solutions** from the left-hand navigation and click **Import**.



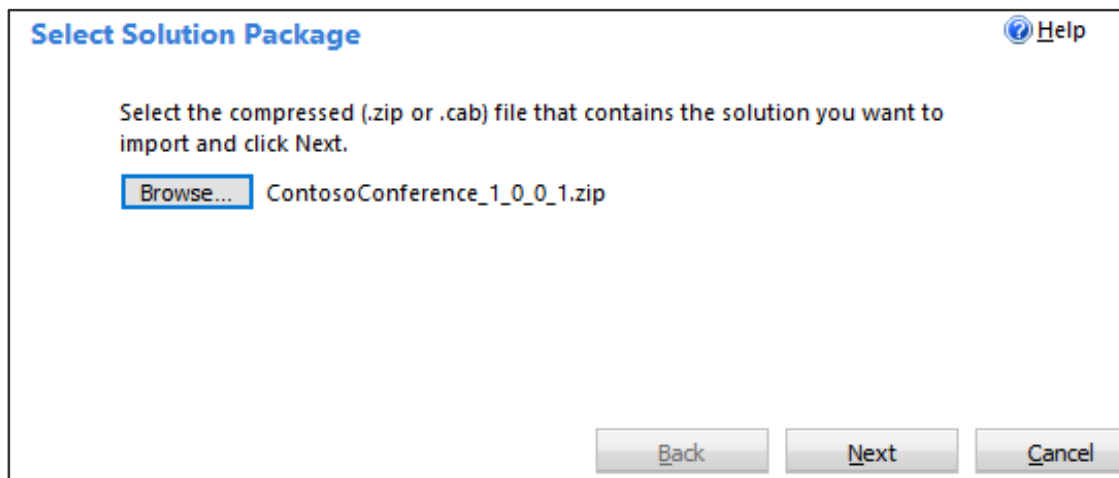
3. Click **Browse**.



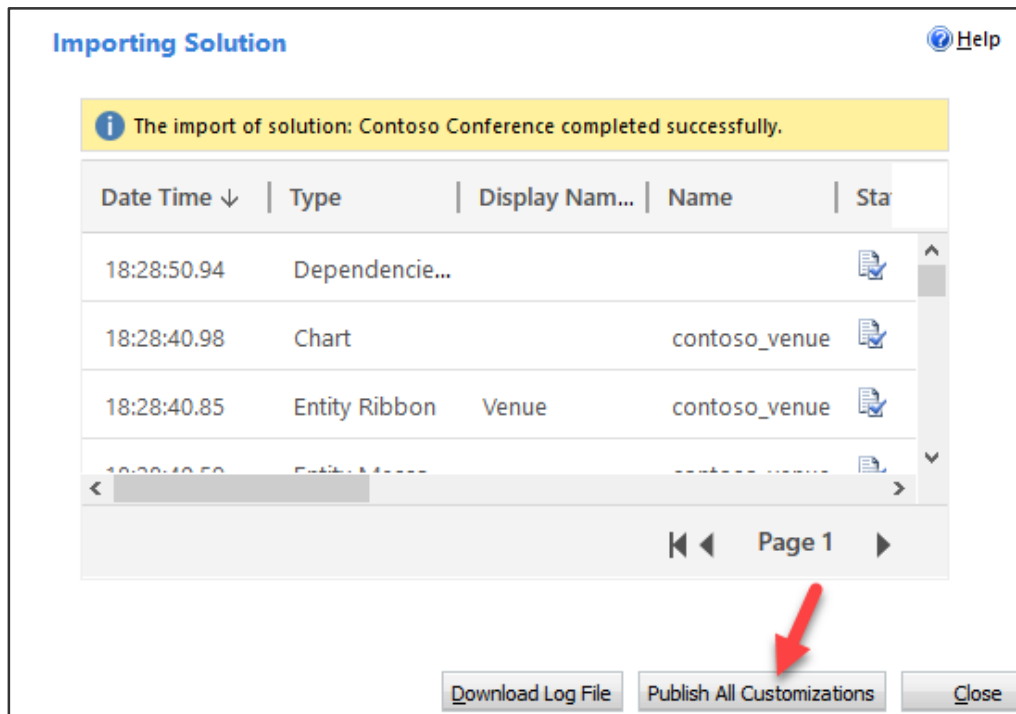
4. Select **ContosoConference_x_x_x_x** zip file located in the resources folder and click **Open**.



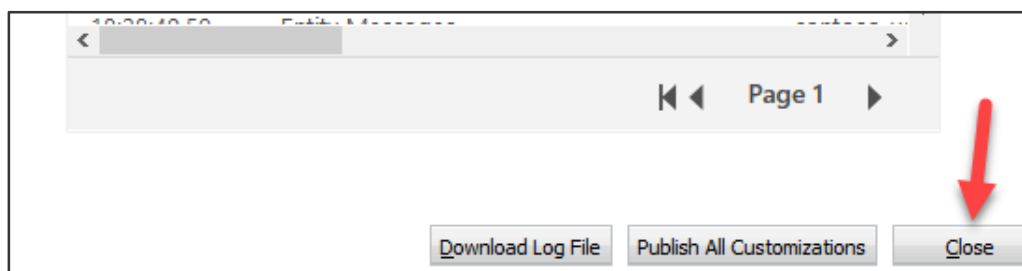
- Click **Next**.



- Click **Import** and wait for the importing to complete.
- Click **Publish All Customizations** and wait for the publishing to complete.



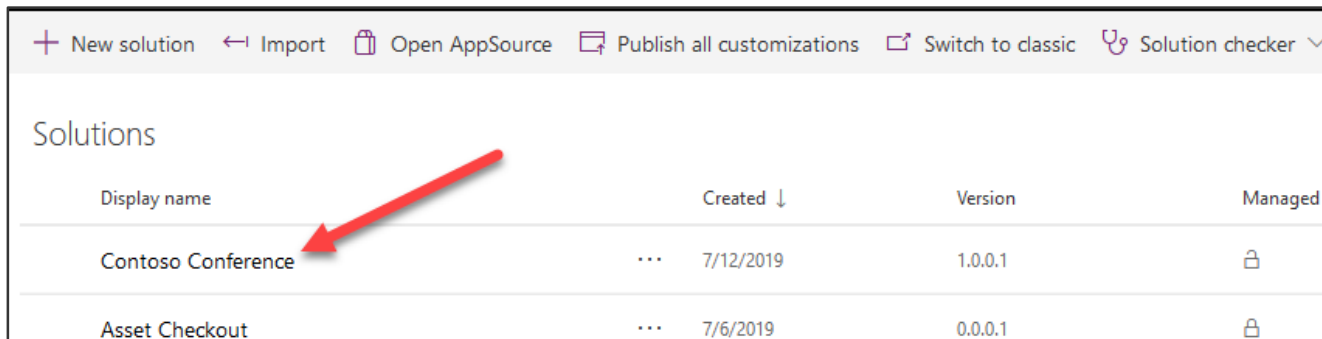
- Click **Close**.



Task 2 – Create the data model

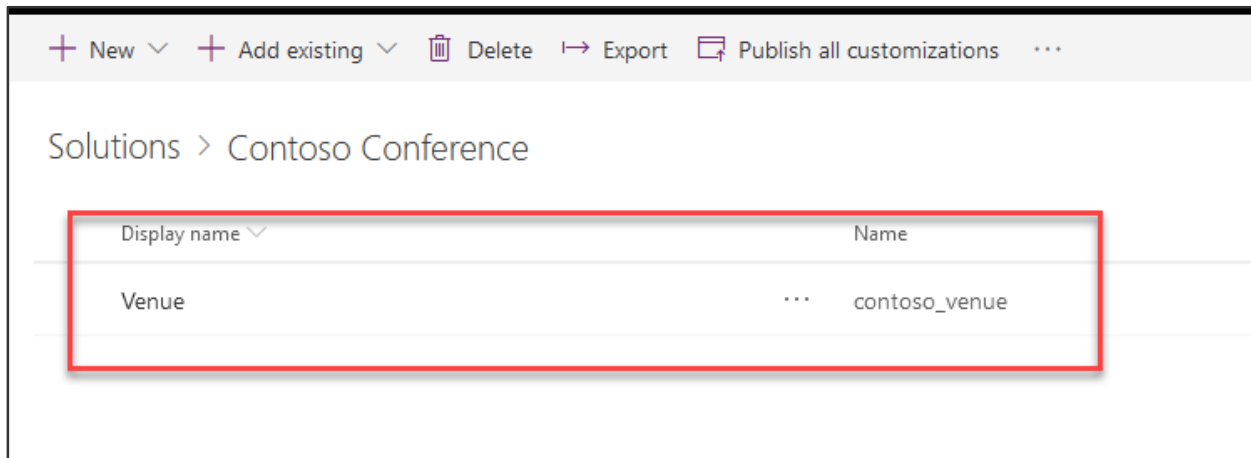
In this task, you will be creating the Session data Entity/table. You will also be creating relationships between it and Users/Venue. Additionally, you will be doing basic edits to the forms for the session entity

1. Click to open the solution you just imported.



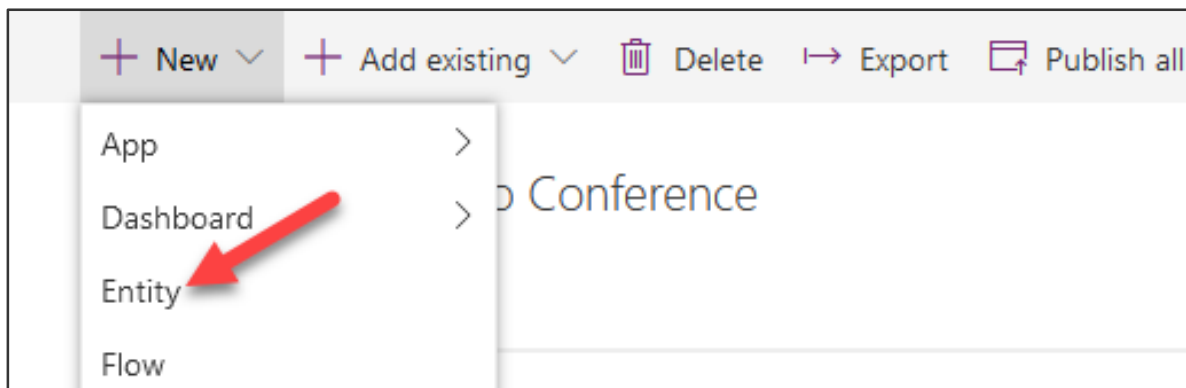
+ New solution ← Import 📁 Open AppSource 📄 Publish all customizations 🔄 Switch to classic 🛡️ Solution checker				
Solutions				
Display name		Created ↓	Version	Managed
Contoso Conference	...	7/12/2019	1.0.0.1	🔒
Asset Checkout	...	7/6/2019	0.0.0.1	🔒

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

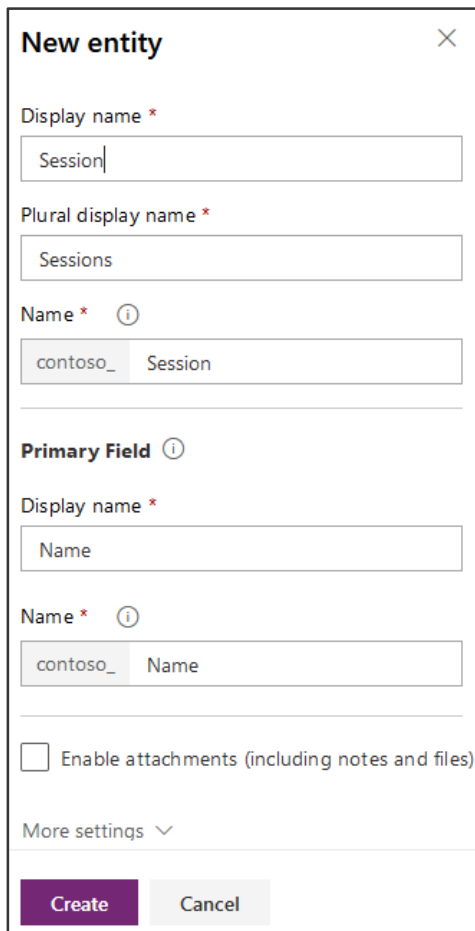


+ New ▾ + Add existing ▾ 🗑️ Delete ➡️ Export 📄 Publish all customizations ...	
Solutions > Contoso Conference	
Display name ▾	Name
Venue	contoso_venue

Click + **New** from the header and select **Entity/table**



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



New entity ✕

Display name *
Session

Plural display name *
Sessions

Name * ⓘ
contoso_ Session

Primary Field ⓘ

Display name *
Name

Name * ⓘ
contoso_ Name

☐ Enable attachments (including notes and files)

More settings ▾

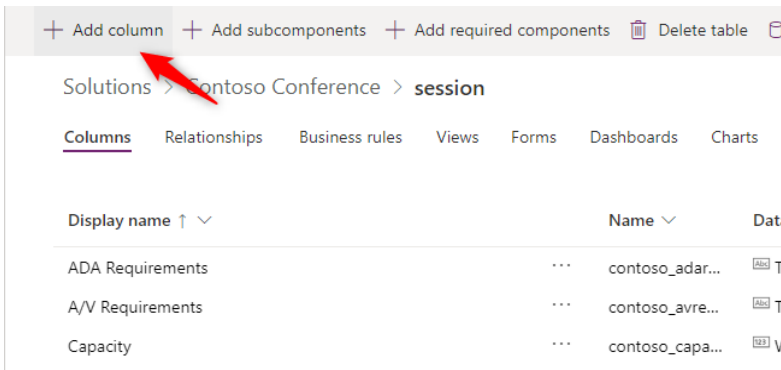
Create Cancel

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.

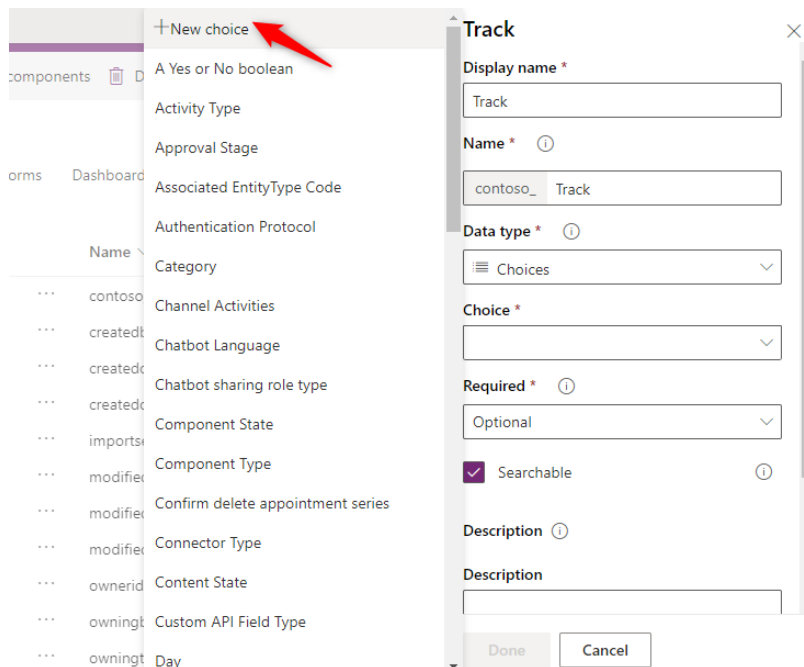
An Entity/table has a list of field/columns. Each column has a data type, such as Text, Number, etc. The data type is chosen when you create a column and is not changeable. The data type also defines many of the characteristics and behaviors of the columns when your application runs. For example, a choice/choices allows you to have a pre-defined list of values for use in your application.

When this field/columns is used on a form in a model-driven application the visual presentation is a drop-down control. The column helps to ensure data consistency and allows for built-in support for multi-language applications. columns are typically used with **forms, views, and searches – columns**

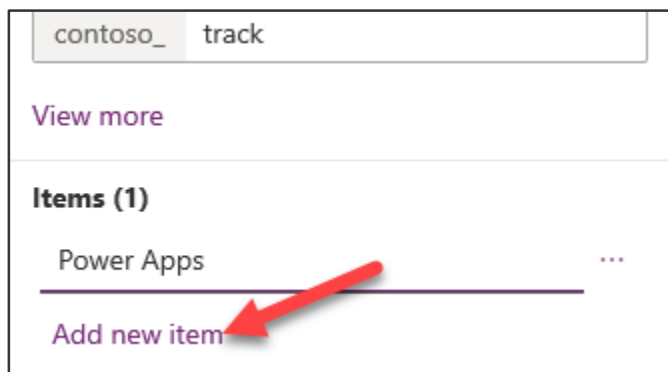
4. Make sure the **Fields(columns)** tab is selected and click + **Add column**



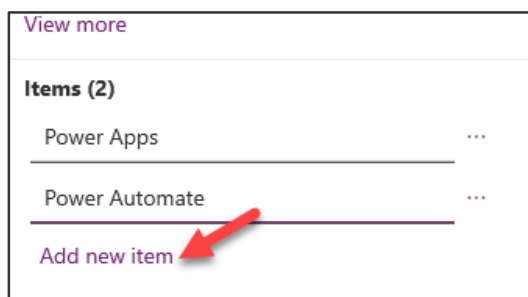
5. Enter **Track** for **Display Name** and select **Choices** for **Data Type**. Click on the **choices** drop down and select **New Choice**



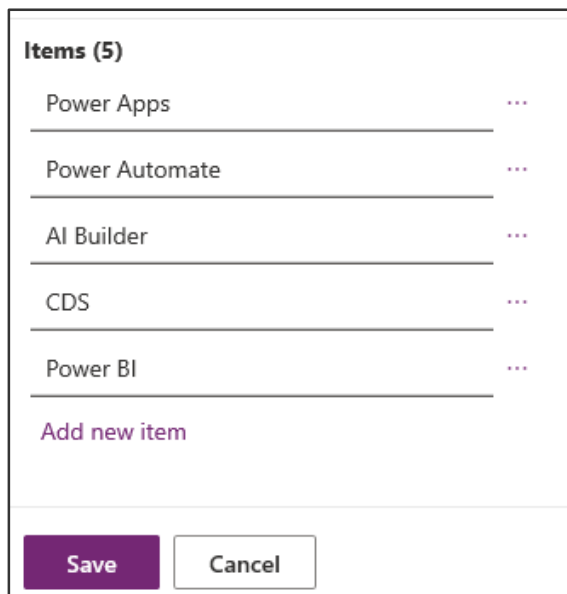
6. If prompted, **select Global Choice**.
7. Enter **Power Apps** and click **Add New Item**.



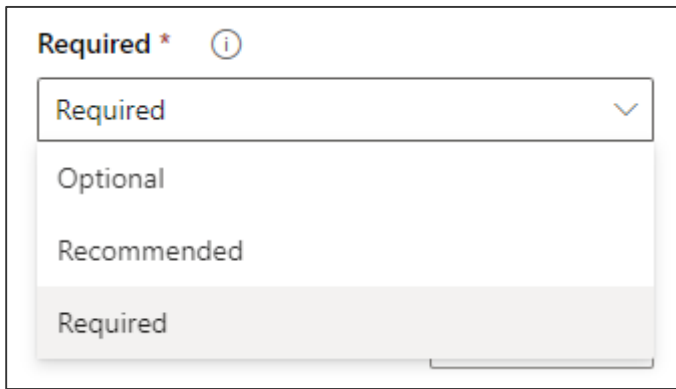
8. Enter **Power Automate** and click **Add New Item**.



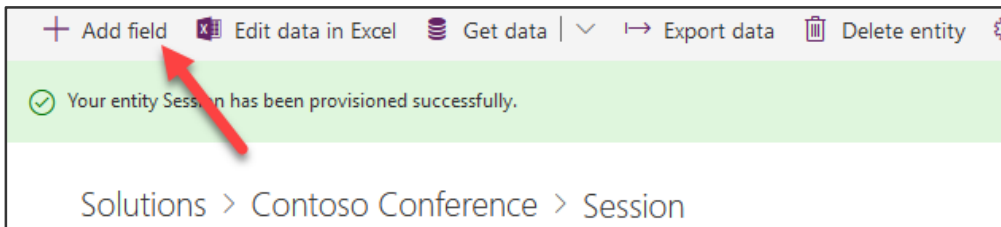
9. Enter **AI Builder** and click **Add New Item**.
10. Enter **CDS** and click **Add New Item**.
11. Enter **Power BI** and click **save** at the bottom of the form.



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



13. Click **+ Add Column**.



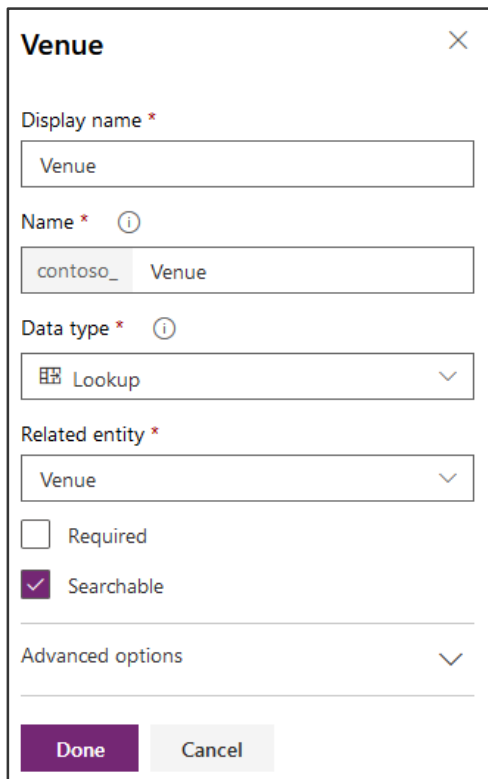
14. Enter **Description** for **Display Name**, select **Text** for **Data Type**, expand **Advanced options** and set max length to **1,000** and click **Done**.

The screenshot shows the 'Add Column' configuration dialog in Power Apps. The fields are as follows:

- Display name ***: Text input with 'Description'.
- Name ***: Text input with 'contoso_ Description'.
- Data type ***: Dropdown menu with 'Text' selected.
- Required**: Unchecked checkbox.
- Searchable**: Checked checkbox.
- Calculated or Rollup**: Unchecked checkbox with an 'Add' button.
- Advanced options**: Section header with an expand/collapse arrow.
- Description**: Text area.
- Max length ***: Text input with '1,000' (highlighted with a red box).
- IME mode**: Dropdown menu with 'Auto' selected.
- Buttons**: 'Done' and 'Cancel' buttons at the bottom.

15. Click **+ Add Column**.

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



Venue ✕

Display name *
Venue

Name * ⓘ
contoso_ Venue

Data type * ⓘ
Lookup

Related entity *
Venue

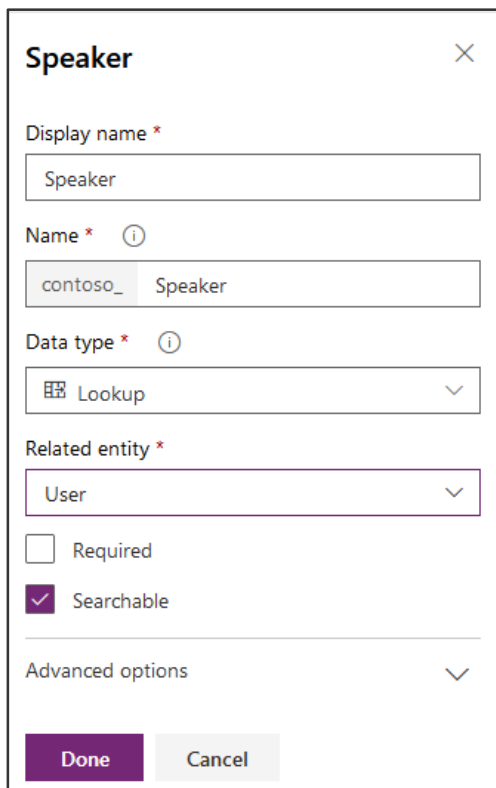
☐ Required
☒ Searchable

Advanced options ▾

Done Cancel

17. Click **+ Add Column**

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



Speaker ✕

Display name *
Speaker

Name * ⓘ
contoso_ Speaker

Data type * ⓘ
Lookup

Related entity *
User

☐ Required
☒ Searchable

Advanced options ▾

Done Cancel

19. Add the following additional columns.

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

When you create an entity in the CDS, it also creates a main form for that entity with a few basic fields on it. In addition to the form, views are created for the entity. Views are used in a Model-Driven app any time a list of the entity records are displayed. You would modify the view to add additional fields or change the placement. You can also create additional views.

Relationships:

Relationships allows you to manage relationships between tables. Relationships supported are One to Many (1:N), Many to One (N:1) and Many to Many (N:N). For example, if the parent record is deleted you can configure the relationship behavior so that all child records are also deleted or simply remove the reference. The **lookup column (which creates a relationship with another table)**

20. Click **Save Entity/Table**.



Standard	✓	✓
Custom	✓	✓

Discard Save Entity

Views:

Views will let you define how a list of records are shown in the app. You can create multiple custom views, each having their own filtering and sorting criteria. For example, you could create a view to see only the records created in the last week and another one to see records that haven't been updated in a year. Create views to make the application users more productive in filtering their data

21. Select the **Views** tab and click **+ Add View**

[+ Add view](#)
[Edit data in Excel](#)
[Get data](#) | [Export data](#)
[Delete entity](#)
[Settings](#)
[Switch to classic](#)

Solutions > Contoso Conference > Session

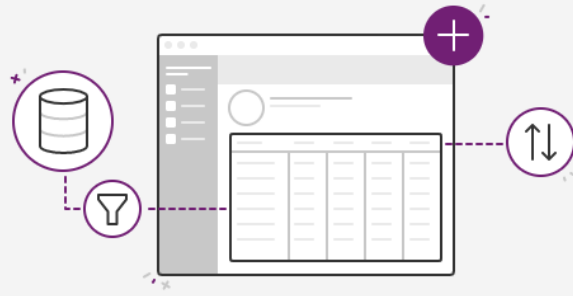
Fields Relationships Business rules Views Forms Dashboards Charts Keys Data

Model-driven

Name ↑ ↓	View type ↓	Type ↓
Active Sessions	Public View Default	Custom
Inactive Sessions	Public View	Custom
Quick Find Active Sessions	Quick Find View Default	Custom
Session Advanced Find View	Advanced Find View Default	Custom
Session Associated View	Associated View Default	Custom
Session Lookup View	Lookup View Default	Custom

22. Enter **Published Sessions** into **Name** and click **Create**

Create a view



Use a view to define how a list of records for an entity appears in your app. Choose which columns to display, set the column width, specify how records are sorted, and more.

New view ✕
 contoso_Session

Name

Description

Create **Cancel**

23. Click on **Capacity** to add it as a view header.

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

25. On the right of the screen, select **Edit filters**

Published Sessions >

View

Name

Published Sessions

Description

Sort by ...

Sort by ... ▾

No filters are present.

🔍 Edit filters ...

26. Click **Add** and select **Add Row**.

Edit filters

And ▾

+ Add ▾

+ Add row

≡ Add group

🔗 Add related entity

27. Set the filter as **Session Status Equals Published**.

Edit filters

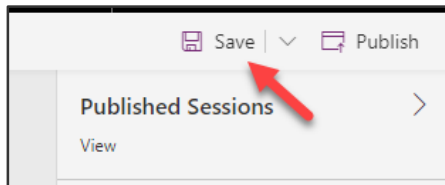
And ▾

☐ Session Status ▾ Equals ▾ Published × | ▾ ...

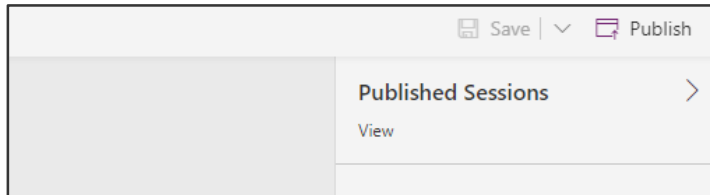
+ Add ▾

28. Click **OK**

29. Click **Save**.



30. Click **Publish** and wait for the publishing to complete.



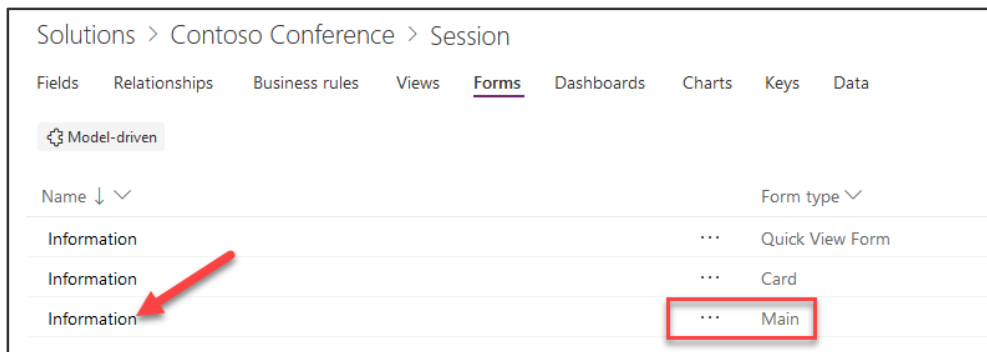
31. Close the browser tab or window.

32. Click **Done**.

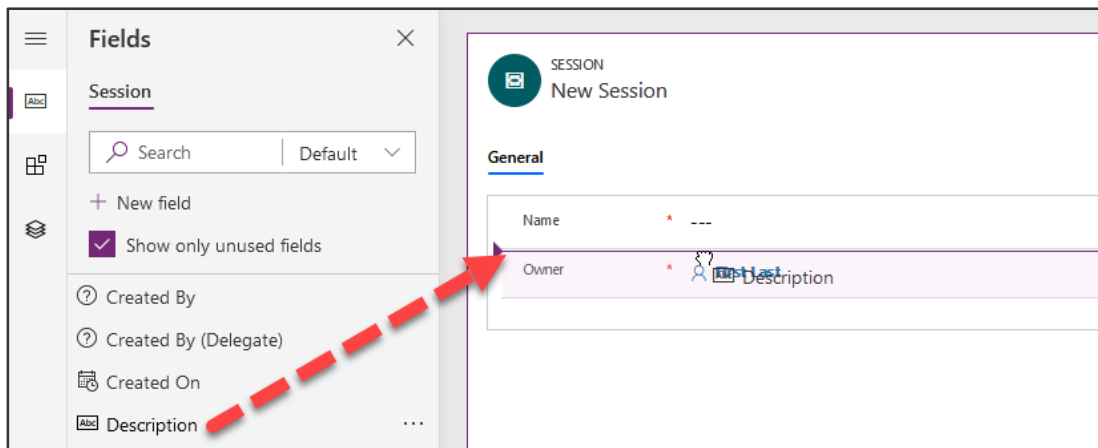
Forms:

Forms provide the user interface that people use to interact with the data they need to do their work. It's important that the forms people use are designed to allow them to find or enter the information they need efficiently. You can create different types of forms like Quick Create, Quick View, Card, and a Main form

33. Select the **Forms** tab and click to open the **Main** form.



34. Drag the **Description** field and place it below the **Name** field.



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

SESSION
New Session

General

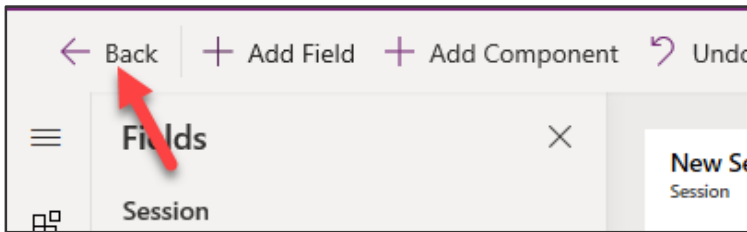
Name	*	---
Description		---
Session Status		---
Track	*	---
Start Time		---
End Time		---
Speaker		---
External Speaker		---
Venue		---
Capacity		---
ADA Requirements		---
A/V Requirements		---
Room Setup		---
Owner	*	AIAH User

36. Click **Save**.

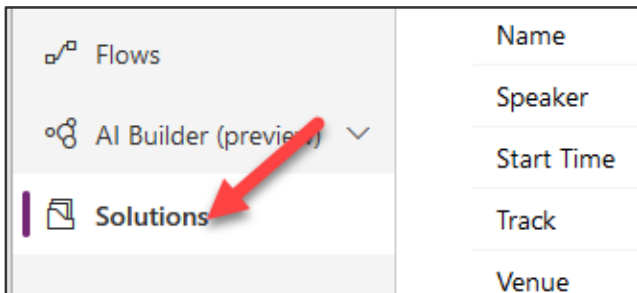
Save | Publish

Form
Information

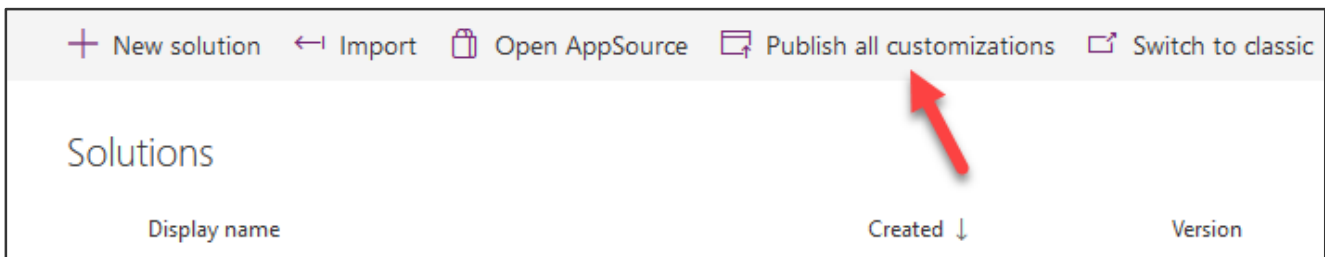
37. Click **Publish** and wait for the publishing to complete.
38. Return to the Power Apps maker using the **<- Button**.



39. Select **Solutions**.



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



Exercise 2 Create Conference Admin App

In this exercise, you will create the model-driven conference administration application.

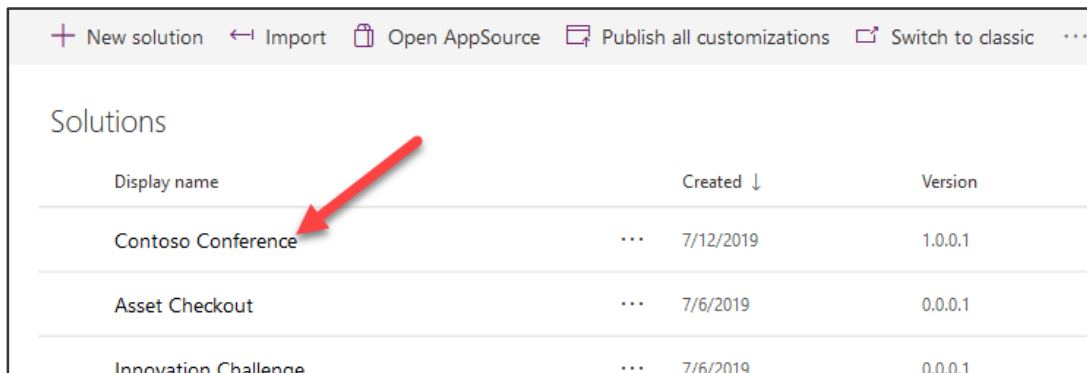
The model-driven apps are built by composing multiple page types and components using several focused designers. Model-driven app design is an approach that focuses on adding dashboards, forms, views, and charts to your apps.

Model-driven apps use a component-focused approach to develop the app. When developing canvas apps, you have complete control over the appearance and behavior of your app, **whereas with model-driven apps, the layout is mainly based on the components that you add to the app.**

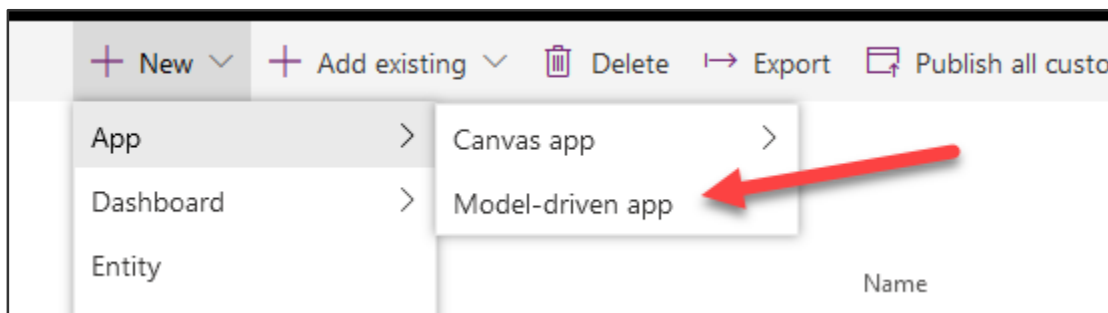
Model-driven apps are fully responsive so a single definition works from web to tablet to mobile devices. This is different from the canvas apps which need to choose the mobile vs. tablet when defining the app.

Task 1 – Create the model-driven app

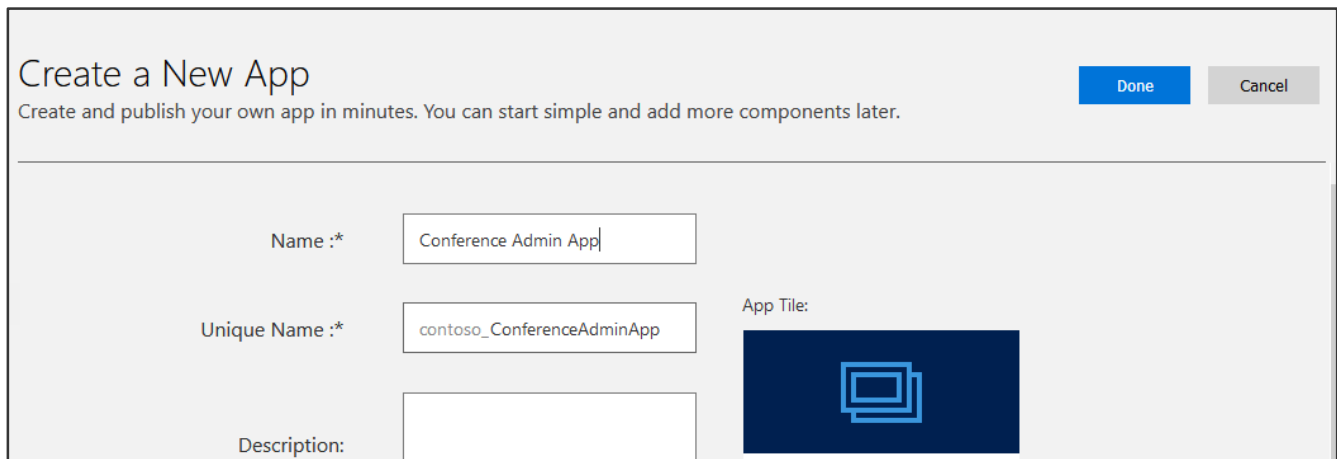
1. Navigate to <https://make.powerapps.com/> and make sure you are in the correct environment.
2. Select **Solutions** and click to open the **Contoso Conference** solution.



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

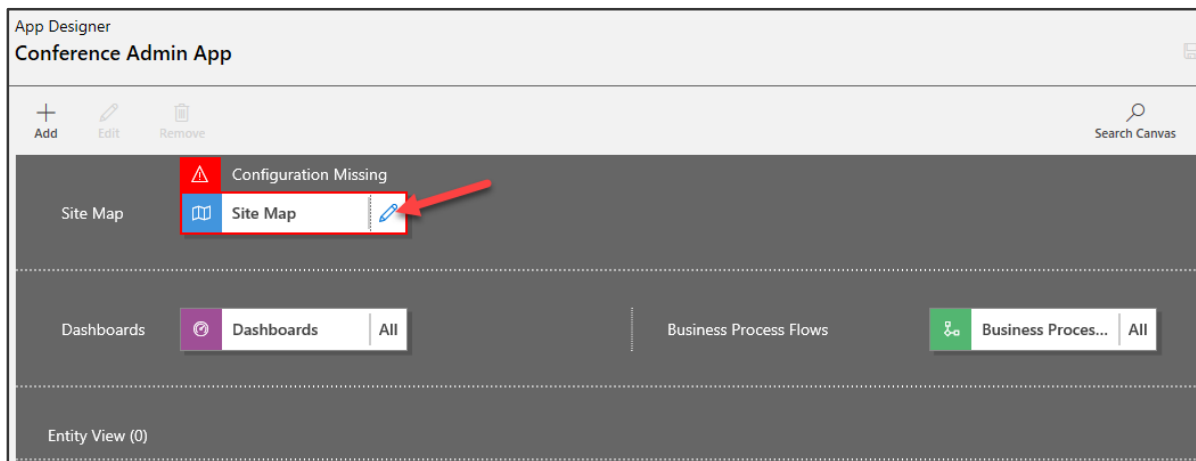


4. Enter **Conference Admin App** for Name and click **Done**.

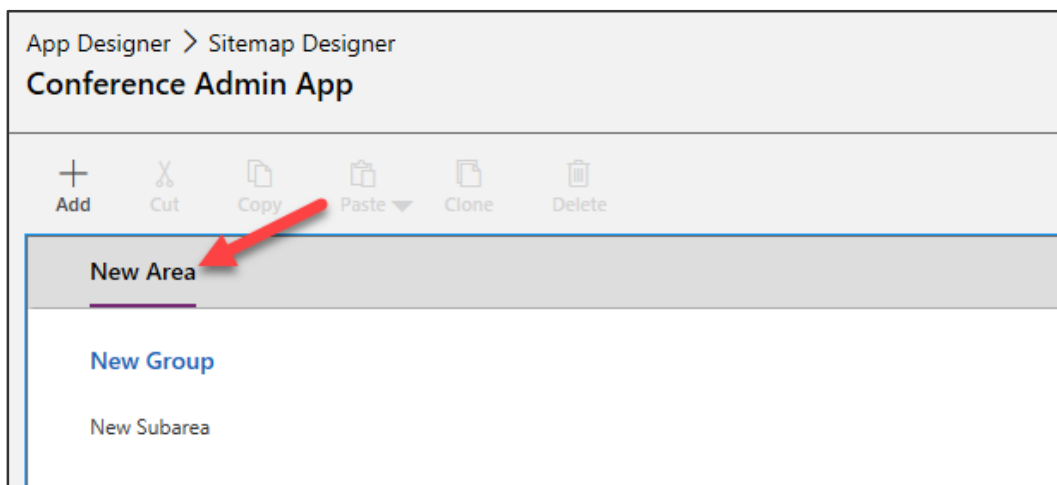


5. Click Edit **Site Map**.

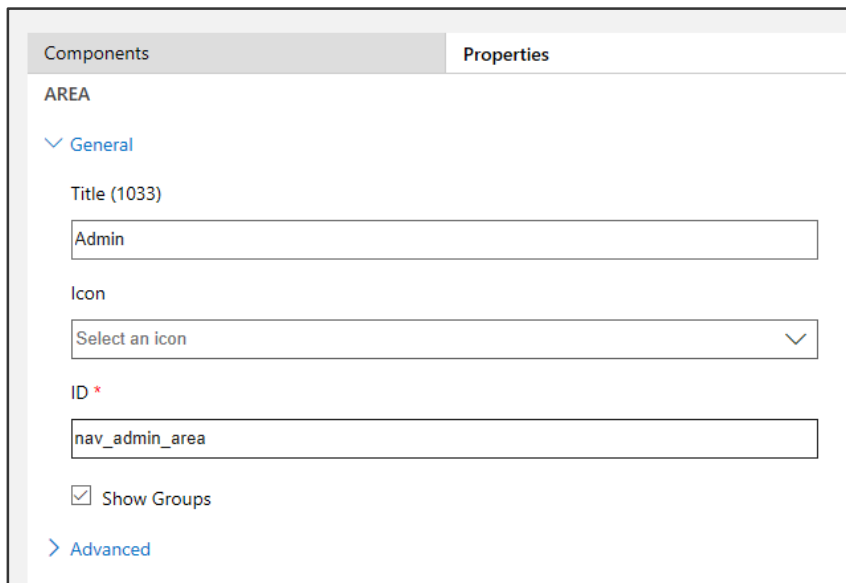
It will include a sitemap that defines the custom navigation users will use to navigate between the components (Entity views, Dashboards and other visual components)



6. Click to select the **New Area**.



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



The screenshot shows the 'Properties' pane for an 'AREA' component. The 'General' tab is selected. The 'Title (1033)' field contains 'Admin'. The 'Icon' field is a dropdown menu with 'Select an icon' and a downward arrow. The 'ID *' field contains 'nav_admin_area'. There is a checked checkbox for 'Show Groups'. A link for 'Advanced' properties is at the bottom.

Components Properties

AREA

General

Title (1033)

Admin

Icon

Select an icon

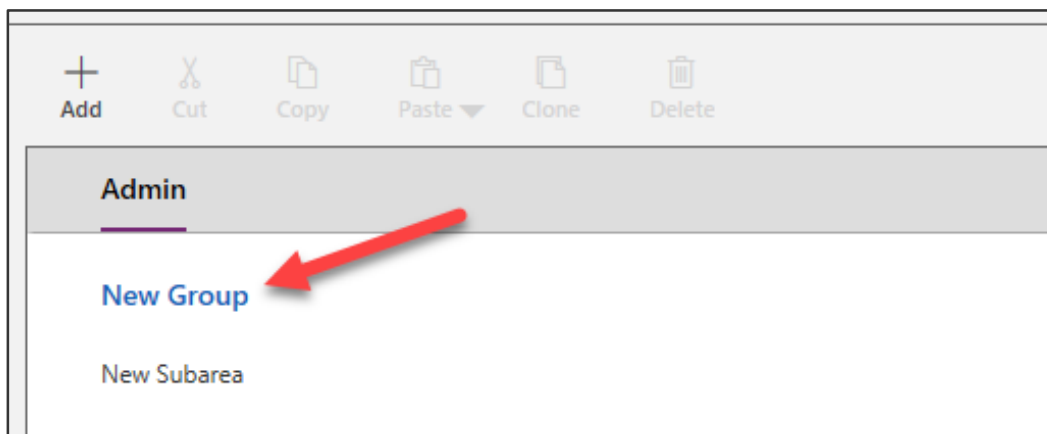
ID *

nav_admin_area

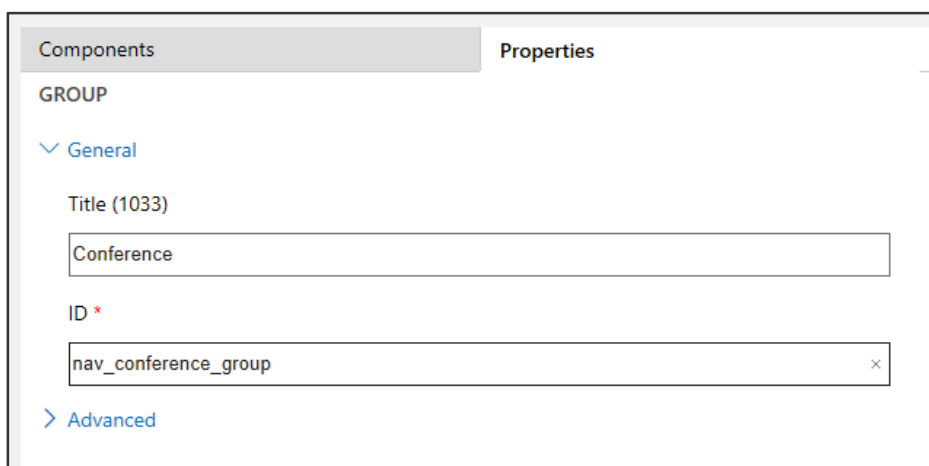
☒ Show Groups

Advanced

8. Click to select the **New Group**.



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



The screenshot shows the 'Properties' pane for a 'GROUP' component. The 'General' tab is selected. The 'Title (1033)' field contains 'Conference'. The 'ID *' field contains 'nav_conference_group'. There is a link for 'Advanced' properties at the bottom.

Components Properties

GROUP

General

Title (1033)

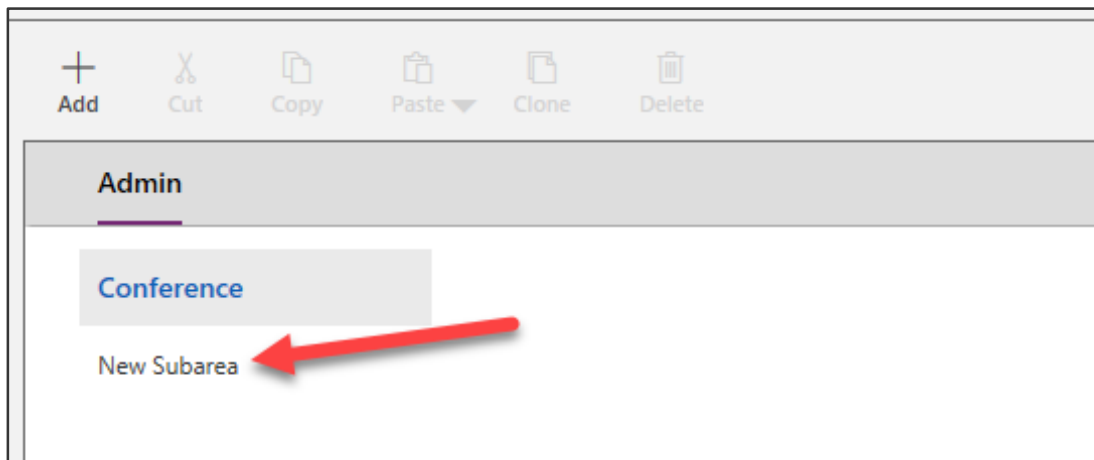
Conference

ID *

nav_conference_group

Advanced

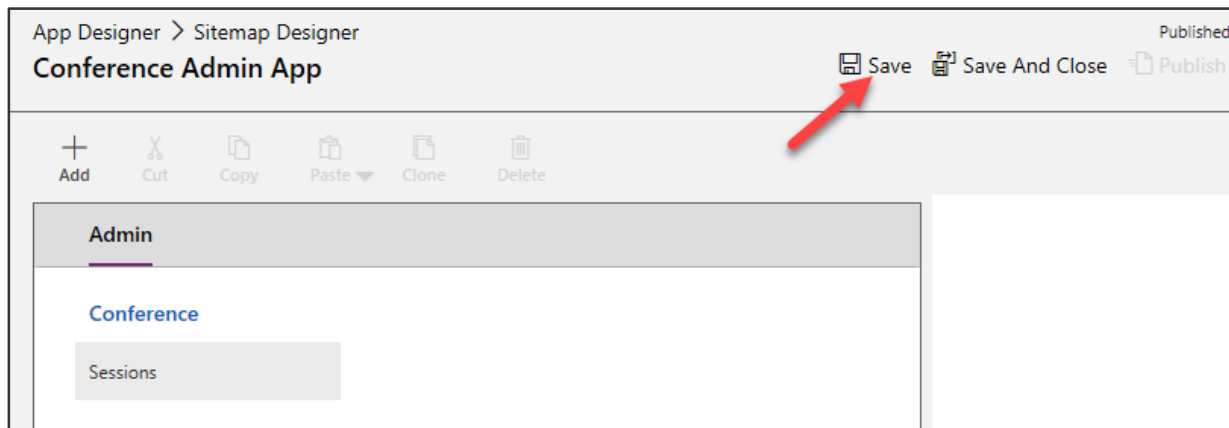
10. Click to select the **New Subarea**.



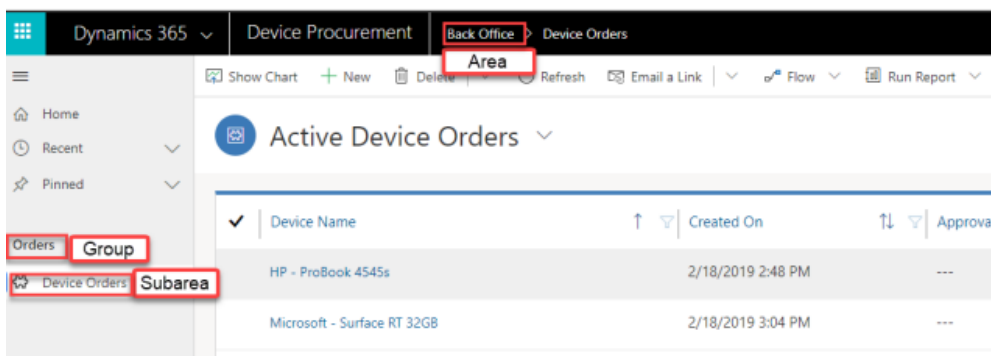
11. Go to the **Properties** pane and select **Entity** for **Type**, **Session** for **Entity**, and **nav_session_subarea** for **ID**.

A screenshot of the Power Apps Properties pane. The 'Components' tab is selected, and the 'SUB AREA' component is chosen. The 'General' tab is active, showing various configuration fields. The 'Type' field is set to 'Entity'. The 'Entity' field is set to 'Session'. The 'URL' field is empty. The 'Default Dashboard' field is set to 'Select a dashboard'. The 'Title (1033)' field is empty. The 'Icon' field is set to 'Use Default Image'. The 'ID' field is set to 'nav_session_subarea'. There is a checkbox for 'Parameter Passing' which is currently unchecked.

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



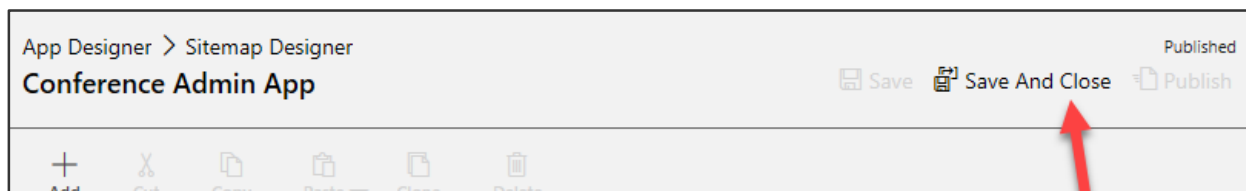
13. Click **Publish** and wait for the publishing to complete.



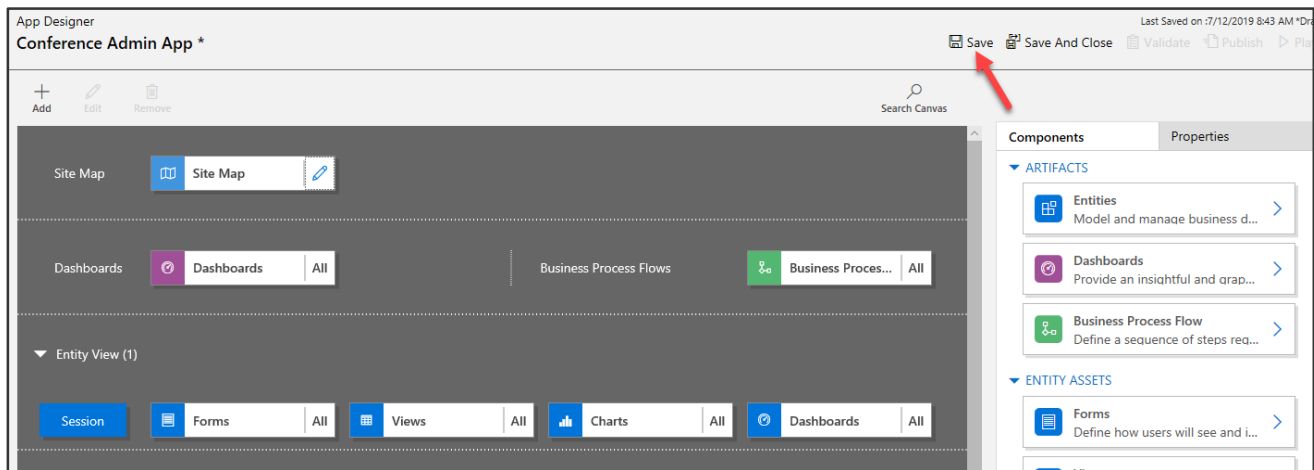
If you were building a more complex application, you could use Areas to group together related items making it easy for the user to navigate between the components.



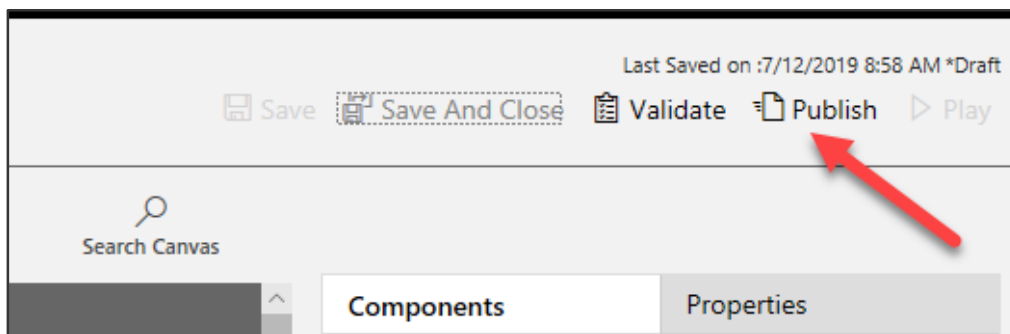
14. Click **Save and Close** to close the Site Map editor.



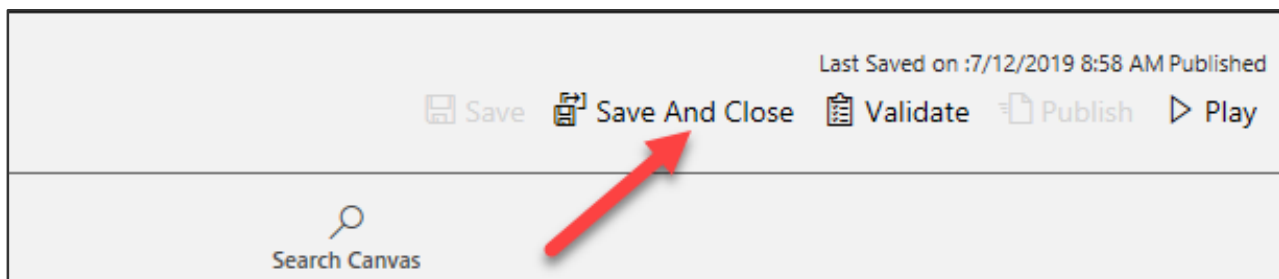
15. Your model-driven application should now look like the image below. Click **Save**.



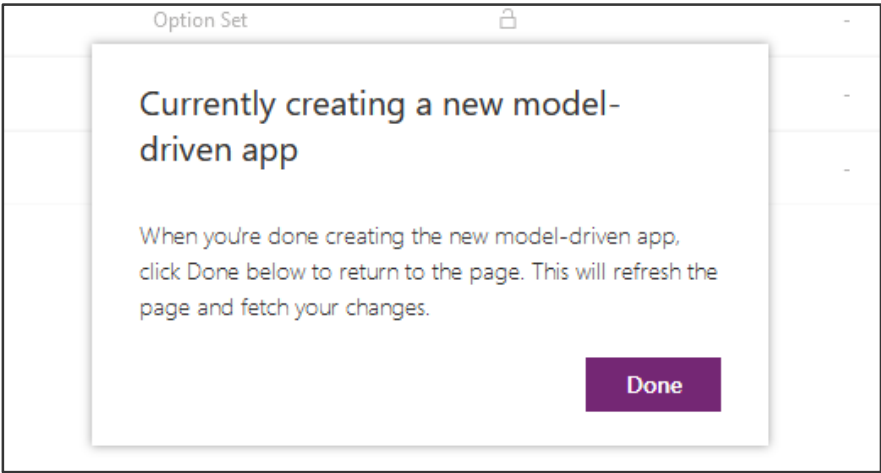
16. Click **Publish** to publish the application.



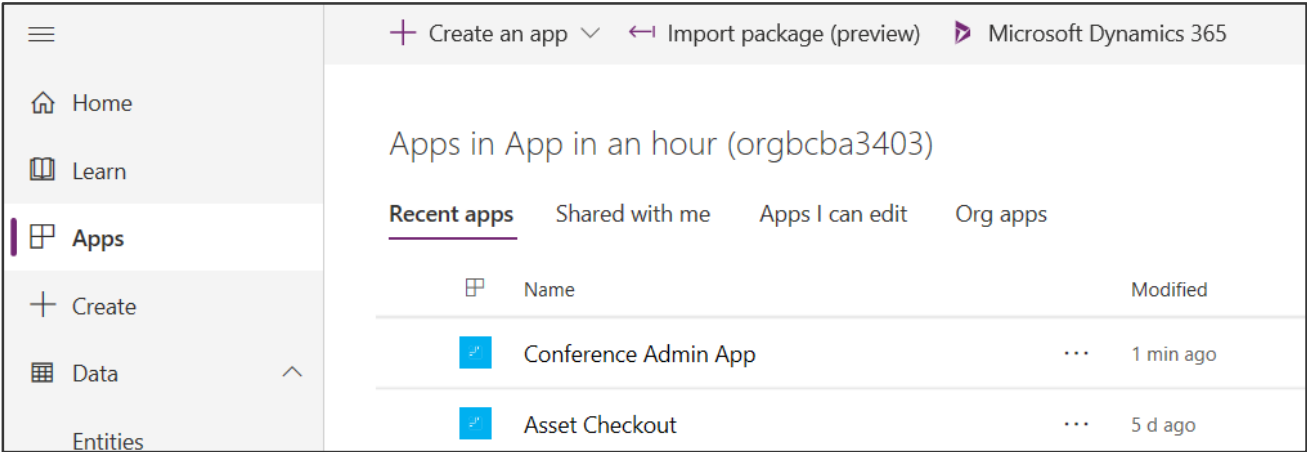
17. Click **Save and Close** to close the model-driven application designer.



18. Click **Done**.



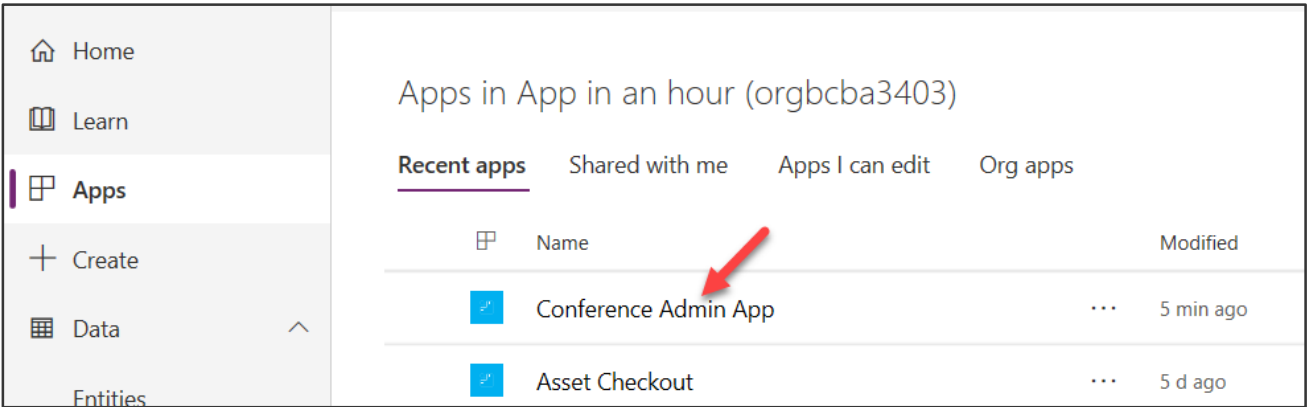
19. Your new application should now be listed under **Apps**.



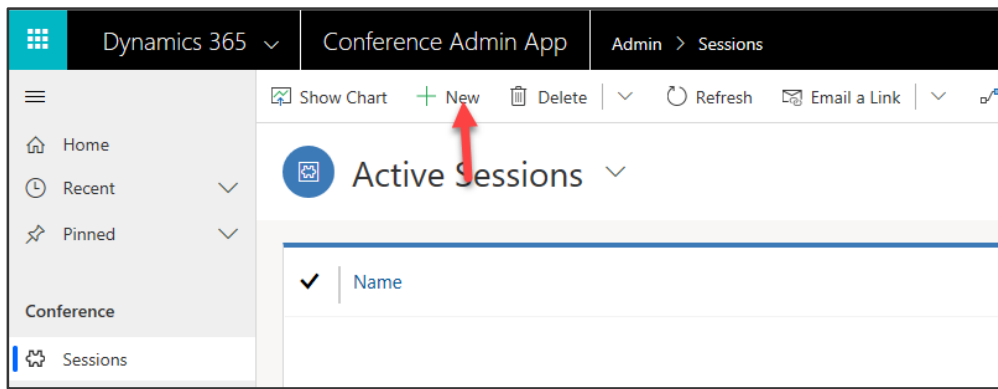
Task 2 - Test the Model-Driven Application

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**.



- 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**.

 This screenshot shows the 'Common Data Service' session form. The 'General' tab is selected. The form fields are:

Name	* Common Data Service		
Description	Common Data Service lets you securely store and manage data that's used by business applications		
Session Status	---		
Track	* CDS		
Start time	10/31/2019	10:00 AM	⌚
End Time	10/31/2019	11:00 AM	⌚

- Click on the **Venue** lookup and click **+ New Venue**.



 This screenshot shows the 'Venue' lookup field with its dropdown menu open. The dropdown contains a search bar 'Look for Venue', a 'Type to search' prompt, and a '+ New Venue' button (highlighted with a red arrow). Other fields visible include 'External Speaker' (set to ---) and 'Capacity'.

- Provide the information below and click **Save and Close**.



Room: Microsoft Event Center Conference Room Red

Address: 16070 NE 36th Way, Redmond, WA 98052

- Click on the **Venue** lookup and select the venue you created.

External Speaker	---
Venue	 Microsoft Event Center Conference Room Red 
Capacity	---



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

Speaker	 MOD Administrator
External Speaker	---
Venue	 Microsoft Event Center Conference Room Red

8. Click on **Session Status** and Select **Published**.

Name	* Common Data Service
Description	Common Data Service lets you securely store and manage data that's used by business applications
Session Status	Published
Track	* CDS

9. Click on the **Speaker Name**.

Speaker	 MOD Administrator
External Speaker	---
Venue	 Microsoft Event Center Conference Room Red

10. Locate the **Title** field and enter **Program Manager**.

User Information

First Name * First

Last Name * Last

Title Program Manager

Primary Email *

11. Click on the entity Image.

Save & New + New Connect Refresh Reassign Records Join

User: User ▾

FL First Last

Summary Details Administration Related

12. Click **Upload Image**.

Notes, Activities or Posts.

Choose Image ×

Upload an image from your device, or use the default image

FL

Current Image

Upload Image

13. Select the Power Apps image located in the resources folder and click **Open**.

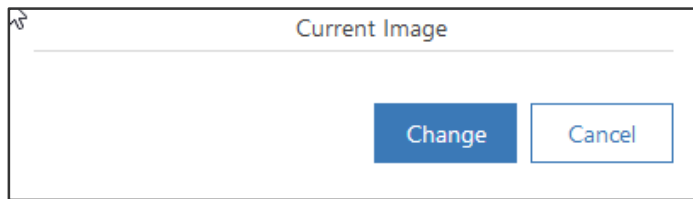
PowerApps.png

me: ▾

Image Files (*.jpe;*.jpg;*.jpeg;*.*) ▾

Open Cancel

14. Click **Change**.



15. 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.

Name	Status	Track	Description
Advanced Power Automate	Published	Power Automate	Learn advanced Flow skills using Microsoft Power Automate
Intermediate Power BI	Published	Power BI	Simplify Your Data. Create Custom Dashboards & Reports
Introduction to Power Apps	Rejected	Power Apps	Power Apps lets pro developers programmatically interact with data and metadata.

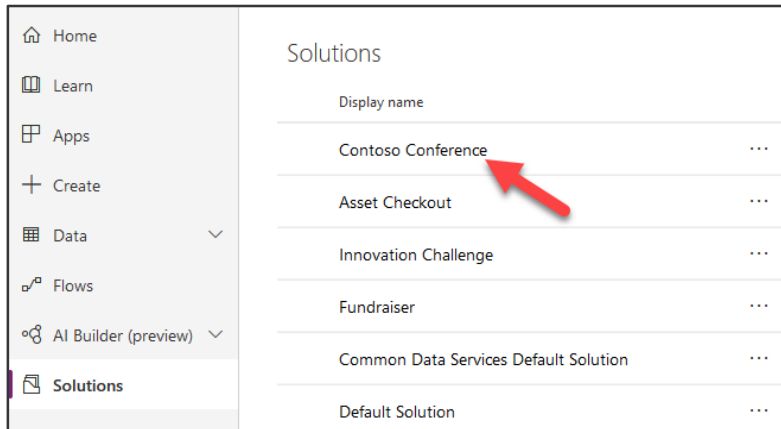
16. Close the Conference Admin App browser tab/window.

Exercise 3 Create Conference Attendee App

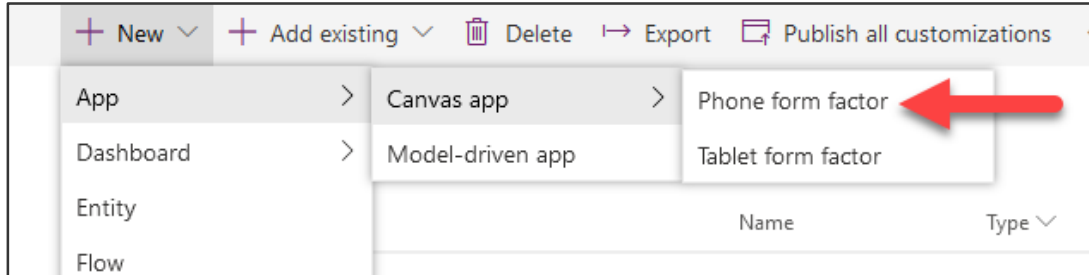
In this exercise, you will create the conference canvas application that the internal conference attendees will use.

Task 1 – Setup the app

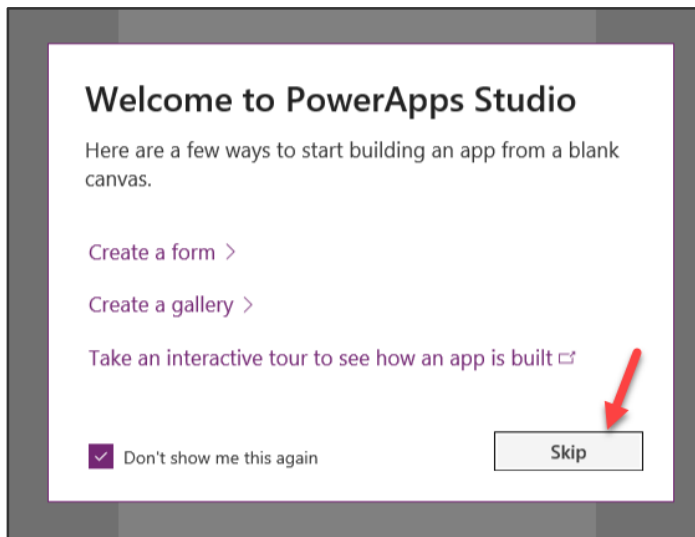
1. Navigate to <https://make.powerapps.com/> and make sure you are in the correct environment.
2. Select **Solutions** and open the **Contoso Conference** solution.



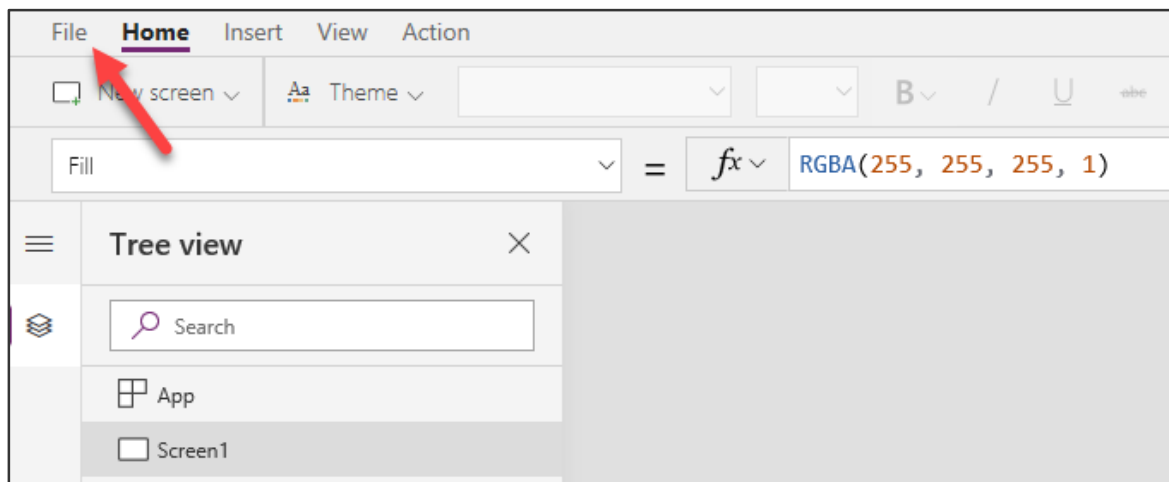
3. Click **New | App | Canvas | Phone form factor**.



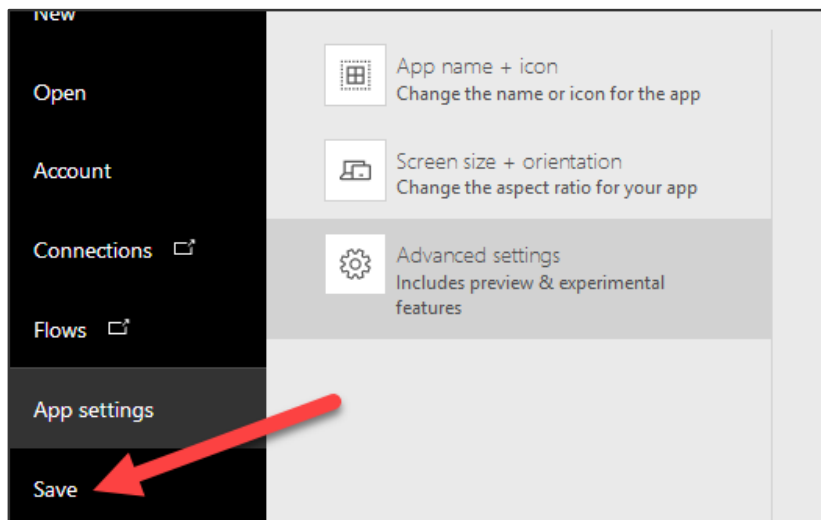
4. Check the **don't show me again** checkbox and click **Skip**.



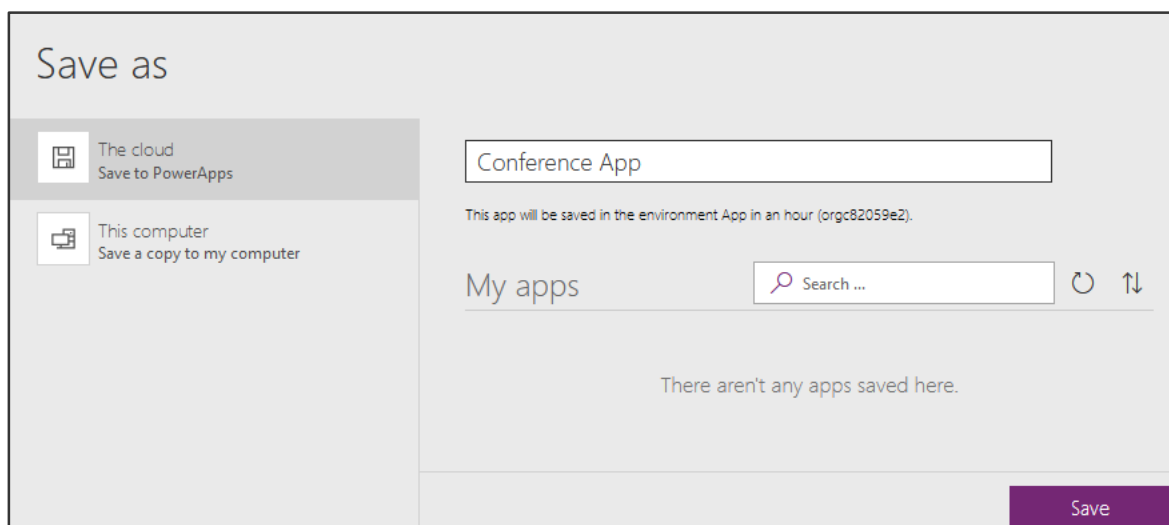
5. You will give your application a name and save it. Click **File**.



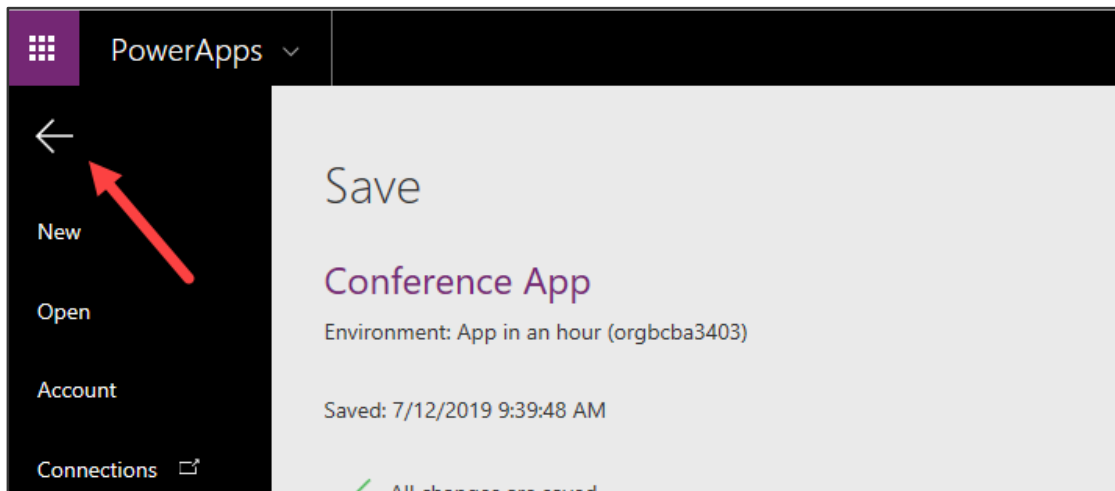
6. Select **Save**.



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

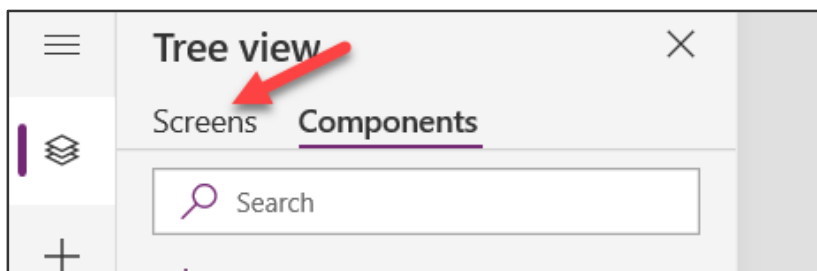


- Click on the **designer** back button.

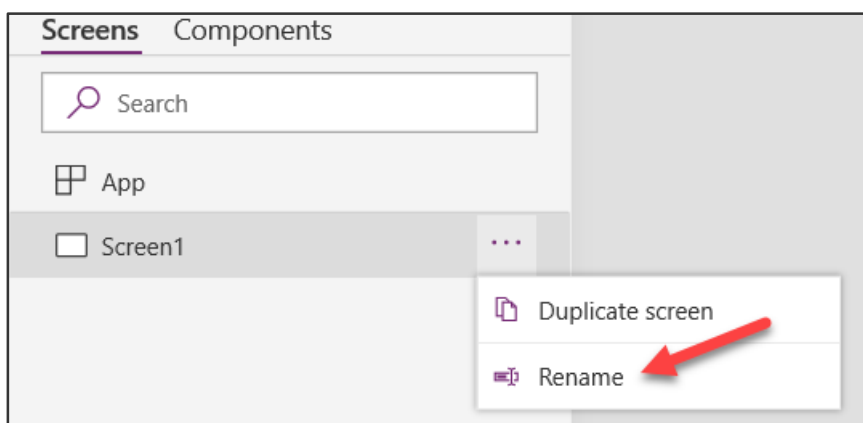


Task 3 – Setup the home screen

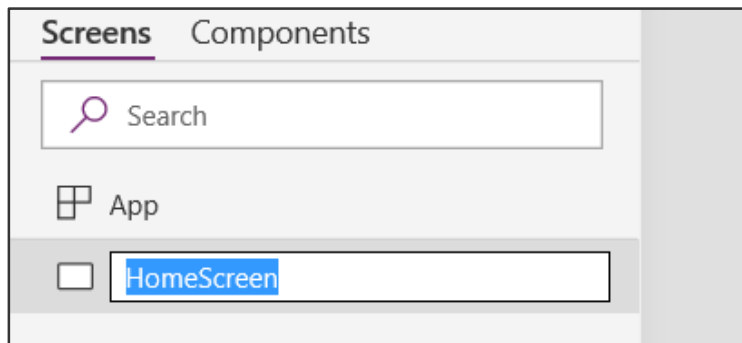
- Select the **Screens** tab.



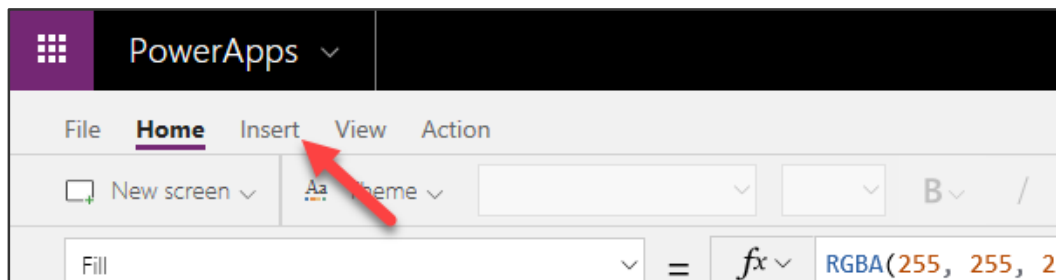
- Click on the ... button of **Screen1** and select **Rename**.



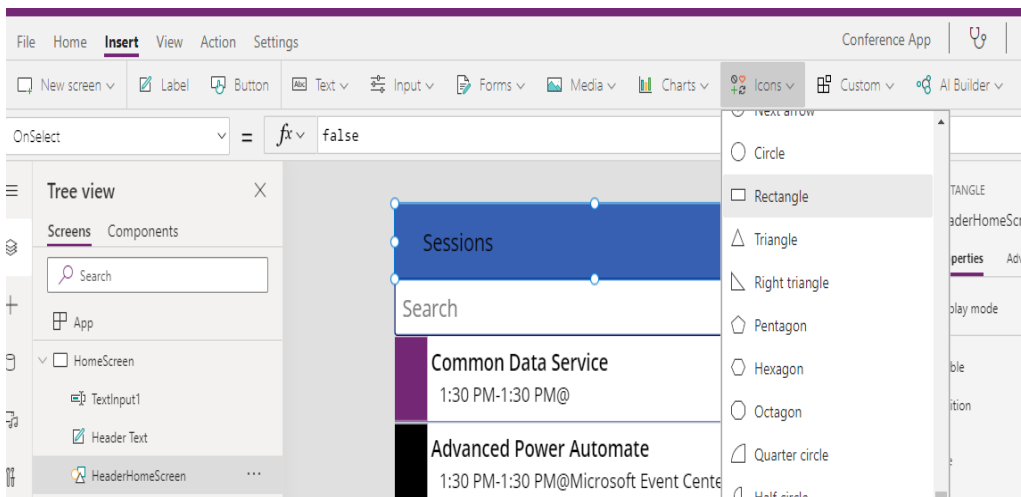
- Rename it **HomeScreen**.



4. Select the **Insert** tab.



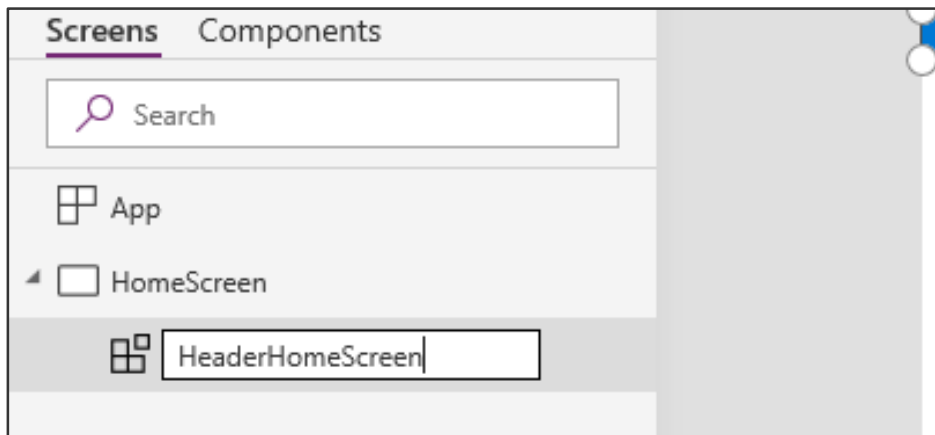
5. Click **Icons** and select **Rectangle** icon.



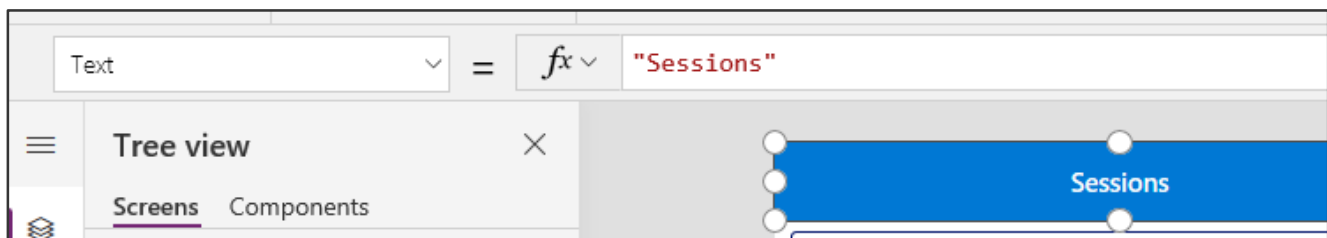
The **Rectangle** component should be added to the screen. Drag & adjust to the screen with Blue colour.

Select the **Insert** tab again to select the **label**.

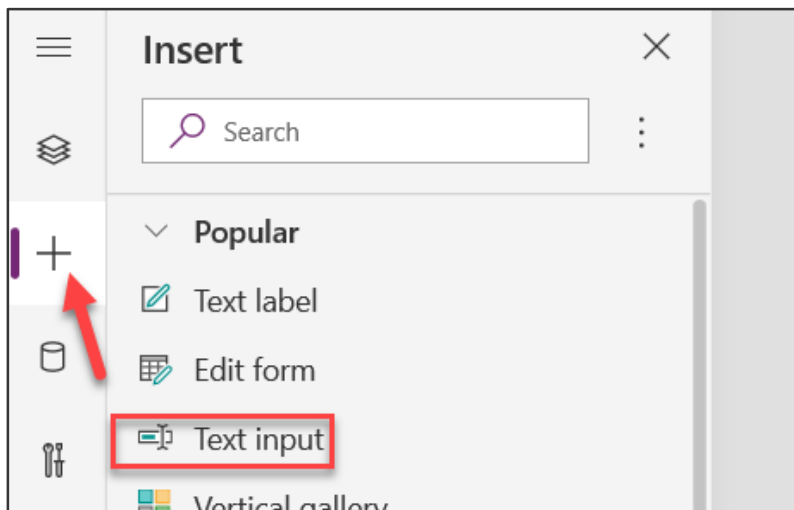
6. Rename the **label** to **HeaderHomeScreen** & adjust the label as shown.



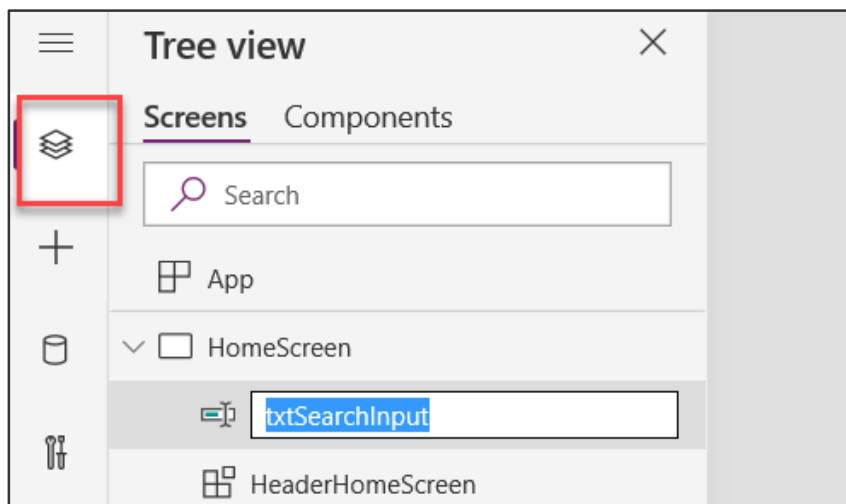
7. Select **HeaderHomeScreen** and change the **Text** value to **Sessions**.



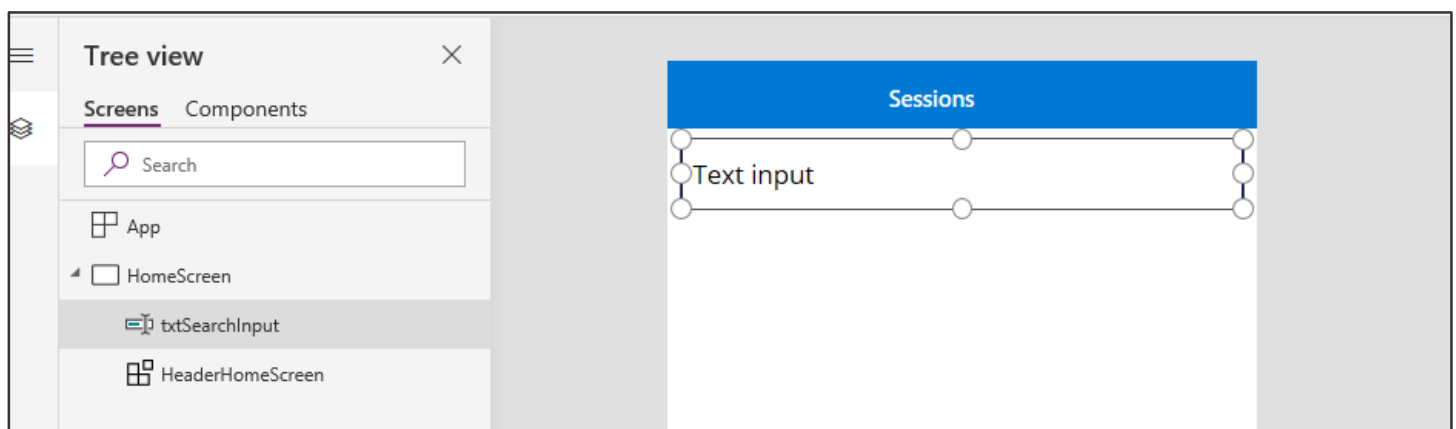
8. Click on the + button and select **Text Input**.



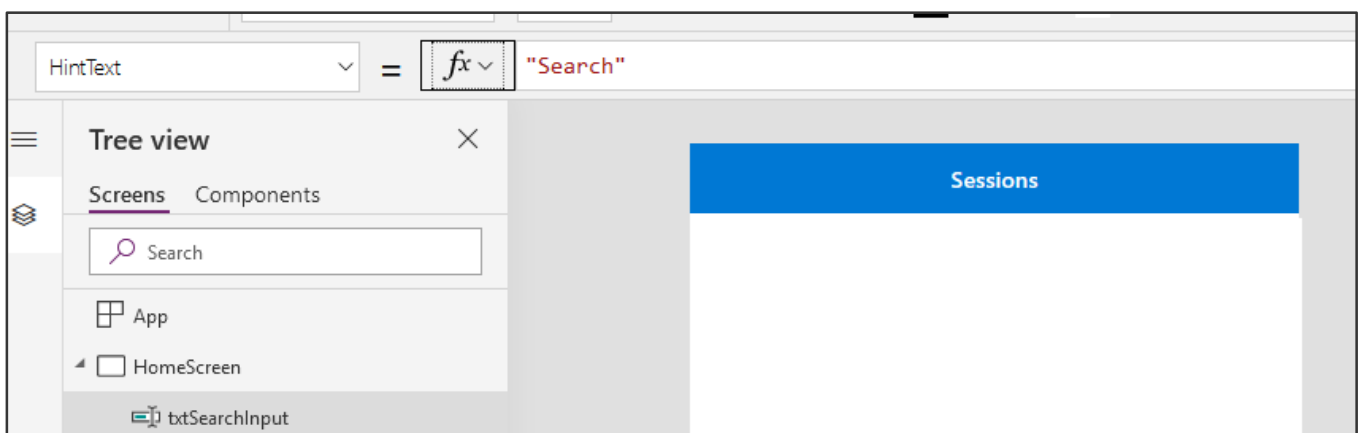
9. Select the Tree View and rename the text input **txtSearchInput**.



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

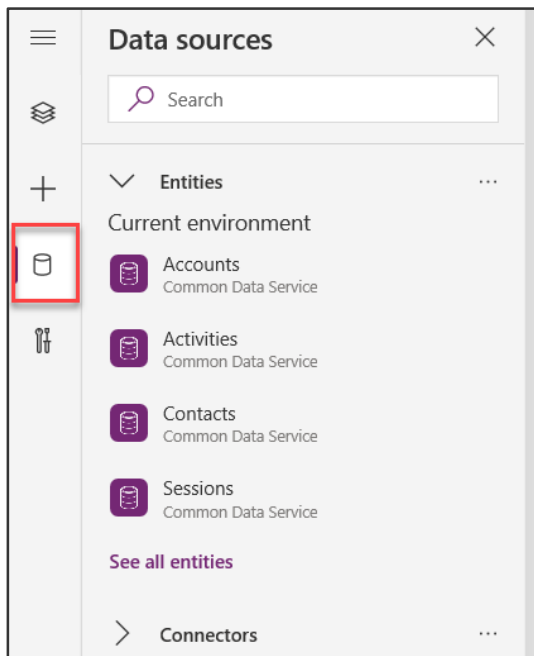


11. Change the **HintText** value to **Search**; and the **Default** text to ""

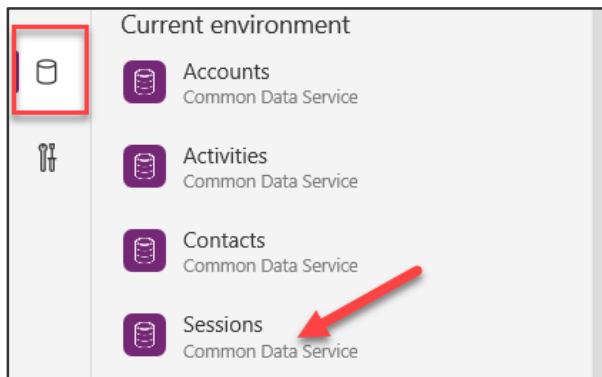


Task 4 – Add a list of sessions

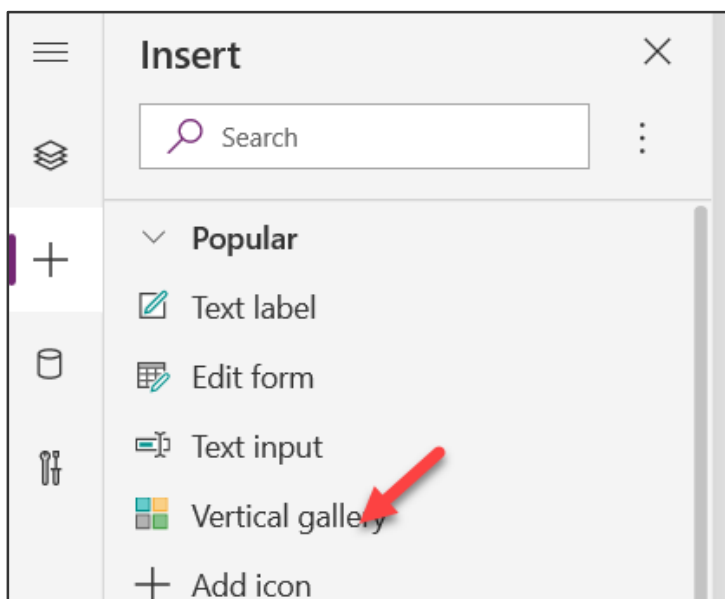
1. Select **Data Sources**, notice our CDS/Dataverse entities are already available.



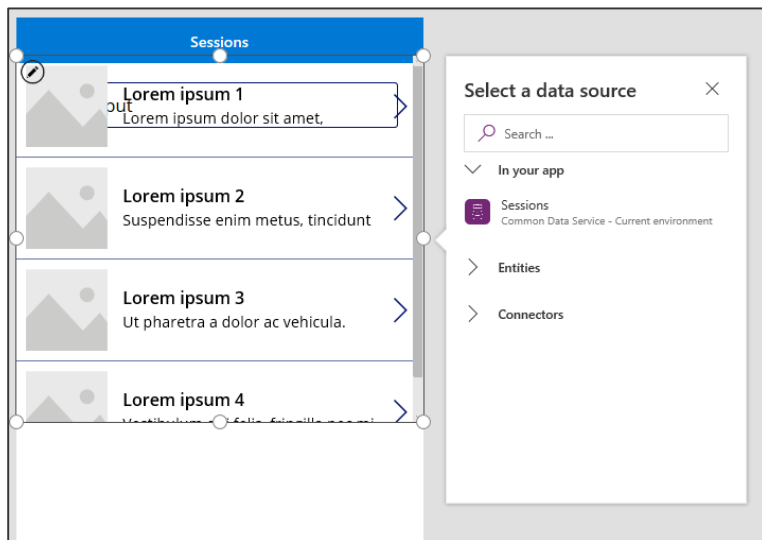
2. Select **Sessions** to connect it.



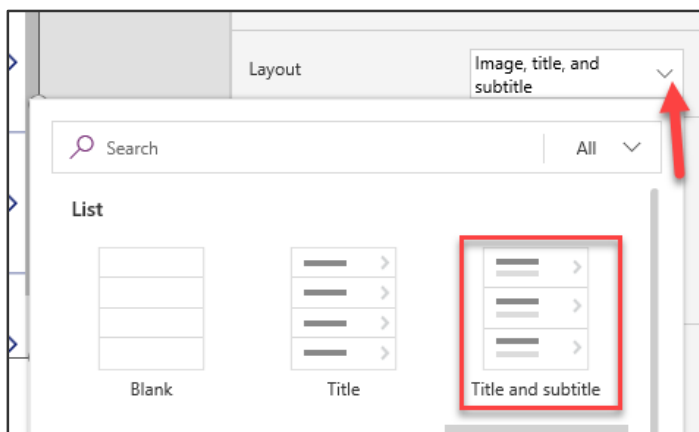
3. Click + and select **Vertical Gallery**.



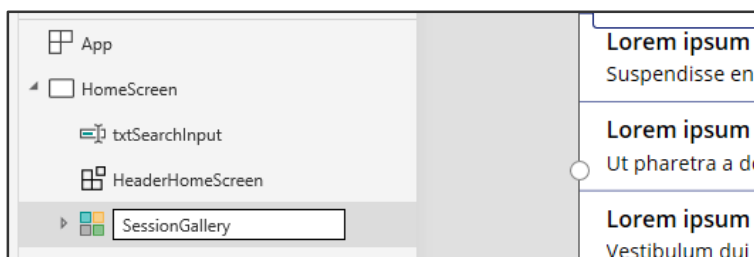
4. Close the **Data** pane.



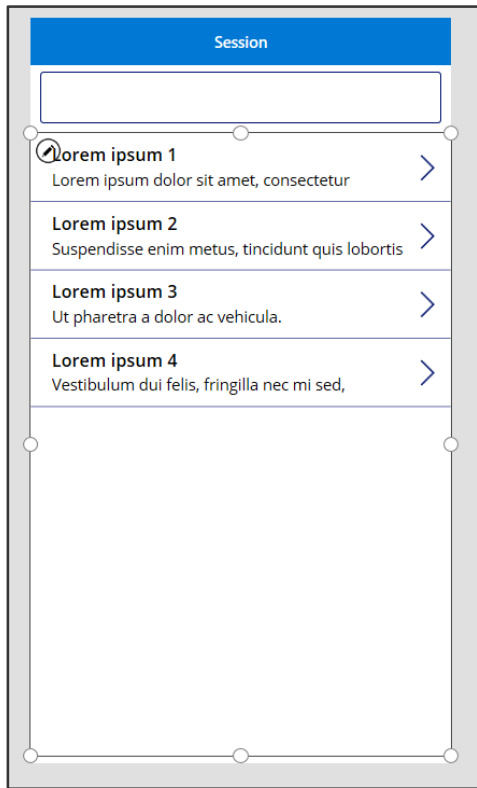
5. Click on the **Layout** dropdown and select **Title and Subtitle**.



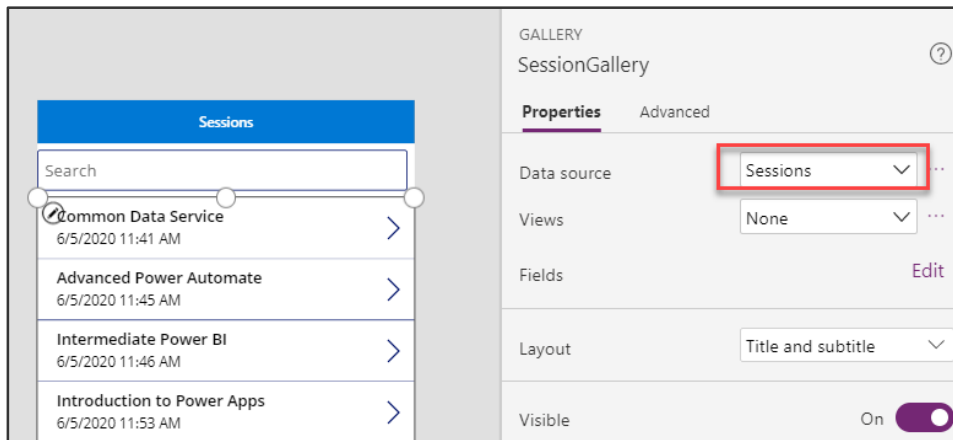
6. Select the **Tree View** and rename the gallery **SessionGallery**.



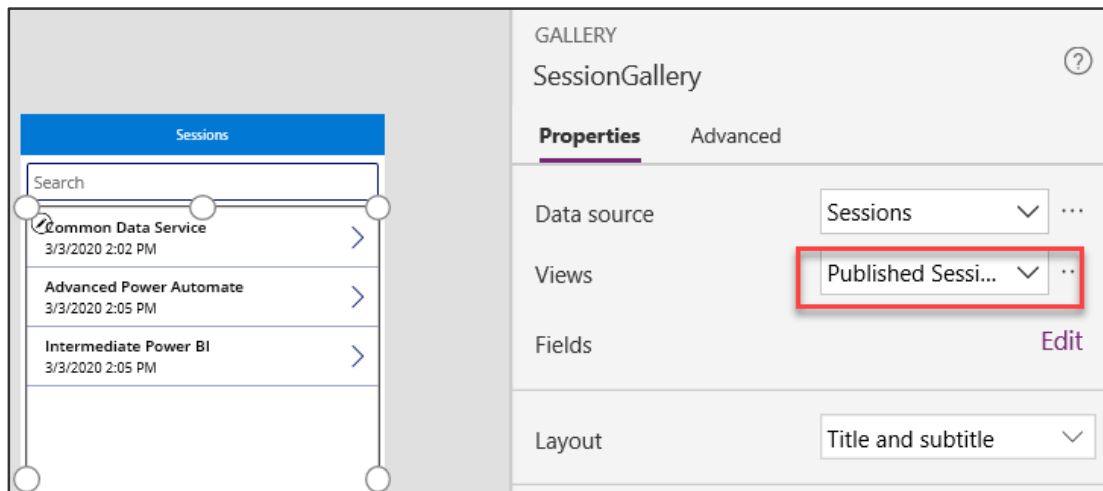
7. Resize and reposition the **SessionGallery** below the other items on the screen; as shown in the image below.



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

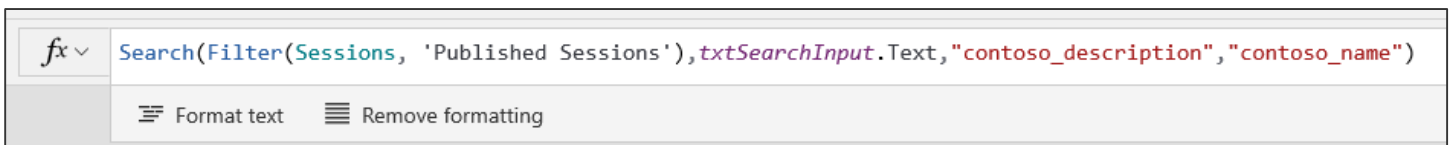


9. Now change the **Views** to **Published Sessions**; and now only our published sessions are shown.



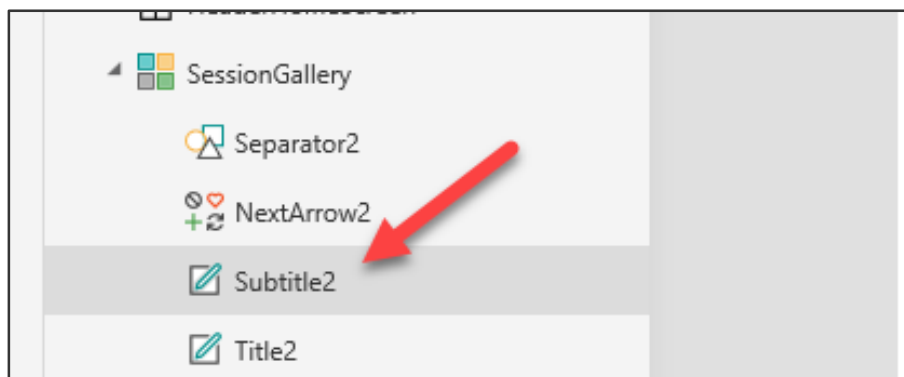
10. While this sets our data source for the gallery, we will now add the search functionality. We will search based on both session name and description. With the **SessionGallery** selected in the tree view, change the Items property to the following formula:"

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



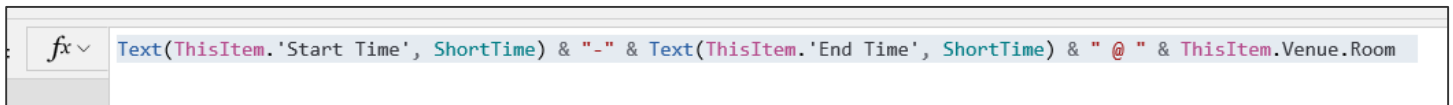
NOTE :All functions in Power Apps are case sensitive. As you start typing "User" you will see a drop-down of available choices. It is a good idea to pick from the autocomplete options.

11. Expand **SessionGallery** and select the **Subtitle**.

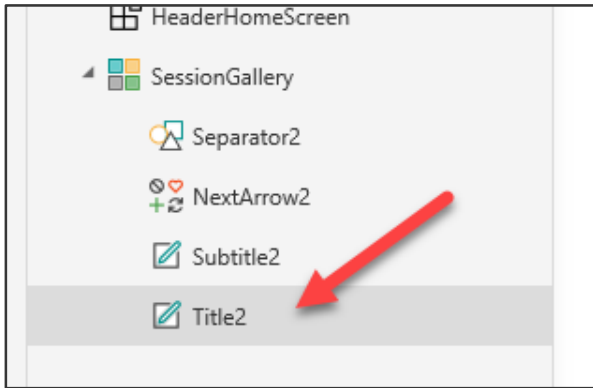


12. Set the **Text** value of the subtitle to the formula below.

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

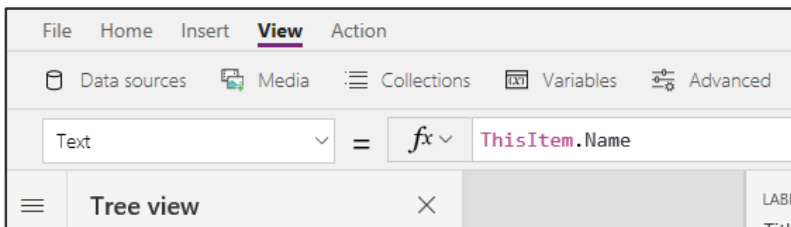


13. Select the **Title**.

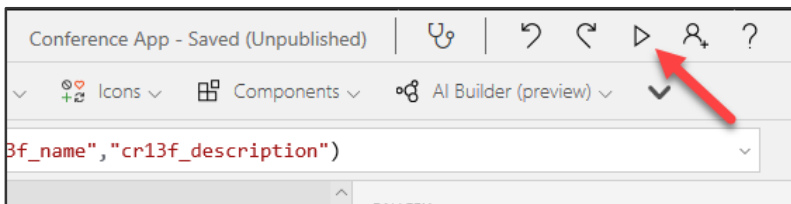


14. Change the **Text** value of the **Title** to the formula below.

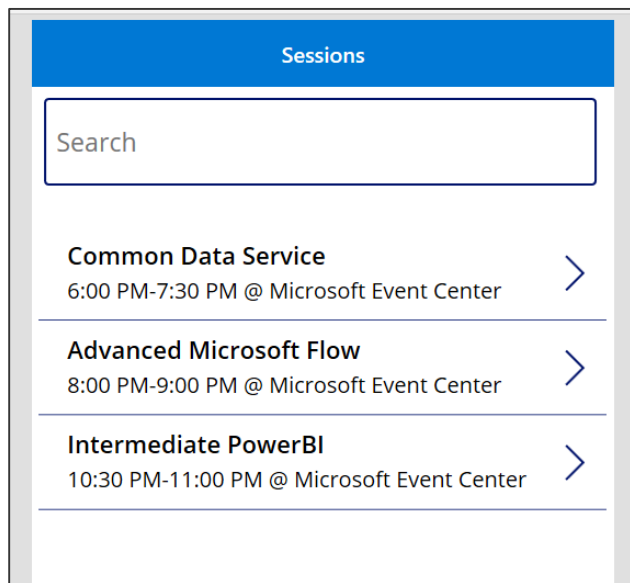
`ThisItem.Name`



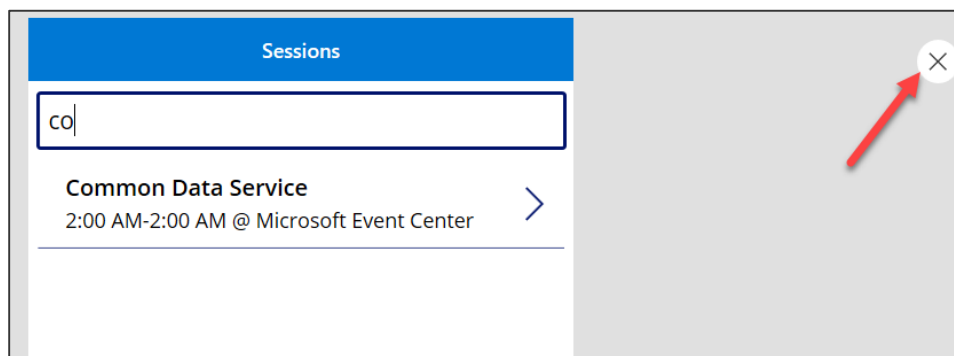
15. Click **Play**.



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



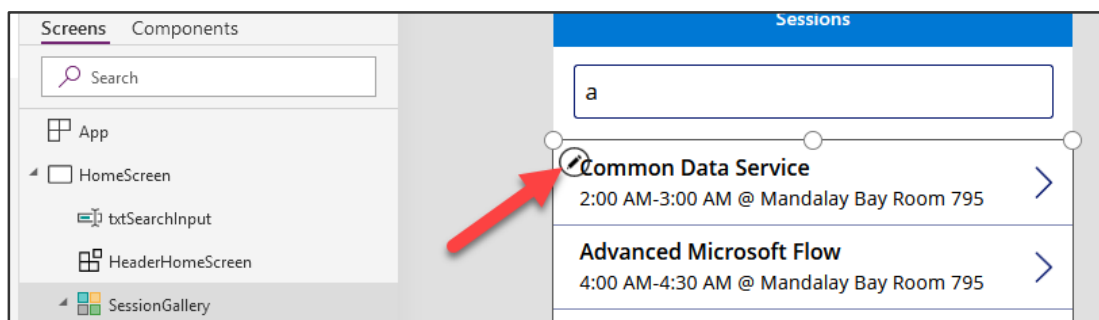
17. Close the preview.



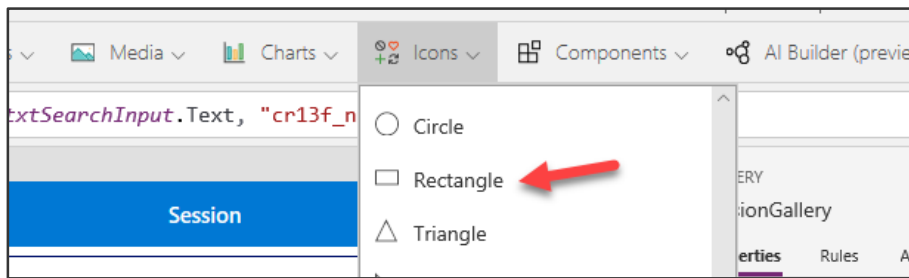
Task 5 – Color code the sessions

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

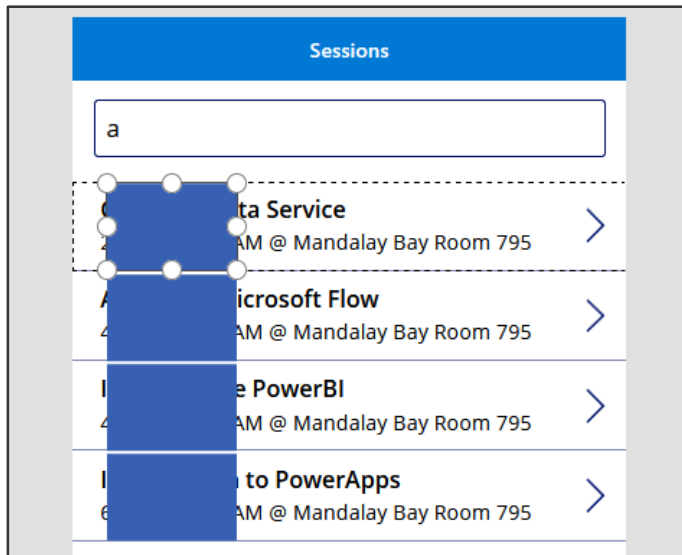
1. Select **SessionGallery** and click on the **Edit** button.



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

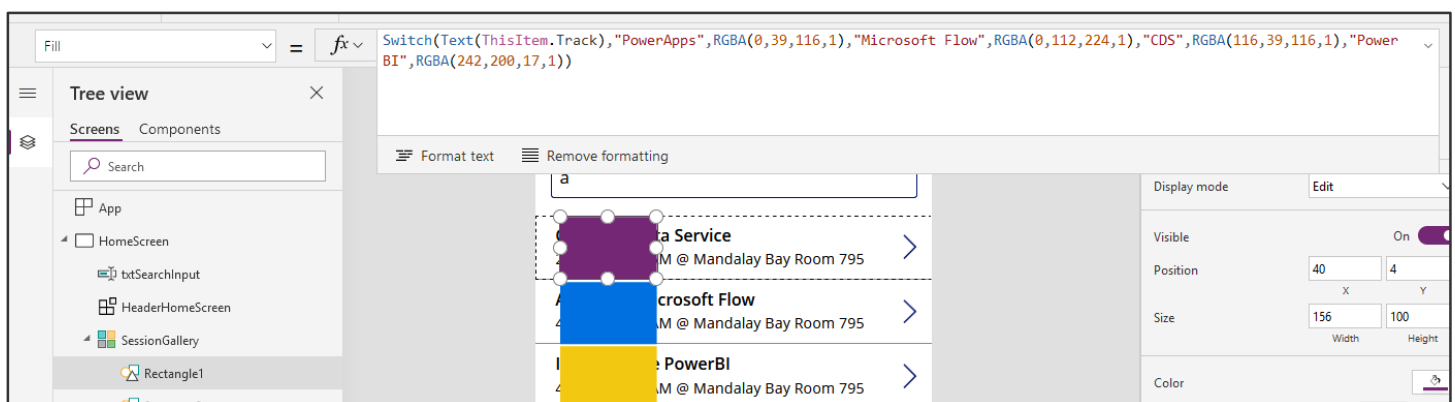


3. Rectangle should be added to the gallery.

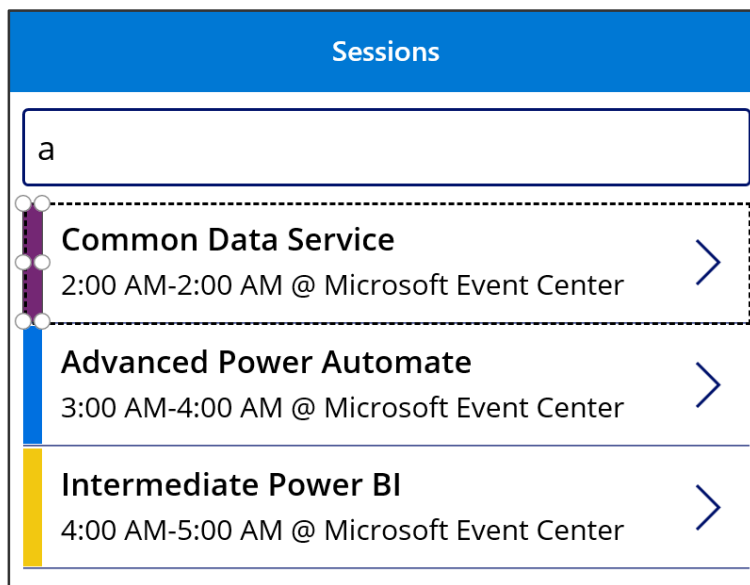


4. Set the **Fill** value of the rectangle to the formula below. This formula will show a different color for each session track.

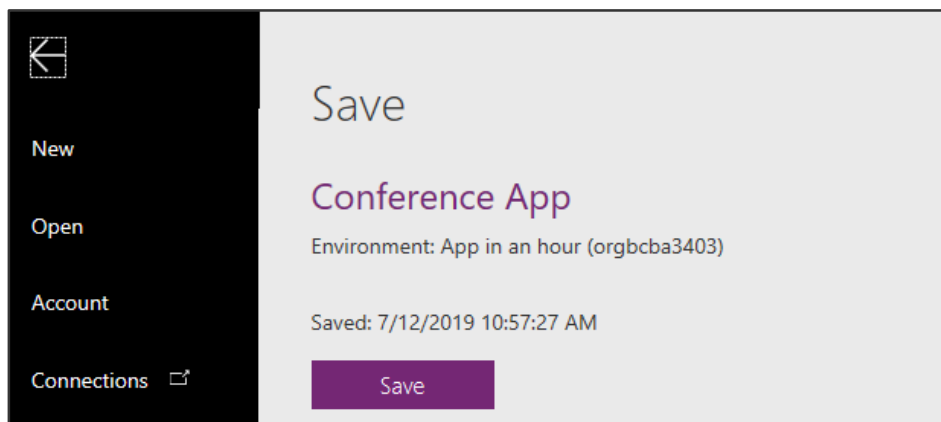
```
Switch(Text(ThisItem.Track), "PowerApps", RGBA(0,39,116,1), "Power Automate", RGBA(0,112,224,1), "CDS", RGBA(116,39,116,1), "Power BI", RGBA(242,200,17,1))
```



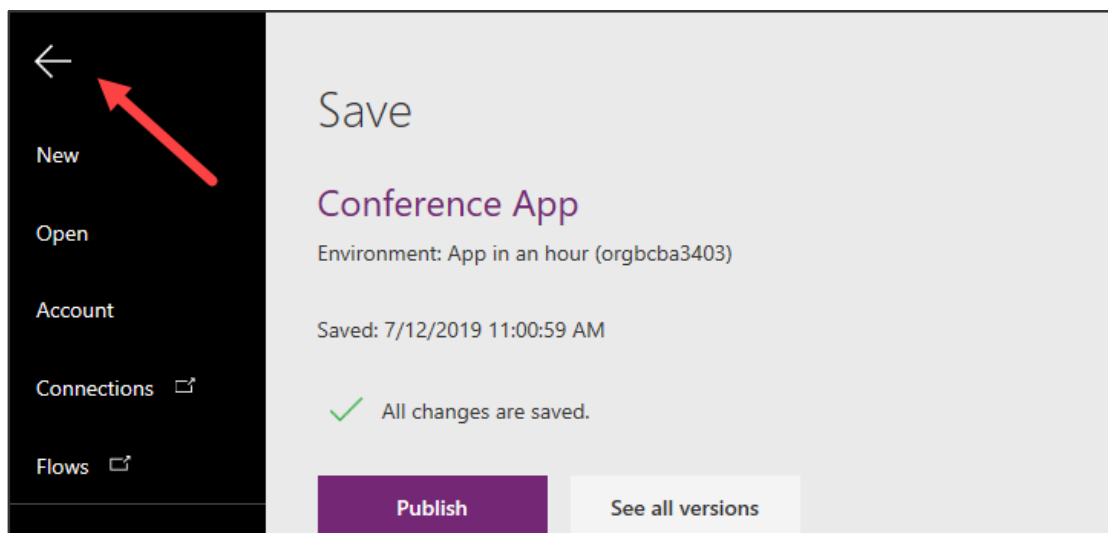
5. Resize and reposition the rectangle as shown in then image below.



6. Click **File** and **Save**.



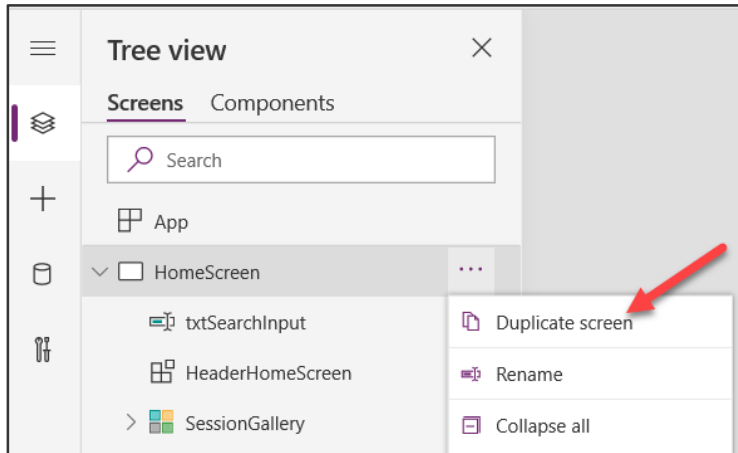
7. Click on the designer back button.



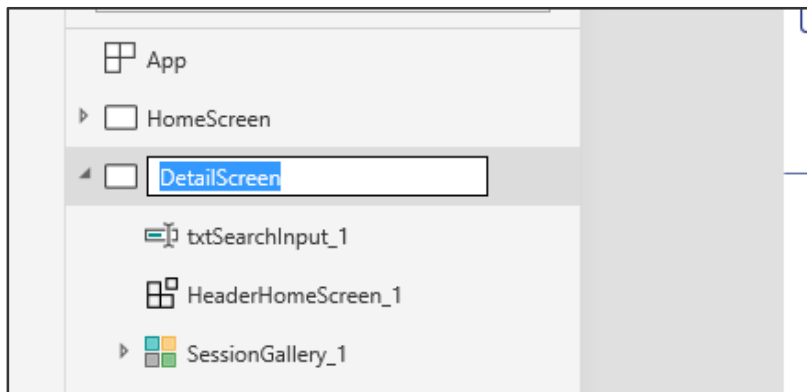
Task 6 - Add Session Details Screen

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

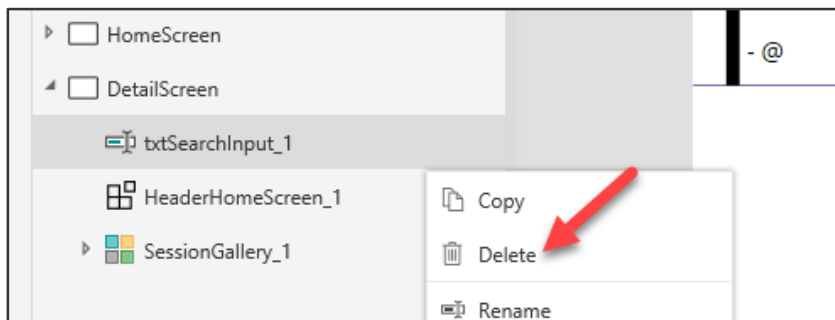
1. Click on the ... button of the **HomeScreen** and select **Duplicate Screen**.



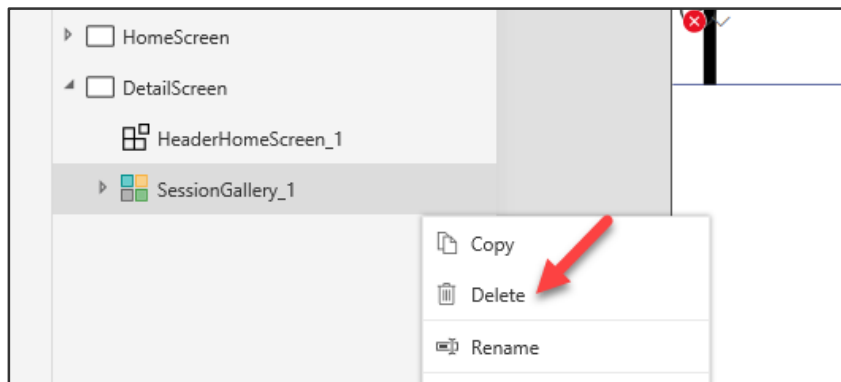
2. Rename HomeScreen_1 to **DetailScreen**.



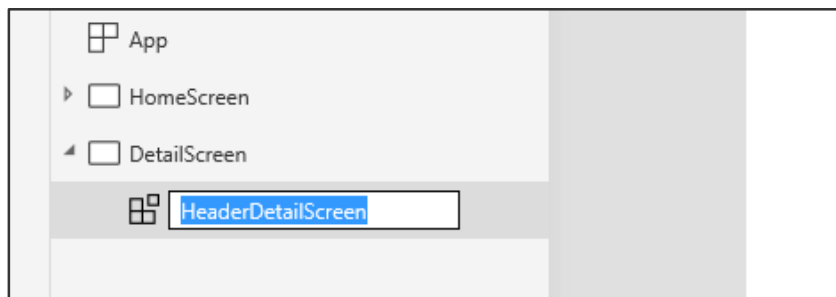
3. Delete **txtSearchInput_1**.



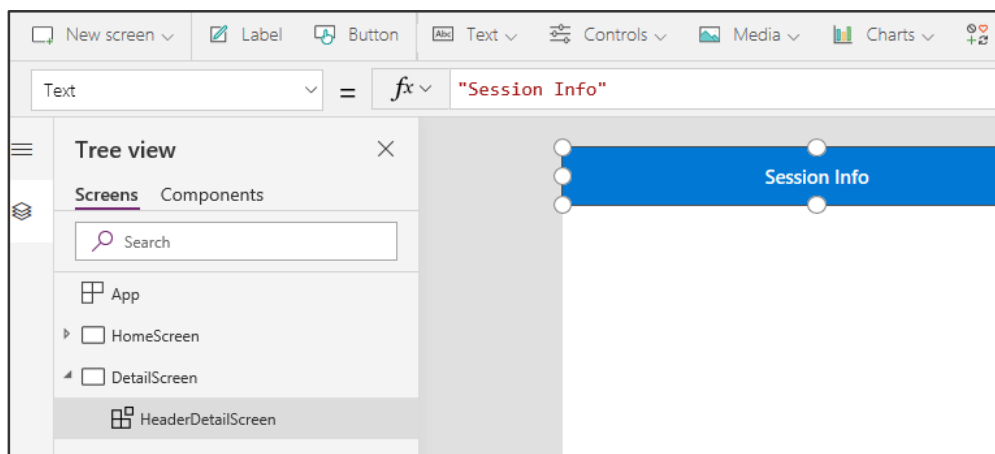
4. Delete **SessionGallery_1**.



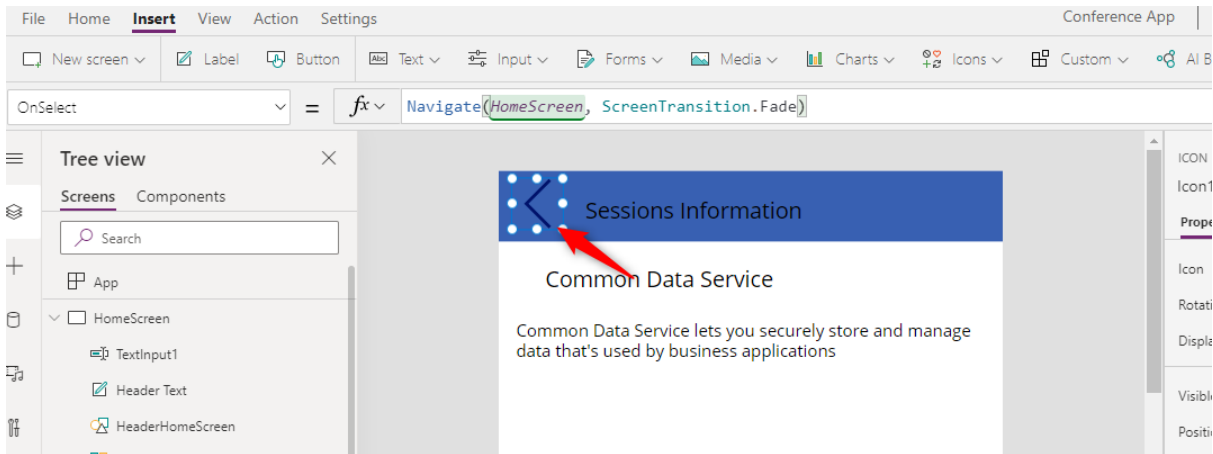
5. Rename **Label** to **HeaderDetailScreen**.



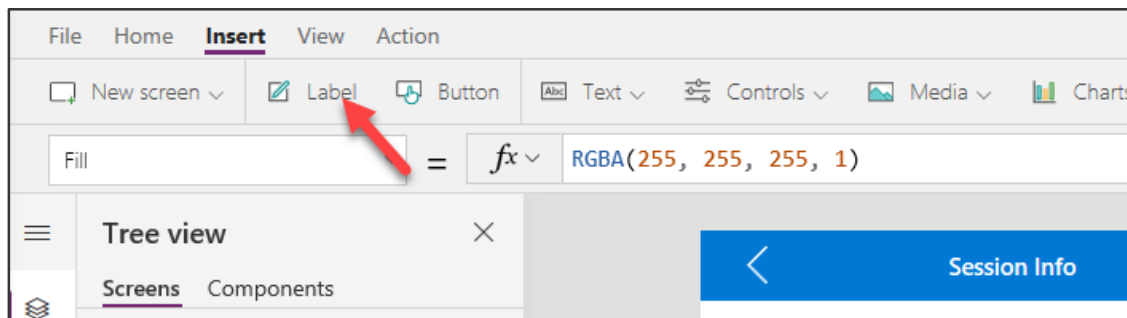
6. Select **HeaderDetailScreen** and set the **Text** value of label to **Session Info** & adjust the text as shown below



7. Select the **back** button from the **Icons**. In the **Onselect** property enter the below formula : `Navigate(HomeScreen, ScreenTransition.Fade)`

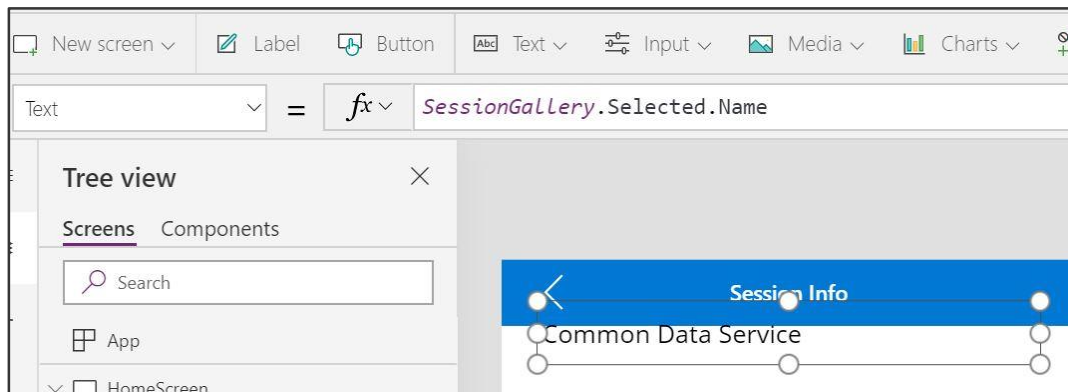


8. Go to the **Insert** tab and click **Label**.

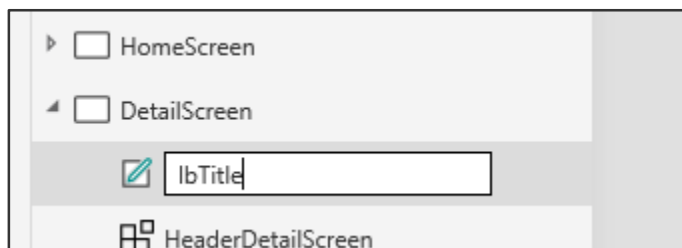


9. Set the **Text** value of the new label to the formula below.

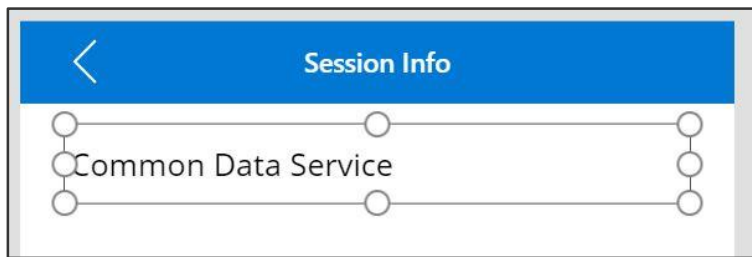
`SessionGallery.Selected.Name`



10. Rename the Label **lbTitle**.



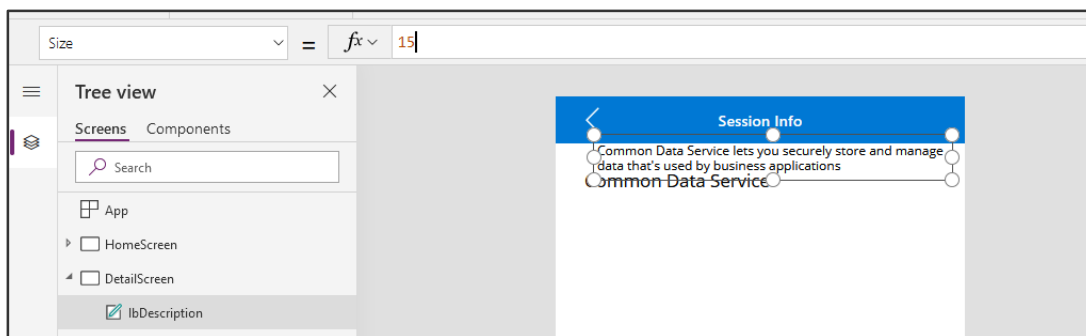
11. Resize and reposition **lbTitle** as shown below.



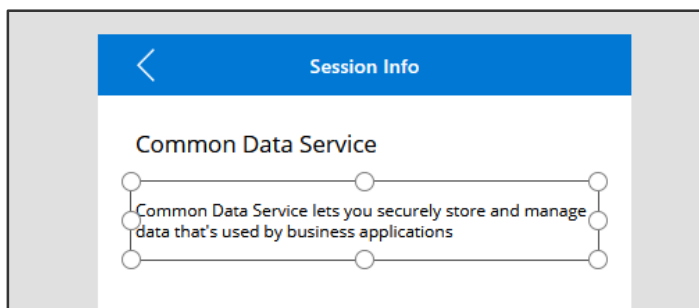
12. Go to the **Insert** tab and click **Label** again.
13. Set the **Text** value of the new label to the formula below.

`SessionGallery.Selected.Description`

14. Rename the new label **lbDescription**.
15. Set the Size value of **lbDescription** to **16**.

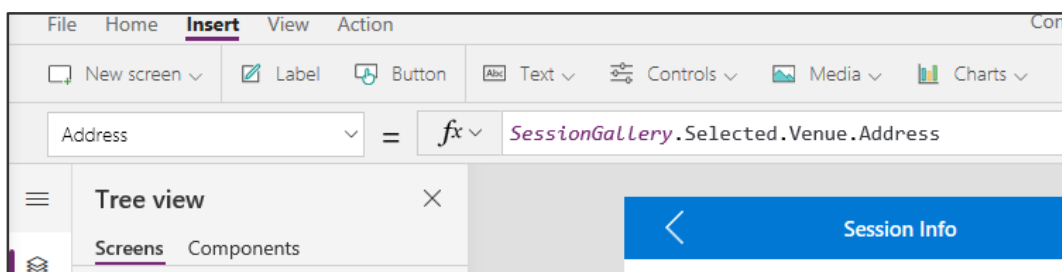


16. Resize and reposition **lbDescription** to better fill the space..



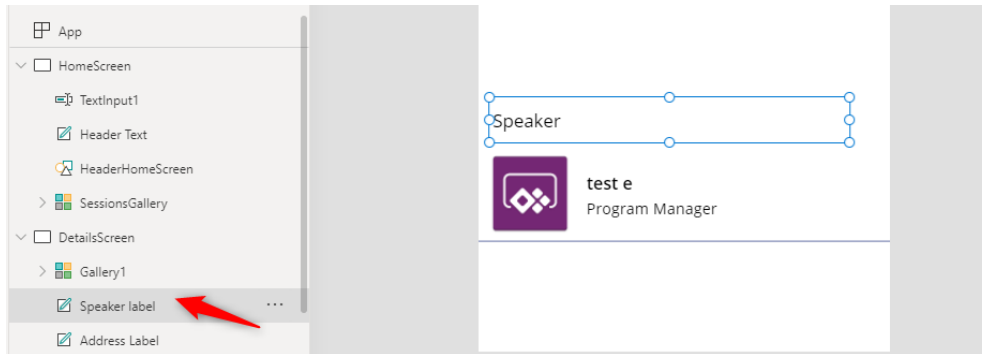
17. Set the **Address** value of the map control to the formula below.

`SessionGallery.Selected.Venue.Address`

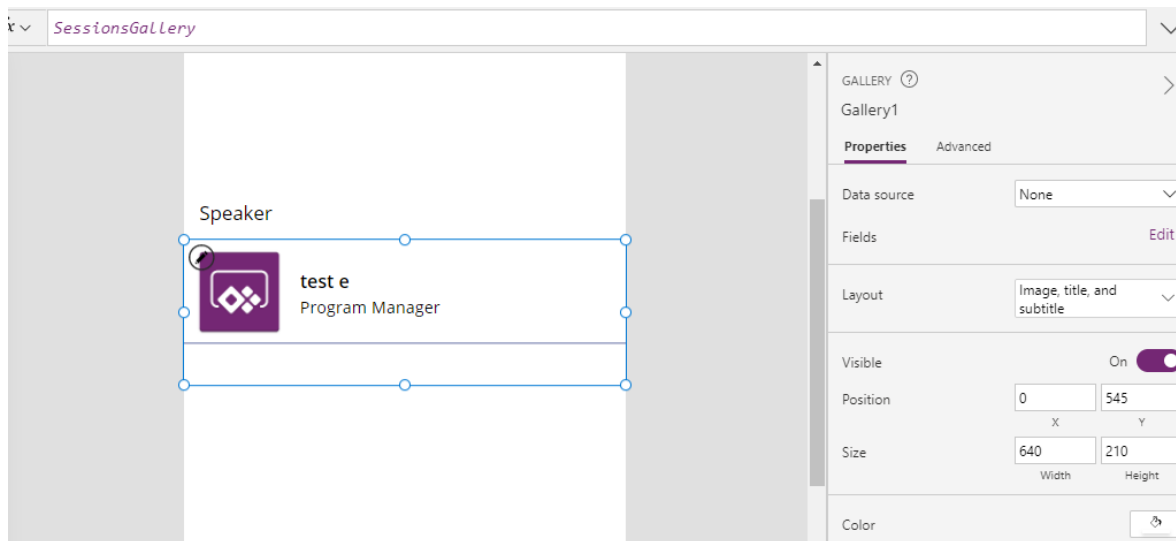


18. Go to the **Insert** tab and click **Label**.
19. Rename the new label **Speaker label**.
20. Set the text value of **Speaker label** to **Speaker**.

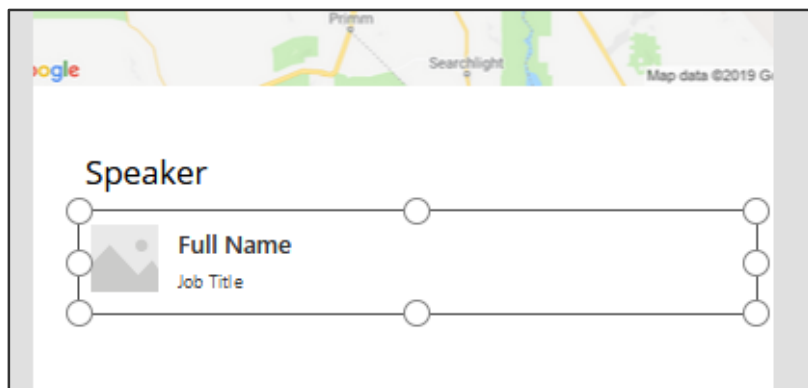
21. Resize and reposition **Speaker label** as shown in then image below.



22. Go to the **Insert** tab, click **Gallery** and select **Vertical Gallery**. In **Items property** enter the below formula : **SessionsGallery** (previous gallery name)

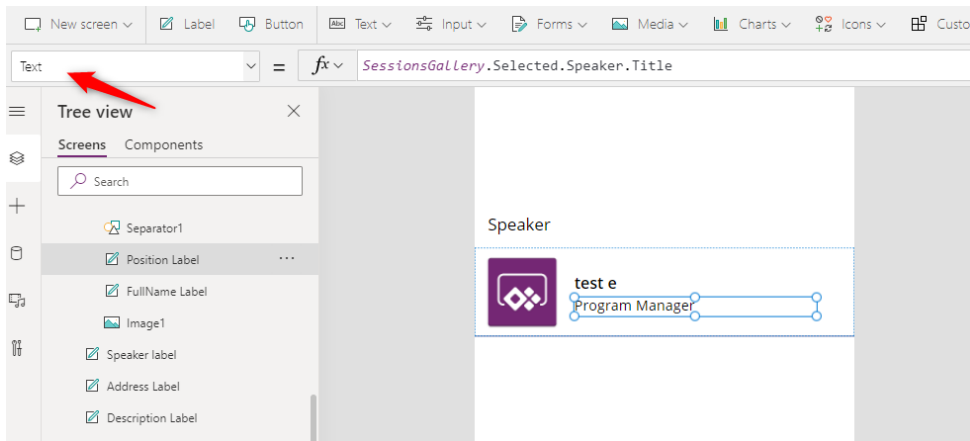


23. Resize and reposition the **Gallery** below the map control.



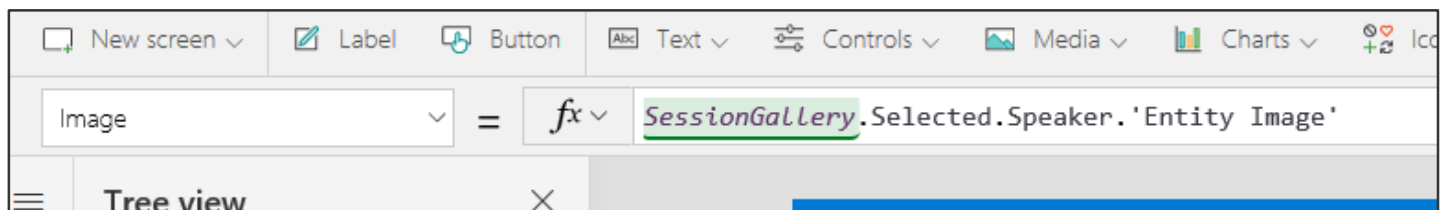
24. Select the gallery and change the **Title_1** label to **FullName Label**, set the **FullName** value to the formula below in the **text property** left side

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



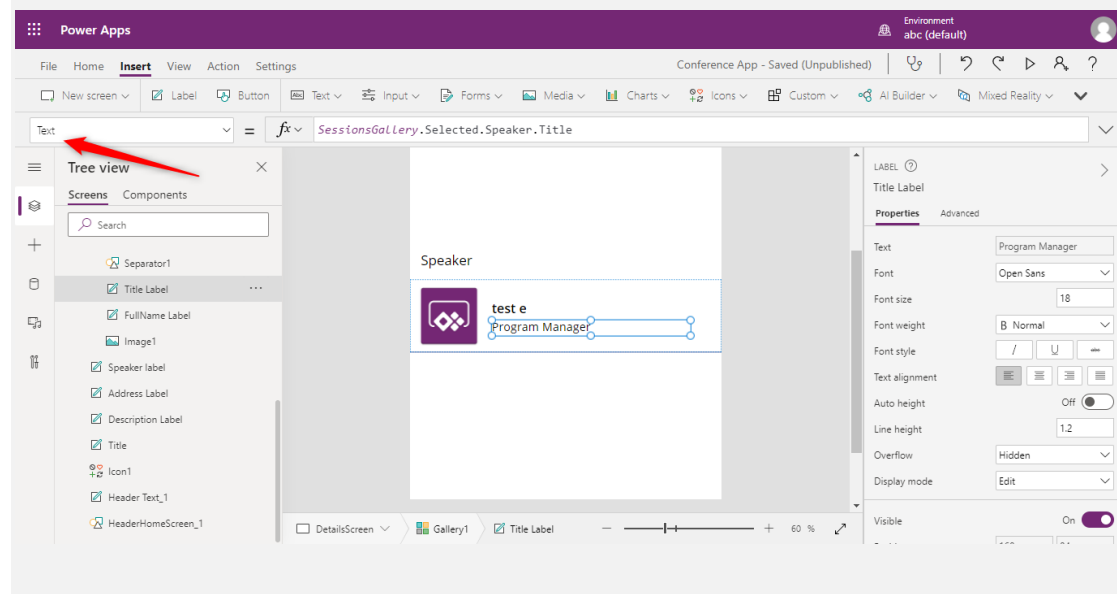
25. Set the Image value of the Image 1 to the formula below.

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

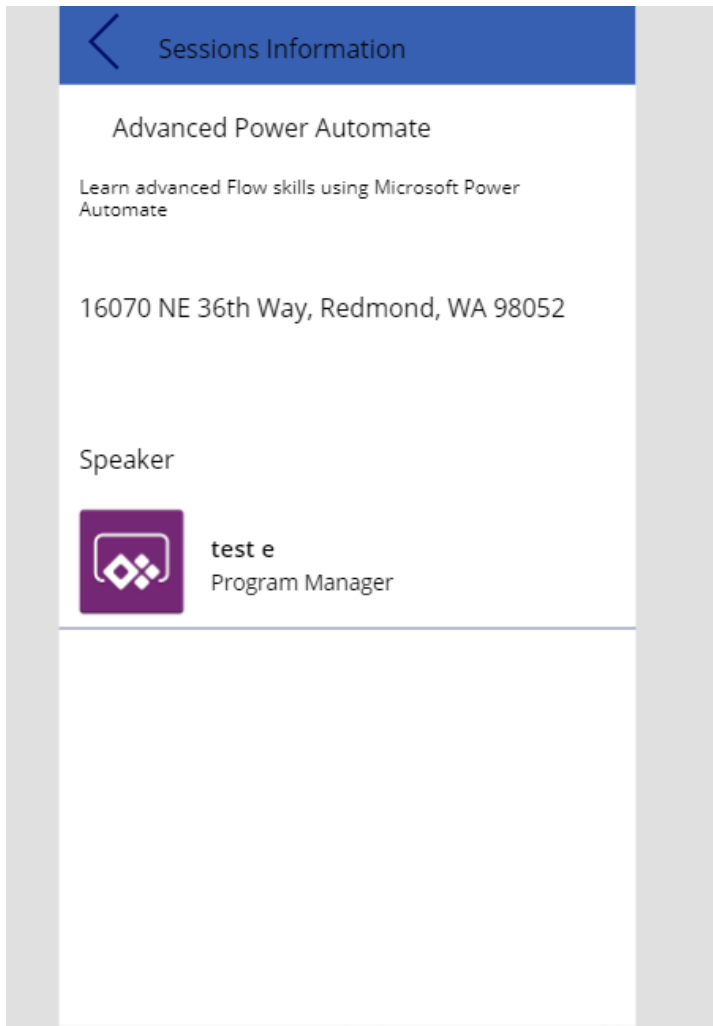


26. Change the label **subtitle_1** to **Title Label**, Set the Text value of the **Position Label** to formula below.

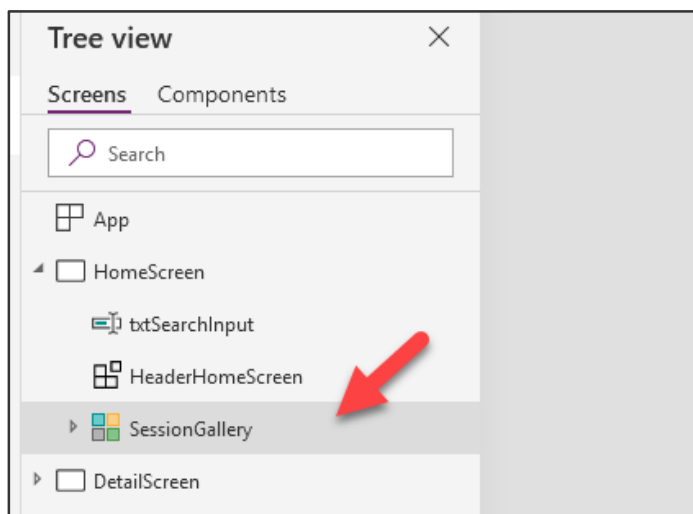
```
SessionGallery.Selected.Speaker.Title
```



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

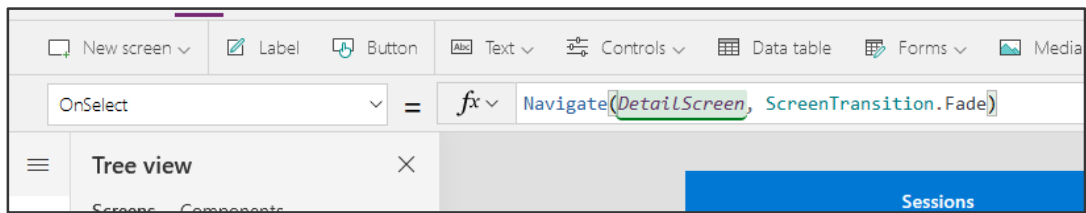


28. Expand the **HomeScreen** and select **SessionGallery**.



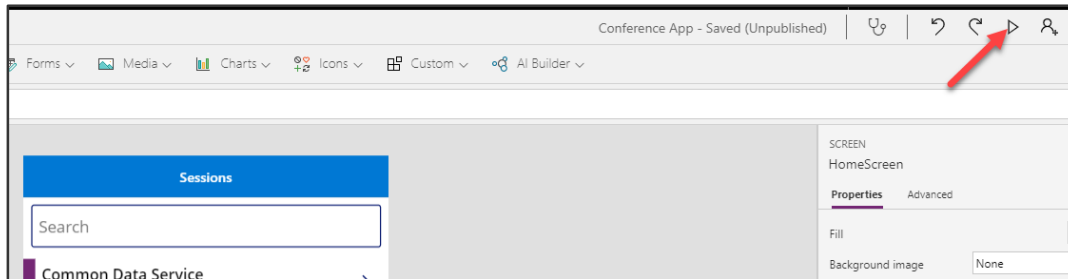
29. Set the **OnSelect** value of the **SessionGallery** to the formula below.

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

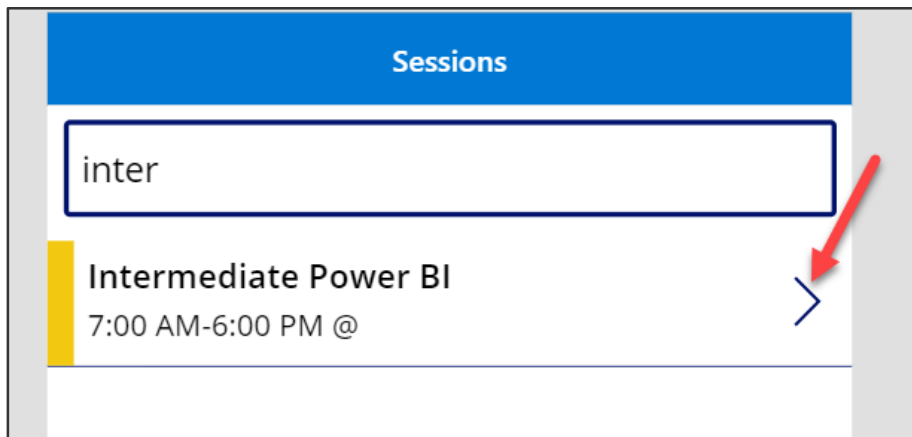


Task 8 – Test the app

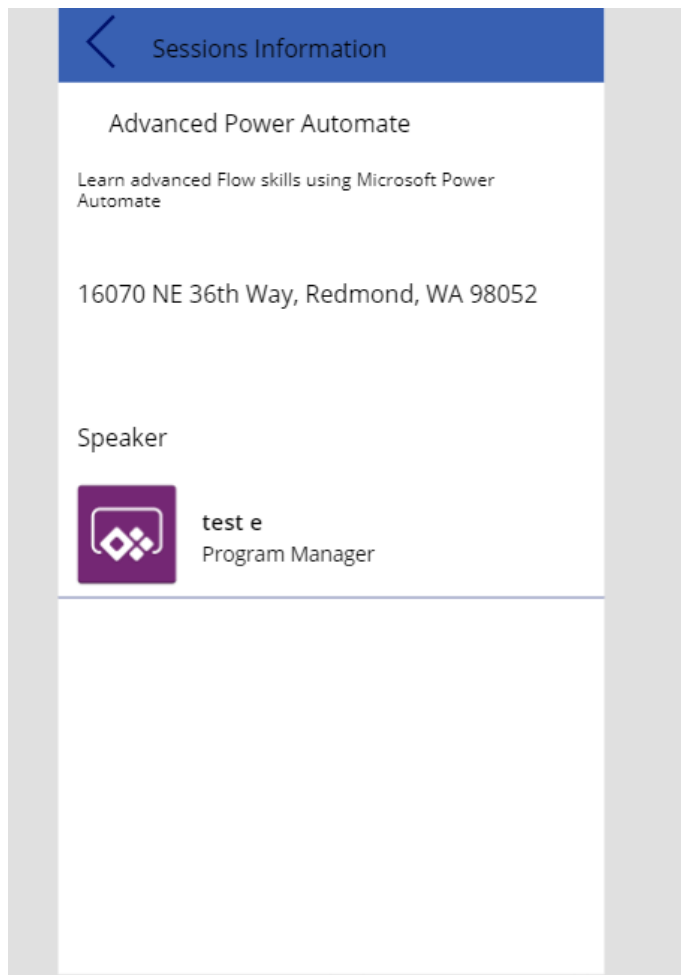
1. Select the **HomeScreen** and click **Play**.



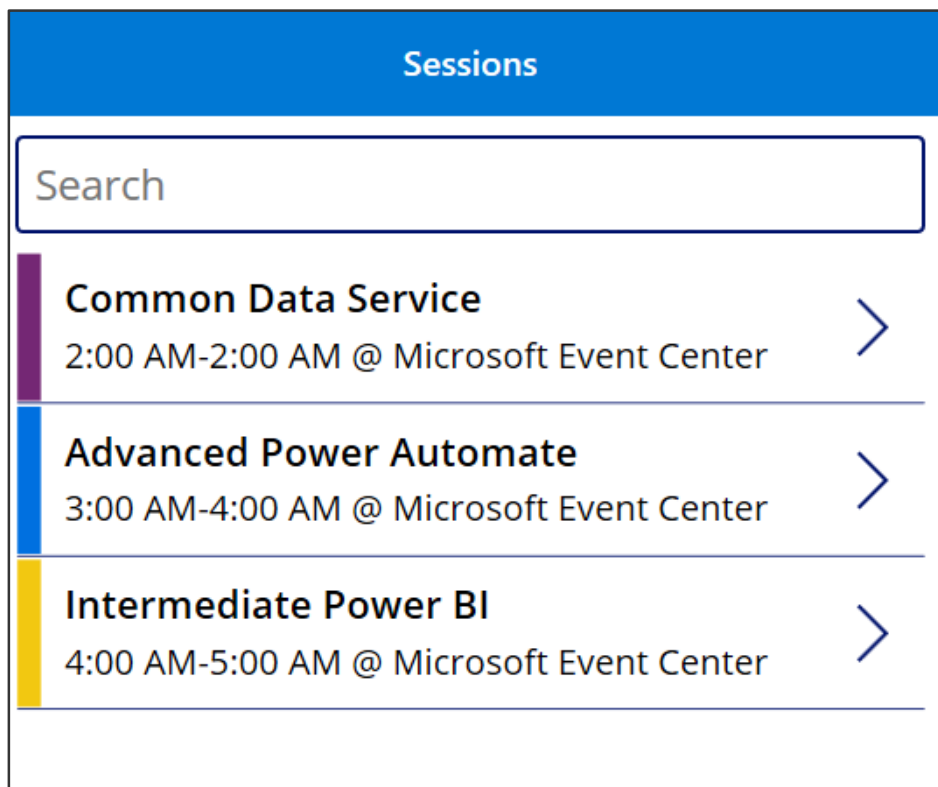
2. Select a session



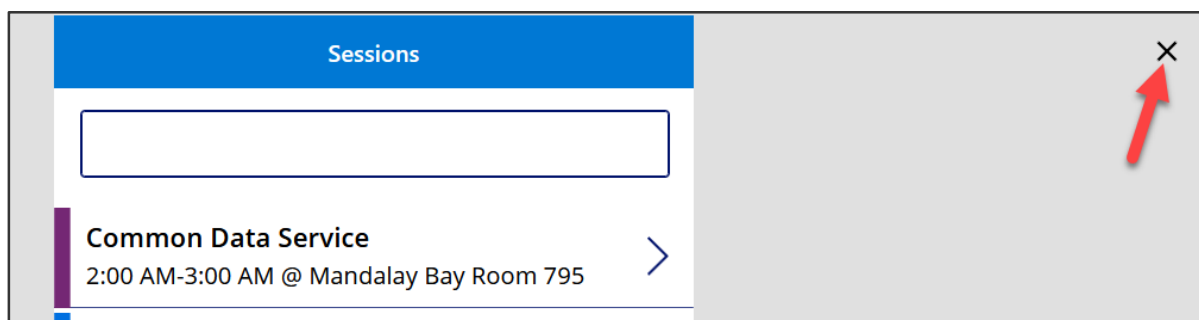
3. The session details should load. Click on the back button.



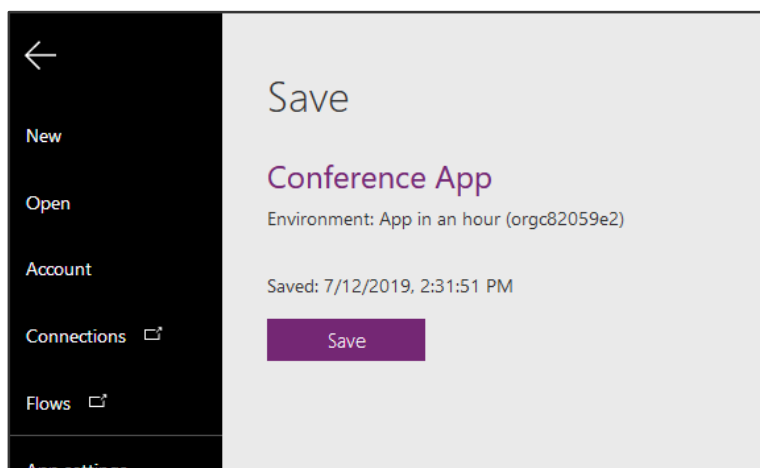
4. The app should go back to the sessions screen. Clear the search textbox.
5. All sessions should load.



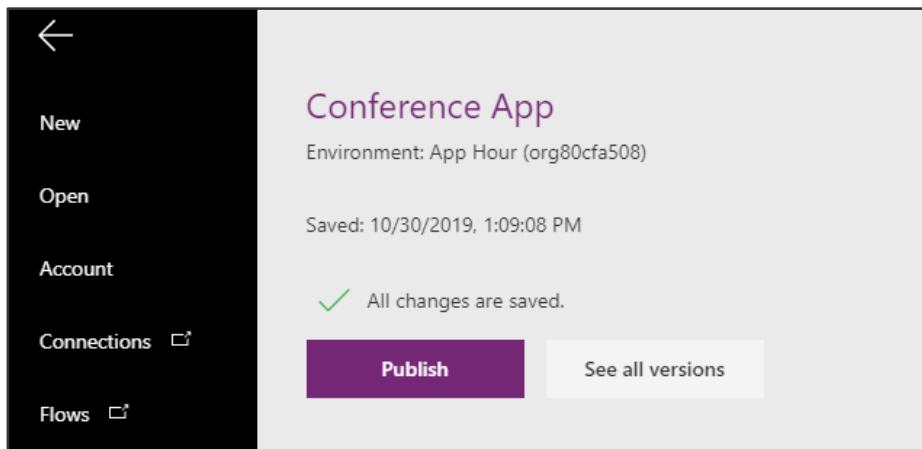
6. Close the preview.



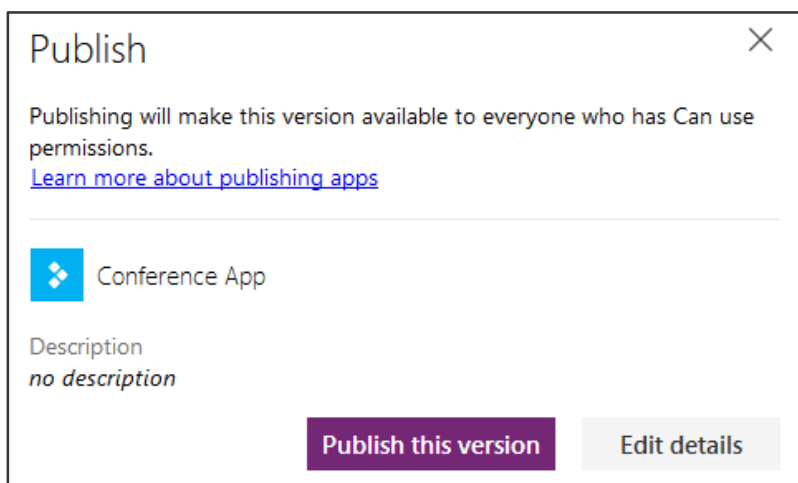
7. Click **File** and **Save**.



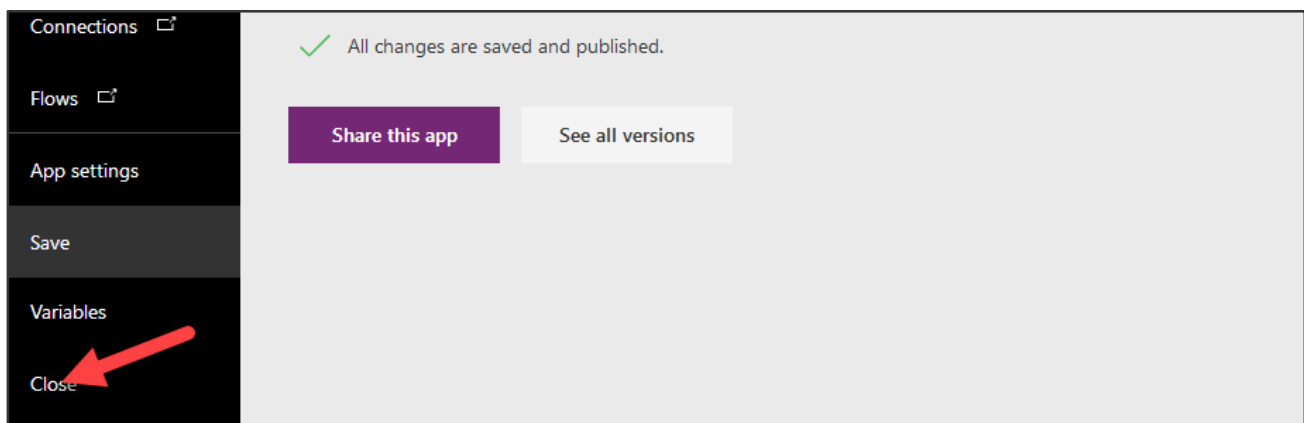
8. Click **Publish**.



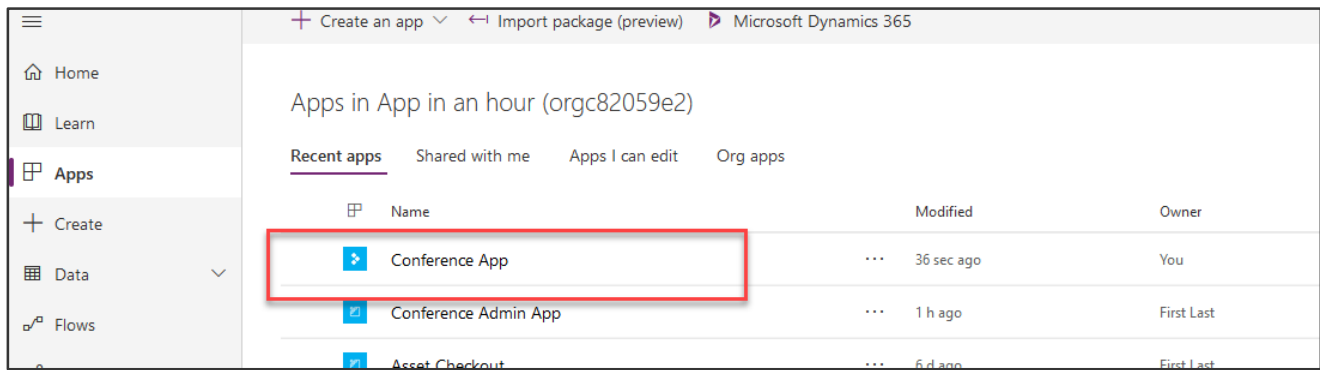
9. Click **Publish this Version**.



10. Click **Close**.



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!

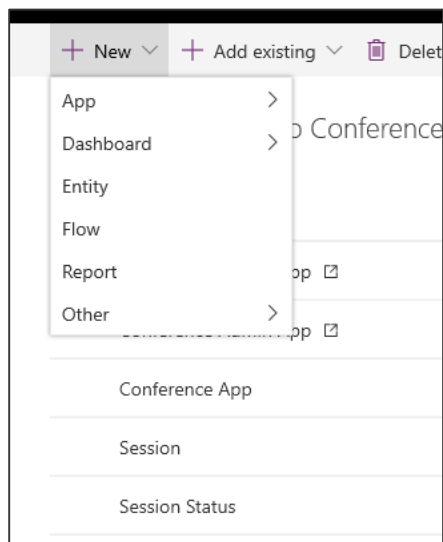
You've completed the App in an hour. If you have more time, continue to more exercises to add Power Automate flow.

Exercise 7 Build a flow to approve session

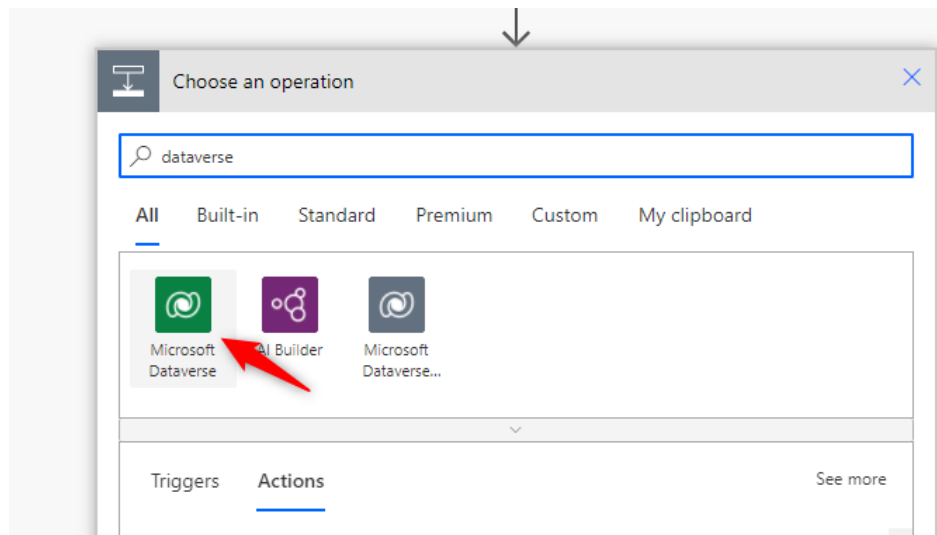
Task 1 – Create a flow

In this task, you will create a flow that will get triggered when session is created or when the capacity field changes. If the capacity is equals or greater than 50, the flow will set the status to waiting for approval and send an approval request. The flow will then wait for the approval result and change the session status according to the outcome.

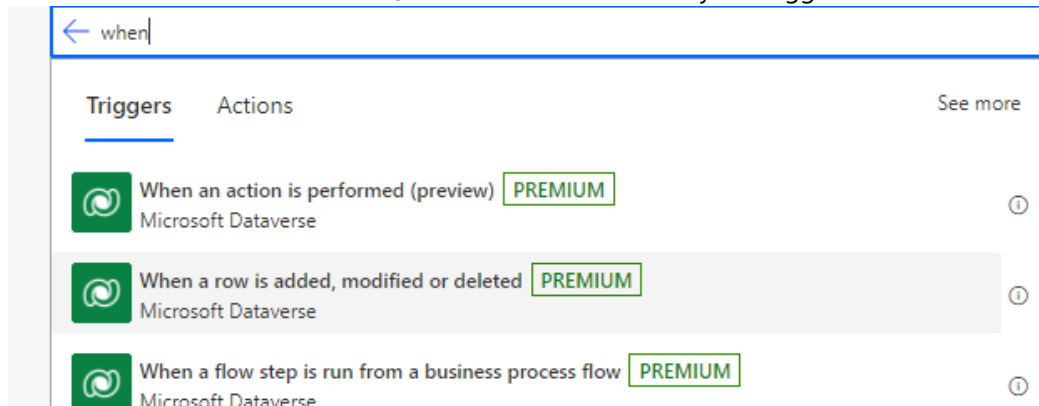
1. Navigate to <https://make.powerapps.com/> and make sure you are in the correct environment.
2. Select **Solutions** and click to open the **Contoso Conference** Solution.
3. Click **New** and select **Flow(Cloud flow)**



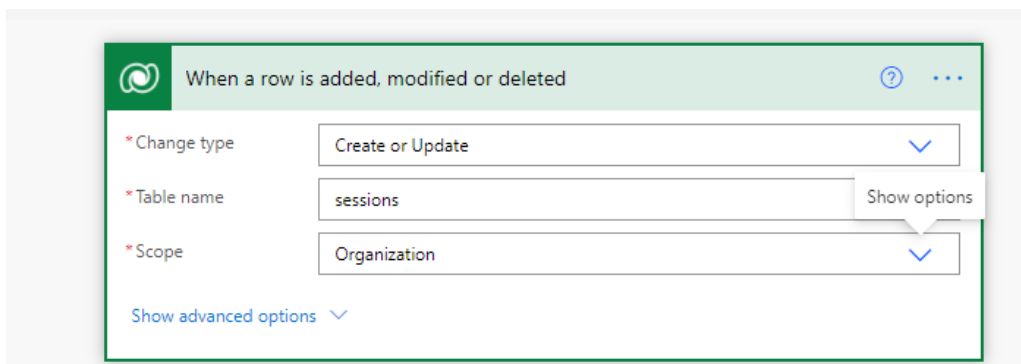
4. Search for Common Data Service and select **Common Data Service/ Dataverse** You may have to hover over the icons to ensure you have the desired selection.



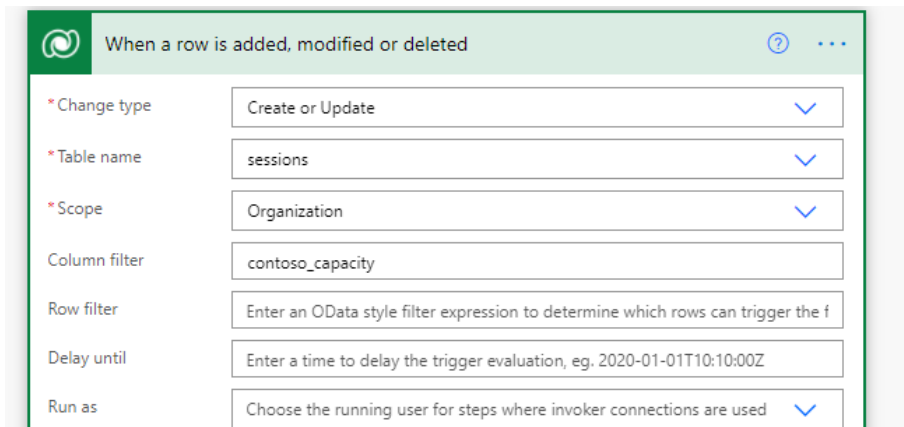
5. Select **When a row is added, modified or deleted** as your trigger.



6. Choose the following and click **Show Advanced Options**.
- Change type: **Create or Update**
 - Table name: **Sessions**
 - Scope: **Organization**



7. Click **Show advanced** options and Enter **contoso_capacity** for **Column filter**.



When a row is added, modified or deleted

* Change type: Create or Update

* Table name: sessions

* Scope: Organization

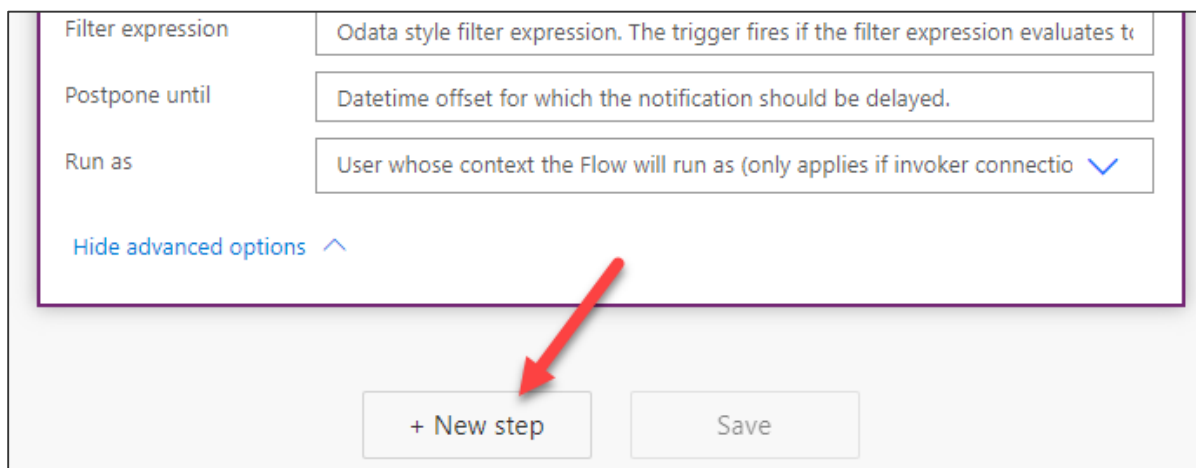
Column filter: contoso_capacity

Row filter: Enter an OData style filter expression to determine which rows can trigger the f

Delay until: Enter a time to delay the trigger evaluation, eg, 2020-01-01T10:10:00Z

Run as: Choose the running user for steps where invoker connections are used

8. Click **+New step**.



Filter expression: Odata style filter expression. The trigger fires if the filter expression evaluates to

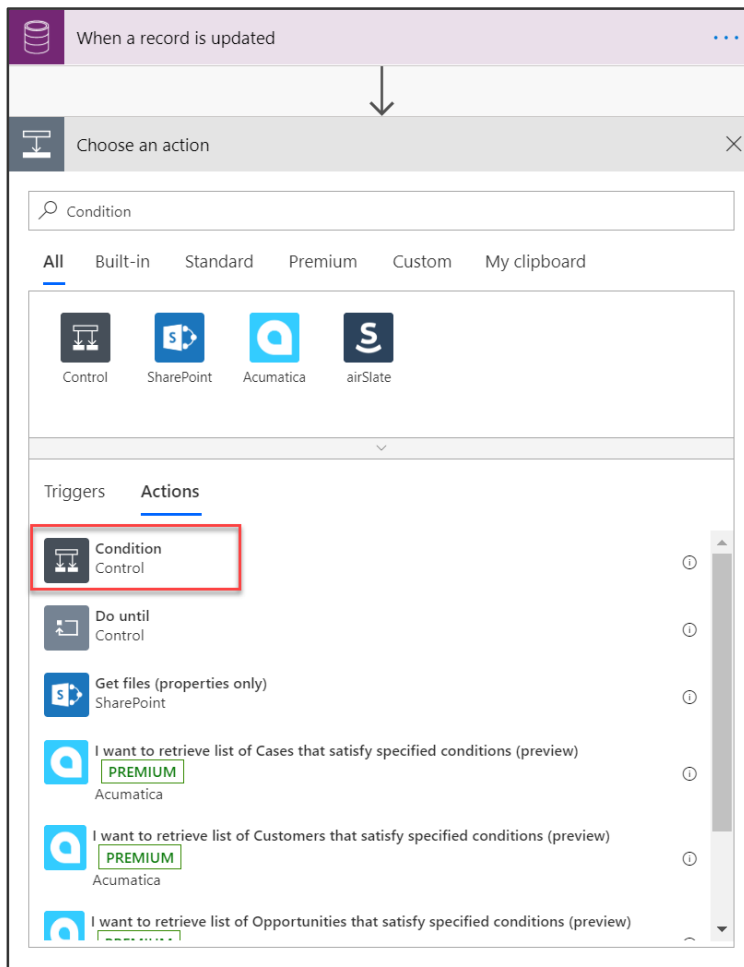
Postpone until: Datetime offset for which the notification should be delayed.

Run as: User whose context the Flow will run as (only applies if invoker connectio

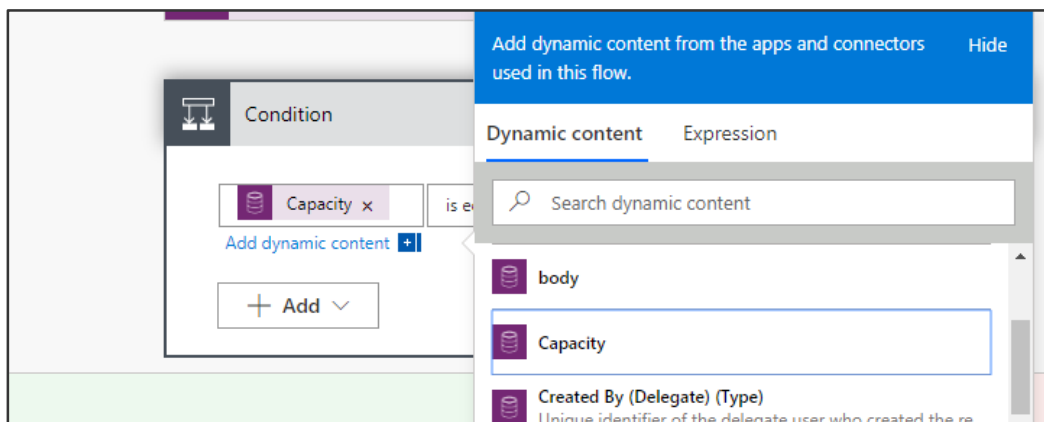
[Hide advanced options](#)

+ New step Save

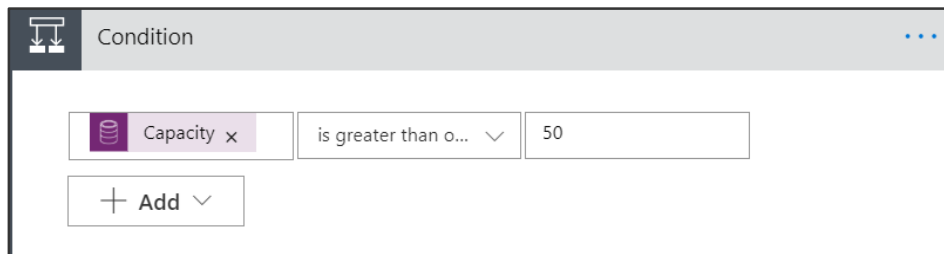
9. Select the **Condition** action.



10. Click on the **Choose a Value** field and select **Capacity** from the Dynamic Content pane.



11. Select **is greater than or equal to**, and type **50** for **Value**.

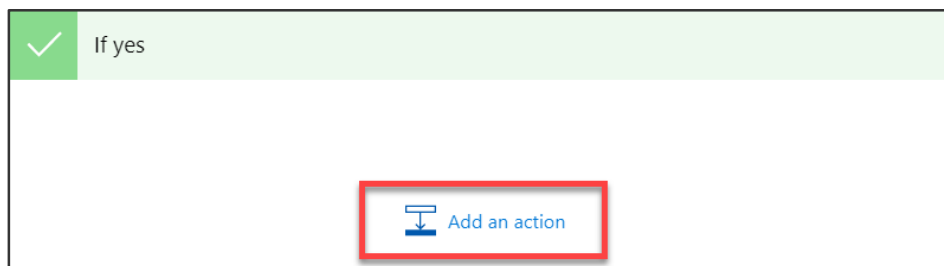


Condition

Capacity x is greater than o... 50

+ Add v

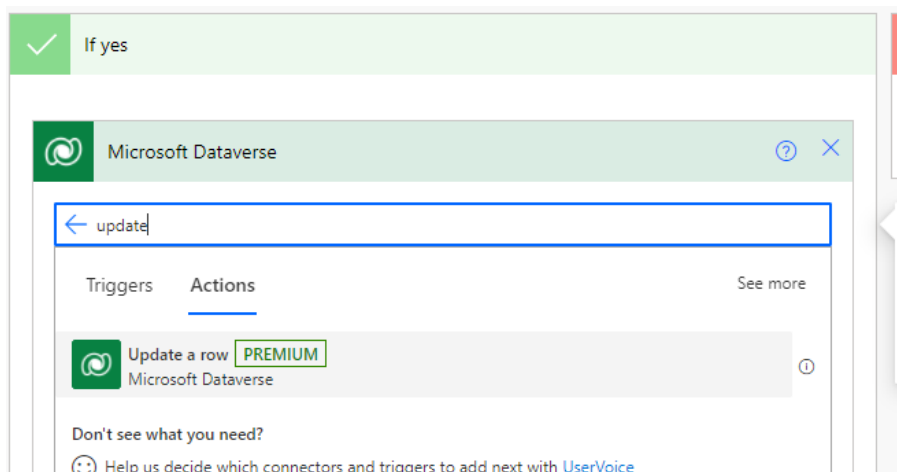
12. Click **Add an action** for the **If yes** condition.



✓ If yes

Add an action

13. Search for Update a Row and select **Update a Row (Current Environment)**.



✓ If yes

Microsoft Dataverse

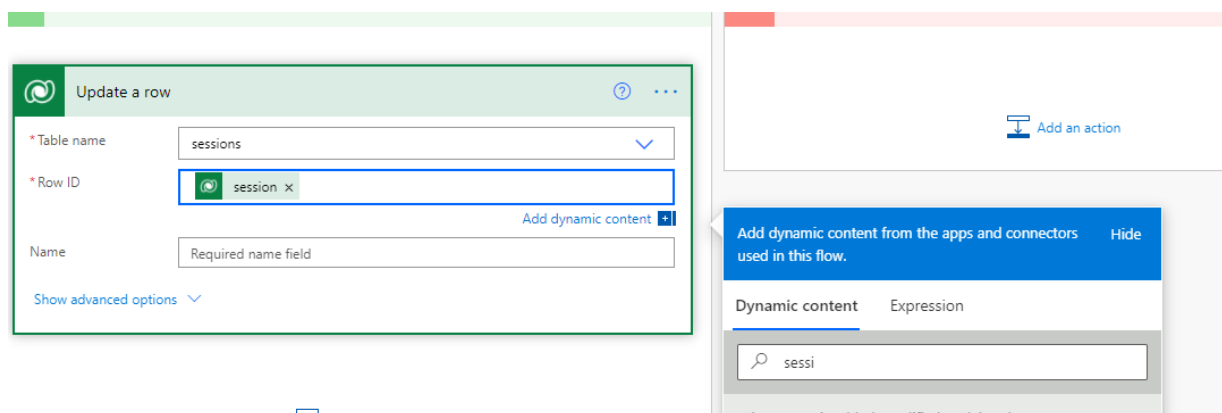
← update

Triggers Actions See more

Update a row PREMIUM Microsoft Dataverse

Don't see what you need?
Help us decide which connectors and triggers to add next with UserVoice

14. Select **Sessions** for the **Table name** click on the **Row Id** field and select **Session** from Dynamic Content pane.



Update a row

* Table name sessions

* Row ID session x Add dynamic content +

Name Required name field

Show advanced options v

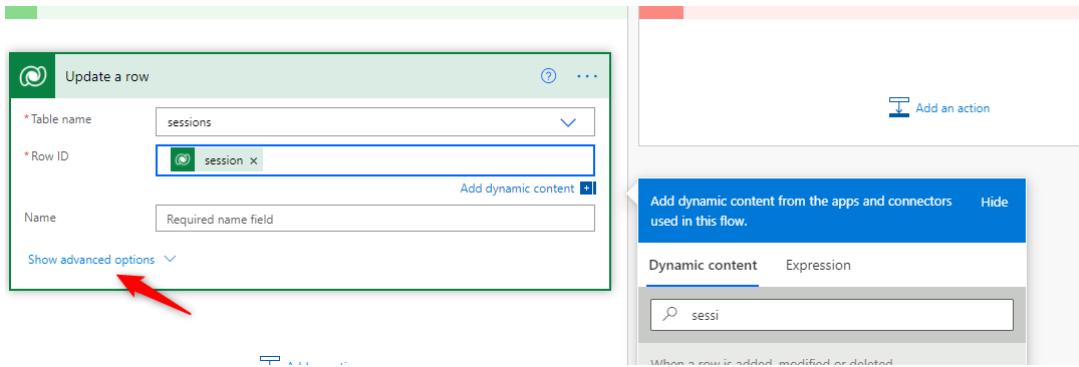
Add an action

Add dynamic content from the apps and connectors Hide used in this flow.

Dynamic content Expression

sessi

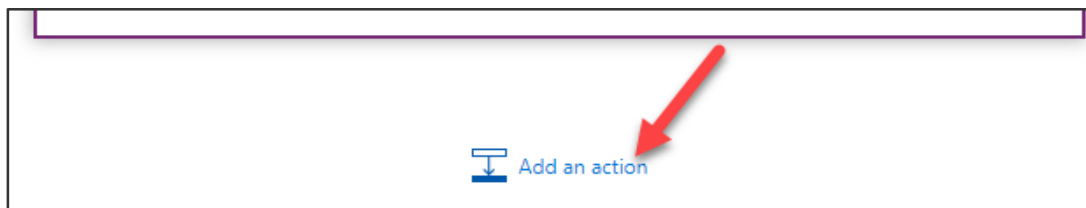
15. Click **Show Advanced Options**.



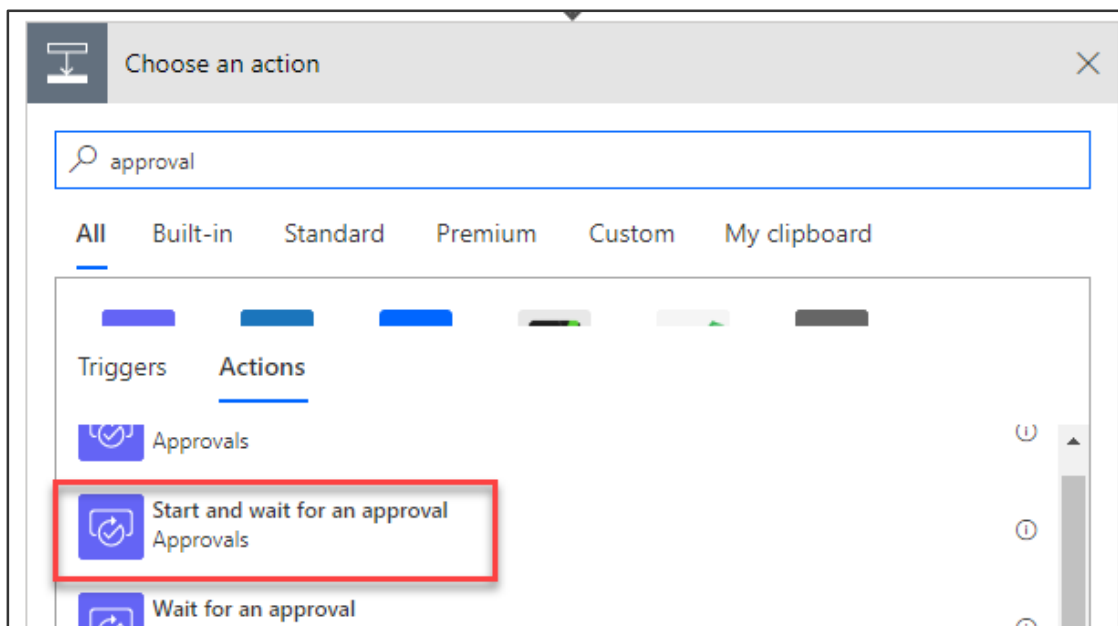
16. Set **Session Status Value** to **Waiting**.

Process Id	Contains the id of the process associated with the entity.
Room Setup	
Session Status	Waiting Approval
Speaker (Users)	

17. Click **Add an Action**.



18. Search for **Approval** and select **Start and Wait for an Approval**.



19. In the **Approval type** dropdown select **Approve/Reject – First to Respond**.

Approve/Reject - First to respond

Approve/Reject - Everyone must approve

Approve/Reject - First to respond

Custom Responses – Wait for all responses (Premium)

Custom Responses – Wait for one response (Premium)

Enter custom value

20. Enter **Session Capacity Request for** in the title, then search for and select **Name** from the **Dynamics Content**.

Start and wait for an approval

* Approval type: Approve/Reject - First to respond

* Title: Session Capacity Request for **Name** x

* Assigned to: Email addresses, separated by a semicolon (;)

Details: Markdown supported (see <https://aka.ms/approvaldetails>)

Item link: Add a link to the item to approve

Add dynamic content from the apps and c used in this flow.

Dynamic content Expression

name

Update a record

Name Required name field

When a record is created, updated or dele

21. Select the **Assigned to** field and enter the email of user you are using for this lab.

22. In the **Details** field, type **A session's capacity has changed** and hit <enter>

Start and wait for an approval

* Approval type: Approve/Reject - First to respond

* Title: Session Capacity Request for **Name** x

* Assigned to: [Redacted]

Details: A session's capacity has changed

Add dynamic content

23. Type **Session:** and Select **Name** from the Dynamic content pane.

24. Type **Capacity:** and select **Capacity** from the Dynamic content pane.

Start and wait for an approval

* Approval type: Approve/Reject - First to respond

* Title: Session Capacity Request for [Name]

* Assigned to: [Name]

Details: A session's capacity has changed
Session: [Name]
Capacity: [Capacity]

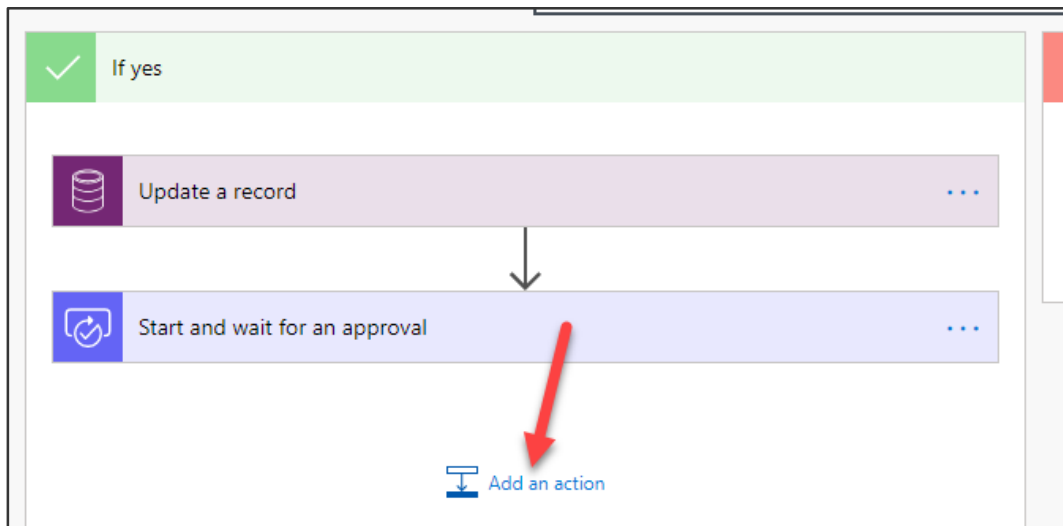
Item link: Add a link to the item to approve

Item link description: Describe the link to the item

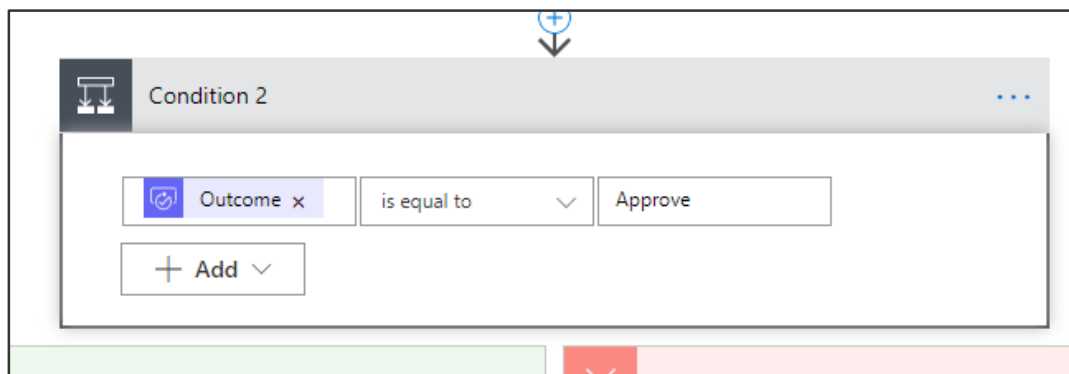
25. Save the flow

Task 2 – Add a condition

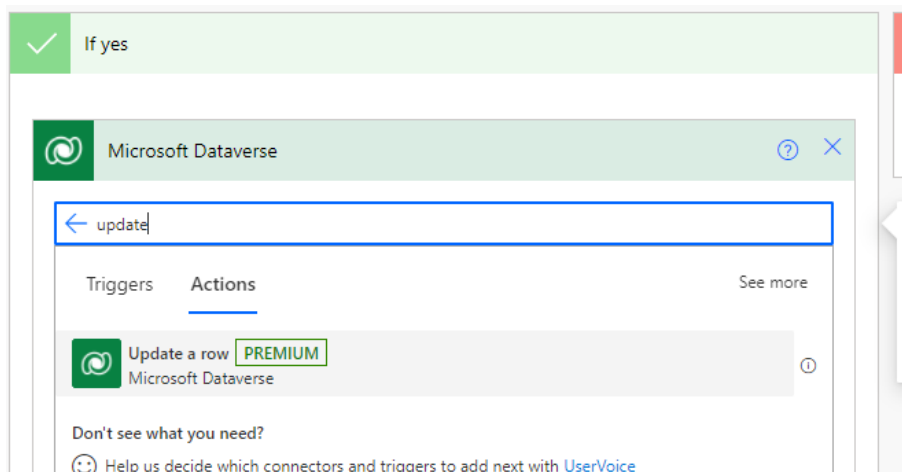
1. Click **Add an action** under **Start and wait for an approval**



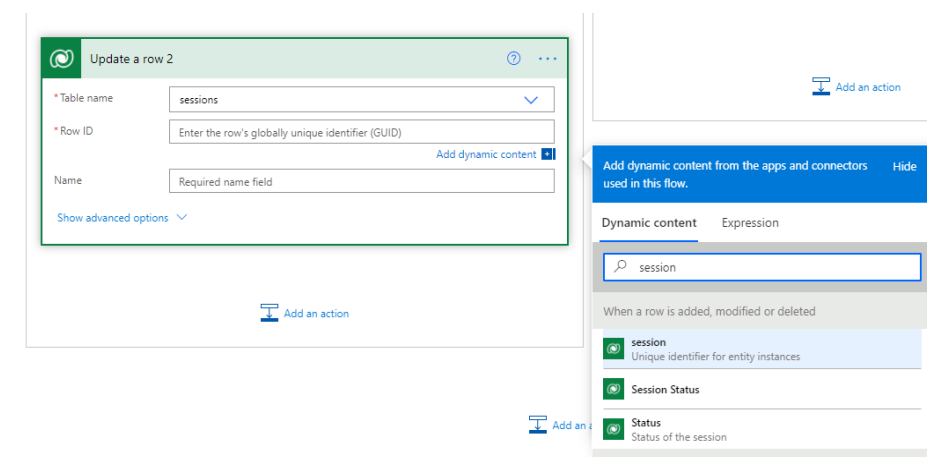
2. Select **Condition**
3. Click Choose a value and select Outcome.
4. Select is equal to and type Approve.



5. Click **Add an Action** of the **Yes** branch.
6. Search for Update a Row and select **Update a Row(Current Environment)**.



7. Select **Sessions** for Table Name, click on the **Row ID** field and select **Session** from the Dynamic Content pane.

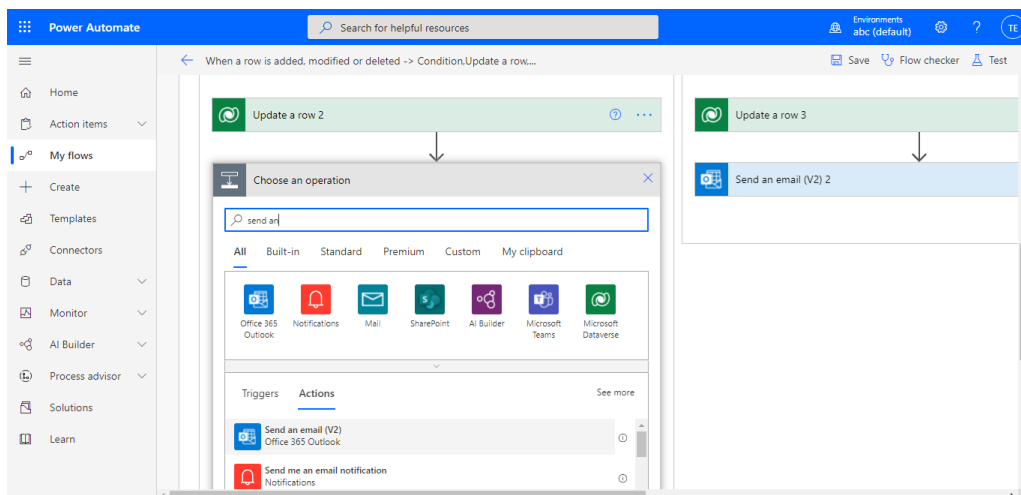


8. Click to expand **Show Advanced Options**
9. Set the **Session Status** to **Approved**.

Process Id	Contains the id of the process associated with the entity.
Room Setup	
Session Status	Approved ▼
Speaker (Users)	
Start time	
Status	Status of the Session ▼

10. Click **Hide Advanced Options**.

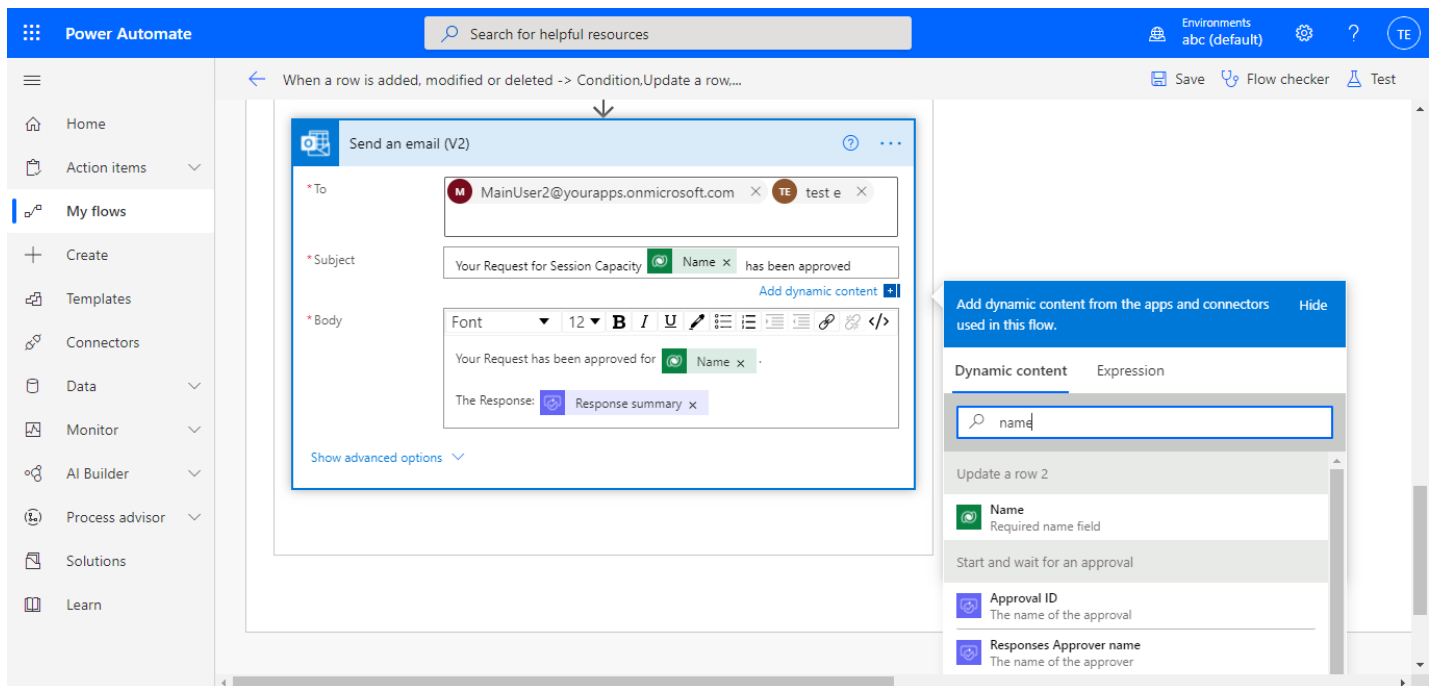
11. **Update to users/ recipients after approval – Add an action** and search – send an email



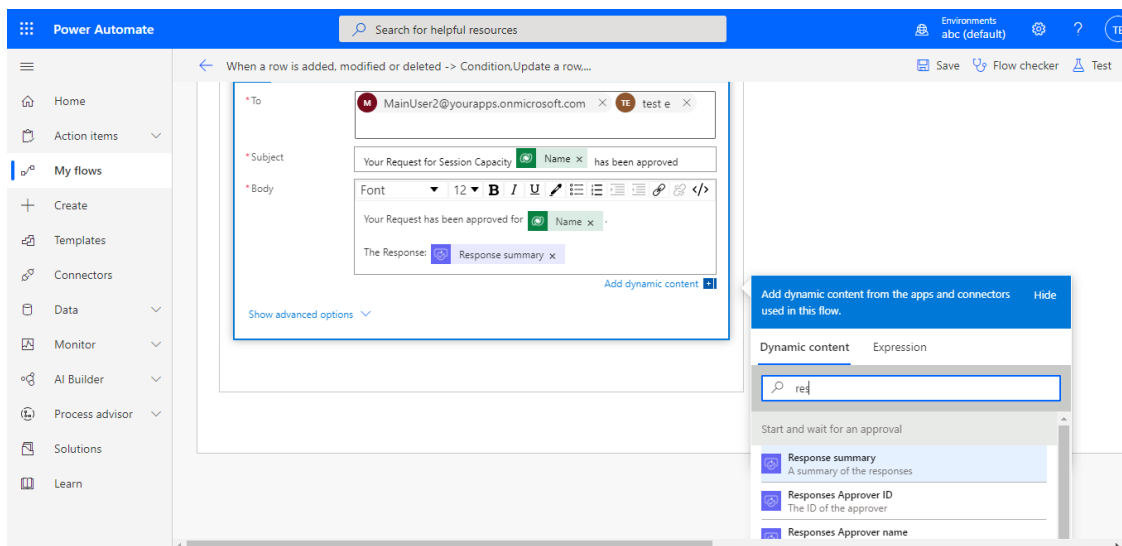
12. After selecting 'Send an email'

13. Select the users/ recipients. Type in **subject** : Your Request for Session Capacity has been approved ; **Search Name** from Update a row2 from dynamic content

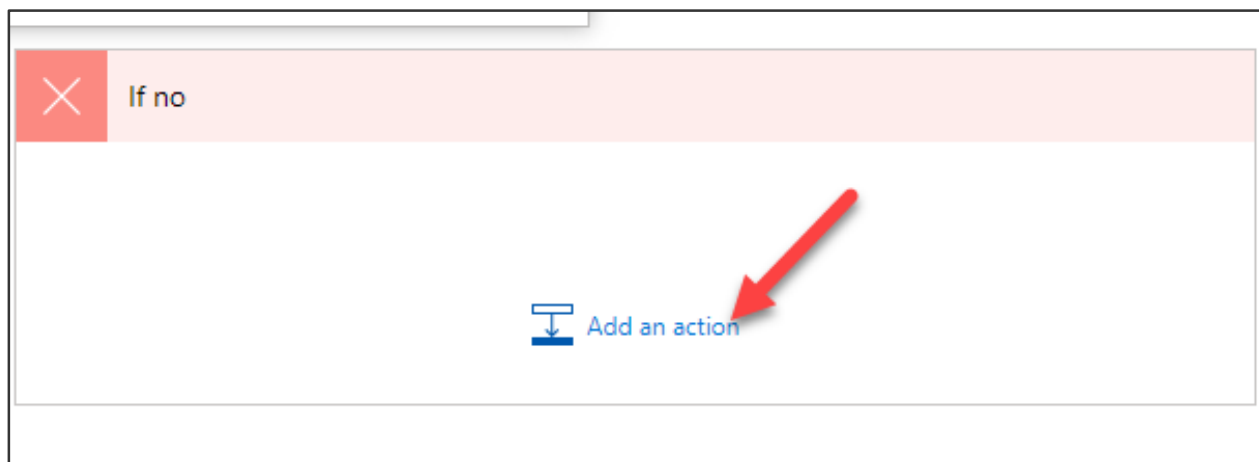
14. The body: Your request has been approved for Name (dynamic content).



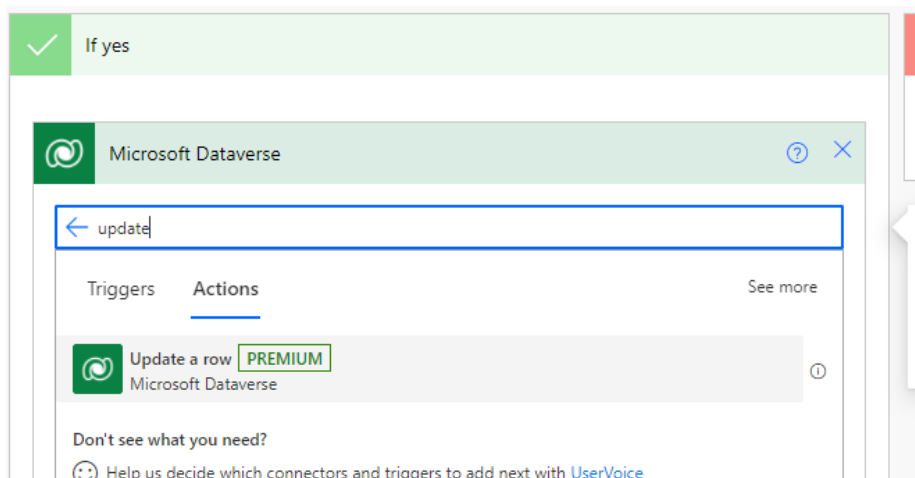
The response : Response summary from Start and wait for an approval



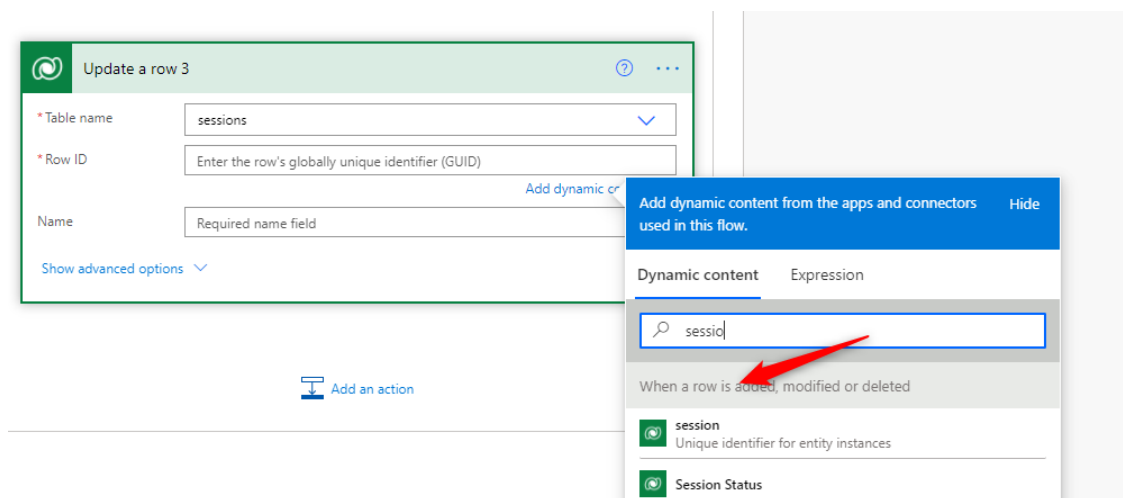
15. Click on **Add an Action** under the **No** branch.



16. Search for Update a Record and select **Update a Row (Current Environment)**.



17. Select **Sessions** for Table Name, click on the **Row ID** field and select **Session** from the Dynamic Content pane.

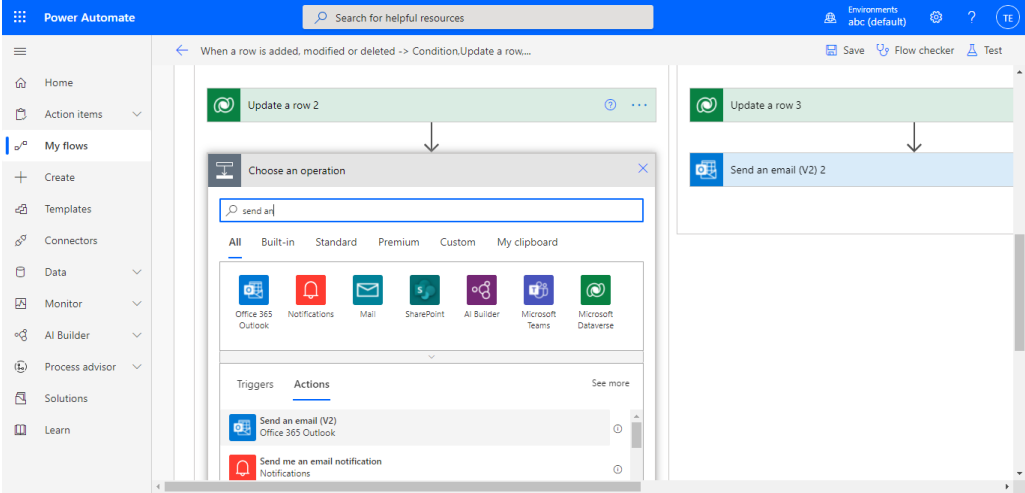


18. Click to expand **Advanced options**

19. **Set Session Status** to **Rejected**

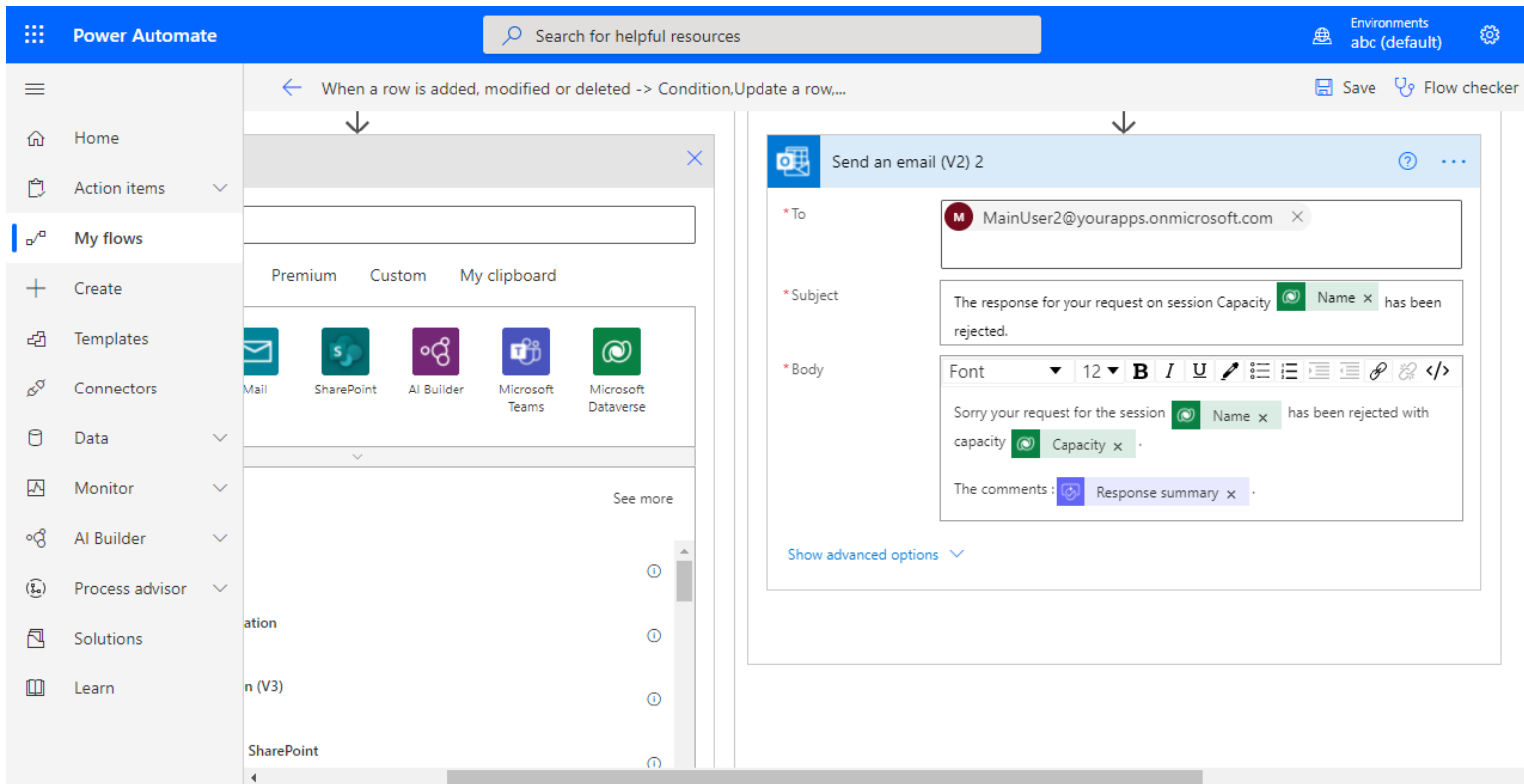
Process Id	Contains the id of the process associated with the entity.
Room Setup	
Session Status	Rejected
Speaker (Users)	
Start time	

20. **Update to users/ recipients after Rejection – Add an action and search – send an email**



21. After selecting 'Send an email'

22. Select the users/ recipients. Type in **subject** : The Request for Session Capacity has been Rejected ; **Search Name** from **Update a row3** from dynamic content

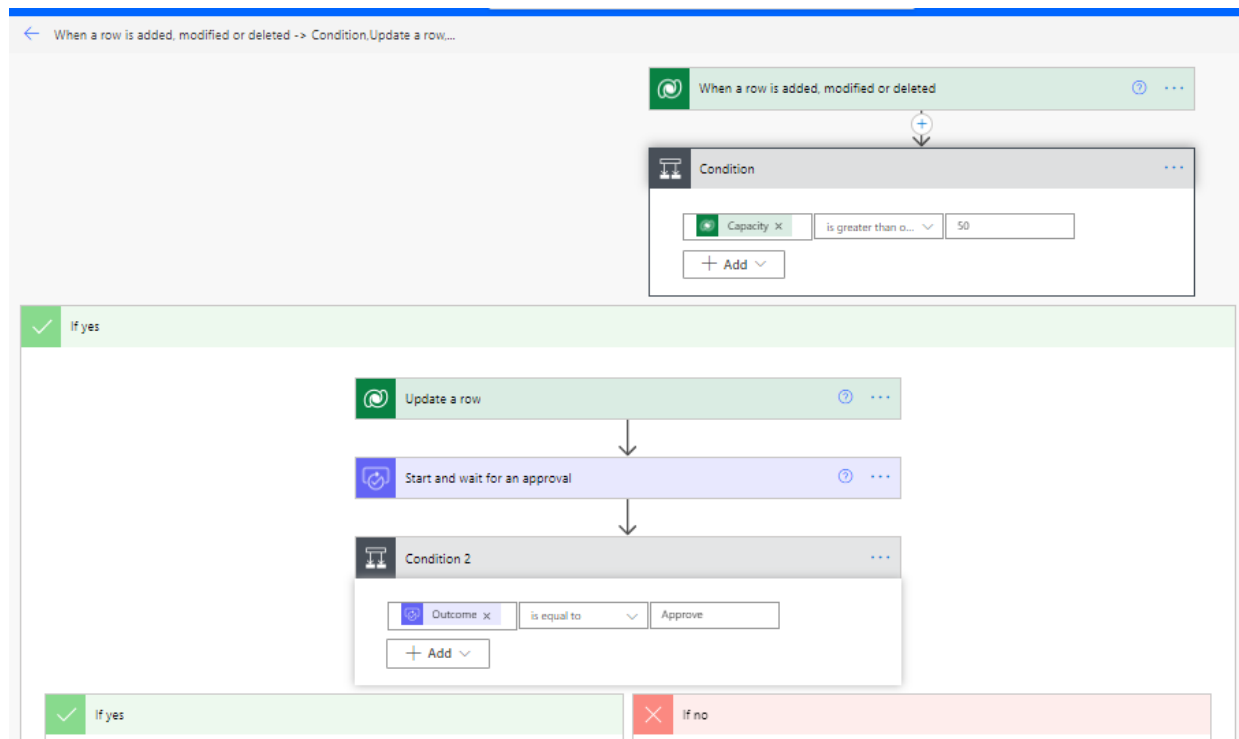


The subject & body as shown in the above image. **Name & Capacity** from the **dynamic content (Update Row3)**

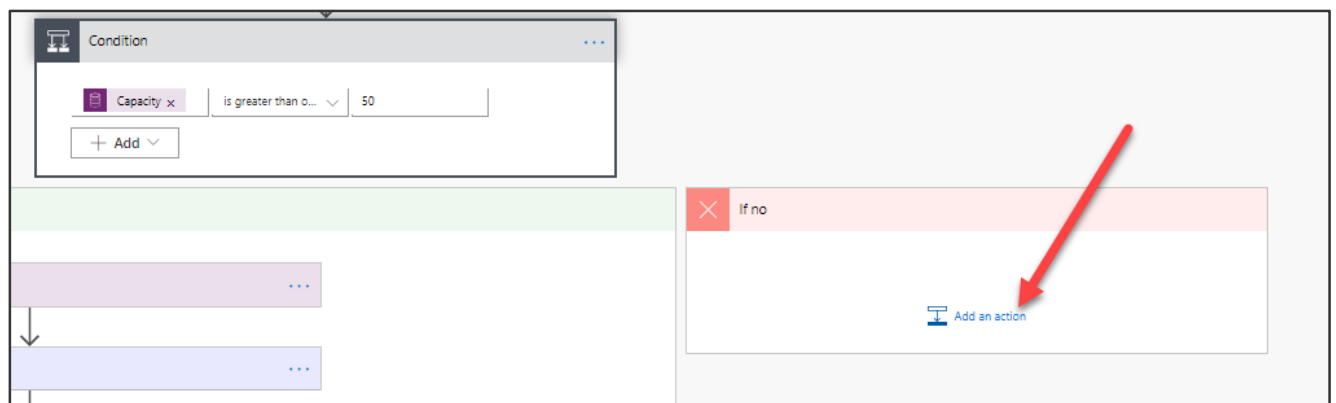
The response summary from dynamic content

Task 3 – Set If No Value

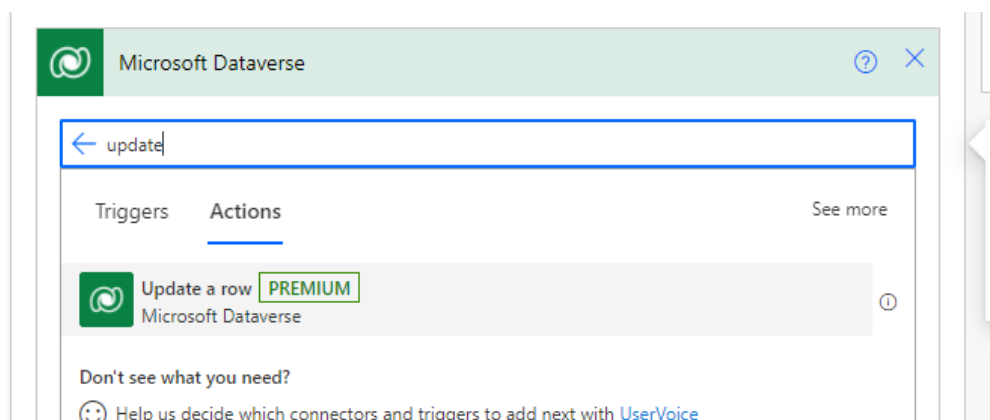
1. At this point your flow should look like the image below



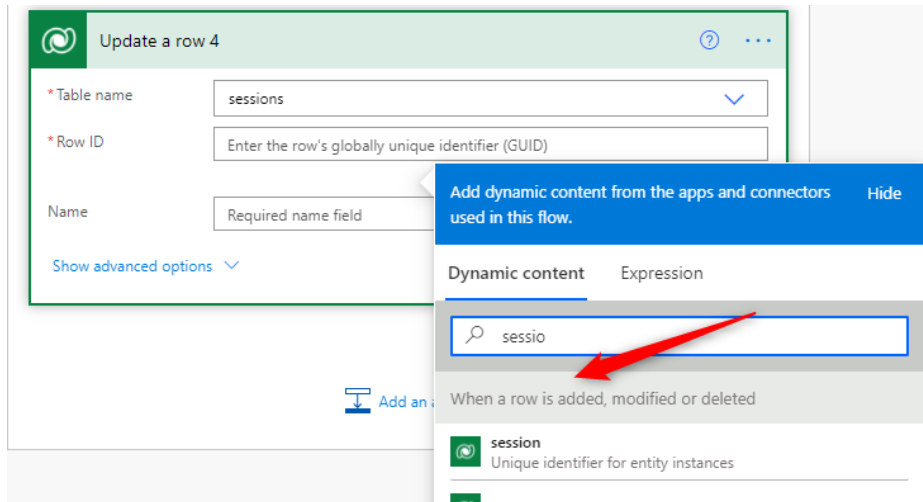
2. Click **Add an action** under the If no conditional outcome



3. Search for Update a Row and select **Update a Row (Current Environment)**.



4. Select **Sessions** for table Name, click on the **Row Identifier** field and select **Session** from the Dynamic Content pane.




5. Expand **Show Advanced Options**
6. Set the **Session Status** to **Approved**. Save your flow.

Process Id	Contains the id of the process associated with the entity.
Room Setup	
Session Status	Approved
Speaker (Users)	
Start time	
Status	Status of the Session

Task 4 – Test flow

Testing your flow is optional for this exercise.

To test, select the  Test icon in the upper right-hand corner of the flow screen. Select **I'll perform the trigger** action and click **Save and Test**. Then, navigate to the Conference Admin app and create three Session records as follows:

1. Capacity 20
2. Capacity 55
3. Capacity 85

You should receive two approval request emails.

Refresh the Conference Admin App and review the three Session record

1. Capacity 20: Status is Approved
2. Capacity 55: Status is Waiting Approval
3. Capacity 85: Status is Waiting Approval

Approve the one for the Capacity of 55 and Reject the other. Then, refresh and review the three records.

4. Capacity 20: Status is Approved
5. Capacity 55: Status is Approved
6. Capacity 85: Status is Rejected