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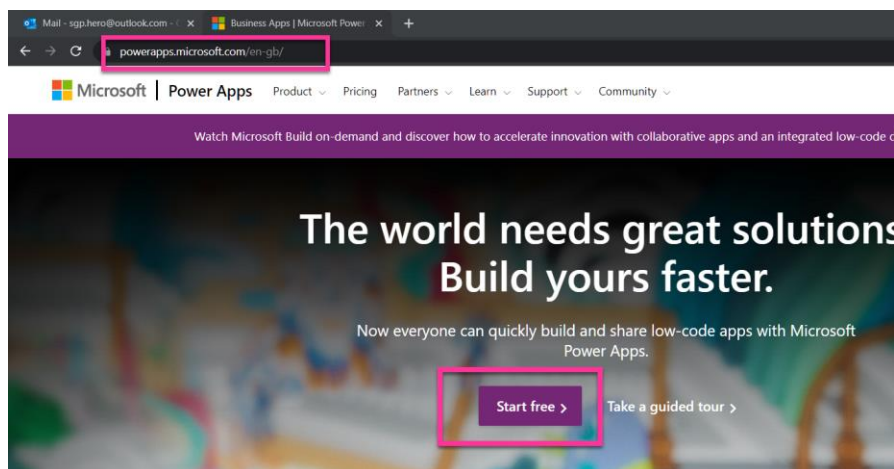
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Module 1 - Microsoft Power Platform

Exercise 1 – Acquire your Microsoft Power Platform trial tenant

1. Copy your **Microsoft 365 credentials** from the Authorized Lab Host.
2. Navigate to <https://powerapps.microsoft.com/>. Click **Start free**.
3. Click **Start free**.



4. Under **Get started**, enter the email address from your Microsoft 365 credentials in the text box that says **Enter your work email address**. Click **Sign up**.

Thank you for choosing **Microsoft PowerApps**

① Let's get you started

Enter your work or school email address; we'll check if you need to create a new account.

By proceeding, you acknowledge that if you use your organisation's email address, your organisation may have rights to access and manage your data and account.
[Learn More](#)

② Your account info

③ Confirmation details

5. You will see a prompt that you have an existing account with Microsoft. Select **Sign in**.
6. Enter the password provided by the Authorized Lab Host. Click **Sign in**.
7. At the **Almost there** prompt, click **Start**.

Note: Depending on your internet browser, you may be prompted to sign in again. Select **Sign in**, click the email account you just signed in with, and continue. You may also be prompted to provide more information. Enter **1234567890** in the Phone number field, and click **Get started**.

8. Select **Yes** to stay signed in. On the page that shows **You're all set**, click **Get started**.

Exercise 2 - Create your environment

Task 1 – Create environment

1. Access <https://admin.powerplatform.com> and log in with your Microsoft 365 credentials if prompted again.
2. If you are not automatically directed there, select **Environments** and click **+New**.

Power Platform admin center

Environments

Environment	Type	State	Region	Created on ↓	Created by
Help Desk support	Microsoft Teams	Ready	Asia	09/21/2021 11:30 PM	Aroh Shukla
Project	Microsoft Teams	Ready	Asia	09/16/2021 6:32 AM	Dhruvin Shah
Aroh Shukla's Environment	Developer	Ready	Asia	05/18/2021 2:27 PM	SYSTEM
Teams with Apps	Microsoft Teams	Ready	Asia	02/19/2021 7:24 AM	Aroh Shukla
Team Site with Data	Microsoft Teams	Ready	Asia	02/10/2021 12:14 PM	Aroh Shukla
arohmvp365 (default)	Default	Ready	Asia	09/26/2020 8:34 PM	SYSTEM

- For **Name**, enter **[my initials] Practice**. (Example: AJ Practice.)

- For **Type**, select **Trial**. You may see an option for **Trial (subscription-based)** - select the option that only says **Trial**.

The screenshot shows a 'New environment' form with the following fields and callouts:

- 2**: Points to the 'Name' text input field containing 'Aroh'.
- 3**: Points to the 'Type' dropdown menu, which is set to 'Trial'.
- 4**: Points to the 'Region' dropdown menu, which is set to 'Asia - Default'.
- 5**: Points to the 'Create a database for this environment?' toggle switch, which is currently turned 'Yes'.
- 6**: Points to the 'Next' button at the bottom of the form.

Other visible text includes: 'New environment', 'This operation is subject to [capacity constraints](#)', 'Name *', 'Type ⓘ *', 'Region *', 'Local environments can provide quicker data access.', 'Purpose', 'Test', and 'Cancel'.

- Change the **Create a database for this environment?** toggle to **Yes**.

- Leave all other selections as default and click **Next**.

The screenshot shows the 'Add database' dialog box with the following elements and numbered callouts:

- 1**: Points to the warning message 'This operation is subject to [capacity constraints](#)'.
- 2**: Points to the 'Language' dropdown menu, which is currently set to 'English'.
- 3**: Points to the 'Deploy sample apps and data' toggle switch, which is currently set to 'Yes'.
- 4**: Points to the 'Save' button at the bottom of the dialog.

Other visible elements include the 'URL' field with a 'Choose Url' button and the default value 'crm5.dynamics.com', and the 'Currency' dropdown set to 'SGD (\$)'. The 'Enable Dynamics 365 apps' toggle is set to 'No'.

- On the next tab, change the toggle for **Deploy sample apps and data?** to **Yes**. Click **Save**.
3. Your **Practice** environment should now show in the list of Environments.
 4. Your environment may take a few minutes to provision. Refresh the page if needed. When your environment is prepared, select your **Practice** environment by clicking on the ellipses next to its name to expand the drop down menu and select **Settings**.
 5. Explore the different areas in **Settings** that you are interested in but do not make any changes yet.

+ New ↻ Refresh 🗑 Recover deleted environments 2 ✓ New environment Aroh Praticce is getting prepared. It can be used once active.				
Environments				
Environment	Type	State	Region	
Aroh Praticce	Trial	PreparingInstance	Asia	
 Help Desk support	...	Microsoft Teams	Ready	Asia
Project	...	Microsoft Teams	Ready	Asia

NOTE Depending on the browser that you are using, it is suggested that you disable any pop-up blockers that maybe enabled. This will prevent pop up screens from not appearing as they should.

Module 2 - Create App from Data

Lab 2.1: Practice Lab – Create an app / Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client **Fabrikam**.

Fabrikam would like to encourage their **employees to continuously learn**. They want to build an application that allow a small set of employees to **create knowledge assessments** and then make them available to all employees to test their knowledge.

The employees need to be able to **pick an assessment** and quickly complete it **in just a few minutes**. In this practice, you will be **creating the apps necessary to support this effort**.

Working with the solution architect on the project **you have determined that you will create two apps**.

Fabrikam Knowledge Admin – this will be a model-driven application that you can quickly enable creation of the **knowledge assessments** by the users.

Fabrikam Knowledge – this will be a canvas app that will be a **custom user experience** making it easy to find the **assessments and take them**.

In this practice, you will be starting the creation of these applications and will build them out as you progress through the course. You will also create one of the template applications so you can see how easy it is to get started using a “Make from data” template.

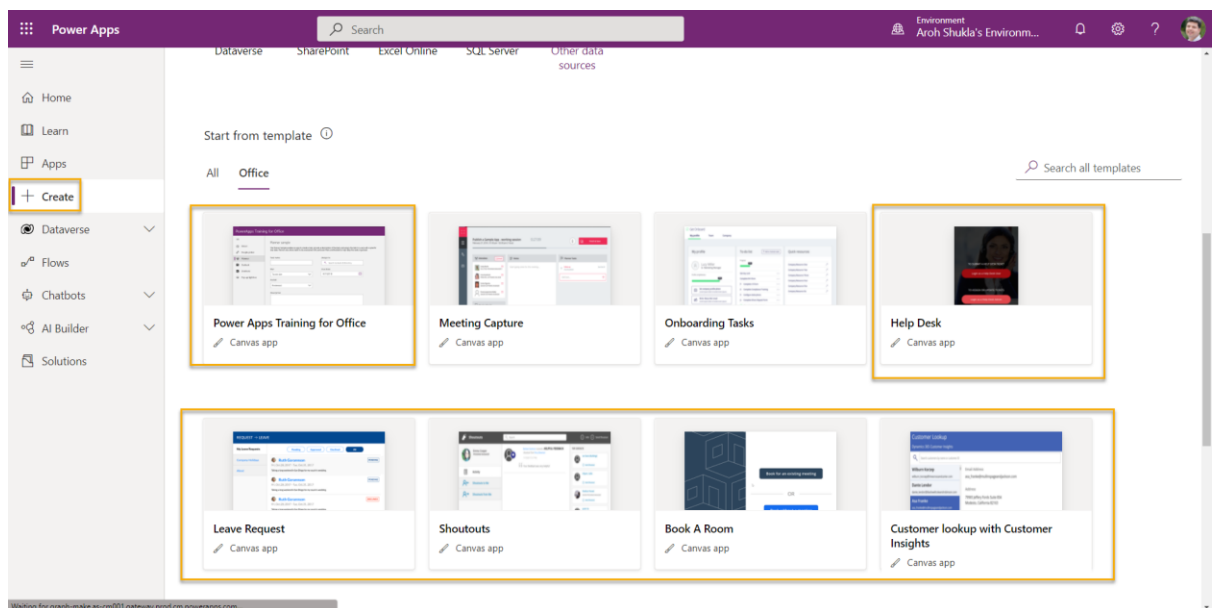
Exercise 1 – Review Templates and Create App from Data

In this exercise, you will **review the template and sample apps** that are available on the maker portal. You will also create an app using the Create from **data templates** to see how quickly that can get a basic canvas app started.

Task 1 – Review + Create templates/samples

If you have time, you can choose any of these and select Make It and explore on your own.

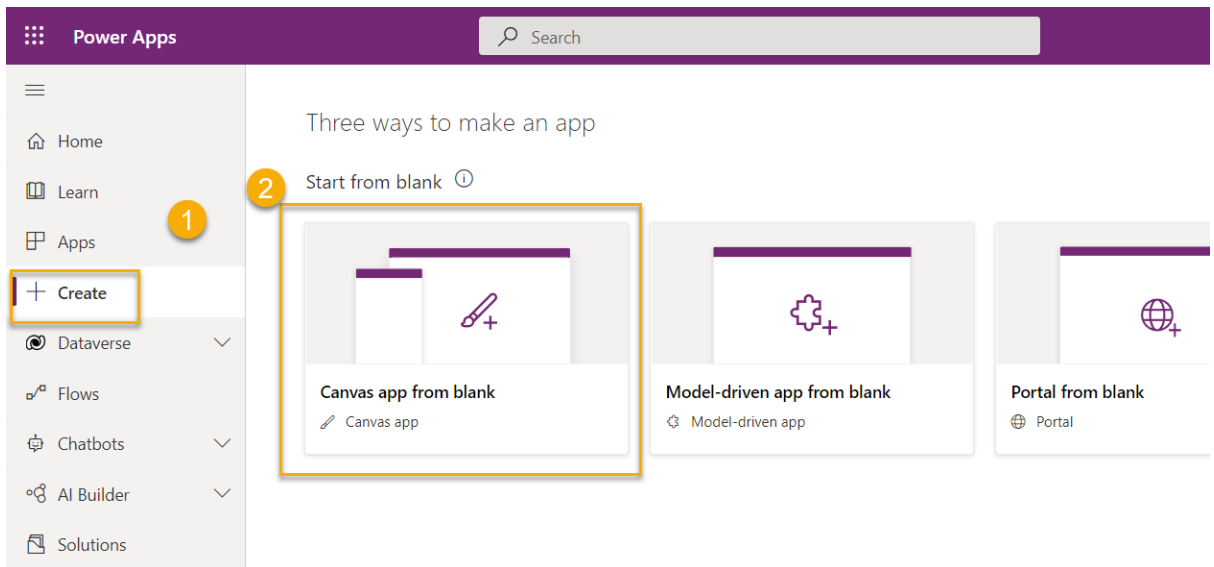
1. Navigate to <https://make.powerapps.com>. You may need to sign in again using your credentials if necessary.
2. Switch to your **Practice** environment by using the Environment Selector in the upper right corner of the screen. (It will probably say **Contoso (Default)**.) Select your **Practice** environment from the list.
3. Select **+ Create** from the left-hand navigation.
4. Review the different apps that are available to use as both **samples** and **starting templates**.



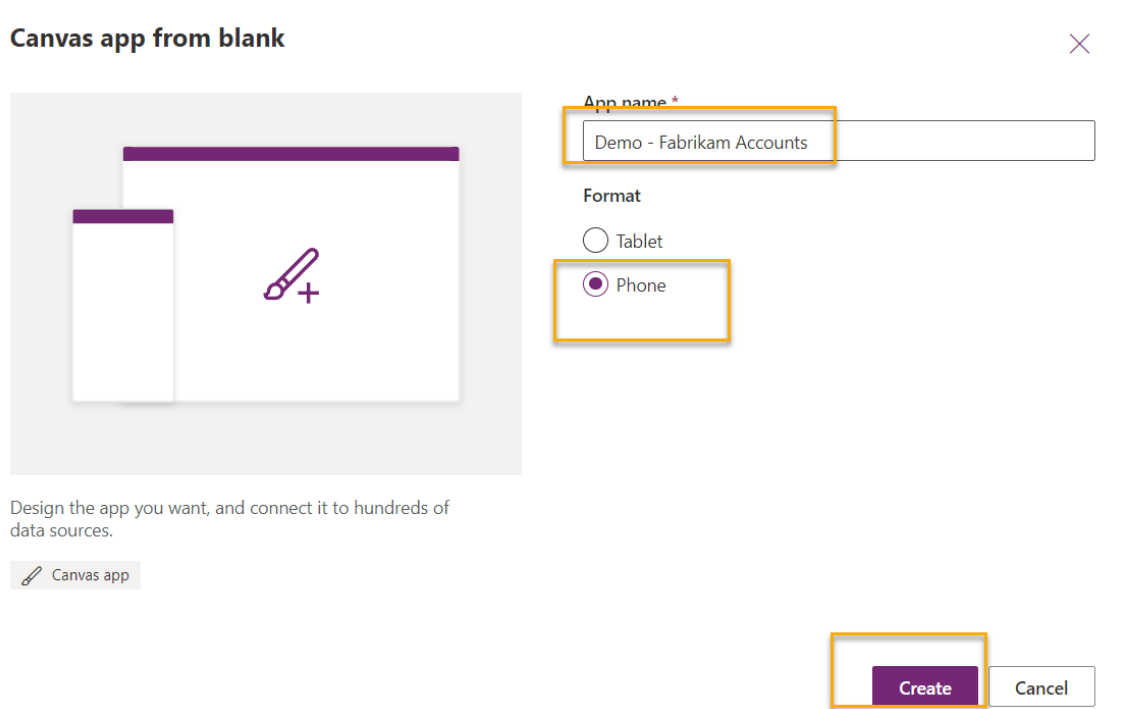
Task 2 – Create an app over data for Account

Starting a canvas app from data is a quick way to **start a canvas app** when the goal is to have a list of data from a table.

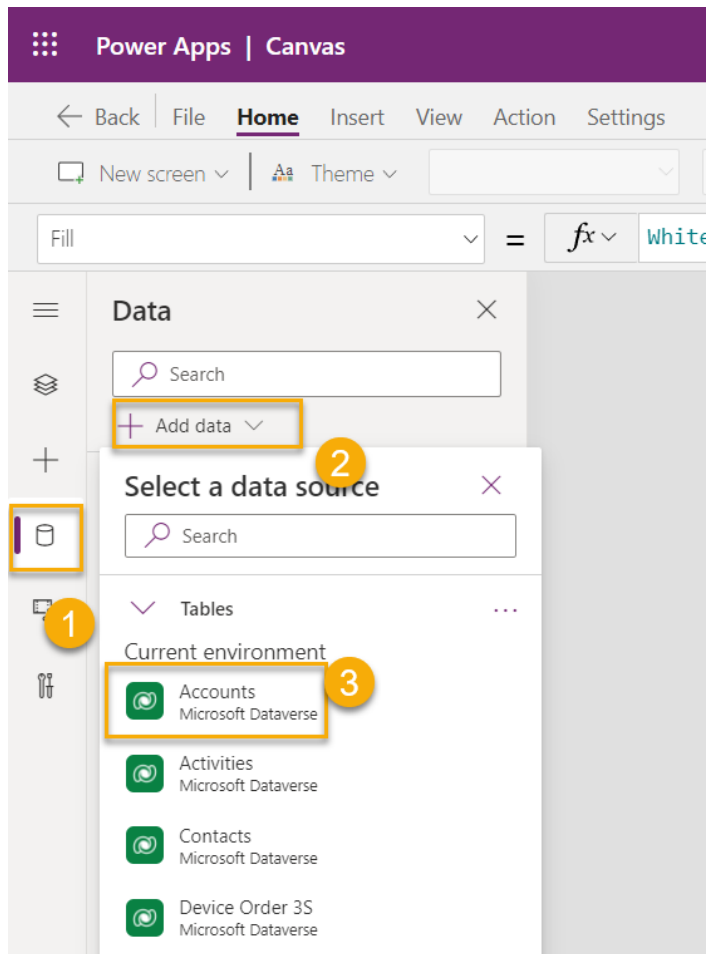
1. Click **Canvas app from blank**.



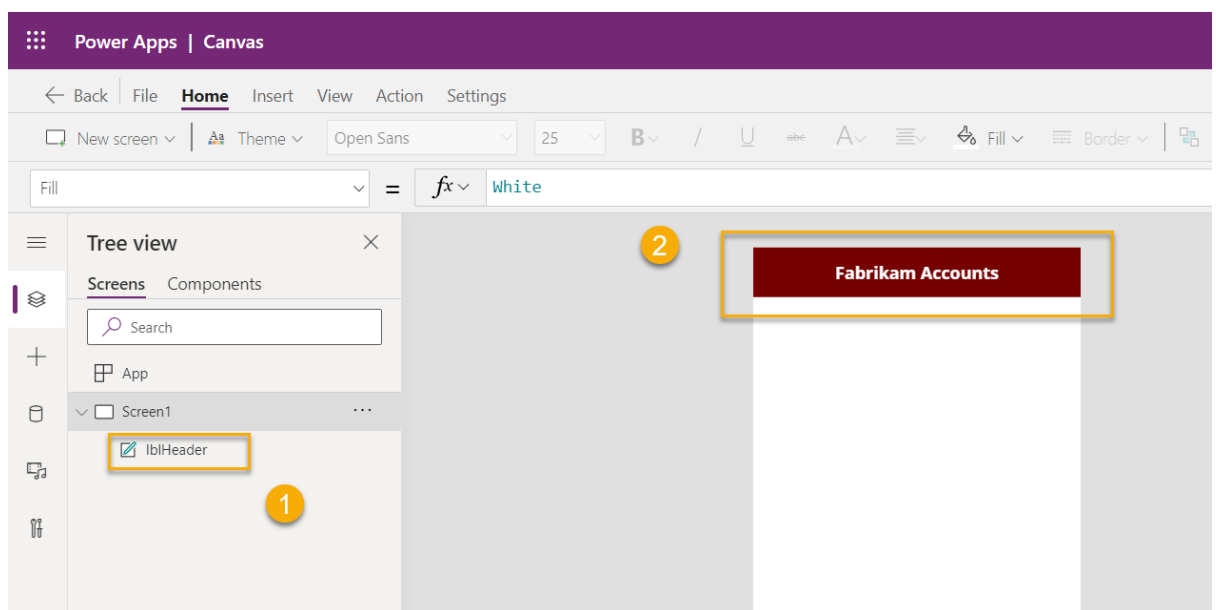
2. In the dialog box, name your app **Fabrikam Accounts** and select **Phone** format.



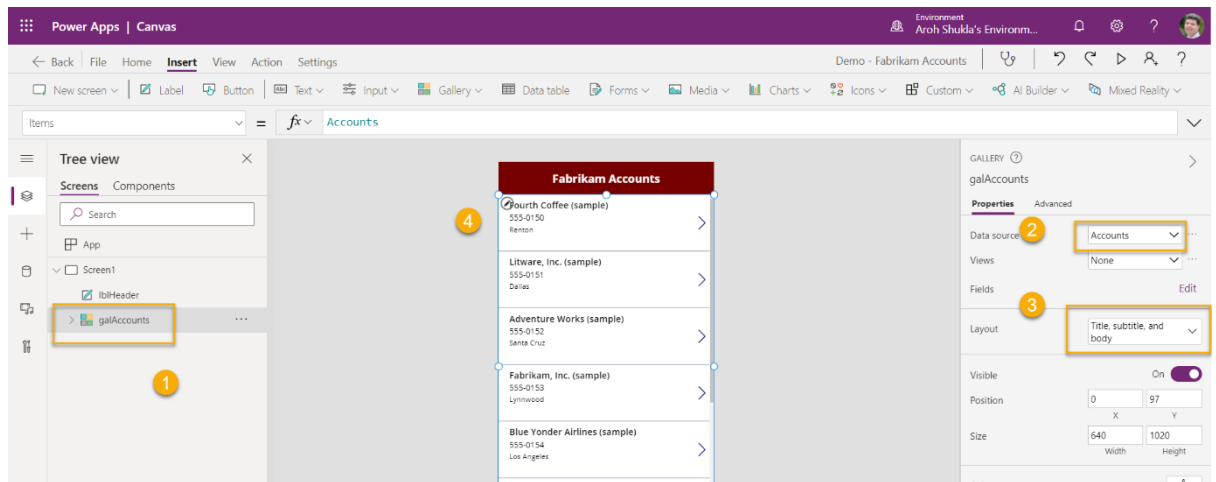
3. Click **Create** in the dialog. (You may be required to sign in again; enter your tenant credentials if necessary.)
4. Your app should open in the designer. (You may get a few pop-ups first; close them.)
5. Select **Data** from the left bar and click **Add data**. From the list of tables, select **Accounts**.



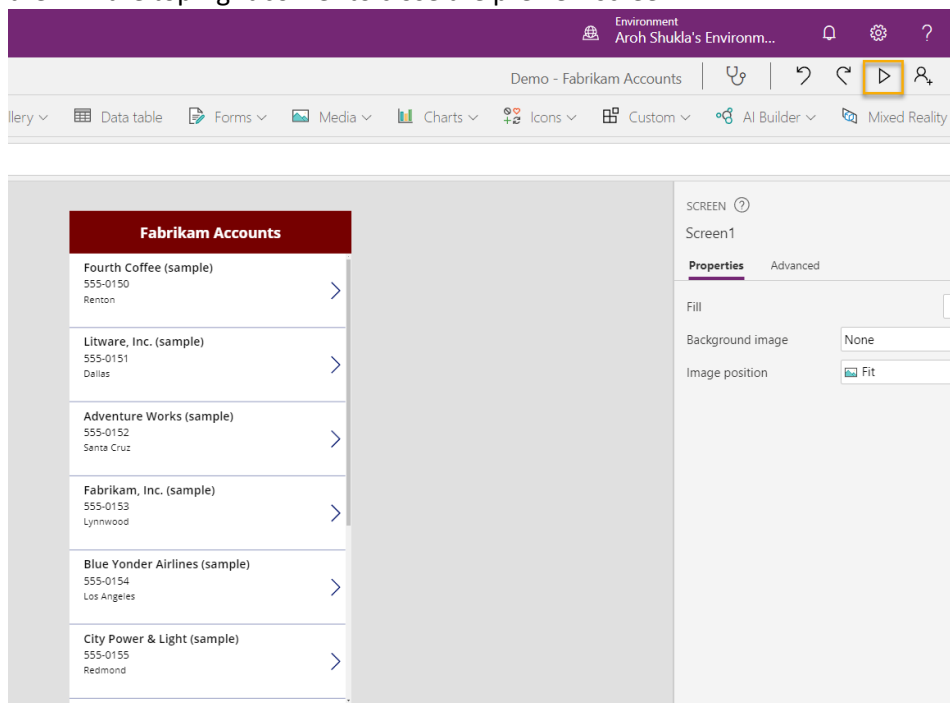
- 6.
7. Add a header to your app by selecting the + button (the Insert button) on the left tab and selecting **Text label**. Use the pane on the right side of the screen to enter **Fabrikam Accounts** in the **Text** field, then hit **Enter**. You can edit the size, font, and other attributes to customize the look and feel of the application.



8. Add a list of accounts to your app by selecting the **+** button on the left tab and selecting **Vertical Gallery** from the **Layout** section.

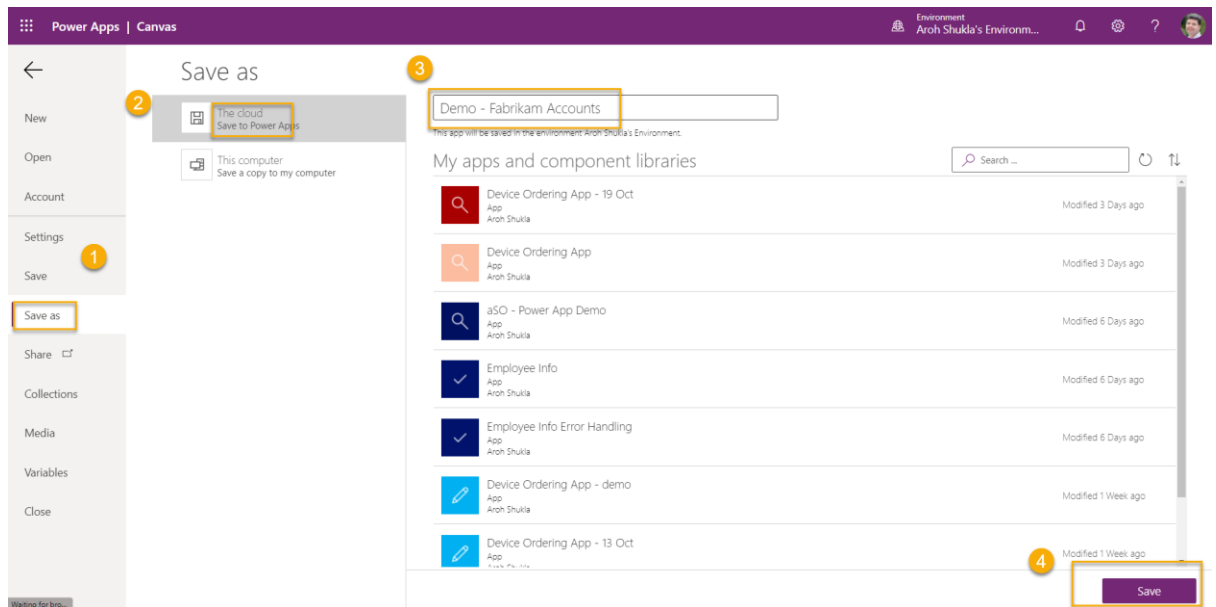


9. A vertical gallery will be inserted into your app, and you will be prompted to select which data source it should pull from. Select **Accounts** from the pop-up.
10. The application will load list of the accounts (it may be blank for now). Drag the gallery to fit the app or resize to your liking.
11. To preview your app, click **Play** (it will look like a Play button) in the upper right corner. Click the **X** in the top right corner to close the preview screen.



12. Click **File**.
13. Select the **Cloud** and enter **Fabrikam Accounts** in the **Name** box.
14. Click **Save**.

15. Explore the app as much as you want and then proceed to the **next exercise**. This app will be saved, and you can always revisit it later.



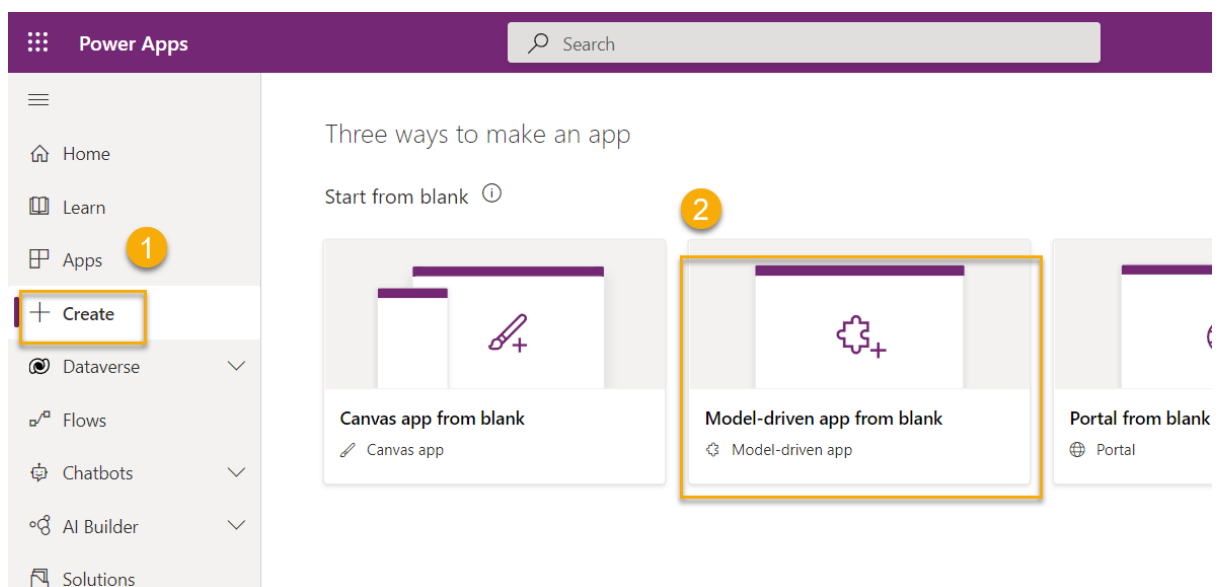
16. Close the **App Designer**.

Exercise 2 – Create the model-driven app

In this exercise, you will be creating the Knowledge Admin model-driven app. In the data modeling module, you will be creating all the entities, so getting this started will be easy.

Task 1 – Create a model-driven app

1. Go back to <https://make.powerapps.com> and make sure you are in your **Practice** environment.
2. Click on **+ Create** and select **Model-driven app from blank**. Select **Create** in the pop-up window.



3. Enter **Knowledge Admin** for Name and click **Done**.

4.

New model-driven app

Name *

Knowledge Admin

Description

Create Cancel

New model-driven app

Name *

Knowledge Admin

Description

Create Cancel

5.

Power Apps | Knowledge Admin

Navigation

- Administration
 - User Admin
 - Users

User Admin

Users

Enabled Users

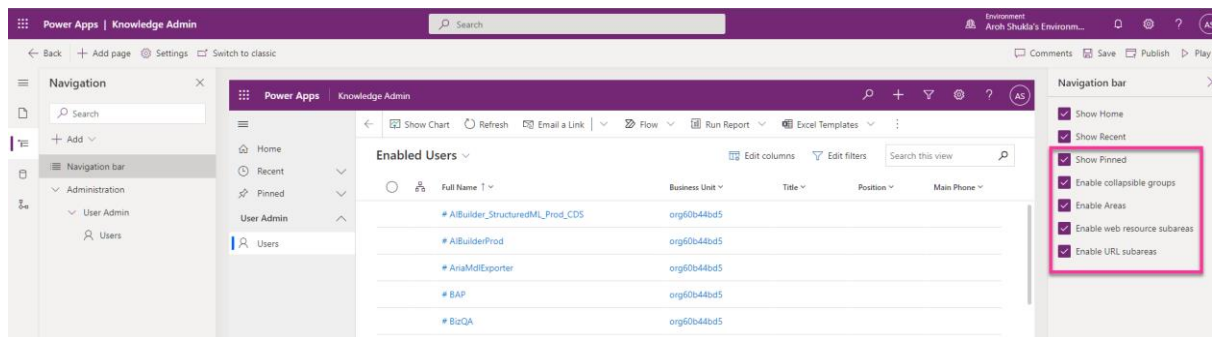
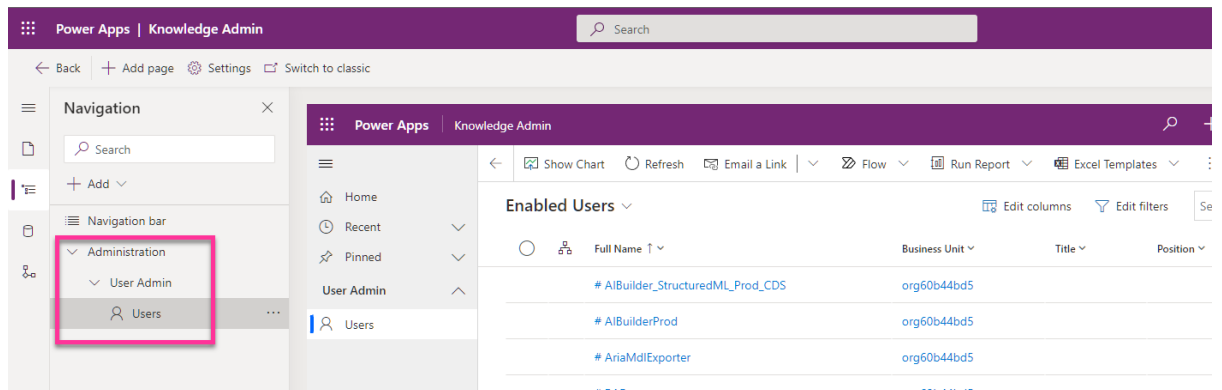
Full Name 1	Business Unit	Title	Position	Main Phone
# AIBuilder_StructuredML_Prod_CDS	org43b8c9b4			
# AIBuilderProd	org43b8c9b4			
# AsiaMdlExporter	org43b8c9b4			
# BAP	org43b8c9b4			
# BtcQA	org43b8c9b4			
# CCADDataAnalyticsML	org43b8c9b4			
# CDSFileStorage	org43b8c9b4			

Navigation bar

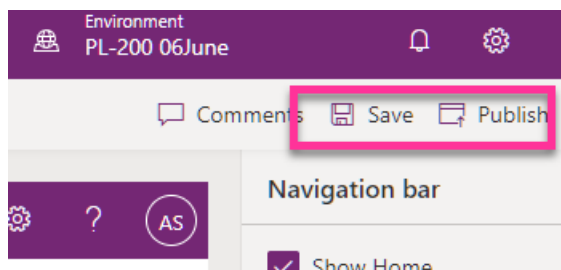
- Show Home
- Show Recent
- Show Pinned
- Enable collapsible groups
- Enable Areas
- Enable web resource subareas
- Enable URL subareas

6.

7.



8. **Save and Publish**



9. **Play**

Power Apps

Create a New App

Create and publish your own app in minutes. You can start simple and add more components later. [Learn more.](#)

1

Name :* Demo Knowledge Admin

Unique Name :* cr6ac_DemoKnowledgeAdmin

Description:

Icon: ☒ Use Default Image

Unified Interface URL: https://org60b44bd5.crm5.dynamics.com/Apps/uniquename/cr6ac_DemoKnowledgeAdmin

2 Done Cancel

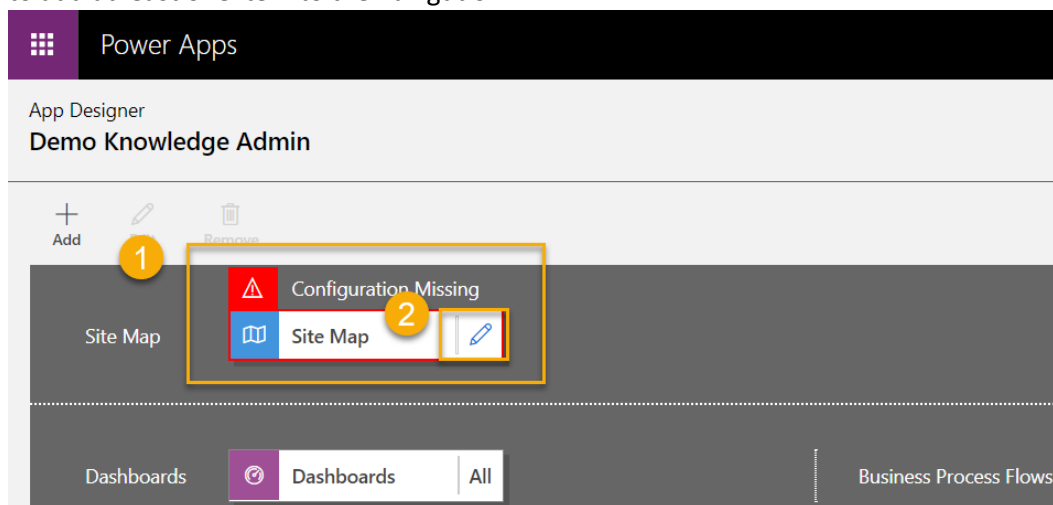
App Title: Demo Knowledge Admin

☐ Use existing solution to create the App

☐ Choose a welcome page for the app

☐ Enable Mobile Offline

10. Click the edit icon (it looks like a pencil) next to **Site Map**. *Note:* When you start a new app, you must edit the site map before you can run it - otherwise you will get an error. You need to add at least one item to the navigation.



Click on Pencil Icon.

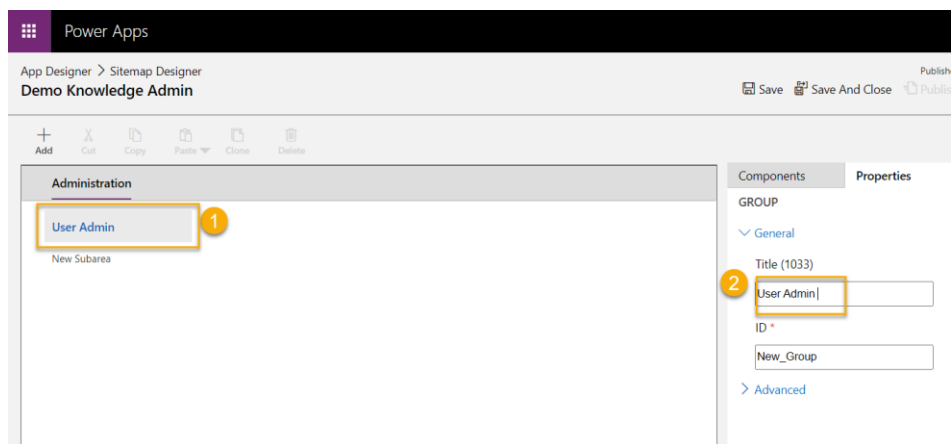
11. Click on the **New Area**.

12. Enter **Administration** for **Title**.



13. Select the **New Group**.

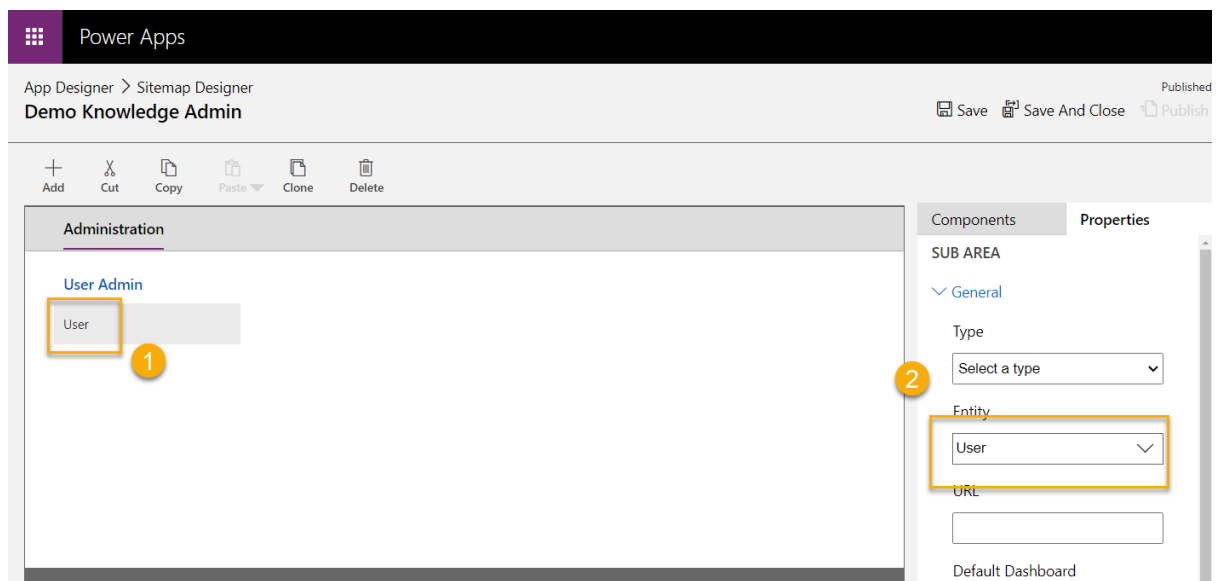
14. Enter **User Admin** for **Title**.



15. Select the **New Subarea**.

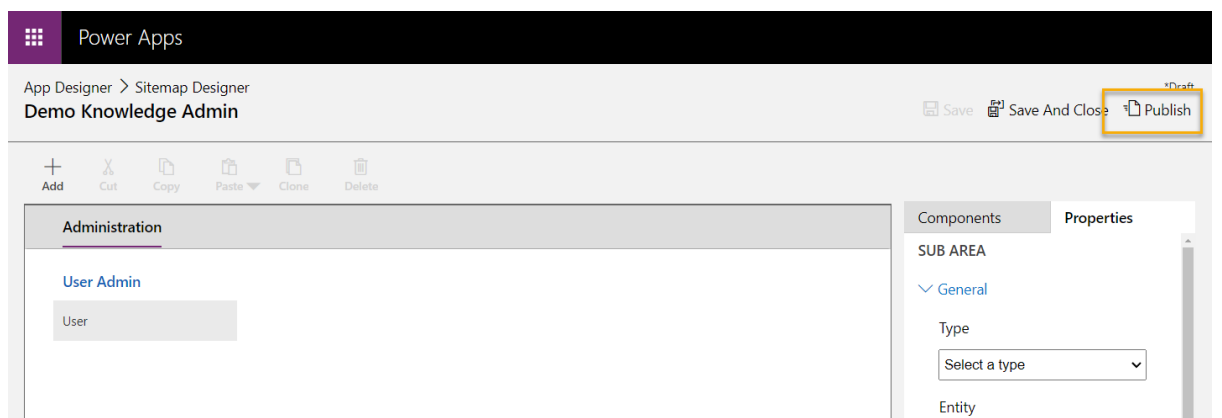
16. Select **Entity** for **Type**.

17. Select **User** for **Entity**.

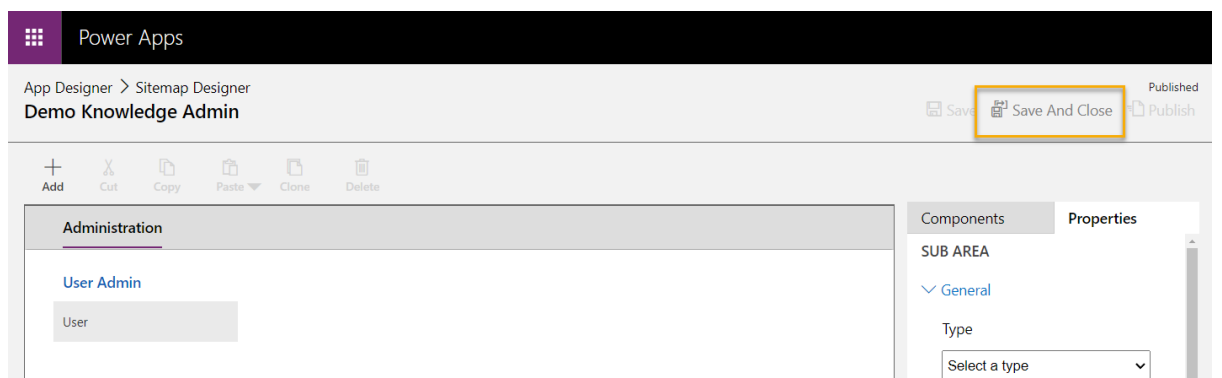


18. Click **Save**.

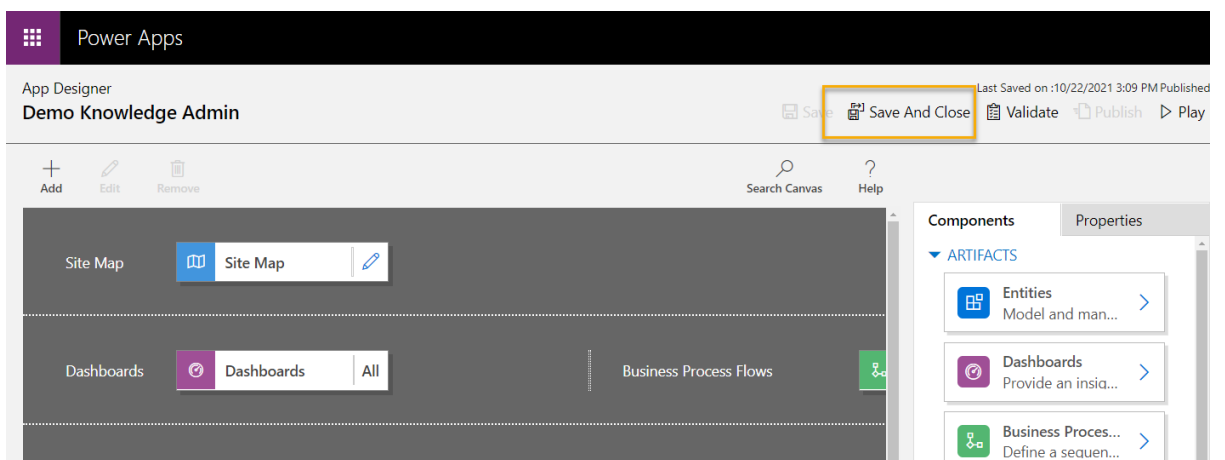
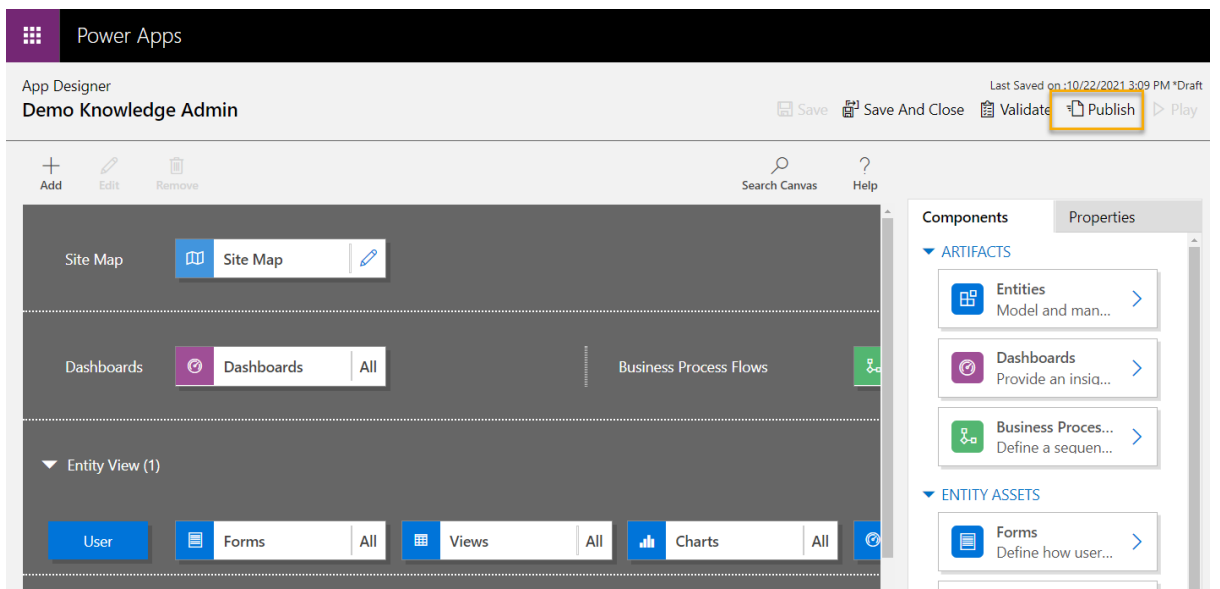
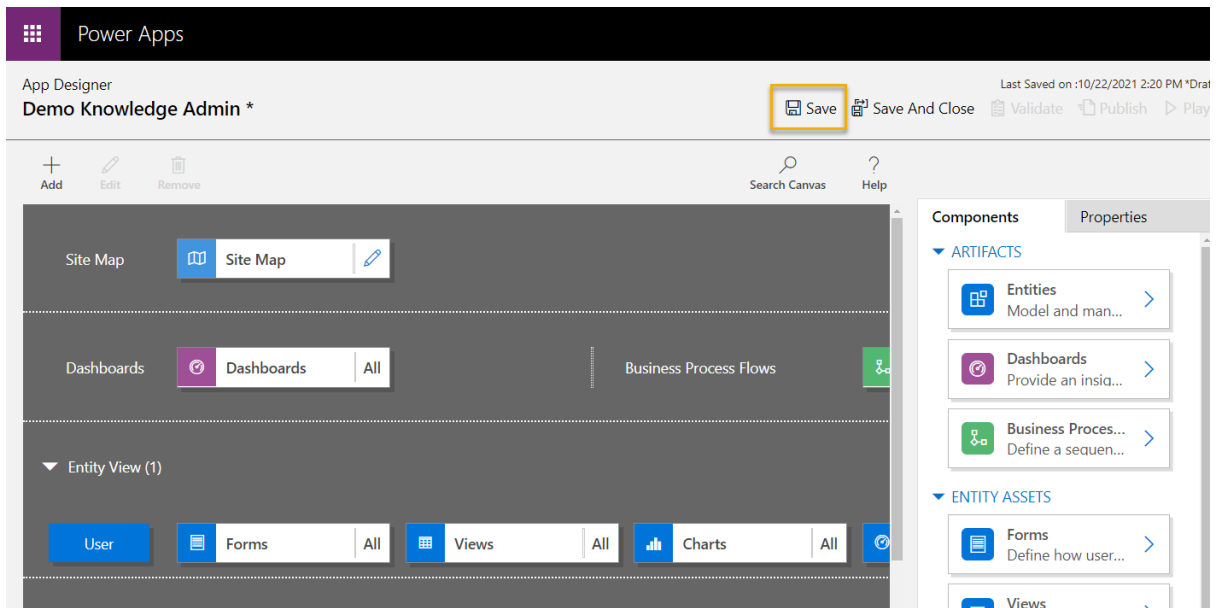
19. Click **Publish**.



20. Close the sitemap editor by clicking **Save and Close**.

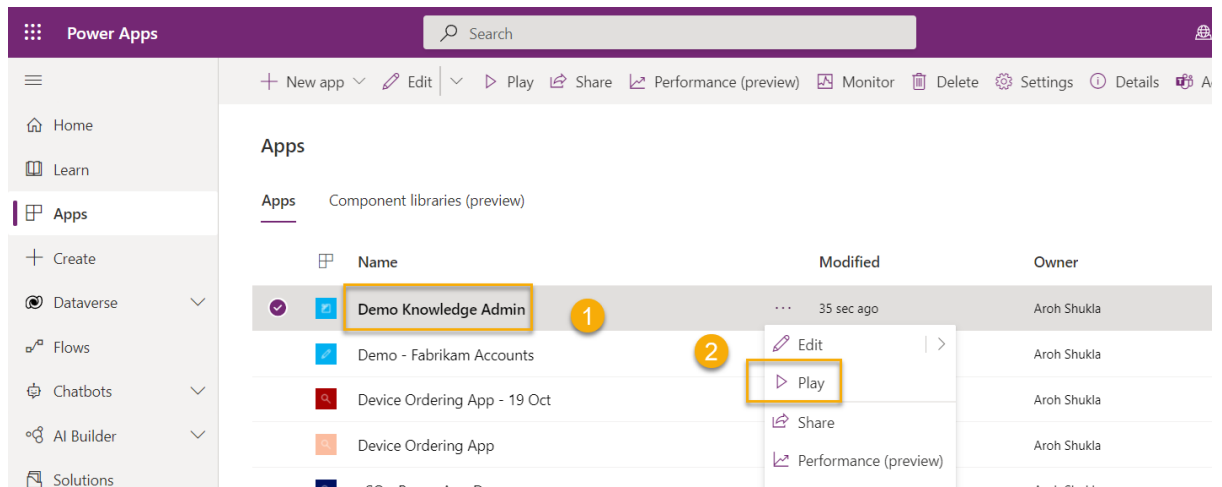


21. Click **Save** and then click **Publish**. After publishing, close the app designer by clicking **Save and Close**.



22. Select Apps.

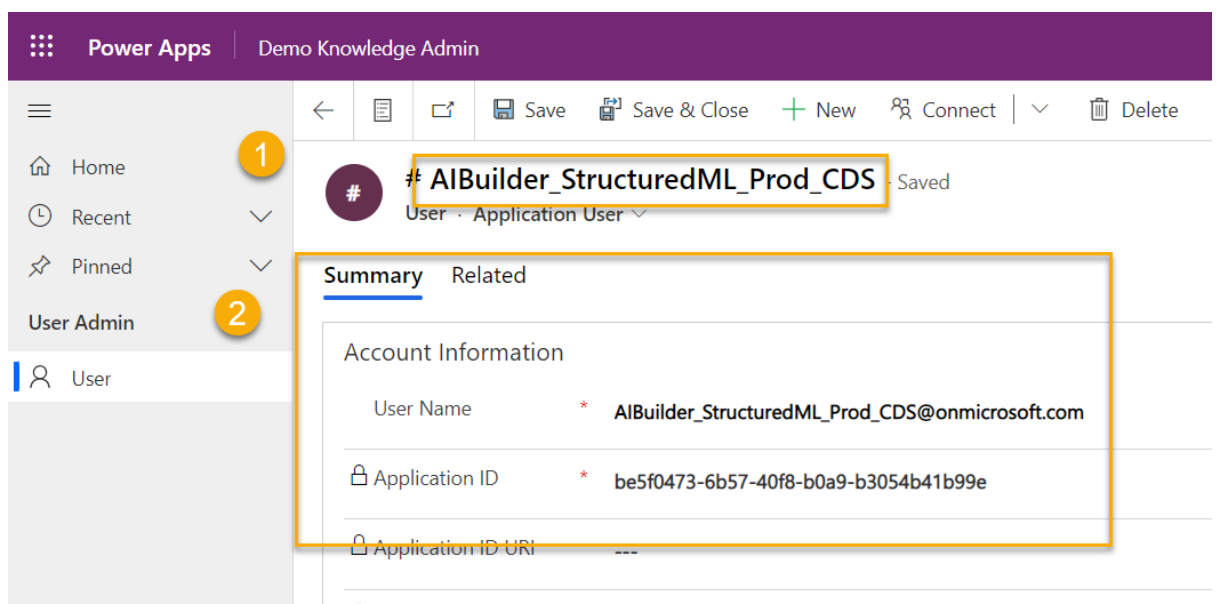
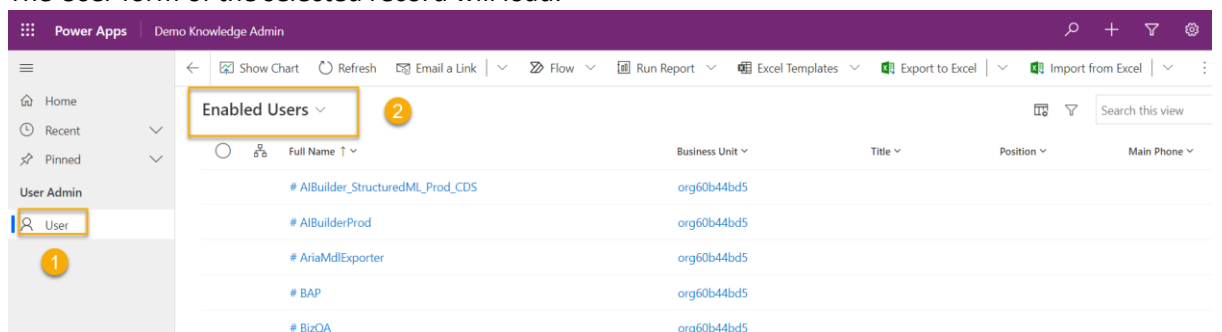
23. The **Knowledge Admin** application you created should be listed. Open the **Knowledge Admin** application by selecting the row and clicking **Play**.



24. The **Model-Driven** application **Knowledge Admin** will load.

25. Open one of the **Users**.

26. The User form of the selected record will load.



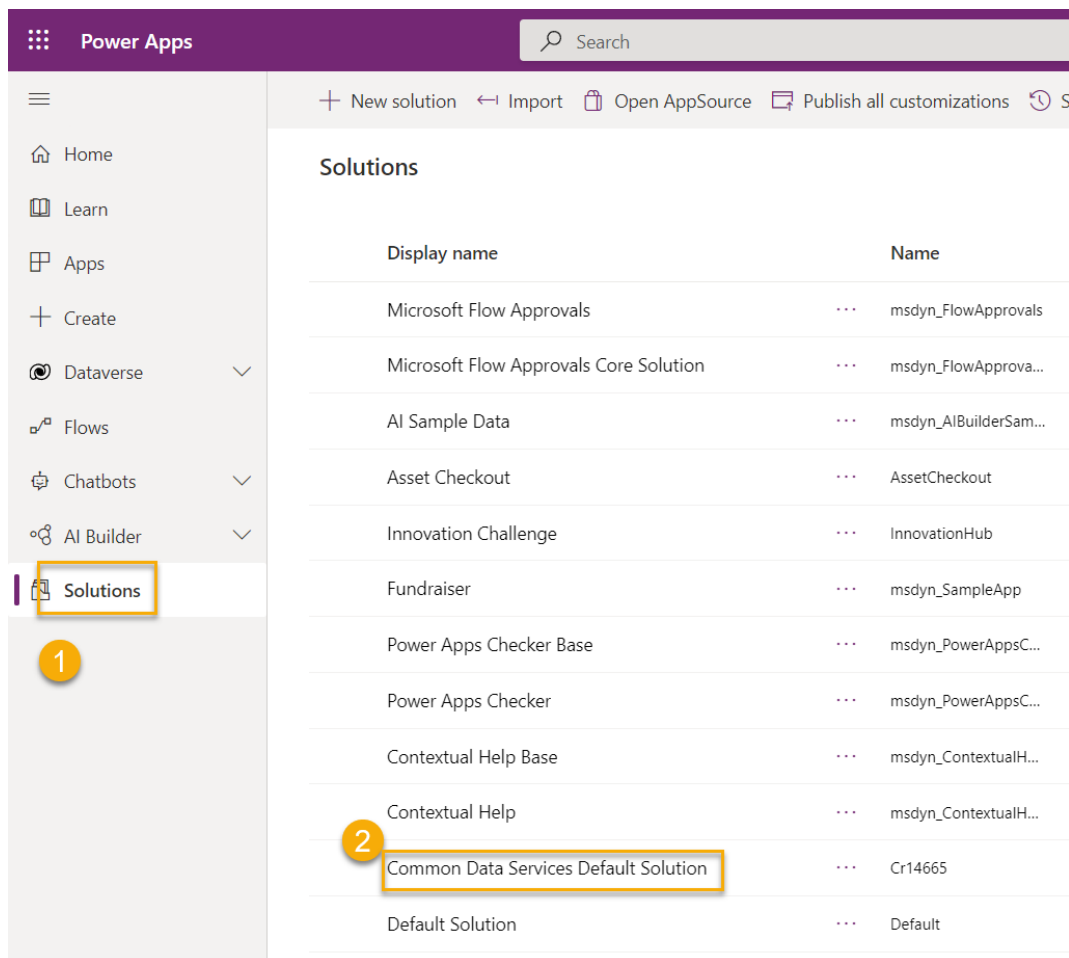
27. Close the application.

Exercise 3 – Create the Knowledge canvas App

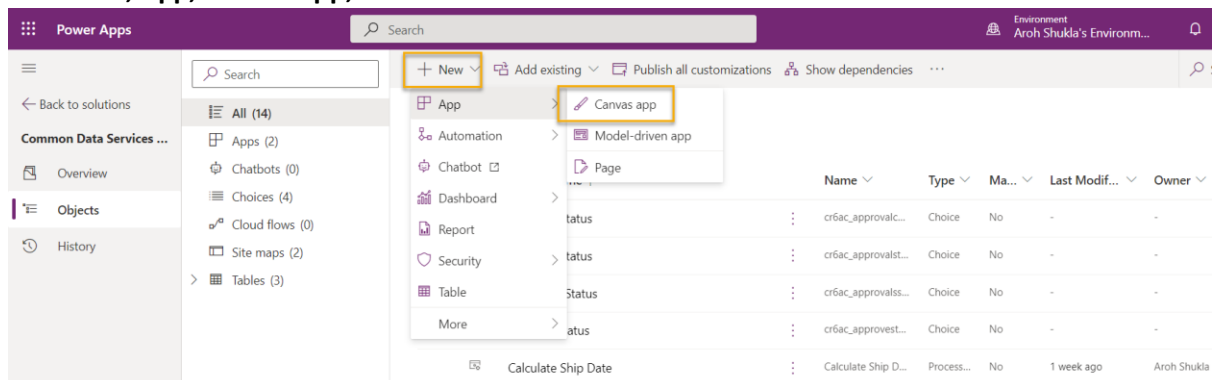
In this exercise, you will be creating the Fabrikam Knowledge canvas app. We will build out the detailed **user experience** in the upcoming canvas app module.

Task 1 – Create a canvas app

1. Go back to <https://make.powerapps.com> and make sure you are in your **Practice** environment.
2. Select **Solutions** and open **Common Data Services Default Solution**.

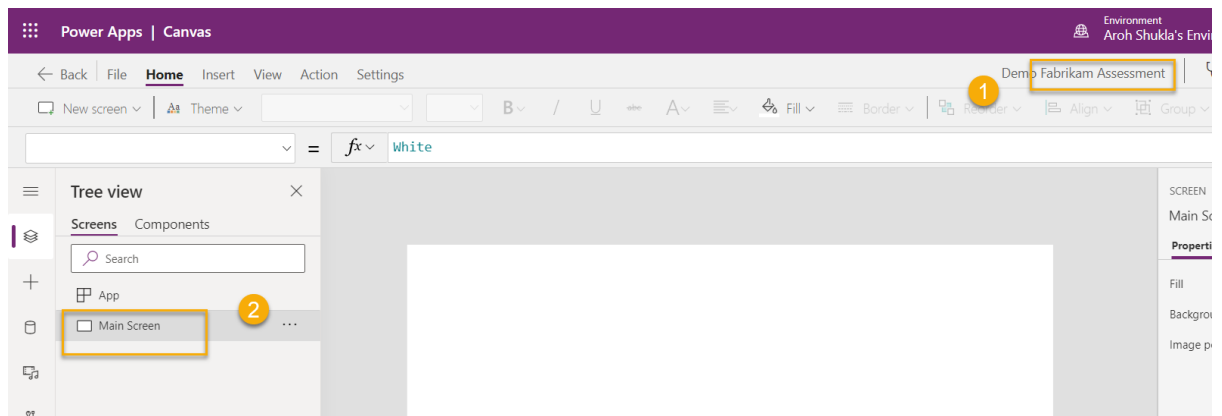


3. Click **New, App, Canvas App**.



4. Enter **Fabrikam Assessment** for **Name** and **Tablet Form Factor** for **Format**.

5. Click **Create**. Click **Skip** if you see a prompt before the designer loads.
6. The Canvas App Designer will load. Hover over **Screen1** and click on the ... button.
7. Select **Rename**.
8. Enter **Main Screen** and press the enter key. *Note:* It is always a good idea to give components meaningful names. It makes them easier to use as your application gets more complex.

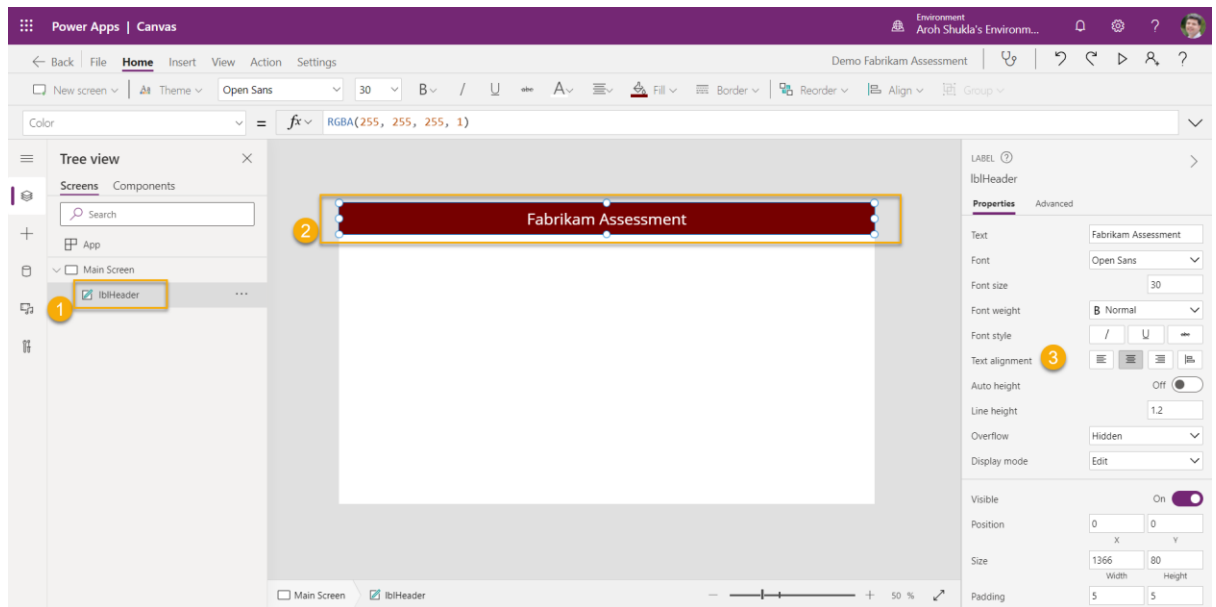


Task 2 – Add Header to the App

Part of making a good app is giving it a personality. We are going to keep things simple here and just add a basic header to the app.

1. Select the **Insert** tab at the top of the screen.
2. Click **Label**.
3. A label will be added to the screen. Select the label.
4. Next to **Label1**, click on the ... button and click **Rename**. Rename the label **Header Label**. Hit **Enter** on your keyboard.
5. Select the **Header** tab and change the **Font Size** to **28**.
6. Click **Color** and change color to **White**.
7. Change the **Fill Color** to **Blue**.
8. Click **Text Alignment** and select **Center**.

9. Locate the **Position** section on the Properties window.



10. Enter **0** for **Y** and **0** for **X**.
11. Locate the **Size** section.
12. Enter **1365** for **Width** and **60** for **Height**.
13. Double click on the **Text** of the label.
14. Replace **Text** with **Fabrikam Assessment**.

Task 3 – Add User Name to the Header

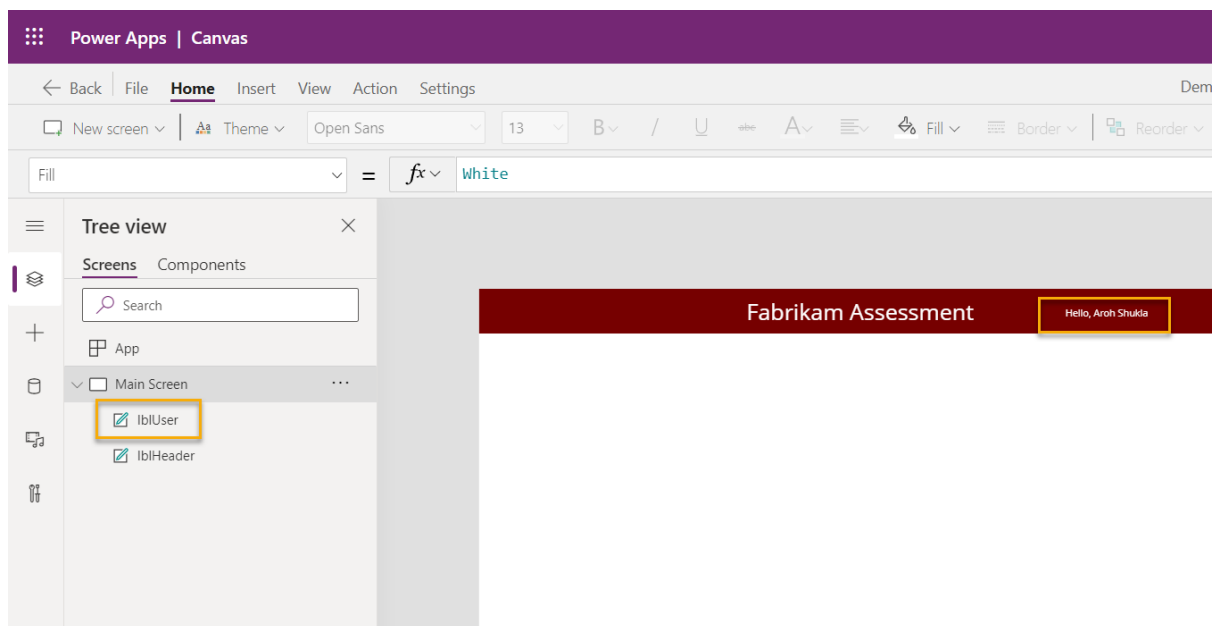
In this task, you are going to leverage the User information to add the name of the current user to the header.

1. Select the **Main Screen** in the left control tree.
2. Select the **Insert** tab from the top menu and click **Label**.
3. Rename the label **User Label**.
4. Make sure text **Text** property is selected and the function value (in the top menu, where you see fx) is now **"Text"**.
5. Replace **"Text"** with the following:

User().FullName

6. The user's Full Name will now be displayed on the label. Select the **Home** tab and make sure the text box is selected.
7. Change the **Font Size** to **14**.
8. Change the Font **Color** to **White**.
9. Click **Align** and select **Right** from the top menu.

10. Click **Text align** from the Properties tab on the right and select **Align right**.

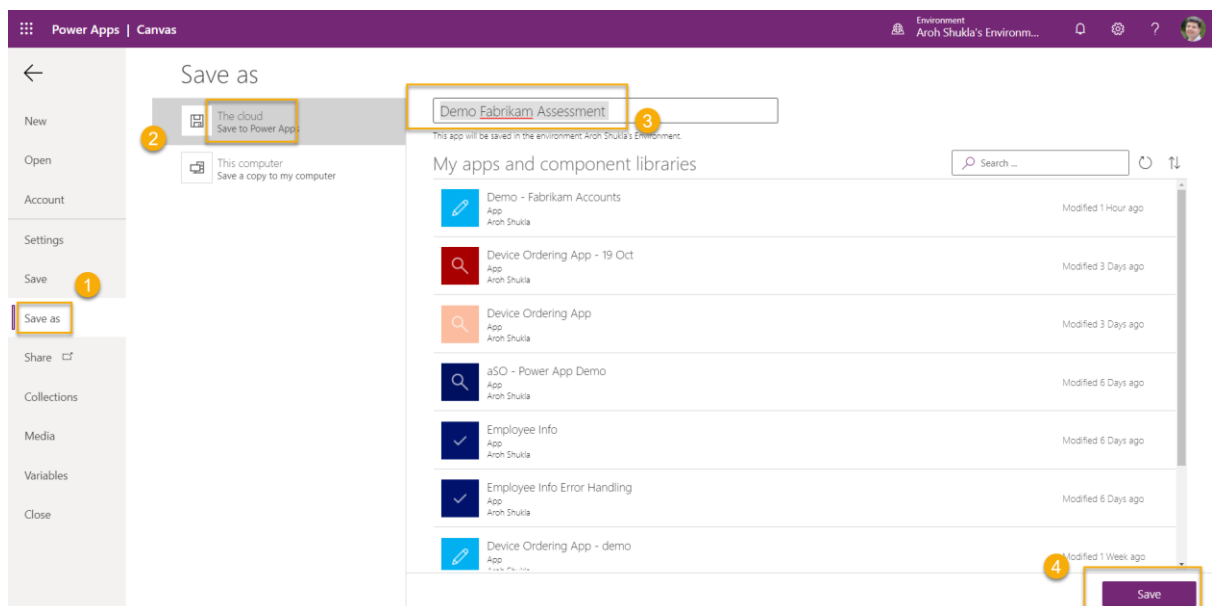


11. Set **Position Y** to **0**.

12. Locate **Size** and set the Height to **60**.

13. Locate **Padding** and enter **10** for **Right**.

14. Click **File** and select **Save**.



15. Click on the **Back** button.

16. Click **Play**.

17. Your application will load.

18. Close the preview.

19. Close the Canvas App Designer.

20. Click **Leave**.

Module 3: Work with Dataverse

Demo: Lesson 1: Work with the data model (Creating Tables, Relationships)

Go Tables in **Labs Exercise 1**, Creating Tables and Relationships

Demo: Lesson 2: Create and manage processes (Business Process flow)

Use Aroh Shukla's Environment

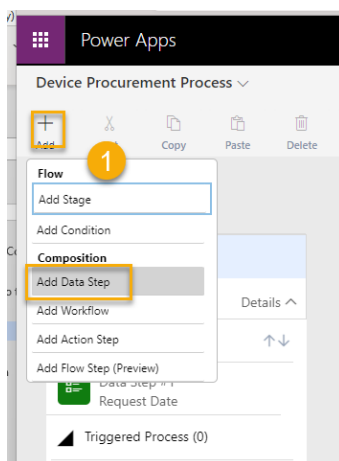
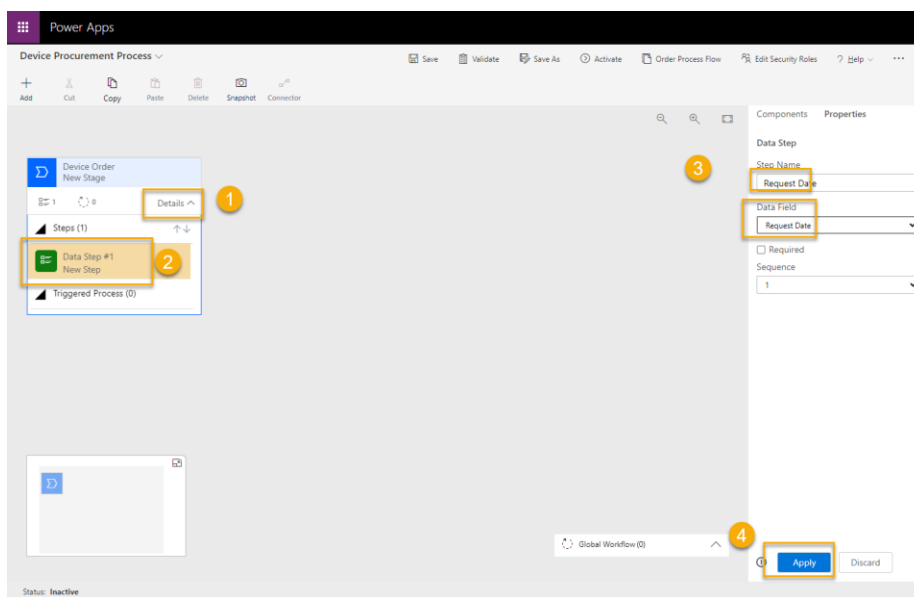
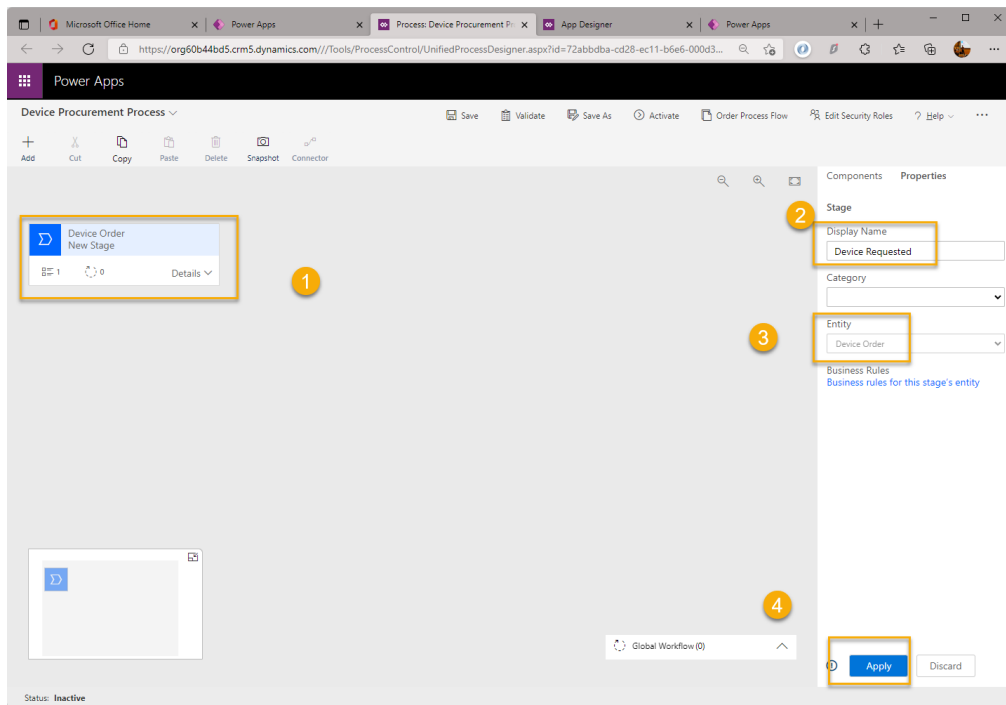
The screenshot shows the Power Apps interface with the following steps highlighted:

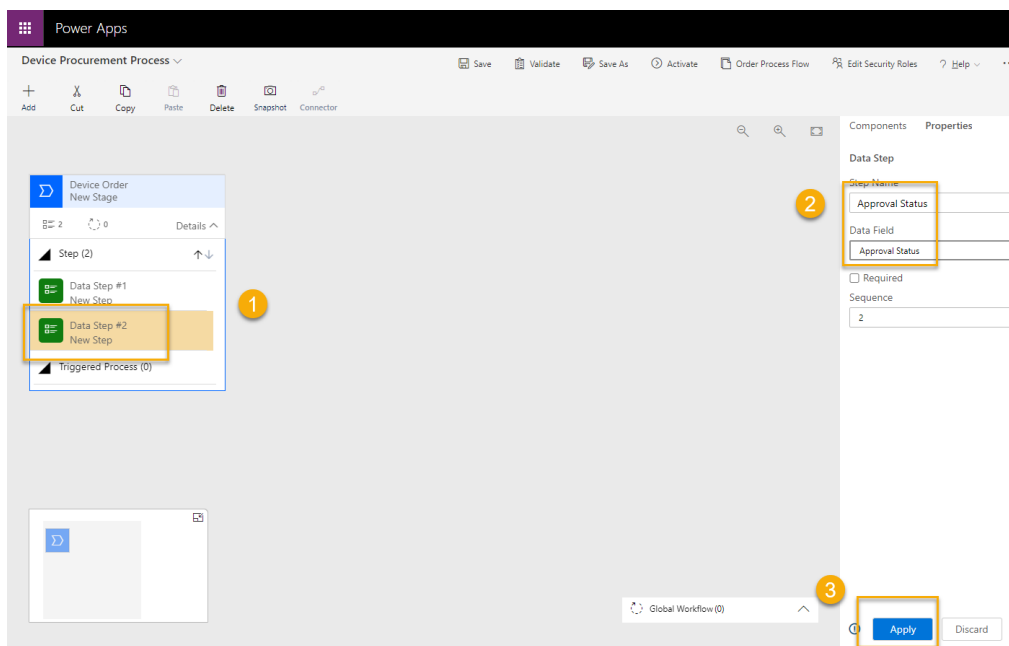
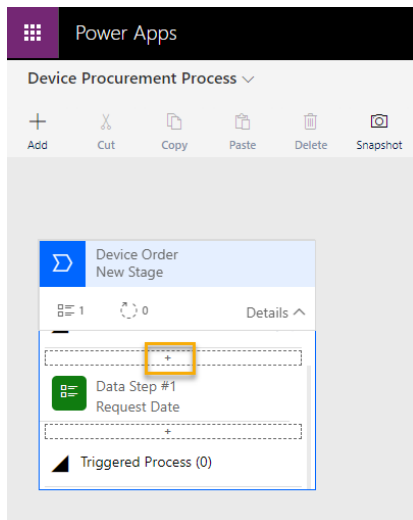
1. In the left navigation pane, click on **Flows**.
2. In the **Flows** section, click on **Business process flows**.
3. Click on the **+ New** button.

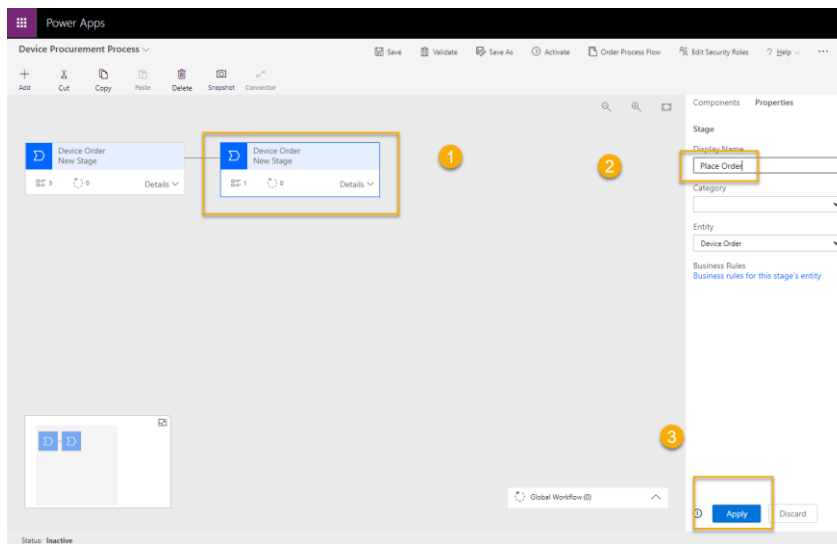
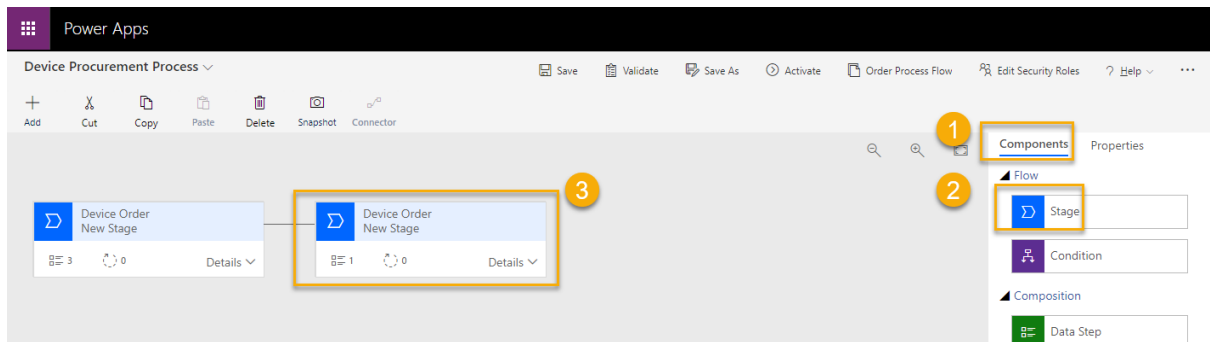
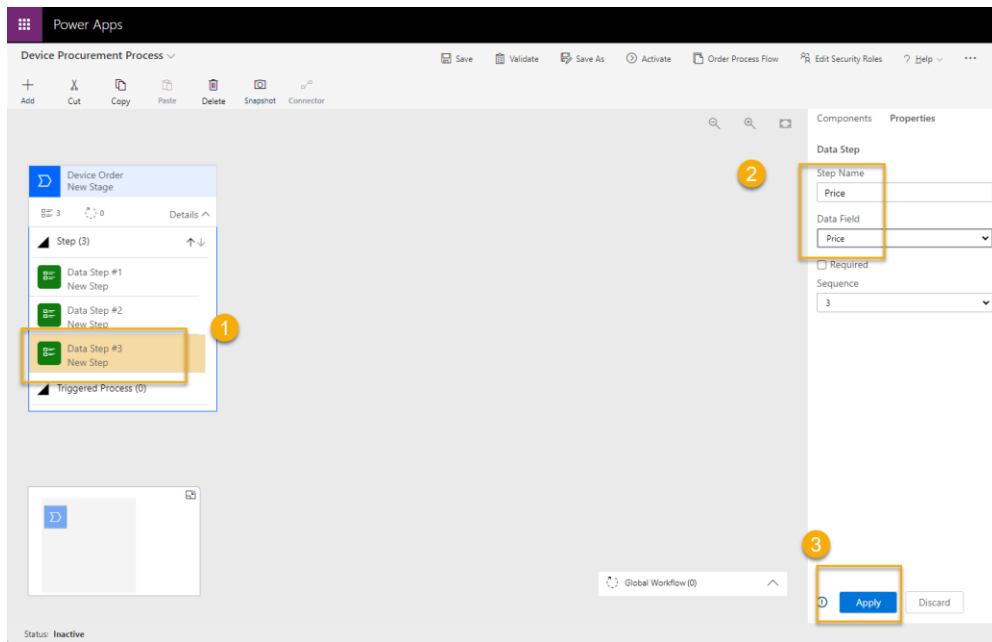
The **Build a business process flow** dialog box is open, showing the following fields:

- Flow name ***: Device Procurement Process
- Name ***: new_deviceprocurementprocess
- Choose a table ***: dev (Device Order)

At the bottom right, there are **Create** and **Cancel** buttons.







Power Apps

Device Procurement Process

Save Validate Save As Activate Order Process Flow Edit Security Roles Help

Add Cut Copy Paste Delete Snapshot Connector

Device Order New Stage

Device Order New Stage

Steps (1)

Data Step #1 New Step

Triggered Process (0)

Global Workflow (0)

Status: Inactive

Components Properties

Data Step

Step Name

Estimated Ship Date

Data Field

Estimated Ship Date

Required

Sequence

1

Apply Discard

1 2 3

Device Procurement Process

Save Validate Save As Activate Order Process Flow Edit Security Roles Help

Add Cut Copy Paste Delete Snapshot Connector

Device Order New Stage

Device Order New Stage

Step (2)

Data Step #1 New Step

Data Step #2 New Step

Triggered Process (0)

Global Workflow (0)

Components Properties

Data Step

Step Name

Supplier Order ID

Data Field

Supplier Order ID

Required

Sequence

2

Apply Discard

1 2 3 4

Power Apps

Device Procurement Process

Save Validate Save As Activate Order Process Flow Edit Security Roles Help

Add Cut Copy Paste Delete Snapshot Connector

Components Properties

Stage

Display Name: Receive Device

Category: [Dropdown]

Entity: Device Order

Business Rules: Business rules for this stage's entity

Steps (2)

Data Step #1: New Step

Data Step #2: Supplier Order ID

Triggered Process (0)

Global Workflow (0)

Apply Discard

Status: Inactive

Power Apps

Device Procurement Process

Save Validate Save As Activate Order Process Flow Edit Security Roles Help

Add Cut Copy Paste Delete Snapshot Connector

Components Properties

Data Step

Step Name: Device Received

Data Field: Device Received

Required: [Checkbox]

Sequence: 1

Steps (1)

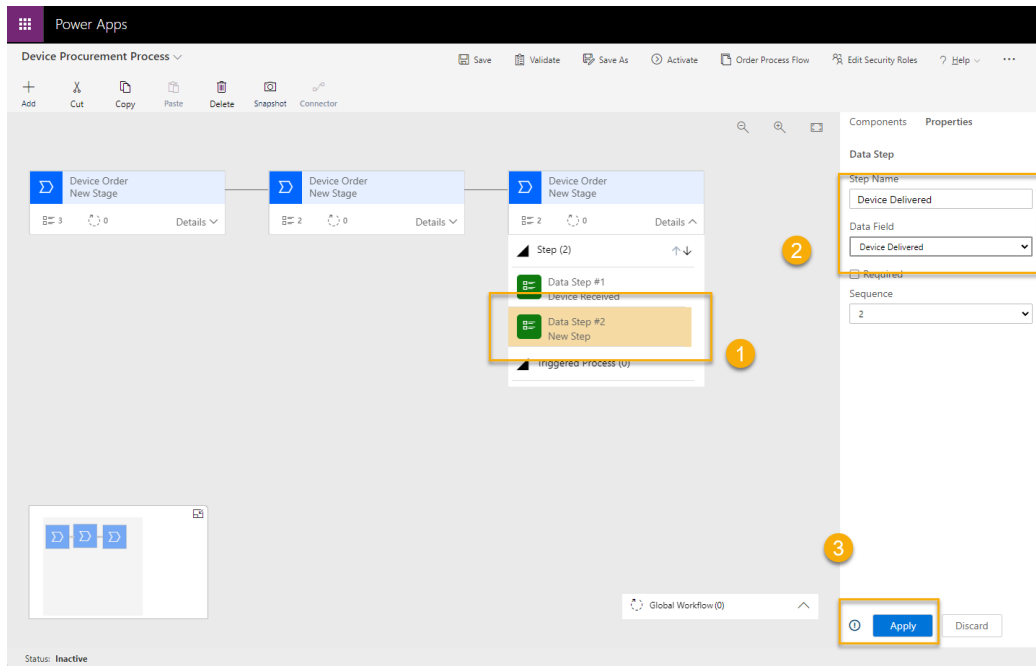
Data Step #1: New Step

Triggered Process (0)

Global Workflow (0)

Apply Discard

Status: Inactive



Demo: Lesson 3 - Work with AI Builder

Power Platform training is very good!

Sentiment Analysis

Premium



Get started Try it out Best practices

Select text to analyze

Select option to test

Or add your own here

Power Platform training is very good!

Analyze text

Analyzed text

Show Details

Power Platform training is very good!

Text sentiment

😊 Positive

Input language

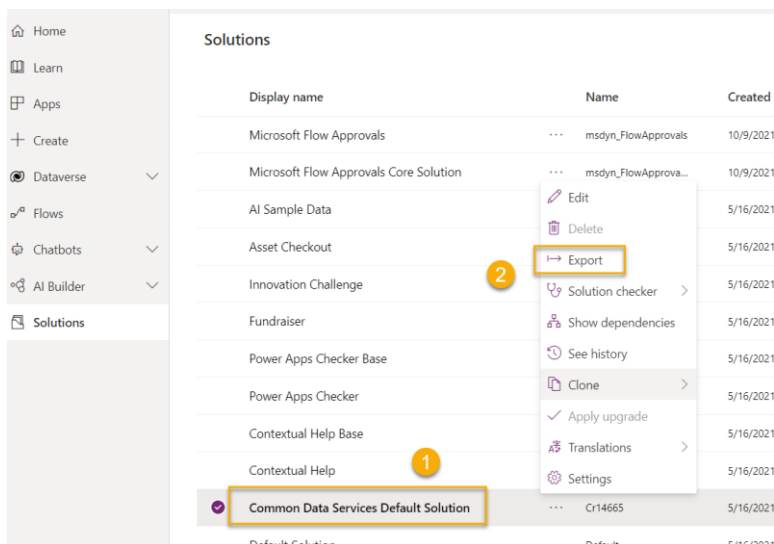
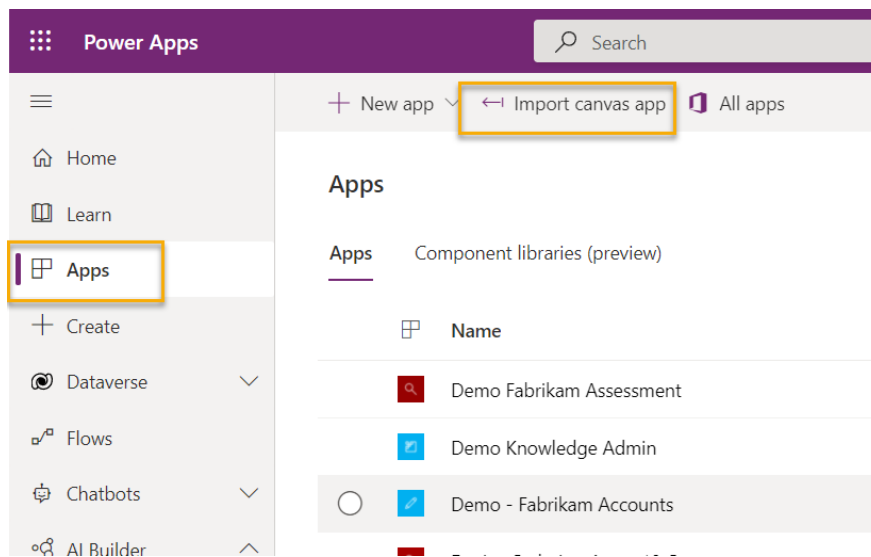
English

Use in a flow

Use in an app

Cancel

Demo: Lesson 5: Import and export data



Power Apps Search Environment Aroh Shukla's Environ...

+ New solution Edit Delete Export Show dependencies See history Sol

Solutions

Display name	Name	Created ↓	Version	Managed externally?
Microsoft Flow Approvals	msdyn_FlowApprovals	10/9/2021	2.0.3.1	🔒
Microsoft Flow Approvals Core Solution	msdyn_FlowApprova...	10/9/2021	2.0.3.1	🔒
AI Sample Data	msdyn_AIBuilderSam...	5/16/2021	1.0.0.6	🔒
Asset Checkout 1	AssetCheckout	5/16/2021	0.0.0.1	🔒
Innovation Challenge		5/16/2021	0.0.0.1	🔒
Fundraiser		5/16/2021	1.0.0.4	🔒
Power Apps Checker Base		5/16/2021	1.2.0.122	🔒
Power Apps Checker		5/16/2021	1.2.0.122	🔒
Contextual Help Base		5/16/2021	1.0.0.22	🔒
Contextual Help		5/16/2021	1.0.0.22	🔒
Common Data Services Default Solution		5/16/2021	1.0.0.0	🔒
Default Solution	Default	5/16/2021	1.0	🔒

Context menu for Asset Checkout:

- Edit
- Delete
- Export** 2
- Show dependencies
- See history
- Clone
- Apply upgrade
- Translations
- Settings

3

Demo: Lesson 7: Configure security settings Dataverse Security

Environments settings

Power Platform admin center

Open environment Settings Resources Convert to production Delete History

Environments

1

Environments > **PL-200 Demo** 6

Details See all Edit

Environment URL 5
org68c45d7.crm5.dynamics.com

Refresh cadence Frequent

Organization ID df912893-22e0-4cb4-a5e5-0e70c4087ec2

State Ready

Type Trial

Region Asia

Security group Not assigned

Access

Security roles See all

Teams See all

Users See all

\$25 Apps See all

Version 2

Database version 9.2.21101.00133

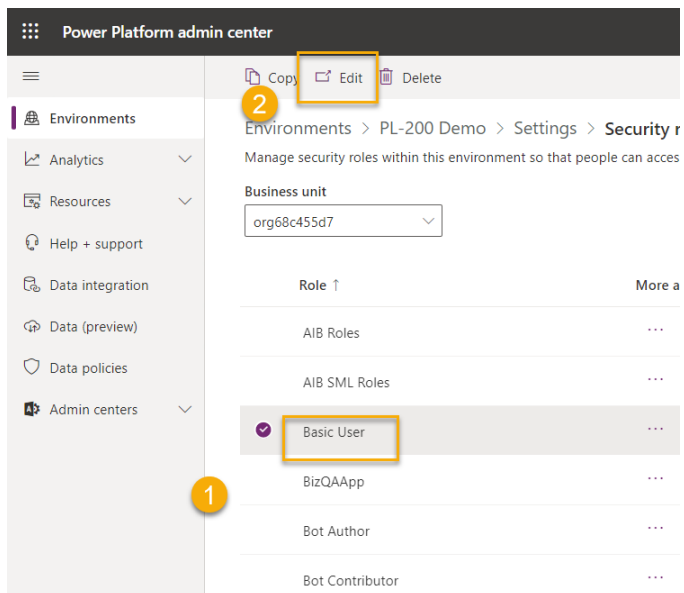
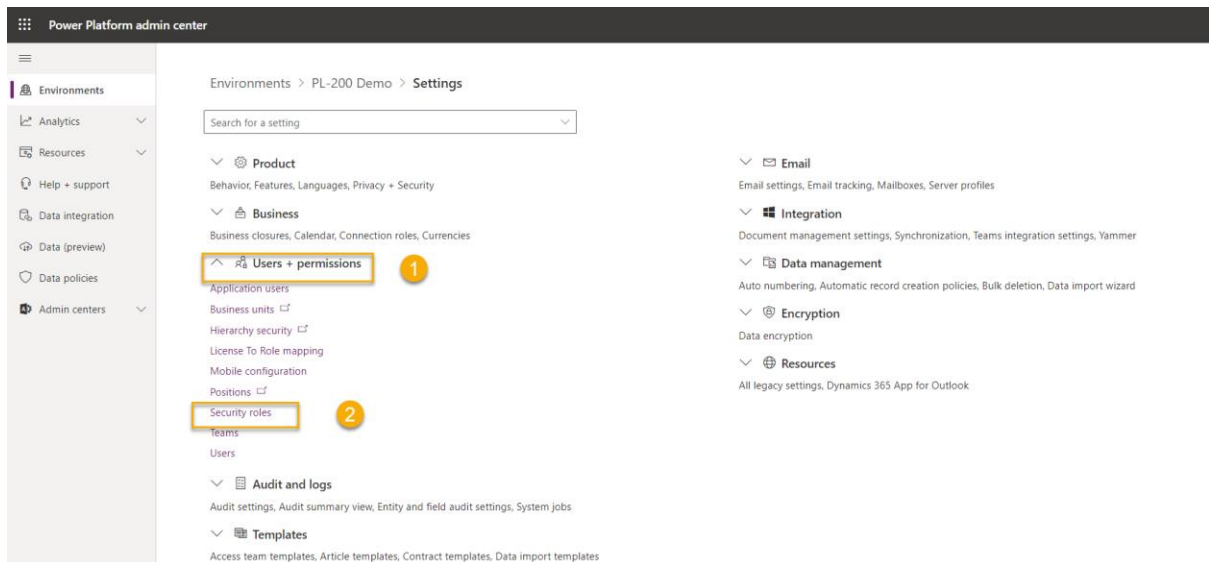
Updates 3

2021 release wave 2 On
See what's new in the release

Recent operation Full history

Type	Start time	End time
Create	10/25/2021, 11:05:36 AM	10/25/2021, 11:05:43 AM

Settings >> Users + Permissions >> Security roles



Power Apps

File Save and Close Actions

Security Role: Basic User

Details Core Records Sales Service Business Management Service Management Customization Missing Entities Business Process Flows Custom Entities

Table	Create	Read	Write	Delete	Append	Append To	Assign	Share
App Config Master								
Attribute Map								
Callback Registration								
Canvas App								
Custom Control								
Custom Control Default Config								
Custom Control Resource								
Customizations								
Entity								
Entity Key								
Entity Map								
Expander Event								
Field								
Hierarchy Rule								
Import Job								
Model-driven App								
Option Set								
Plug-in Assembly								
Plug-in Trace Log								
Plug-in Type								
Process								
Process Configuration								
Process Session								
Publisher								
Relationship								
Sdk Message								
Sdk Message Processing Step								
Sdk Message Processing Step Image								

Key

None Selected User Business Unit Parent: Child Business Units

Lab 3.2: Practice Lab – Creating tables and columns – DATA MODEL

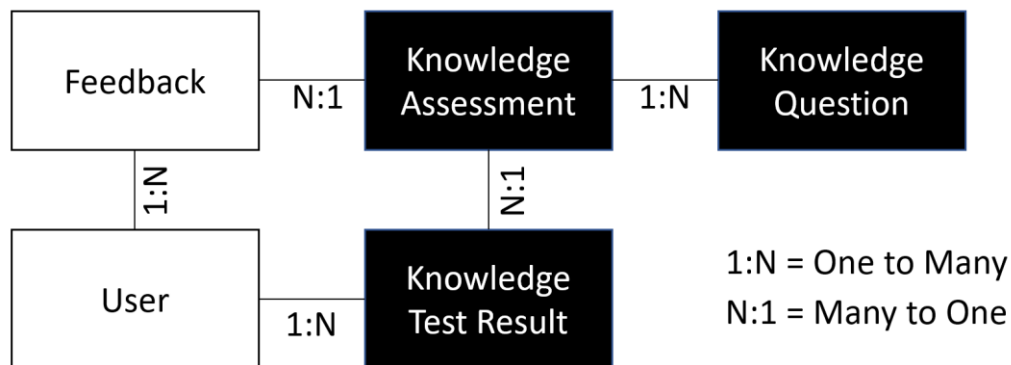
Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. Fabrikam would like to encourage their employees to continuously learn. They want to build an application that allow a small set of employees to create knowledge assessments and then make them available to all employees to test their knowledge. The employees need to be able to pick an assessment and quickly complete it in just a few minutes. In this practice, you will be creating a data model to support the applications.

Working with the client, you have determined the following basic needs for storing data:

- A **Knowledge Assessment table** will represent the actual assessment and contain one or more questions from a Knowledge Question table
- A **Knowledge Test Result table** will track when employees take an assessment
- The **employee who took the assessment will be tracked** using the existing Common Data Model (CDM) **User table**
- The existing **Common Data Model (CDM) Feedback table** will be used to allow employees to express their opinions on the assessment

After consulting with your Solution Architect, you have come up with the following data model. When you are done with this module, you will have created the tables, columns and relationships to implement the following data model,



Exercise 1 – Create the Knowledge Assessment Table

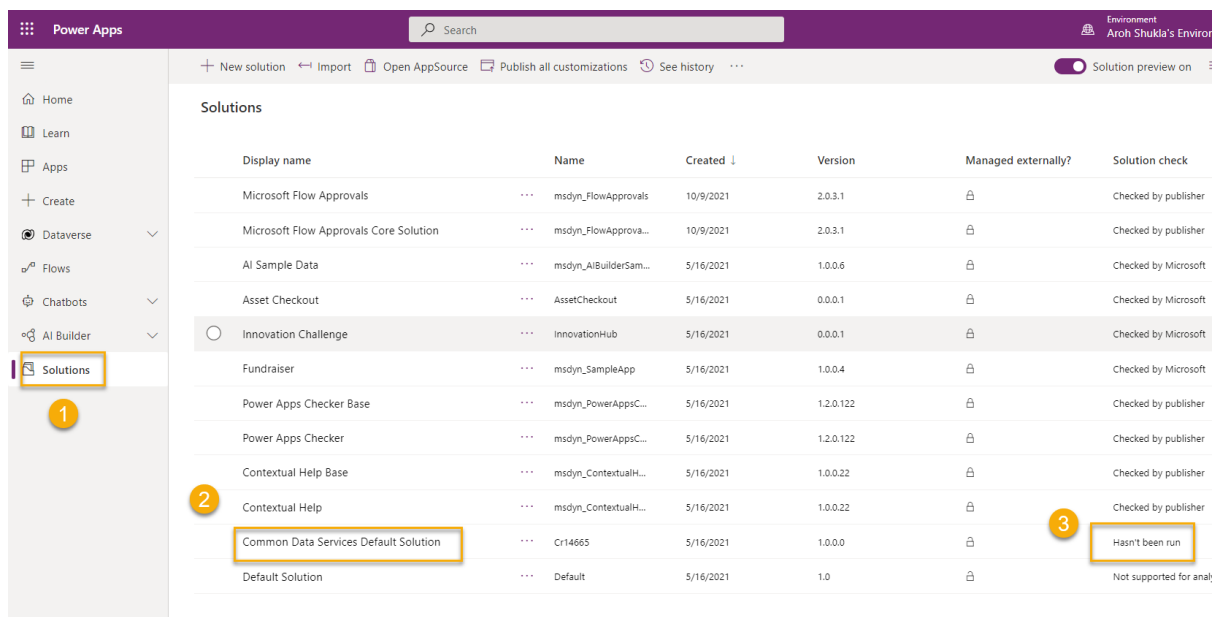
In this exercise,

- you will be creating the **Knowledge Assessment table** and its columns.
- Knowledge Assessment will be a **new custom table you create**.
- You also enable the feedback option for this table, this will cause the system to create the relationship between Knowledge Assessment and the CDM Feedback table.

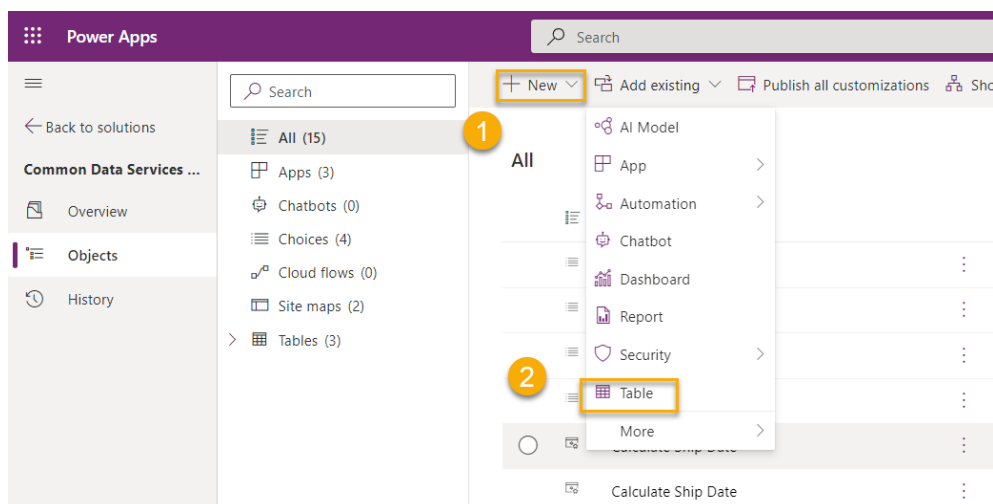
Task 1 – Create a table

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in the **Practice** environment you created.
3. Select **Solutions**.

- Click to open the **Common Data Services Default Solution**.



- Click **+New** and select **Table**.



- Enter **Knowledge Assessment** for **Display Name**. Enter **Title** for **Display Name** in the Primary Name Column section.

New table

Use tables to hold and organize you data. Previously called entities
[Learn more](#)

Properties

Primary column

Display name *

Demo Knowledge Assessment

Plural name *

Demo Knowledge Assessments

Description

☐ Enable attachments (including notes and files) ¹

Advanced options ▼

Save

Cancel

- Click to expand **More settings >> Advanced options** and then click the **Collaboration** section.

8. Check the **Allow feedback** checkbox.

New table ×

Use tables to hold and organize you data. Previously called entities
[Learn more](#)

+ New image web resource

Color

Refine how data in this table is used and managed. Options marked with ¹ can't be turned off if enabled. [Learn more](#)

For this table

☒ Apply duplicate detection rules ¹ ⓘ ☐ Audit changes to its data ⓘ

☐ Track changes ⓘ ☐ Leverage quick-create form if available ⓘ

☐ Provide custom help ⓘ

Help URL

Make this table an option when

☐ Creating a new activity ¹ ⓘ ☒ Doing a mail merge ⓘ ☐ Setting up SharePoint document management ⓘ

Rows in this table

☐ Can have connections ¹ ⓘ ☐ Can be added to a queue ¹ ⓘ

☐ Can have a contact email ¹ ⓘ ☐ When rows are created or assigned, move them to the owner's default queue

☐ Have an access team ⓘ ☒ Can be linked to feedback ¹ ⓘ

Save Cancel

9. Click **Create**. It may take a **few minutes** for your table to be created.
10. With the **Columns** tab selected, click **+Add column**.
11. Enter **Start Date** for **Display Name** and select **Date Only** for **Data Type**.
12. Click **Advanced Options** and make sure **User Local** is selected for **Behavior**.
13. Click **Done**.

Start Date ×

Start Date

Name * ⓘ

cr6ac_ StartDate 1

Data type * ⓘ

📅 Date Only 2

Required * ⓘ

Optional

☒ Searchable ⓘ

Calculated or Rollup ⓘ + Add ▾

Description ⓘ

Advanced options 3

☐ Enable column security ⓘ

☒ Enable auditing ⓘ

☐ Appears in global filter in interactive experience dashboard ⓘ

☐ Sortable in interactive experience dashboard 4 ⓘ

Behavior

User local

IME mode

Auto

Done 5 Cancel

14.

Data type * ⓘ
 Date and time

Format *
 Date only

Behavior ⓘ
 Simple

Required ⓘ
 Optional

☒ **Searchable** ⓘ

Advanced options ^

Schema name * ⓘ
 cr6ac_ StartDate

Time zone adjustment *
 User local

Input method editor (IME) mode *
 Auto

General

☐ Enable column security ⓘ

☒ **Enable auditing** ⓘ

ⓘ This column will not be audited until auditing is enabled for the organization.

Dashboard

☐ Appears in dashboard's global filter ⓘ

☐ Sortable ⓘ

Save **Cancel**

15.

16. Click **+Add column** again.

17. Enter **End Date** for **Display Name** and select **Date Only** for **Data Type**.

18. Click **Advanced Options** and make sure **User Local** is selected for **Behavior**.

19. Click **Done**.

End Date ✕

Display name *
End Date

Name * ⓘ 1
cr6ac_ EndDate

Data type * ⓘ 2
Date Only

Required * ⓘ
Optional

☒ Searchable ⓘ

Calculated or Rollup ⓘ + Add ▾

Description ⓘ

Advanced options ^

☐ Enable column security ⓘ

☒ Enable auditing ⓘ

☐ Appears in global filter in interactive experience dashboard ⓘ

☐ Sortable in interactive experience dashboard ⓘ

Behavior ⓘ 3
User local

IME mode
Auto

4

Done Cancel

20. You will now add an **Choice** type column. Click **+Add column**.

21. Enter **Difficulty** for **Display Name** and select **Choice** for **Data Type**.

22. Click on the **Choice** dropdown and select **+New choice**.

23. Enter **Beginner** for **Item 1** and click **Add New Item**.

24. Enter **Intermediate** for **Item 2** and click **Add New Item**.

25. Enter **Advanced** for **Item 3** and click **Save**.

← Edit choice ×

ⓘ This is a global choice. Changes will be reflected wherever this choice is used.

Display name *
Beginner

Choices Sort ▾

	Label *	Value *		
::	☐ Beginner	958,440,000	⬆ ⬇ ⬆	🗑
::	☐ Intermediate	958,440,001	⬆ ⬇ ⬆	🗑
::	☐ Advanced	958,440,002	⬆ ⬇ ⬆	🗑

+ New choice

Advanced options ▾

Save Cancel

26. Select **Beginner** for the **Default Value** and click **Done**.

27. Click **Save Table** at the bottom of the screen.

Difficulty

×

Display name *

Difficulty

1

Name *

cr6ac_ Difficulty

2

Data type *

Choice

Choice *

Difficulty

Edit choice

Default value

Beginner

3

Required *

Optional

☒ Searchable

Calculated or Rollup

+ Add

Description

Advanced options

4

Done

Cancel

Description ⓘ

Data type * ⓘ

Choice

Behavior ⓘ

Simple

Required ⓘ

Optional

☒ **Searchable** ⓘ

☐ Selecting multiple choices is allowed

Sync with global choice? *

☒ **Yes (recommended)**
Can be used in multiple tables, and will stay updated everywhere.

☐ **No**
Creates a local choice that can only be used in one table. People using it can add new choices.

Sync this choice with *

Beginner

[Edit choice](#) | [New choice](#)

Default choice *

Beginner

[Advanced options](#)

Save **Cancel**

Description ⓘ

Data type * ⓘ

Behavior ⓘ

Required ⓘ

☒ Searchable ⓘ

☐ Selecting multiple choices is allowed

Sync with global choice? *

☒ Yes (recommended)
Can be used in multiple tables, and will stay updated everywhere.

☐ No
Creates a local choice that can only be used in one table. People using it can add new choices.

Sync this choice with *

[Edit choice](#) [+ New choice](#)

Default choice *

Advanced options ▾

Task 2 – Create a calculated column

1. Click **+Add column**.
2. Enter **Days Remaining** for **Display Name** and select **Whole Number** for **Data Type**.
3. Click **Advanced Options**.

4. Enter **0** for **Minimum Value** and **1000** for **Maximum Value**.

Days Remaining

×

Display name *

Days Remaining

Name *

cr6ac_ DaysRemaining

Data type *

Whole Number

Required *

Optional

☒ Searchable

Calculated or Rollup

+ Add

Description

Advanced options

☐ Enable column security

☒ Enable auditing

☐ Appears in global filter in interactive experience dashboard

☐ Sortable in interactive experience dashboard

Minimum value *

0

Maximum value *

1,000

Done

Cancel

5. Click **+Add** next to **Calculated or Rollup**. Click **+Calculation**.

Days Remaining ×

Display name *

Days Remaining

Name * ⓘ

cr6ac_ DaysRemaining

Data type * ⓘ

Whole Number

Required * ⓘ

Optional

☒ Searchable ⓘ

Calculated or Rollup ⓘ + Add

Description ⓘ

+ Calculation

+ Rollup

Advanced options

Done Cancel

New column

Previously called fields. [Learn more](#)

Display name *

Days Remaining

Description ⓘ

Data type * ⓘ

Whole number

Format *

None

Behavior ⓘ

Simple

Simple

Calculated

Rollup

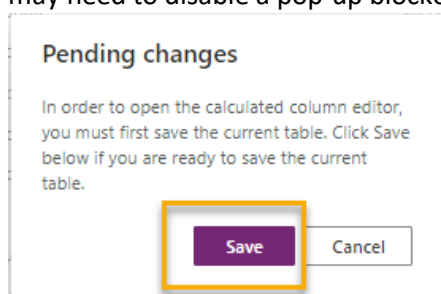
Searchable ⓘ

Advanced options ▾

Save

Cancel

- Click **Save**. A pop-up window should appear allowing you to configure the calculation. (You may need to disable a pop-up blocker.)

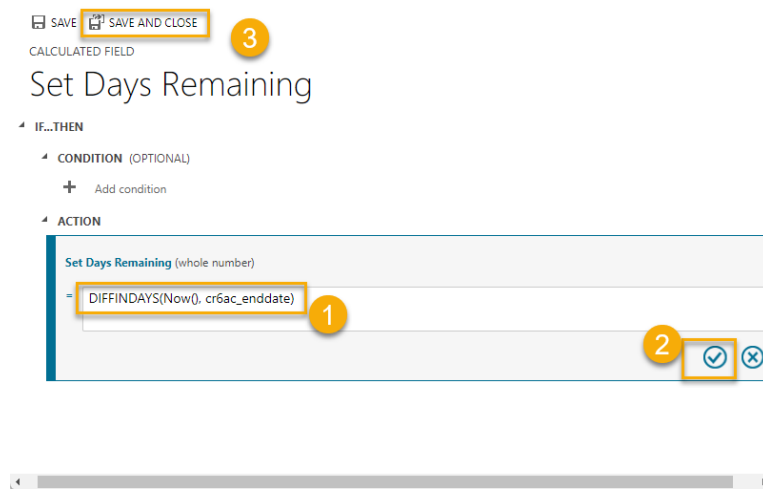


7. Click **Add Action**.

8. Enter the following formula:

`DIFFINDAYS(NOW(), crXXX_enddate)`

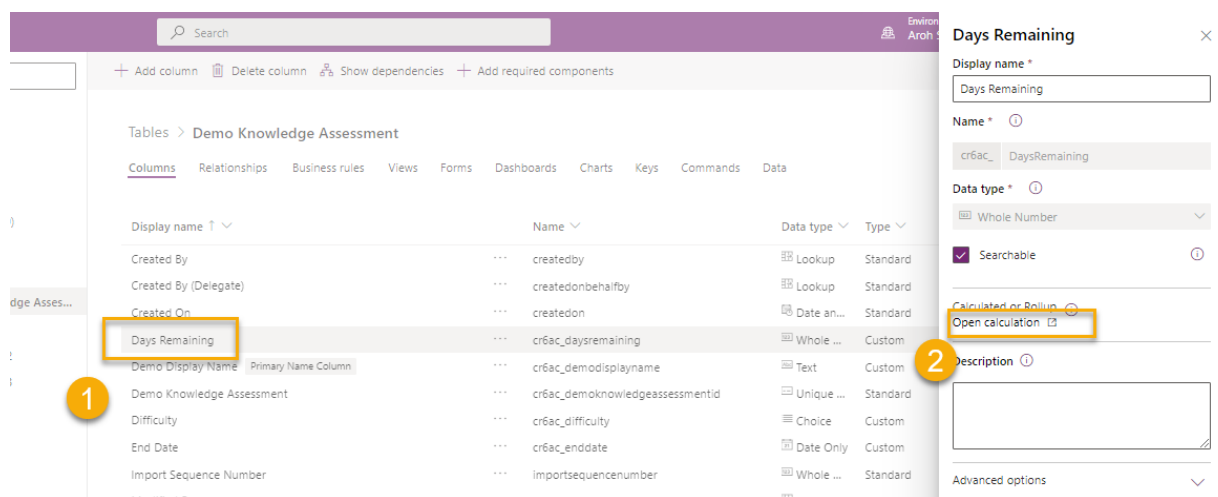
Note: That crXXX is environment-dependent and the name of your environment will be different. To find your environment-specific designation, type **cr** and wait for the field to auto-fill your environment name.



9. Click the check mark. (Depending on your window size, you may need to click out of the text box to see the check mark.)

10. Click **Save and Close**.

11. Click **Done**.



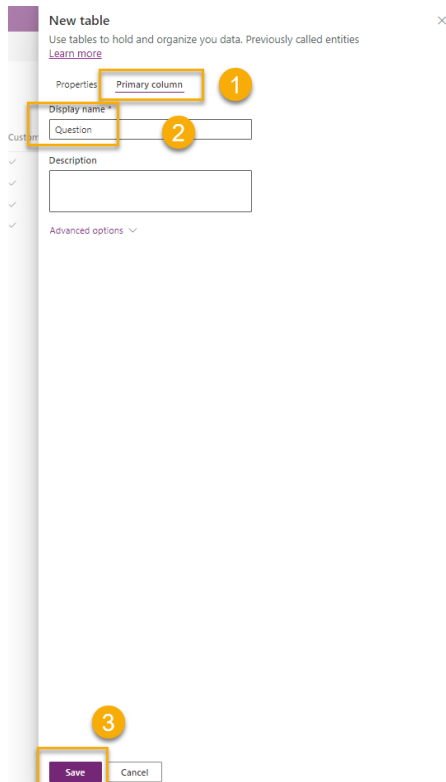
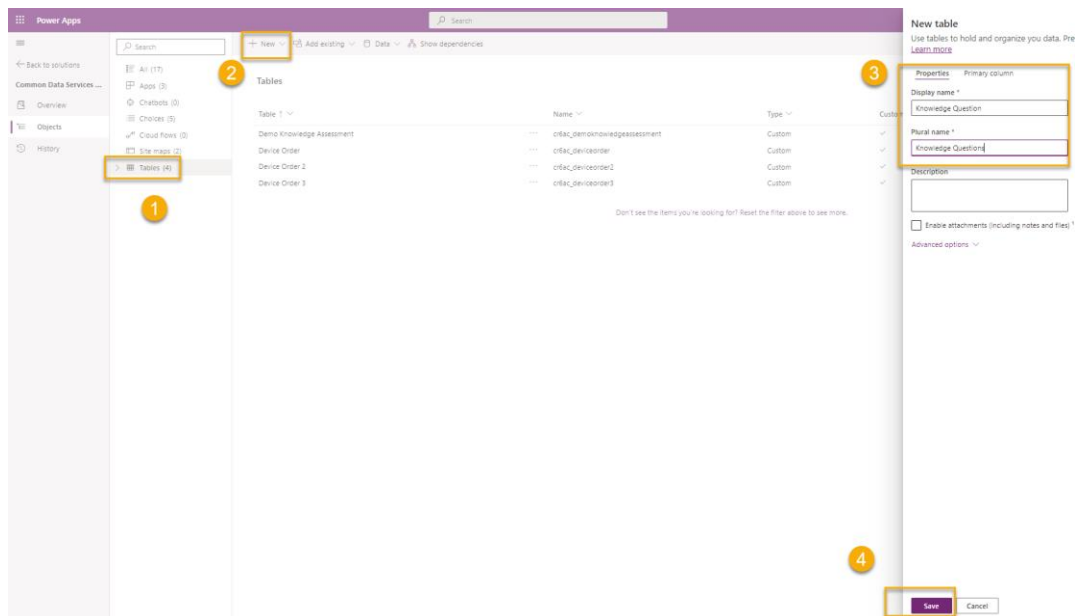
Exercise 2 – Create the Knowledge Question Table

In this exercise, you will be creating the Knowledge Question table and its columns.

Task 1 – Create a table

1. Navigate to <https://make.powerapps.com> and make sure you are in your **Practice** environment.

2. Select **Solutions**.
3. Open the **Common Data Services Default Solution**.
4. Click **+ New** and select **Table**.
5. Enter Knowledge Question for Display Name.
6. Go to the **Primary Name Column** section.
7. Change the **Display Name** to **Question**. The **Name** field should also automatically update to **Question**. Click **Create**.



8. Make sure the **Columns** tab is selected and click **+ Add column**.

The top screenshot shows the Power Apps interface with the 'Tables' tab selected. The 'Knowledge Question' table is highlighted in the list. The bottom screenshot shows the 'Columns' tab for the 'Knowledge Question' table. The '+ Add column' button is highlighted in the top bar.

Table	Name
Demo Knowledge Assessment	cr6ac_demoknov
Device Order	cr6ac_deviceorde
Device Order 2	cr6ac_deviceorde
Device Order 3	cr6ac_deviceorde
Knowledge Question	cr6ac_knowledge

Display name	Name
Created By	createdby
Created By (Delegate)	createdonbehalfby
Created On	createdon
Import Sequence Number	importsequencenumber
Knowledge Question	cr6ac_knowledgequestionid
Modified By	modifiedby
Modified By (Delegate)	modifiedonbehalfby
Modified On	modifiedon

9. Enter **Answer 1** for **Display Name**, select **Text** for **Data Type** and click **Done**.

10. Add **3** more with values below:

- Name: **Answer 2**, Data Type: **Text**.
- Name: **Answer 3**, Data Type: **Text**.
- Name: **Answer 4**, Data Type: **Text**.

11. Click **+Add column**.

12. Enter **Answer 1 Points** for **Display Name**, select **Whole Number** for **Data Type** and click **Done**.

Answer 1 Points

Display name *
Answer 1 Points

Name *
cr6ac_ Answer1Points

Data type *
Whole Number

Required *
Optional

☒ Searchable

Calculated or Rollup
+ Add

Description

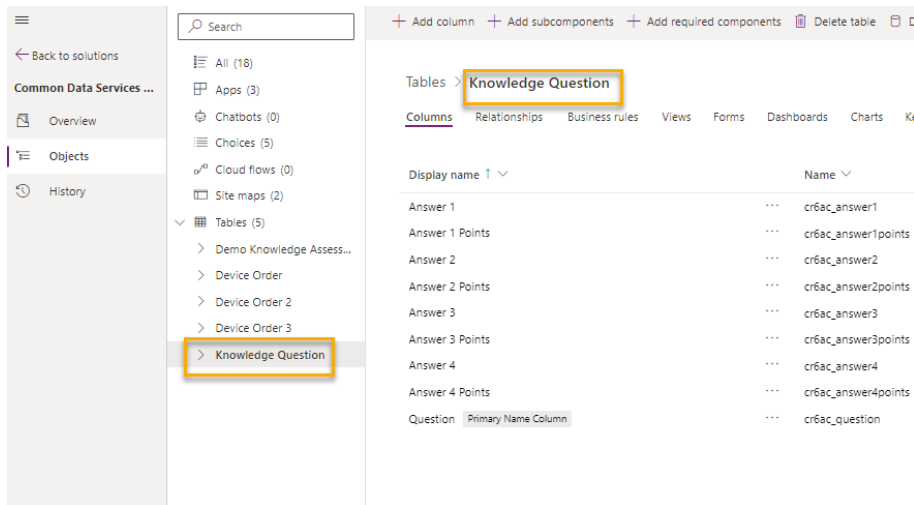
Advanced options

Done **Cancel**

13. Add 3 more filed with values below. These will store the points awarded if someone picks this answer.

- Name **Answer 2 Points** Data Type **Whole Number**.
- Name **Answer 3 Points** Data Type **Whole Number**.
- Name **Answer 4 Points** Data Type **Whole Number**.
- Click **Save Table**.

Note: There are many ways you could model the answers depending on the complexity of your requirements. The approach shown here is simplified for practice purposes to focus on demonstrating how to work with the table creation process.

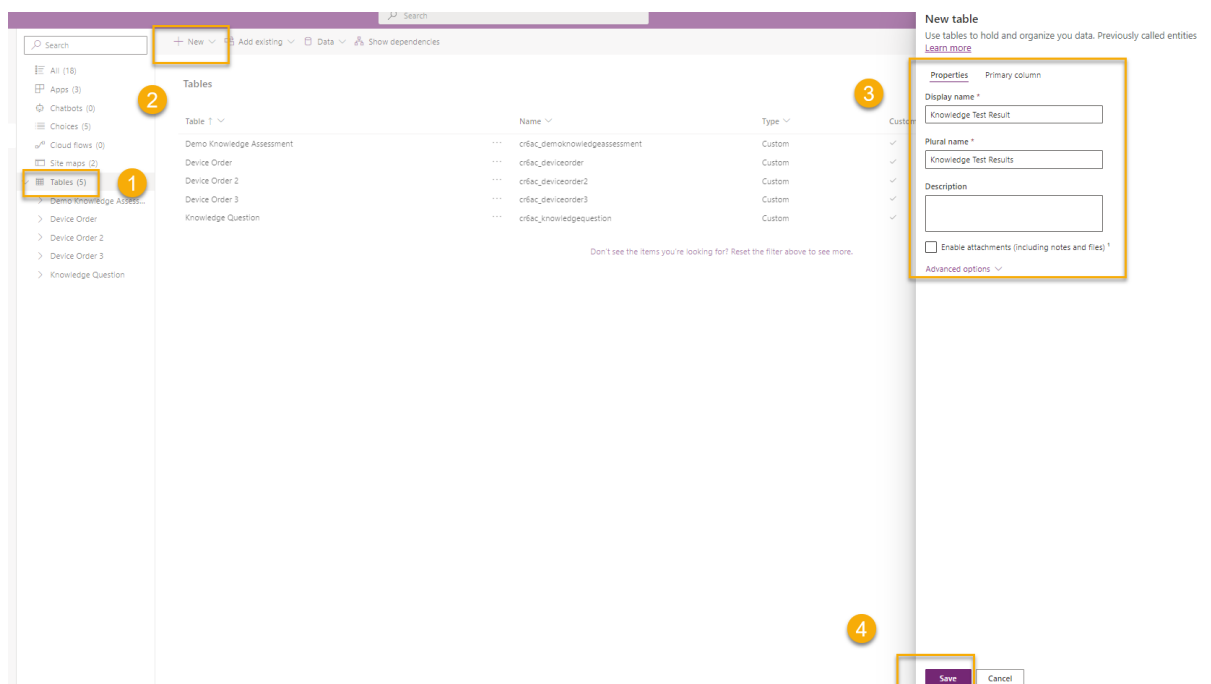


Exercise 3 – Create the Knowledge Test Result Table

In this exercise, you will be creating the Knowledge Test Result table and its columns.

Task 1 – Create a table

1. On the navigation menu, click **Common Data Services Default Solution** to return to the solution.
2. Click **+New** and select **Table**.
3. Enter for **Display Name** and click **Create**.



4. Click **+Add column**.

5. Enter **Total Points** for **Display Name** and select **Whole Number** for **Data Type**.
6. Click **Done**.
7. Click **Save Table**.

Name * ⓘ

cr6ac_ TotalPoints

Data type * ⓘ

Whole Number

Required ⓘ

Optional

☒ Searchable ⓘ

Calculated or Rollup ⓘ + Add

Description ⓘ

Advanced options

Done Cancel

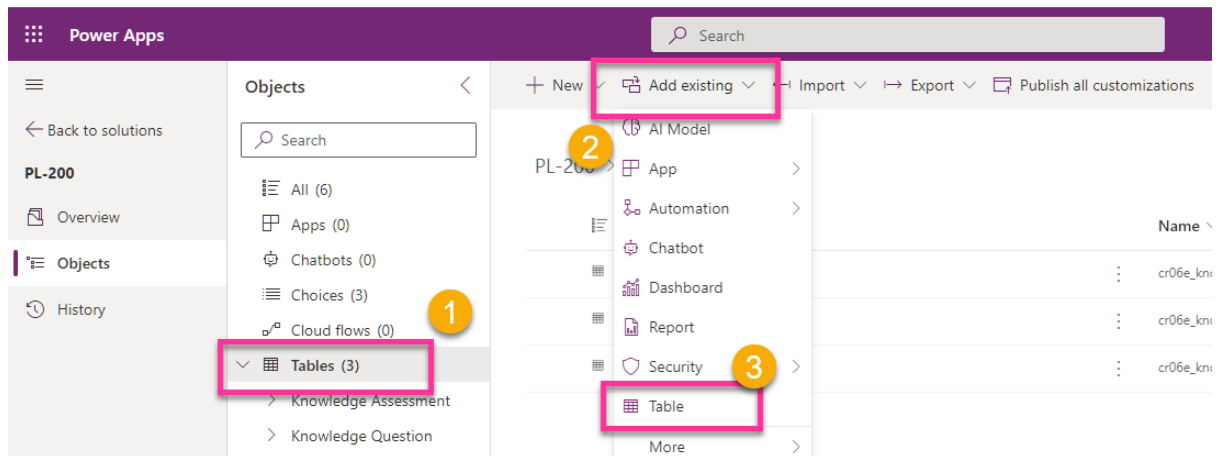
Exercise 4 – Add existing tables to the solution

In this exercise, you will be adding the existing tables Feedback and User. This ensures when relationships are created later between these tables they will be tracked as part of the solution.

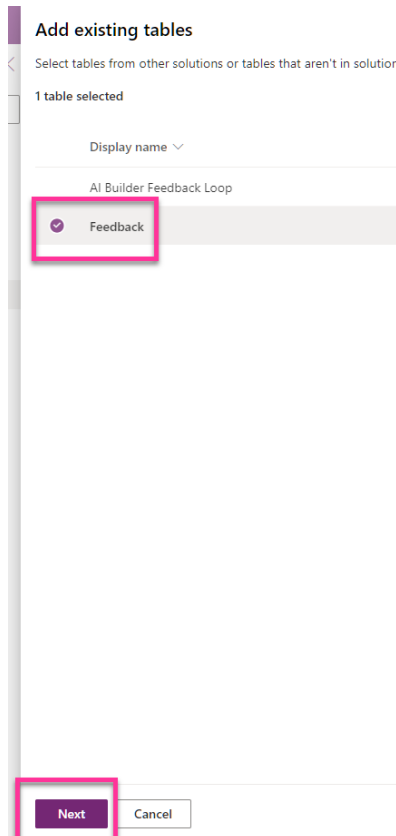
Task 1 – Add existing tables

1. From the navigation menu, click **Common Data Services Default Solution** to return to the solution.

2. Click **Add Existing** and select **Table**.



3. Select the **Feedback** and **User** tables and click **Next**.



Add existing tables

Select tables from other solutions or tables that are

1 table selected

Display name ▼



Feedback

Healthcare Feedback

Next

Cancel

Search

All (0)

Apps (0)

Chatbots (0)

Cloud flows (0)

Tables (0)

Add existing tables

Select tables from other solutions or tables that aren't in solutions yet. Adding tables that aren't already in sol

2 tables selected

1

Display name	Name
ApplicationUser	applicationuser
Applied User Access	insgkdc_applieduseraccess
CR129 User Access Request	cr129_useraccessrequest
Model-Driven App User Setting	appusersetting
ProvisionLanguageForUser	provisionlanguageforuser
Saved View	userquery
User	systemuser
User Access Reques Approval	cr129_useraccessrequestapproval
User Access Request	insgkdc_useraccessrequest
User Access Request History	insgkdc_useraccessrequesthistory
User Chart	userqueryvisualization
UserMobileOfflineProfileMembership	usermobileofflineprofilemembership

3

Add existing tables

Select tables from other solutions or tables that aren't in solutions yet. Adding tables that aren't already in solutions will also add them to Dataverse.

2 tables selected

1

Search user

Display name	Name	Managed externally?	Owner	Status
Saved View	userquery	B	-	-
User	systemuser	B	-	-
User Chart	userqueryvisualization	B	-	-

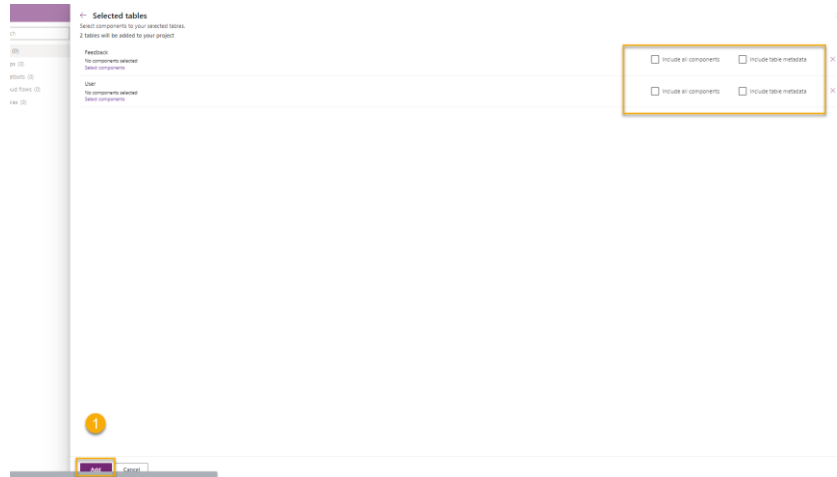
3

4

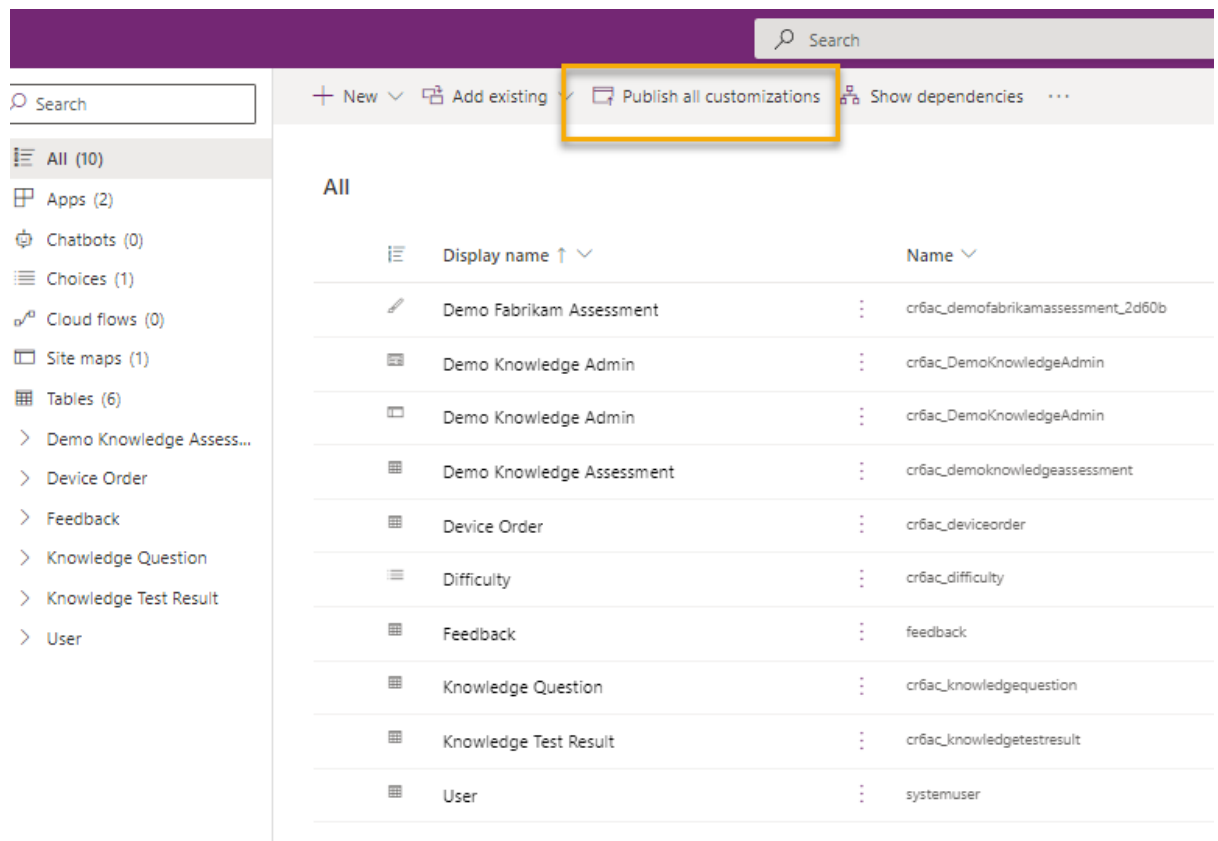
Next

Cancel

4. Leave the **Include All Components** and **Include Table Metadata** unchecked and click **+Add**.



5. Your solution will now have **5 tables** and **1 Choice** in addition to your apps.
6. Click **Publish All Customizations**.

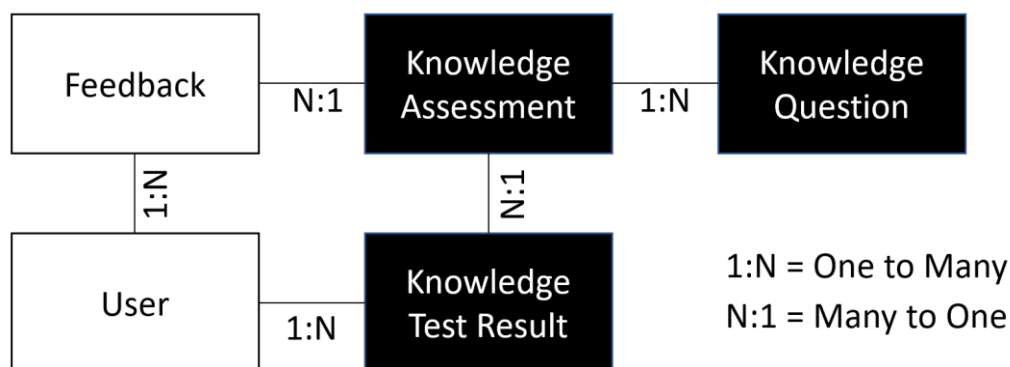


Lab 3.3: Practice Lab – Creating relationships

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You are working on the data model you started in the prior practice. In this practice you will be adding the relationships to what you created in the prior practice. If you haven't completed that practice you should pause this practice and complete that first.

The following is the data model you are building. At this point all the tables are created and you are ready to create the relationships. Please refer to the file labeled **LAB[PL-200]_Data_Model** in the Lab Resources to view the entity relationship diagram.



The following relationships need to be created.

- **Knowledge Assessment to Knowledge Question:** changing the relationship behaviour to be **parental**.
- **Knowledge Assessment to Knowledge Test Result:** changing the relationship behaviour to be **parental**.
- **User to Knowledge Test Result:** we don't need to create because we will assign the user who took the test as the owner of the record. An alternative design could have left owner to track who is working on the record and create another relationship to track who took the assessment. For our purposes, we are going to keep it simple and use record owner.

Important Note: This lab will provide you with an actual Office 365 tenant and licenses for the Power Platform applications you will be using in this course. You will only be provided with one tenant for the practice labs in this course. The settings and actions you take within this tenant do not roll-back or reset, whereas the virtual machine you are provided with does reset each time you close the lab session. Please be aware that Office 365 is evolving all the time. The instructions in this document may be different from what you experience in your actual Office 365 tenant. It is also possible to experience a delay of several minutes before the virtual machine has network connectivity to begin the labs.

Exercise 1 – Create the Knowledge Assessment Relationships

In this exercise, you will be creating the relationships for Knowledge Assessment table.

Task 1 – Knowledge Assessment to Knowledge Question Relationship

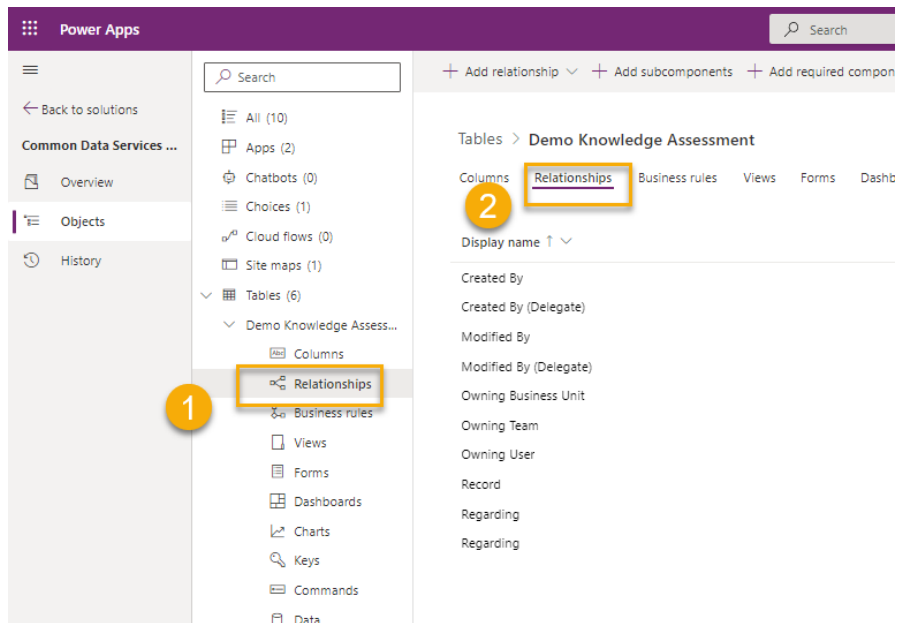
In this task, you will create a One-to-Many relationship between the Knowledge Assessment and Knowledge Question tables.

1. Navigate to <https://make.powerapps.com> and make sure you are in your **Practice** environment.
2. Select **Solutions** and open the **Common Data Service Default Solution**.
3. Click to open the **Knowledge Assessment** table.

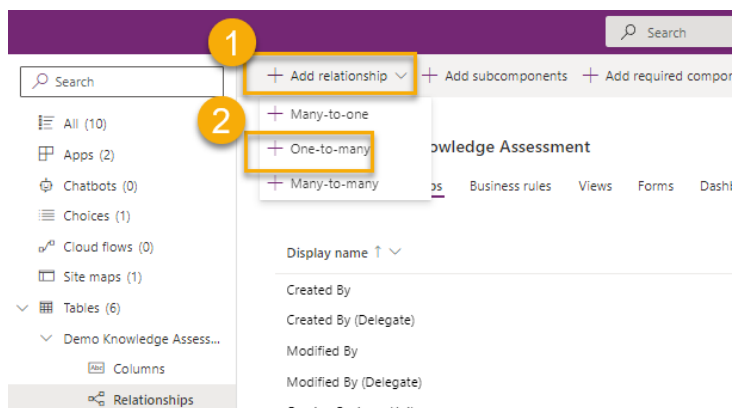
The screenshot shows the Power Apps interface. On the left sidebar, under 'Common Data Services ...', the 'Tables (6)' option is highlighted with an orange box. The main area displays a list of tables under the heading 'All'. The table 'Demo Knowledge Assessment' is highlighted with an orange box. Below is a table representing the data shown in the screenshot:

Display name	Name
Demo Fabrikam Assessment	cr6ac_demoofabrikamassess
Demo Knowledge Admin	cr6ac_DemoKnowledgeAdr
Demo Knowledge Admin	cr6ac_DemoKnowledgeAdr
Demo Knowledge Assessment	cr6ac_demoknowledgeasse
Device Order	cr6ac_deviceorder
Difficulty	cr6ac_difficulty
Feedback	feedback
Knowledge Question	cr6ac_knowledgequestion
Knowledge Test Result	cr6ac_knowledgetestresult
User	systemuser

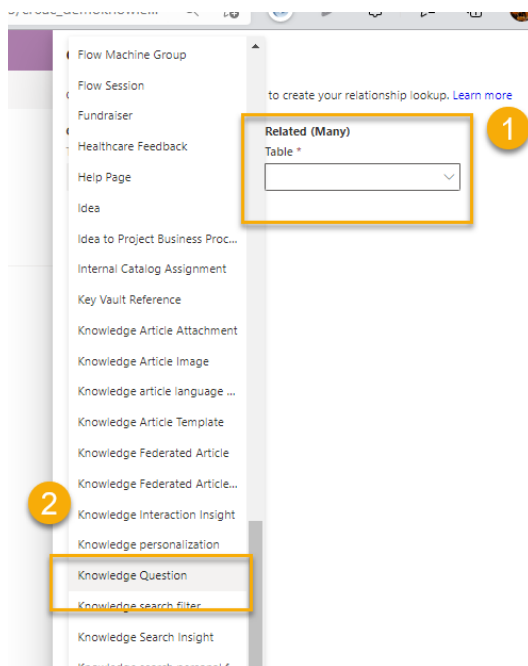
4. Select the **Relationships** tab.



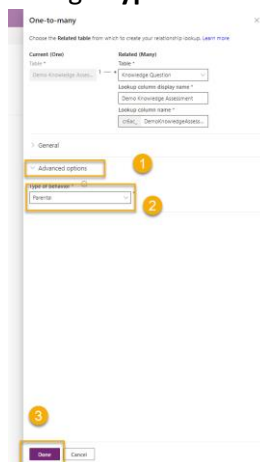
5. Click **+Add Relationship** and select **One-to-Many**.



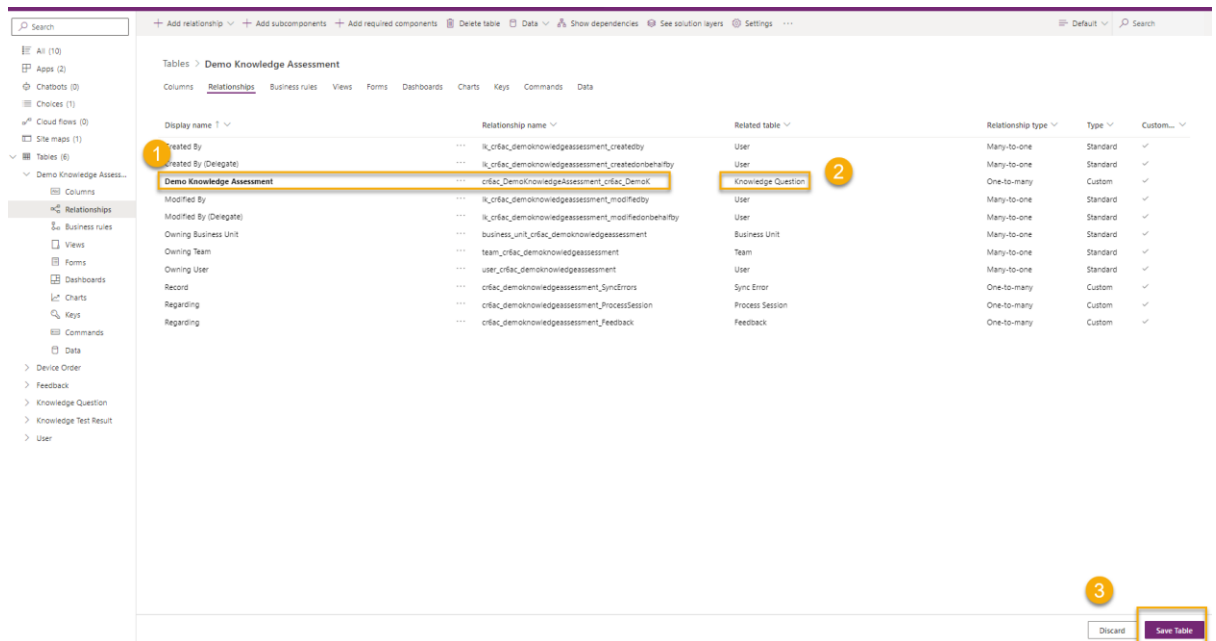
6. Select **Knowledge Question** for **Related (Many) Table** and click **Advanced options**.



7. Change **Type of behaviour** to **Parental** and click **Done**



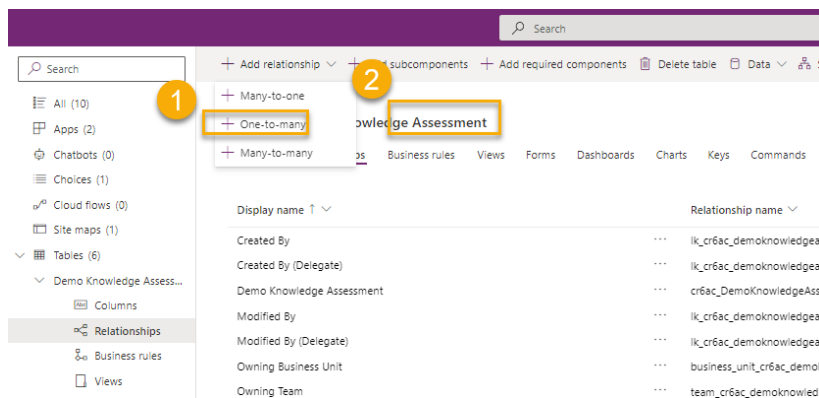
8. Click **Save Table** It is a good idea to save your changes as you make them.



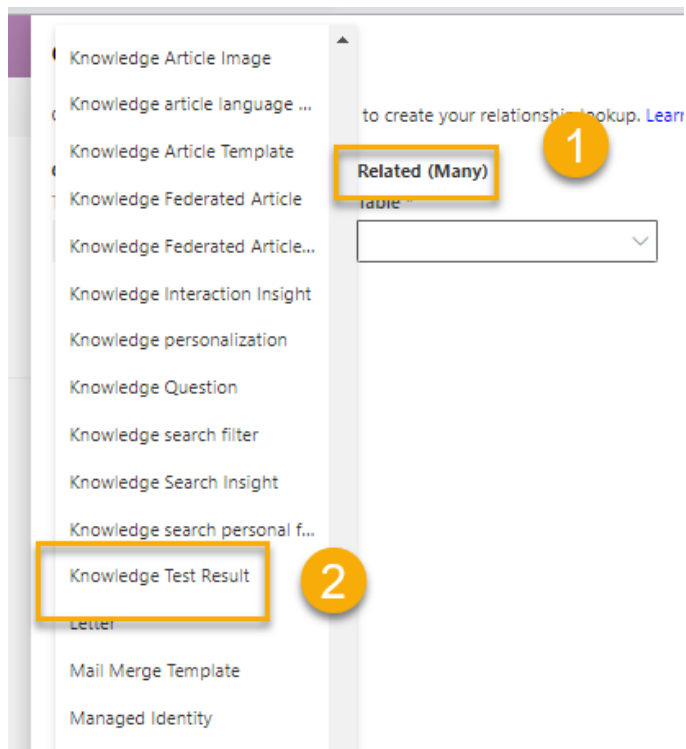
Task 2 – Knowledge Assessment to Knowledge Test Result Relationship

In this task, you will create a **One-to-Many relationship** between the **Knowledge Assessment** and **Knowledge Test Result** tables.

1. Make sure you have the **Relationship** tab selected.
2. Click **Add Relationship** and select **One-to-Many**.



3. Select **Knowledge Test Result** for **Related (Many) Entity** and click **General**.



4. The relationship names must be unique. Change the **Relationship Name** to **KnowledgeAssessment_KnowledgeResult**.

One-to-many

Choose the **Related table** from which to create your relationship lookup. [Let](#)

Current (One)	Related (Many)
Table *	Table *
Demo Knowledge Asses... 1	Knowledge Test Result *
	Lookup column display name *
	Demo Knowledge Assessment
	Lookup column name *
	cr6ac_ DemoKnowledgeAssess...

General

Relationship name *

cr6ac_ KnowledgeAssessment_KnowledgeResult

Lookup column description

5. Click **Advanced options**.

6. Change **Type of behaviour** to **Parental** and click **Done'**

[illegible]

7. Click **Save Table**.

[Add relationship](#)
[Add required class item](#)
[Delete class](#)
[Show dependent](#)
[See relationship](#)
[Settings](#)

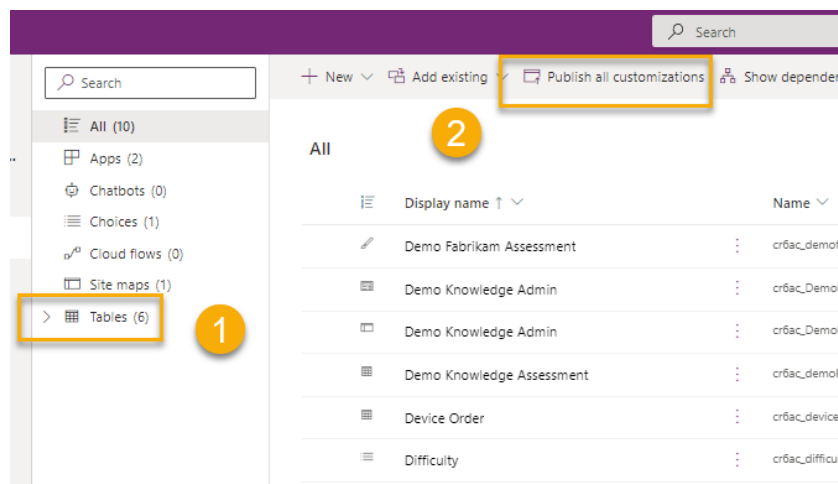
[Tables](#)
[Demo Knowledge Assessment](#)

[Groups](#)
[Relationships](#)
[Business rules](#)
[Views](#)
[Forms](#)
[Dashboards](#)
[Charts](#)
[Alerts](#)
[Comments](#)
[Data](#)

Display name	Relationship name	Related table	Relationship type	Type	Custom
Created by	kythe_jernimo_knowledgeassessment_createdby	User	Many-to-one	Standard	✓
Created by Display	kythe_jernimo_knowledgeassessment_createdbydisplay	User	Many-to-one	Standard	✓
Open Knowledge Assessment	kythe_jernimo_knowledgeassessment_open_detail	Knowledge Question	One-to-many	Custom	✓
Demo Knowledge Assessment	kythe_jernimo_knowledgeassessment_knowledgeabout	Knowledge Test Result	One-to-many	Custom	✓
Is visible by	kythe_jernimo_knowledgeassessment_isvisibleby	User	Many-to-one	Standard	✓
Is visible by Display	kythe_jernimo_knowledgeassessment_isvisiblebydisplay	User	Many-to-one	Standard	✓
Group Business rule	kythe_jernimo_knowledgeassessment_groupbusinessrule	Business Rule	Many-to-one	Standard	✓
Group Item	kythe_jernimo_knowledgeassessment_groupitem	Item	Many-to-one	Standard	✓
Group user	kythe_jernimo_knowledgeassessment_groupuser	User	Many-to-one	Standard	✓
Reset	kythe_jernimo_knowledgeassessment_reset	Quiz Entry	One-to-many	Custom	✓
Reporting	kythe_jernimo_knowledgeassessment_reporting	Project Member	One-to-many	Custom	✓
Reporting	kythe_jernimo_knowledgeassessment_reporting	Feedback	One-to-many	Custom	✓

[Add relationship](#)
[Add required class item](#)
[Delete class](#)
[Show dependent](#)
[See relationship](#)
[Settings](#)

8. Select **Solutions** on the left and click **Publish All Customizations**.



Lab 3.4: Additional table options

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You are working on the data model you started in the prior practice. In this practice you are enabling some table options.

To view the data model you are building, **view Image[MB-200]_M02L02_Creating_Entities_Fields.png in the Lab Resources.**

In this practice, you will be performing the following tasks.

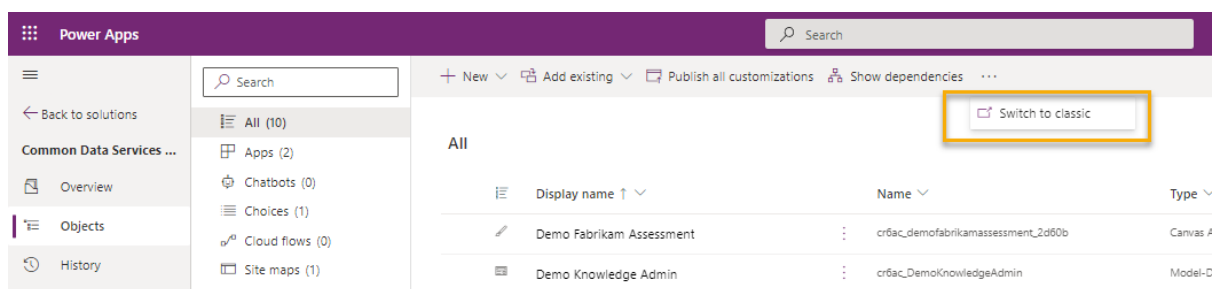
- You will enable auditing on the Knowledge Assessment table.

Exercise 1 – Enable Table Options

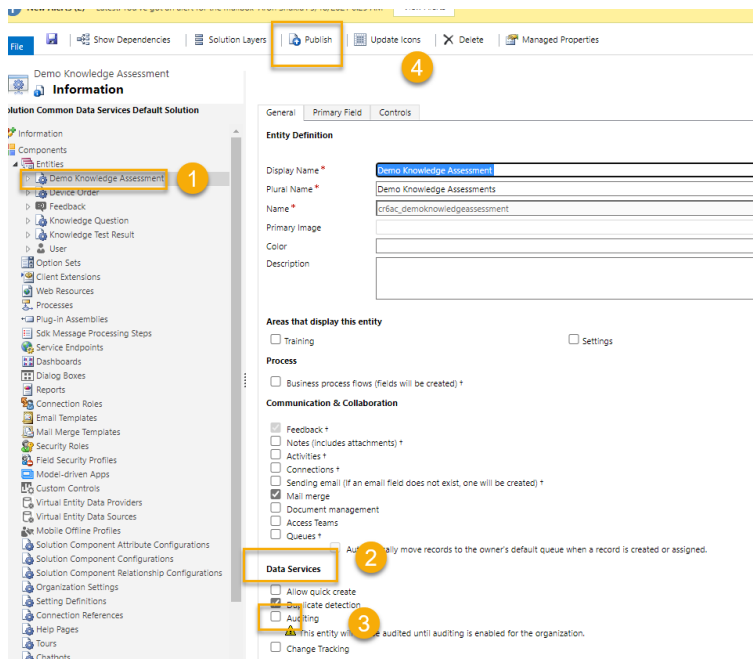
In this exercise, you will **enable auditing** and update the **icon** of the Knowledge Assessment table.

Task 1 – Enable Auditing Option for Knowledge Assessment

1. Navigate to <https://make.powerapps.com> and make sure you are in your **Practice** environment.
2. Select **Solutions**.
3. Click to open **Common Data Services Default Solution**.
4. Click on the ellipses and select **Switch to Classic**.



5. Expand **Entities**.
6. Select the **Knowledge Assessment** table.
7. Scroll down to the **Data Services** section.
8. Check the **Auditing** checkbox. *Note:* Remember auditing must be turned on at the environment, table, and column settings to produce any audit data. By default, columns are enabled for auditing.



9. Click the **Save** icon.

10. Click **Publish**.

The screenshot shows the Power Apps solution editor interface. On the left is a navigation pane with a tree view of components. The 'Demo Knowledge Assessment' entity is selected, and the 'Information' tab is active. A yellow circle with the number '2' highlights the 'Publish' button in the top toolbar. The main area on the right displays the 'Entity Definition' settings for the selected entity. A yellow circle with the number '1' highlights the 'Auditing' checkbox under the 'Data Services' section, which is currently checked. Below this checkbox, a warning message states: 'This entity will not be audited until auditing is enabled for the organization.'

Power Apps

New Alerts (2) Latest: You've got an alert for the mailbox 'Aroh Shukla', 5/18/2021 6:29 AM View Alerts

File Show Dependencies Solution Layers Publish Update Icons Delete Managed Properties

Demo Knowledge Assessment **Information**

Solution Common Data Services Default Solution

Information Components Entities Demo Knowledge Assessment Forms Views Charts Fields Keys 1:N Relationships N:1 Relationships N:N Relationships Business Rules Hierarchy Settings Dashboards Device Order Feedback Knowledge Question Knowledge Test Result User Option Sets Client Extensions Web Resources Processes Plug-in Assemblies Sdk Message Processing Steps Service Endpoints Dashboards Dialog Boxes Reports Connection Roles Email Templates Mail Merge Templates Security Roles Field Security Profiles Model-driven Apps Custom Controls Virtual Entity Data Providers Virtual Entity Data Sources

General Primary Field Controls

Entity Definition

Display Name * Demo Knowledge Assessment

Plural Name * Demo Knowledge Assessments

Name * cr6ac_demoknowledgeassessment

Primary Image

Color

Description

Areas that display this entity

☐ Training ☐ Settings

Process

☐ Business process flows (fields will be created) +

Communication & Collaboration

☒ Feedback +

☐ Notes (includes attachments) +

☐ Activities +

☐ Connections +

☐ Sending email (if an email field does not exist, one will be created) +

☒ Mail merge

☐ Document management

☐ Access Teams

☐ Queues +

☐ Automatically move records to the owner's default queue when a record is created or assigned.

Data Services

☐ Allow quick create

☒ Duplicate detection

☒ Auditing

By default, all fields for this entity are enabled for auditing. Choose the Fields tab to enable or disable specific fields for auditing.

⚠ This entity will not be audited until auditing is enabled for the organization.

☐ Change Tracking

Module 4: Build Power Apps

Lab 4.1: Practice Lab – App designer

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

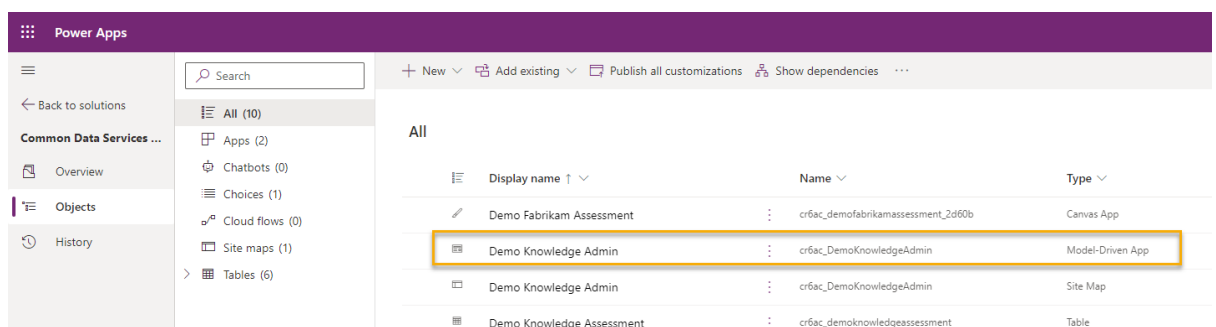
You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. In this lab you will be continuing your work on the model-driven Knowledge Admin app. Previously, all you have done is set up the basic app. Now that you have the data model defined, you can add the other tables to the app navigation.

Exercise 1 – Edit the site map

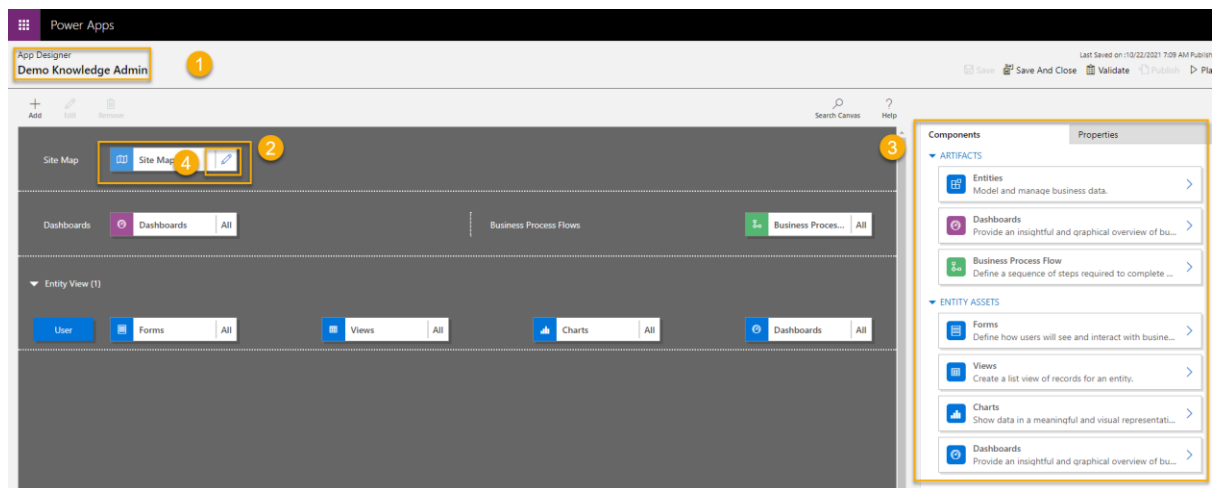
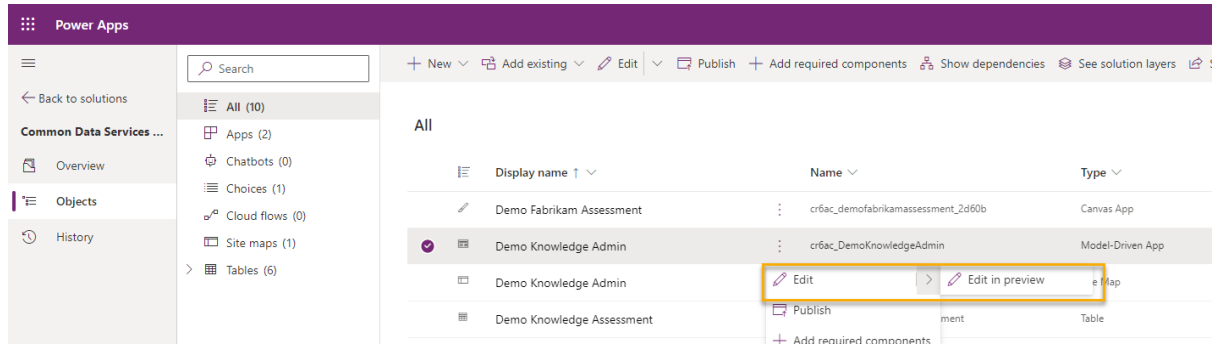
In this exercise, you will use the site map designer to add the other tables to the app navigation.

Task 1 – Edit the site map

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in the **Practice** environment you created.
3. Select **Solutions**.
4. Open **Common Data Services Default Solution**.
5. Select the **Knowledge Admin** model-driven application.

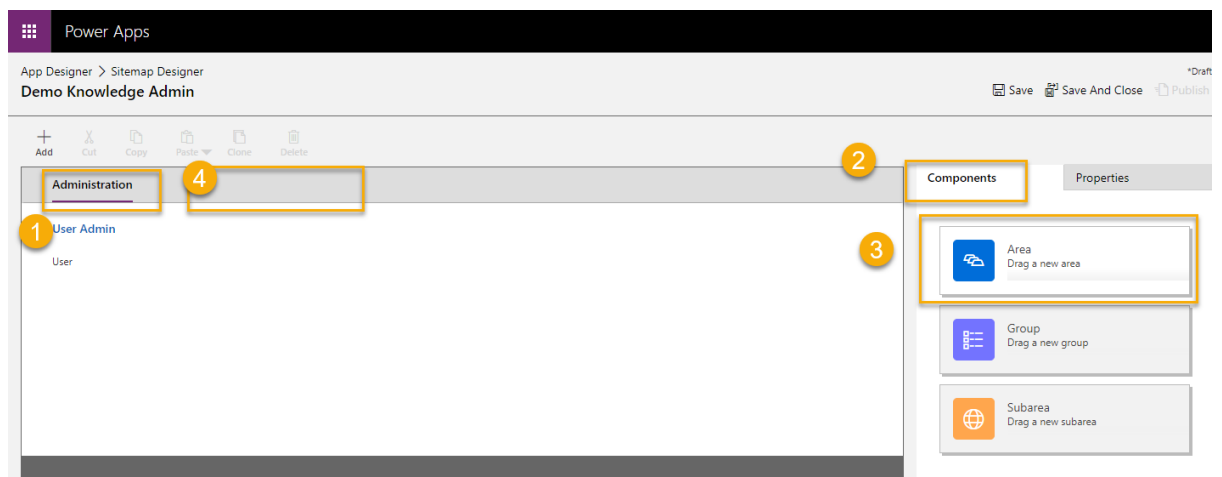


Click the **edit** (the pencil) next to **Site map**.

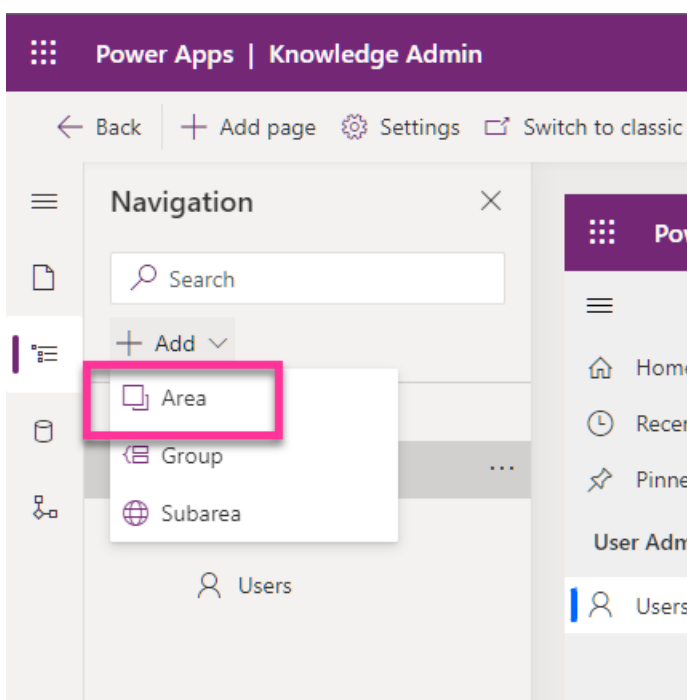
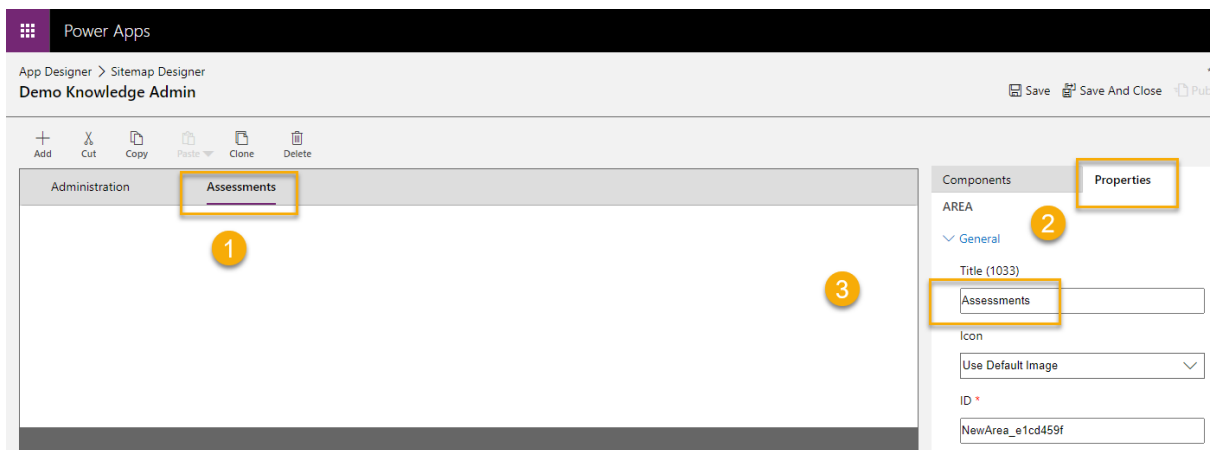


Click on **Pencil Icon** on Site Map

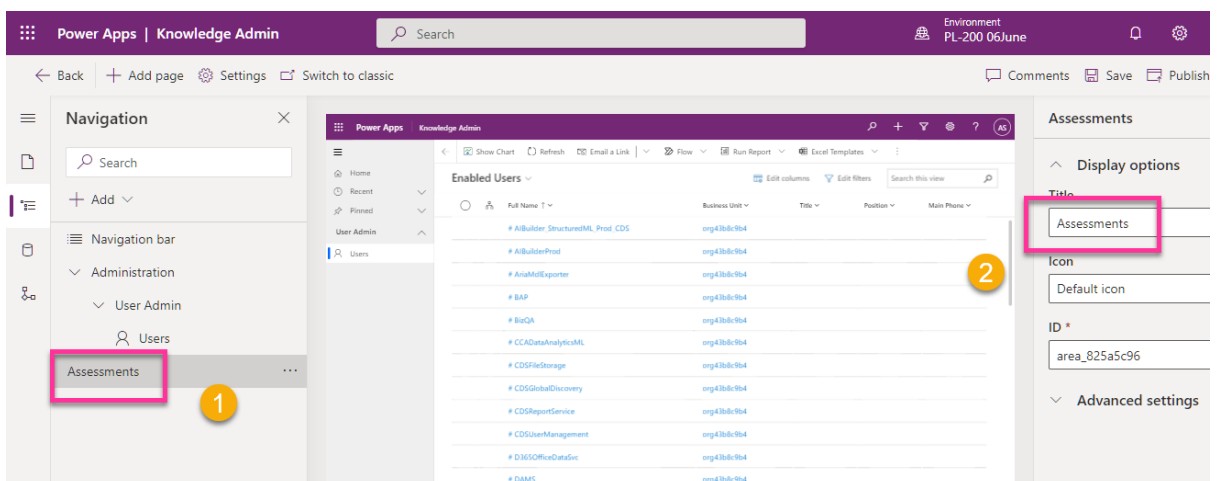
6. Drag **Area** from the **Components** tab and place it directly to the right of the **Administration** area, in the grey top bar.

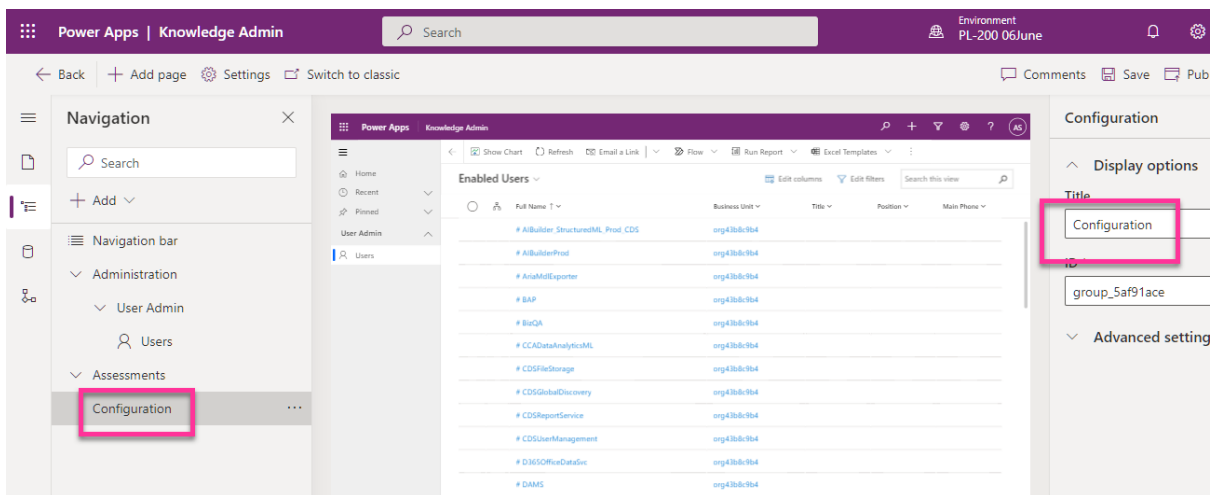
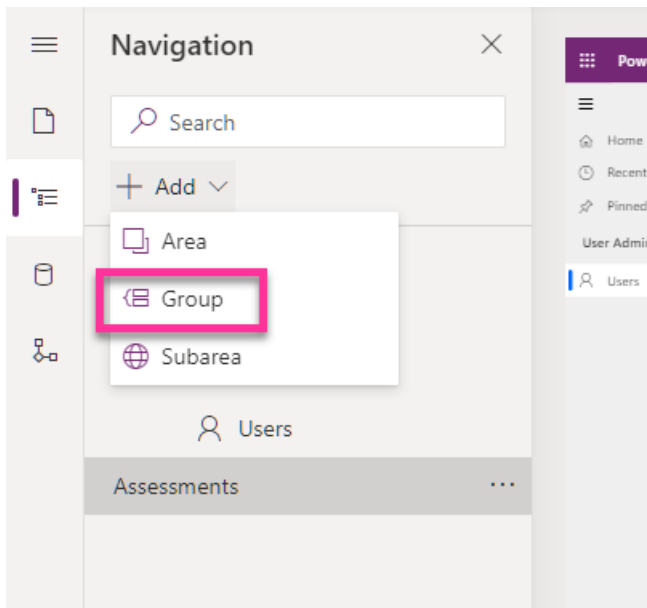


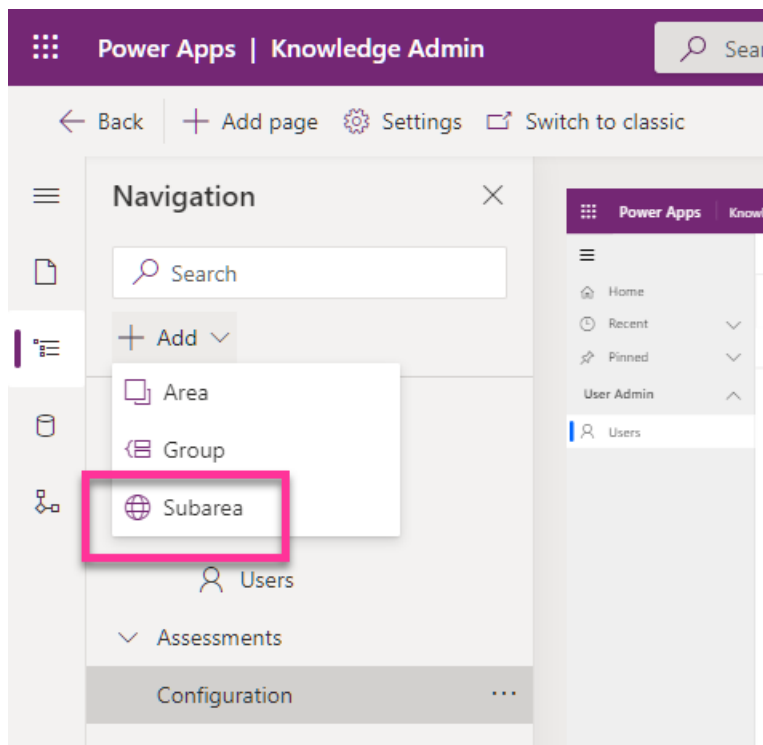
7. Select the new area, click the **Edit** button, and enter **Assessments** for **Title**.



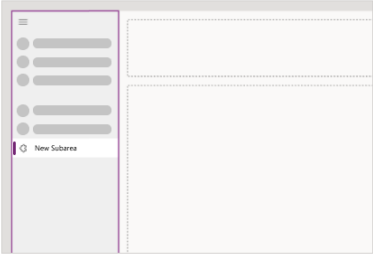
8. Make sure the **Assessments** group you created is selected.







New subarea ✕



The preview shows a navigation pane with a 'New Subarea' entry at the bottom.

Content type
Table

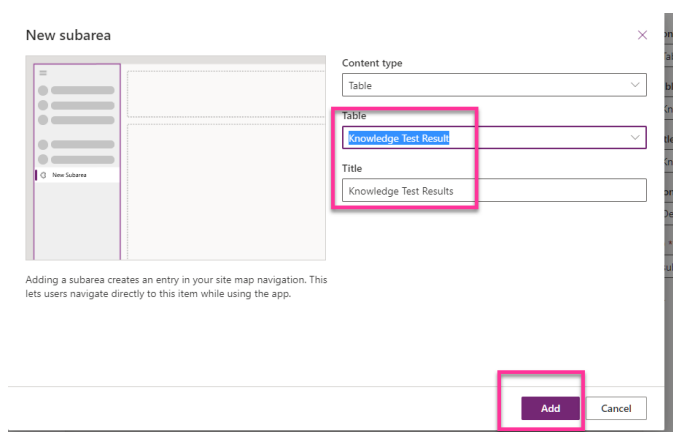
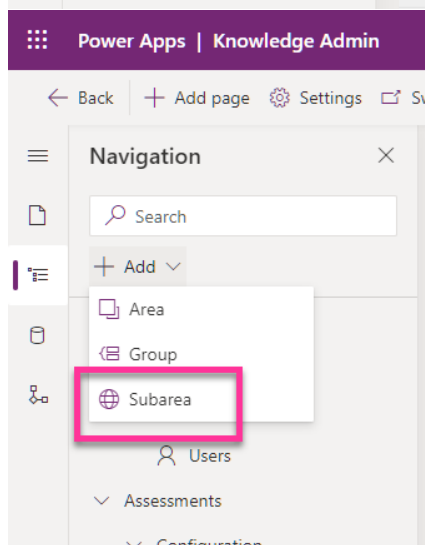
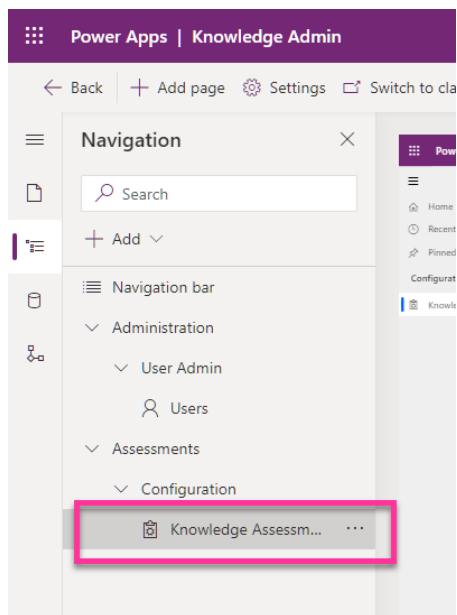
Table
Knowledge Assessment

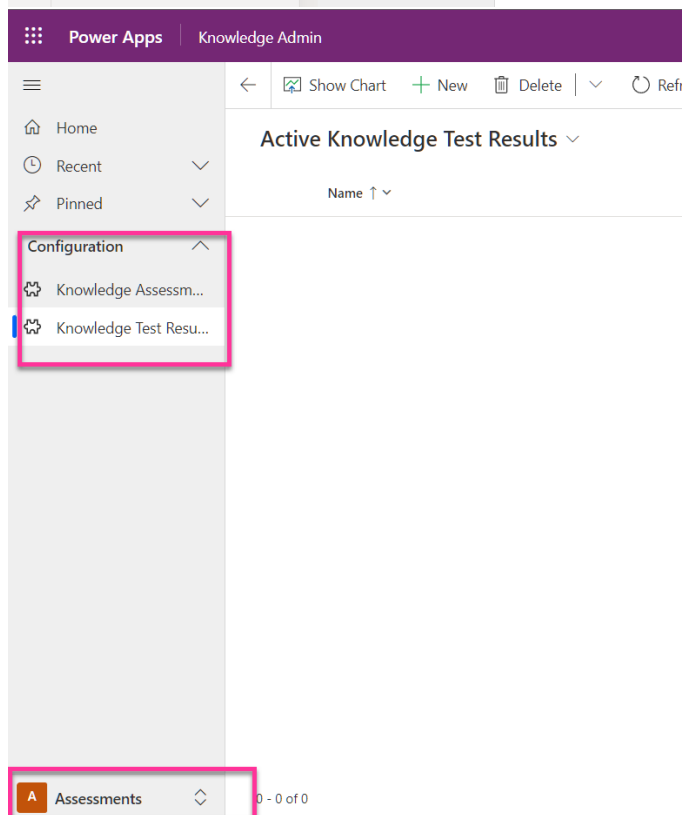
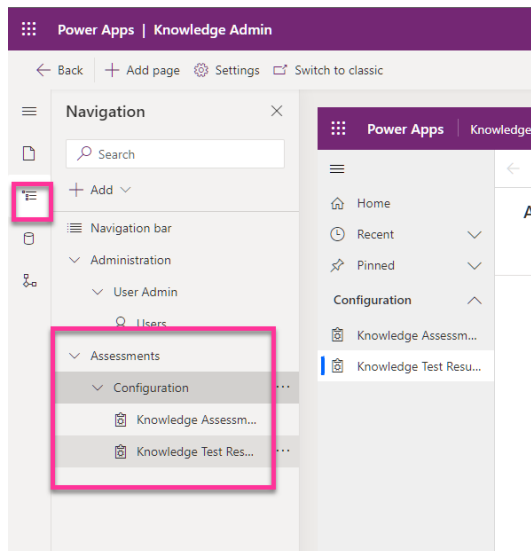
Title
Knowledge Assessments

Adding a subarea creates an entry in your site map navigation. This lets users navigate directly to this item while using the app.

Add

Cancel

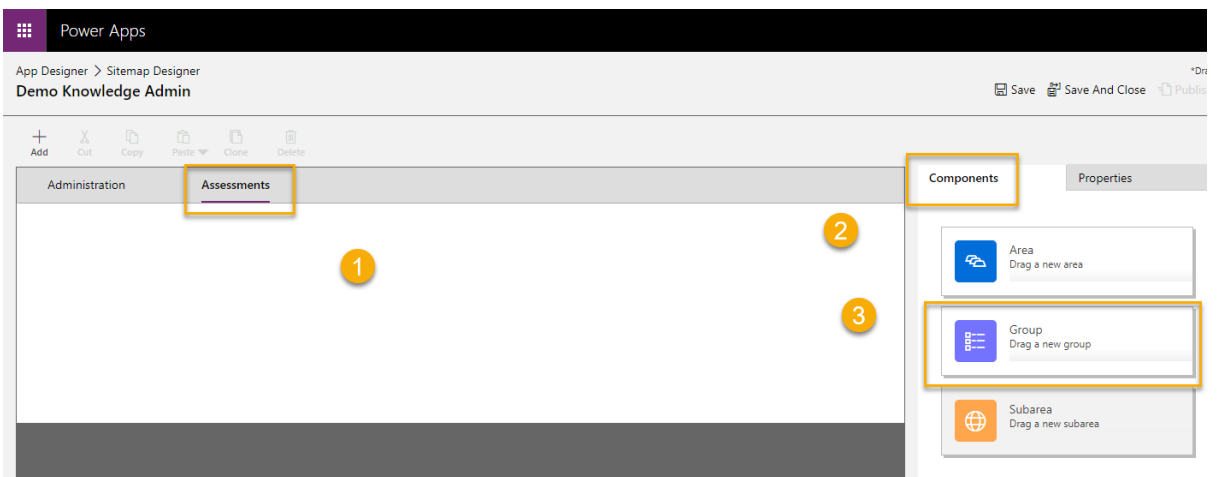




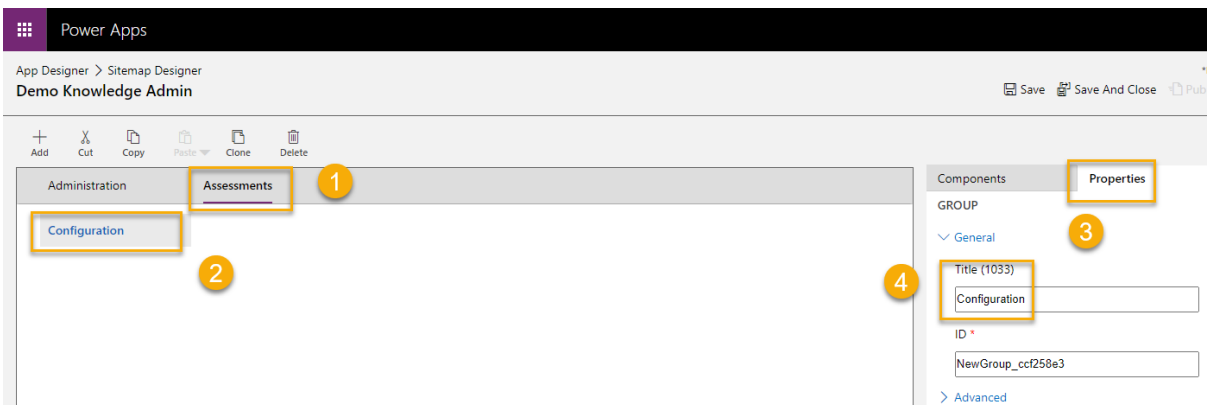
9. Select the **Components** tab.



10. Drag **Group** and place it in the **Assessments** area.



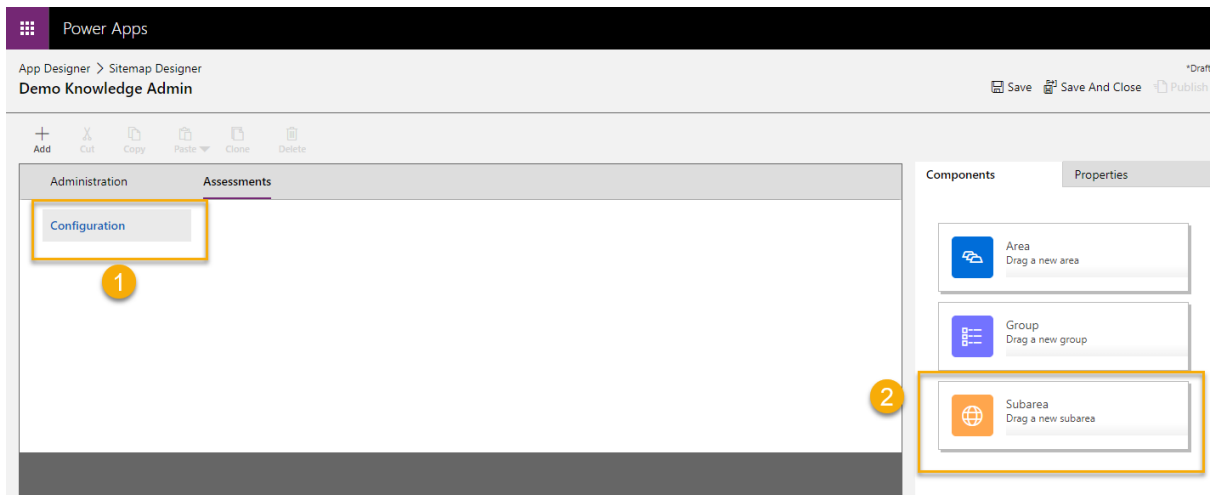
11. Enter **Configuration** for **Title**.



12. Select the **Configuration** group you just added.

13. Select the **Components** tab.

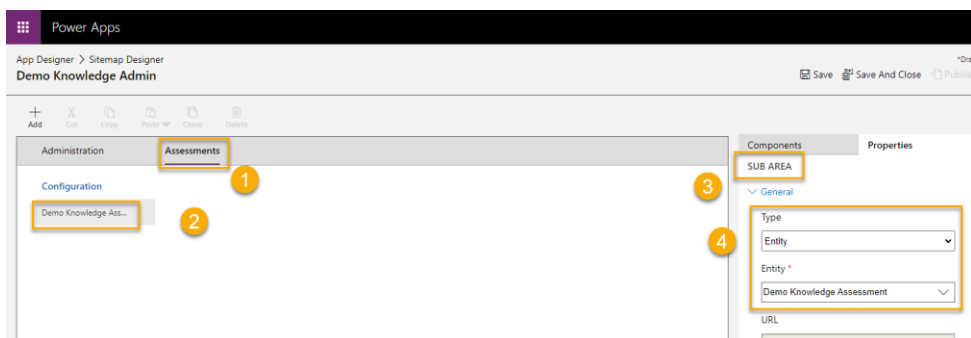
14. Drag a **Subarea** to the **Configuration** group.



15. Select the **New Subarea**.

16. Select **Entity** for **Type**.

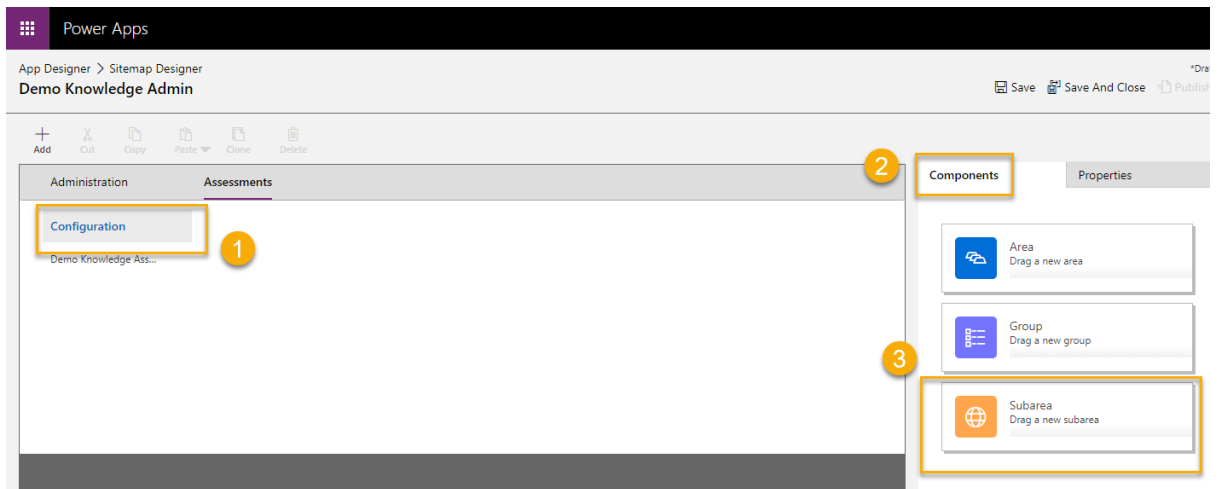
17. Select **Knowledge Assessment** for **Entity**.



18. Select the **Configuration** group.

19. Select the **Components** tab.

20. Drag **Subarea** to the **Configuration** group.



21. Select **Entity** for **Type** and **Knowledge Test Result** for **Entity**.

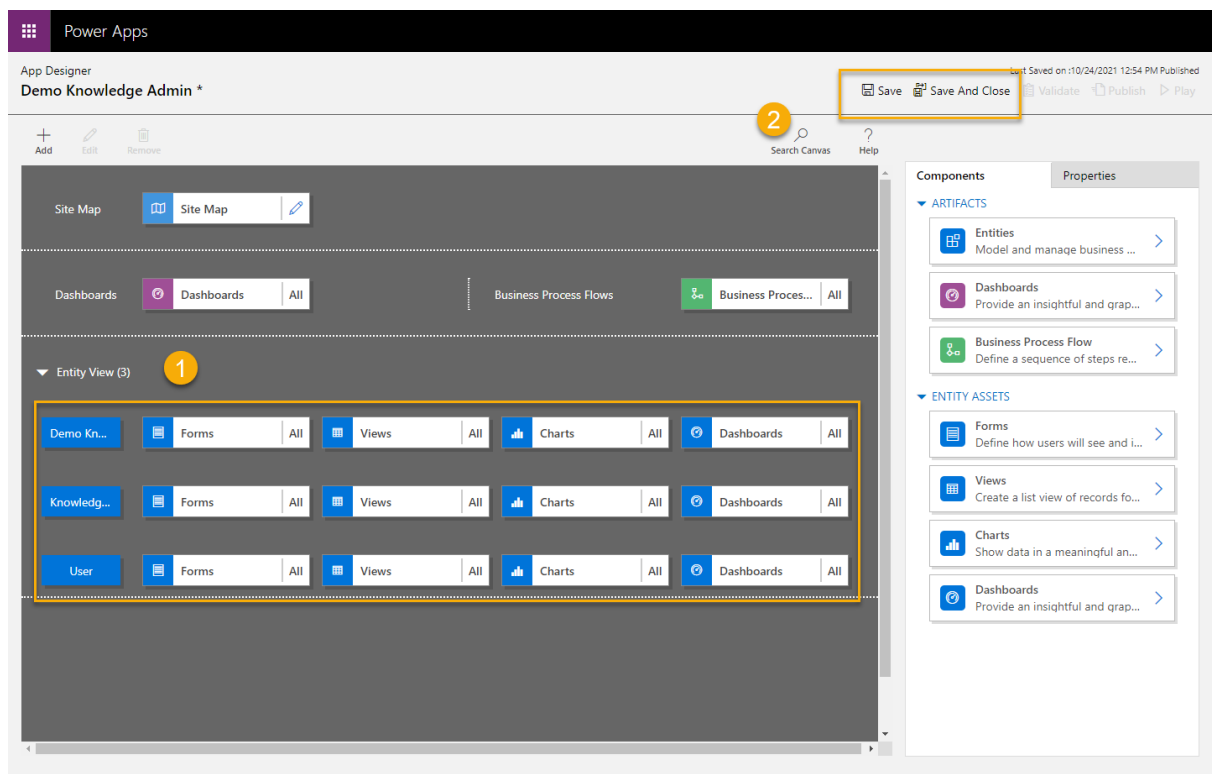
22. Click **Save**.

23. Click **Publish**.

24. Click **Save and Close**.



25. The tables you added to the sitemap are now referenced in the app designer.



26. **Do not** close the app designer.

Exercise 2 – Other app designer changes

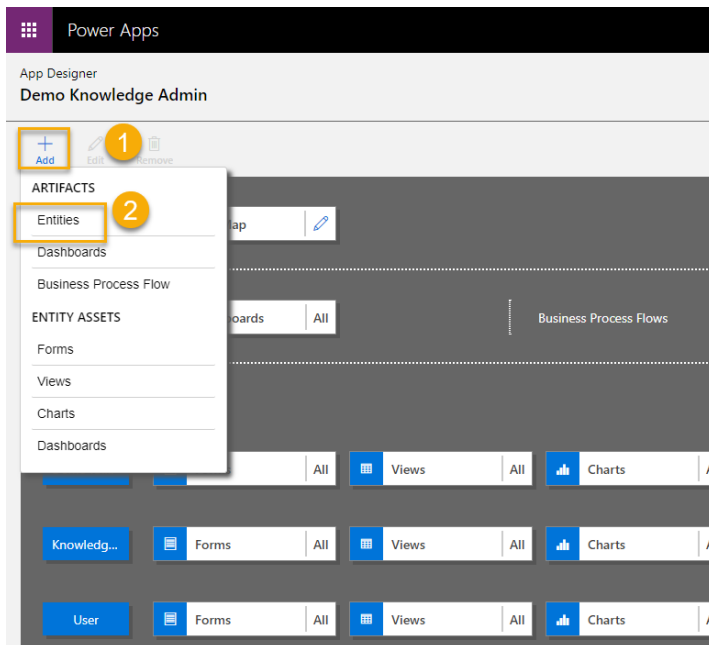
In this exercise, you will use the app designer to filter what is visible.

Task 1 – Add and remove components

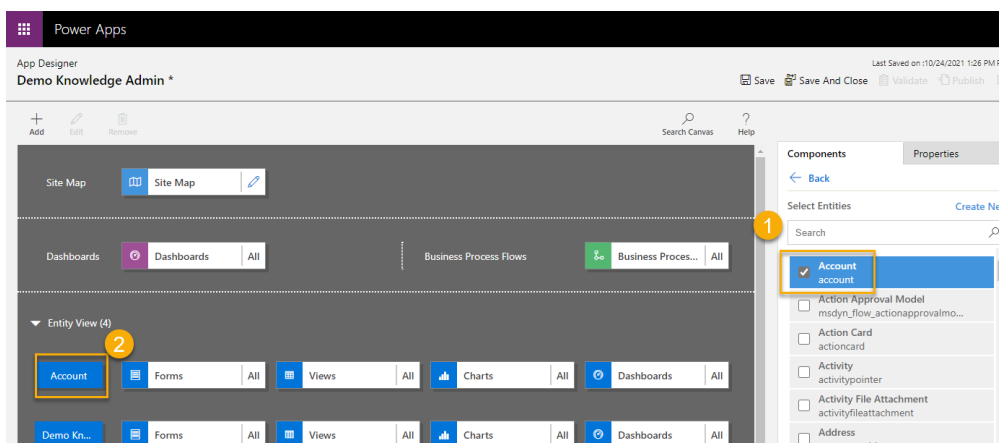
Components can easily be added and removed from an app. Remember an app is just a view into the tables that exist in your environment. Removing them from an app does not physically remove the table.

1. With the app designer still open, click **+ Add**.

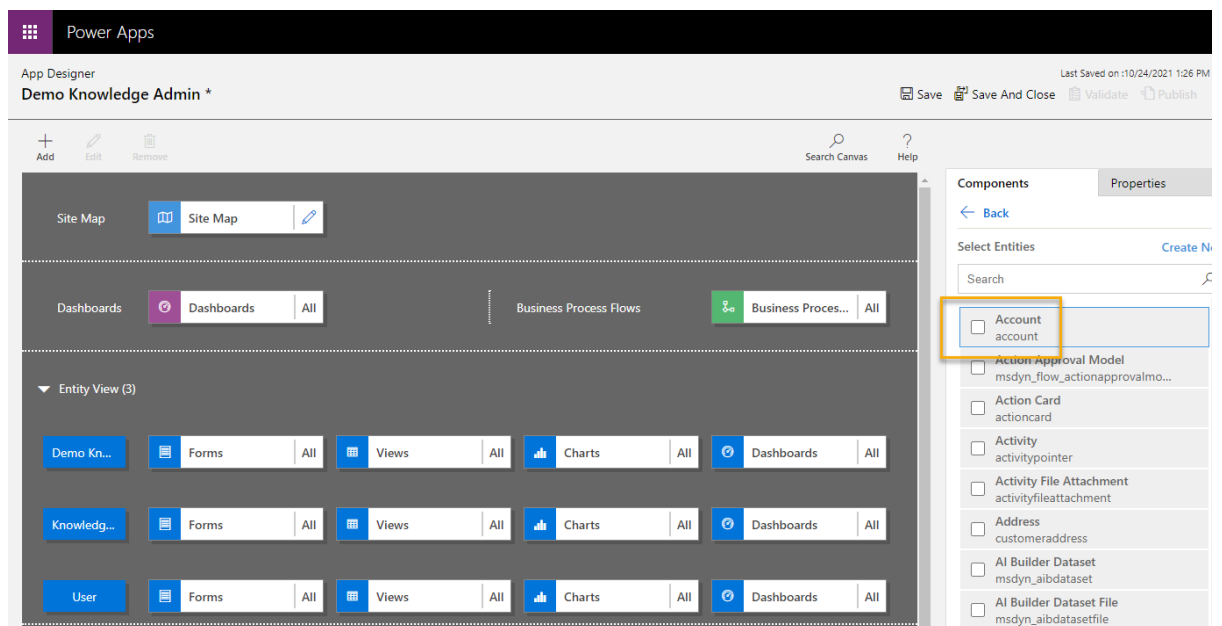
2. Select **Entities**.



3. Select the **Account** table. The Account will be added to the app.

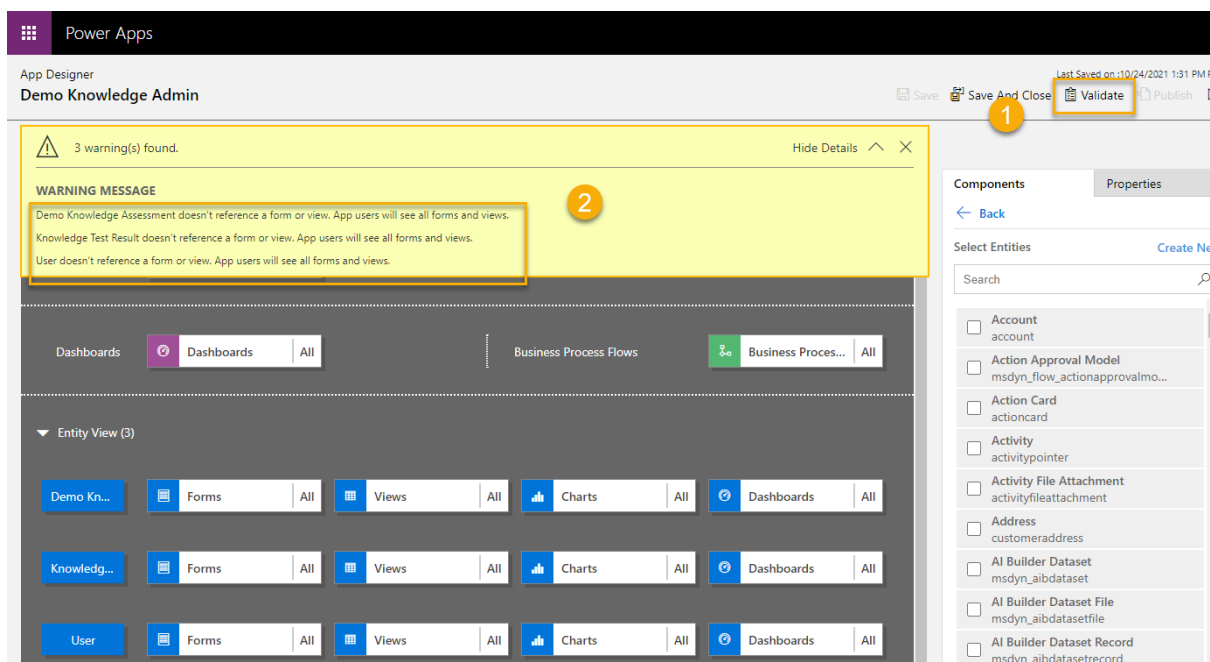


4. Uncheck the **Account** table. The Account entity will be removed from the application.



Task 2 – Validate and adjust what forms and views show

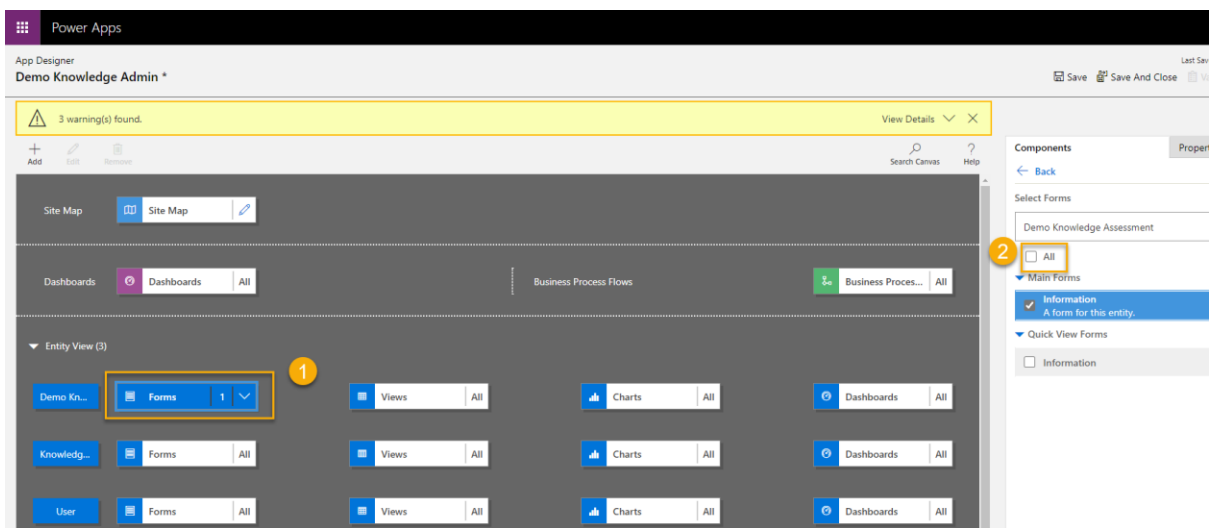
Validating your app will alert you if you are missing any dependencies or other issues. We will also adjust what forms and views are available to the app.



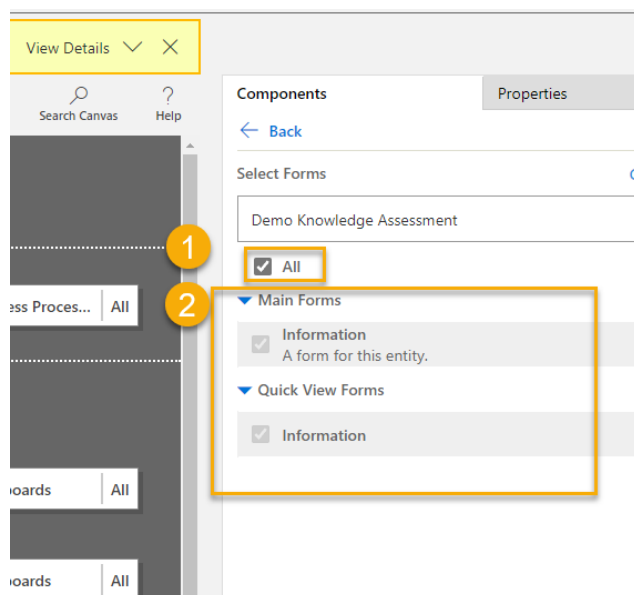
By limiting them now we won't be surprised if somebody adds a view in CDS later. We can then specifically choose which forms and views will show in our app you can do this for the other components as well.

1. Select **Forms** for the **Knowledge Assessment** table.

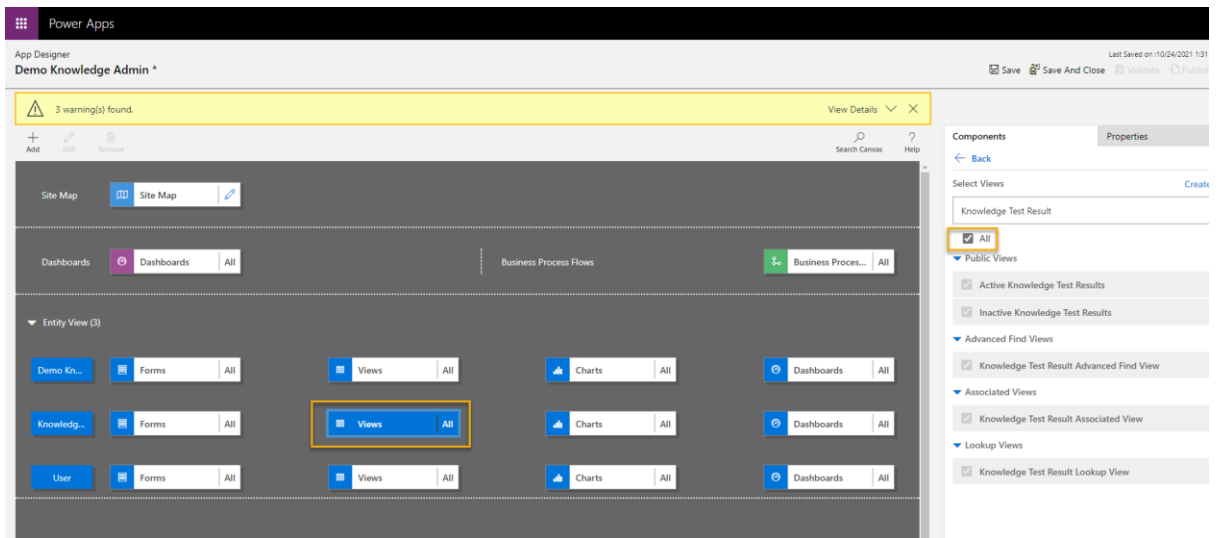
- By default, all available components are selected. Uncheck the **All** checkbox.



- Check the **All** checkbox. Both forms will be selected.

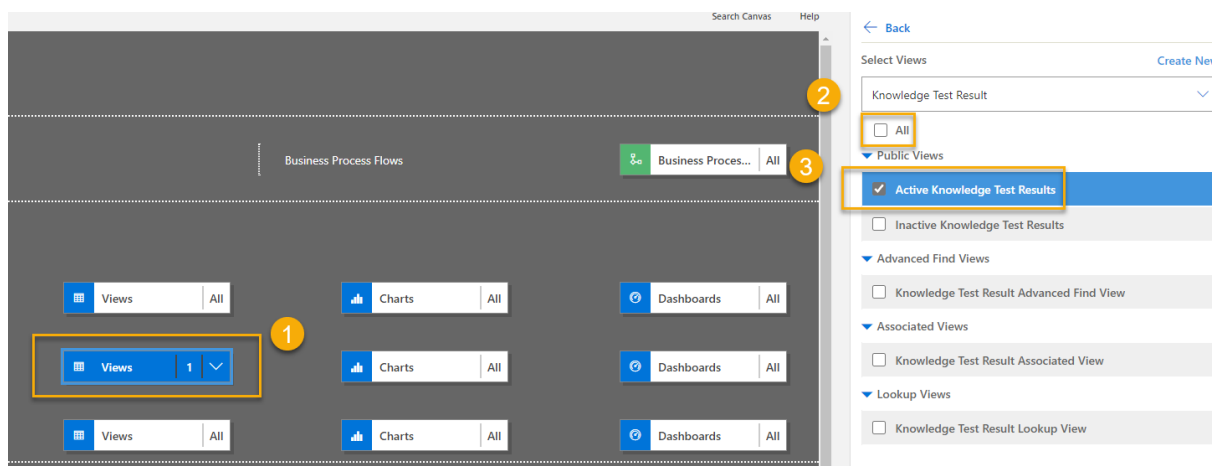


- Select the **Views** of the **Knowledge Test Result**.
- All the **Views** are currently selected.

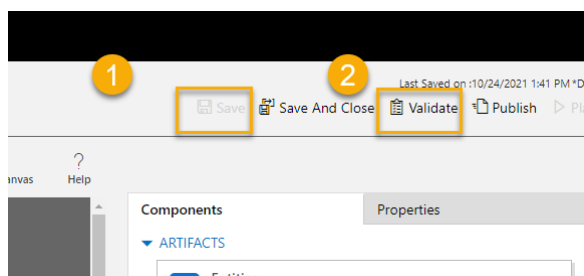


Uncheck the **All** checkbox.

- All but one Public View will be unchecked. You are required to have at least one view.

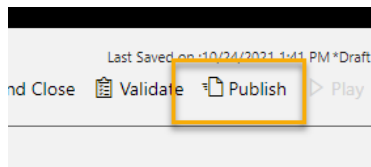


- Check the All checkbox. All the views will be selected.
- You don't have Dashboards or Charts yet. Click **Save**.
- Click **Validate**.

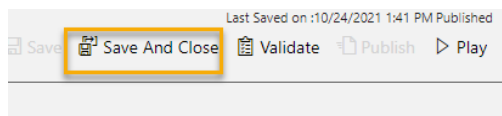


- You will get warnings letting you know you that application users will see all forms and views.

11. Click **Publish**.

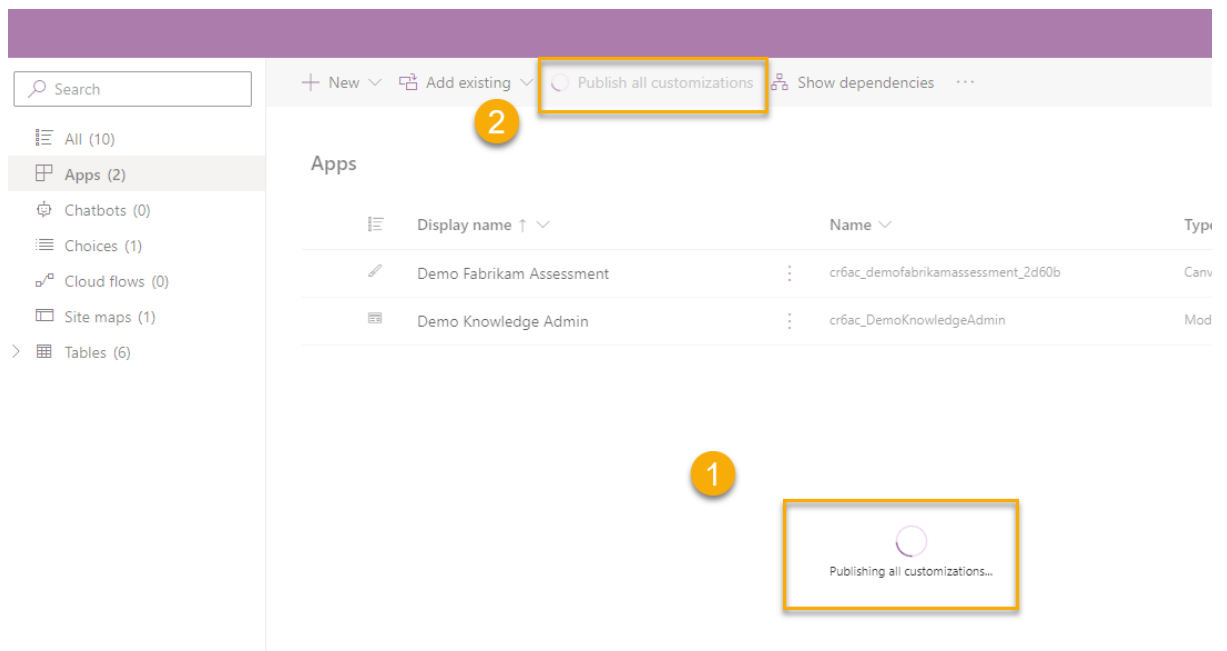
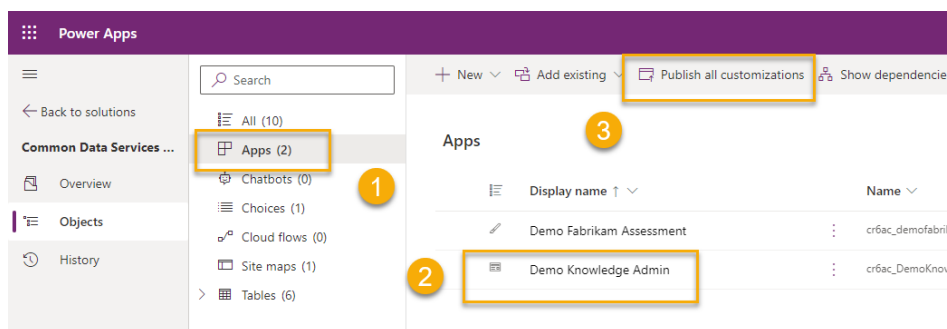


12. Click **Save and Close**.



13. Click **Done**.

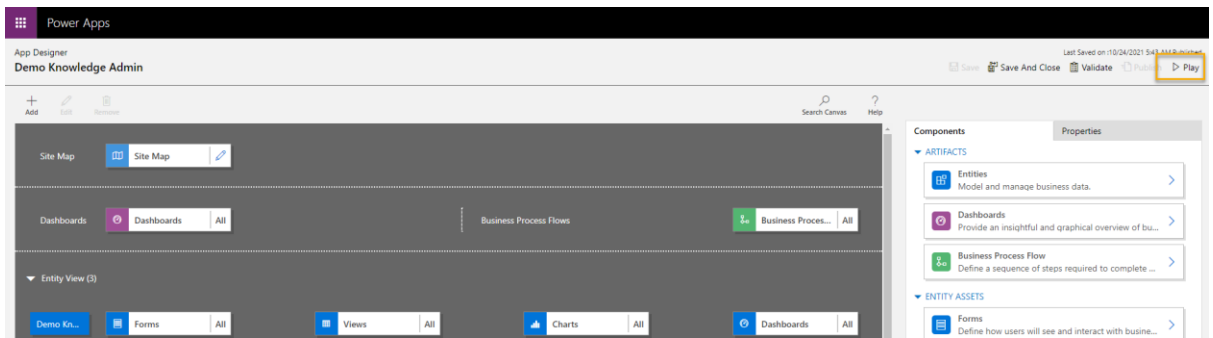
14. Click **Publish all customizations**.



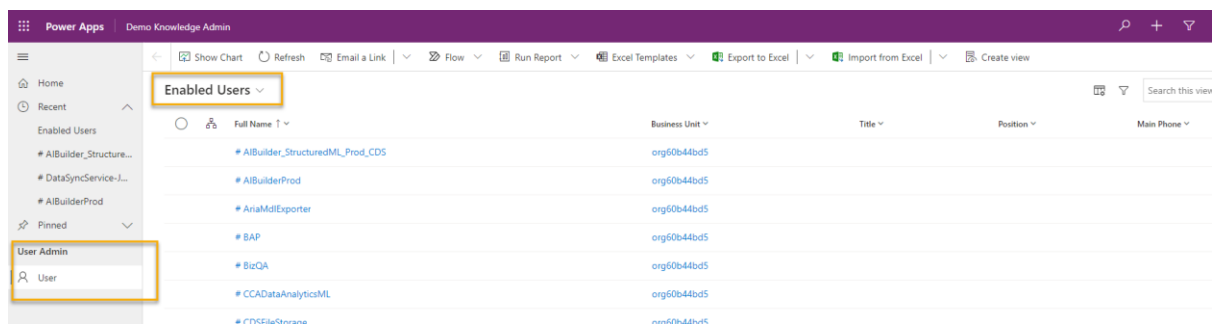
Task 3 – Run the Application

1. Make sure you still have the **Knowledge Admin** model-driven app selected.

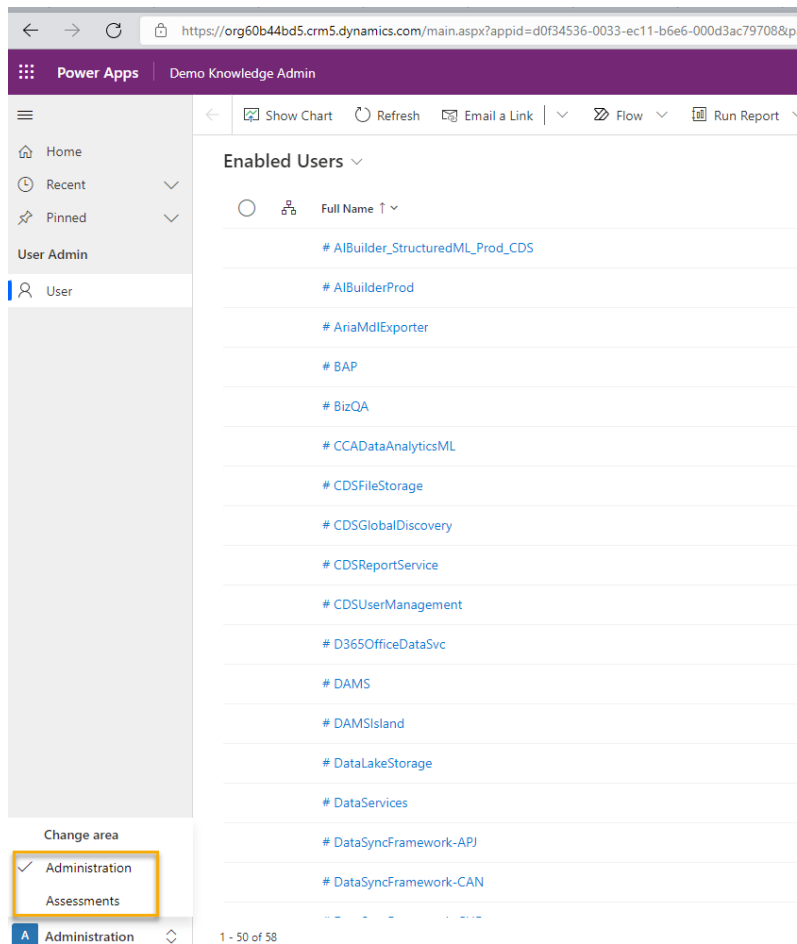
2. Click **Play**.



3. The application will load. The current area is shown on the bottom-left of the page (**Administration**). The **Enabled users** view will load and you will see a list of enabled users.

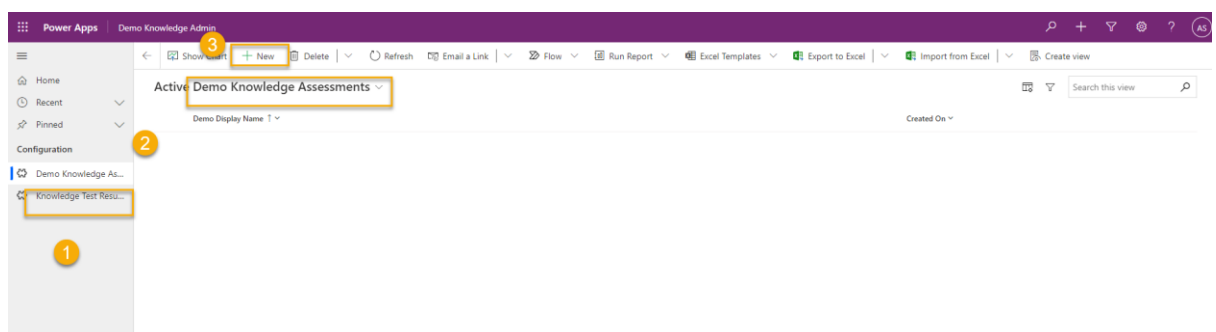


- Click on the **Administration** area and switch to the **Assessments** area.



- The **Active Knowledge Assessments** view will load.

- Click **+ New**.



7. Enter **Test Assessment One** for **Title** and click **Save**.

Power Apps | Demo Knowledge Admin

← Save Save & Close + New Flow

New Demo Knowledge Assessment - Unsaved

General

Demo Display Name Test Assessment One

Owner * Aroh Shukla

8. Click **+ New** Again.

9. Enter **Test Assessment Two** for **Title** and click **Save and Close**.

Power Apps | Demo Knowledge Admin

← Show Chart + New Delete

Active Demo Knowledge Assessment

Demo Display Name ↑

Test Assessment One

Power Apps | Demo Knowledge Admin

← Save Save & Close + New Flow

New Demo Knowledge Assessment - Unsaved

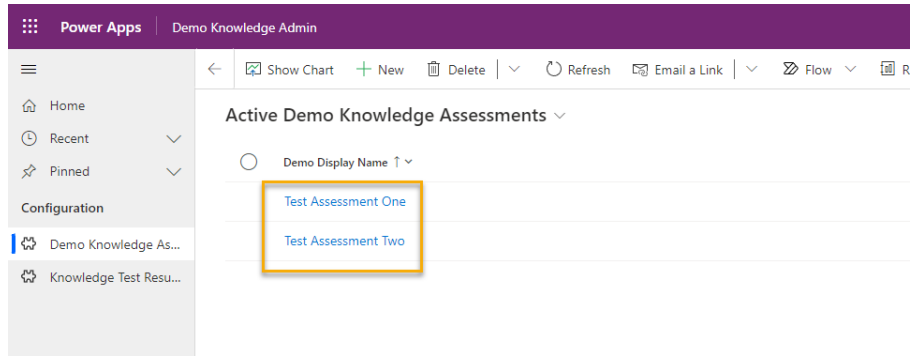
General

Demo Display Name Test Assessment Two

Owner * Aroh Shukla

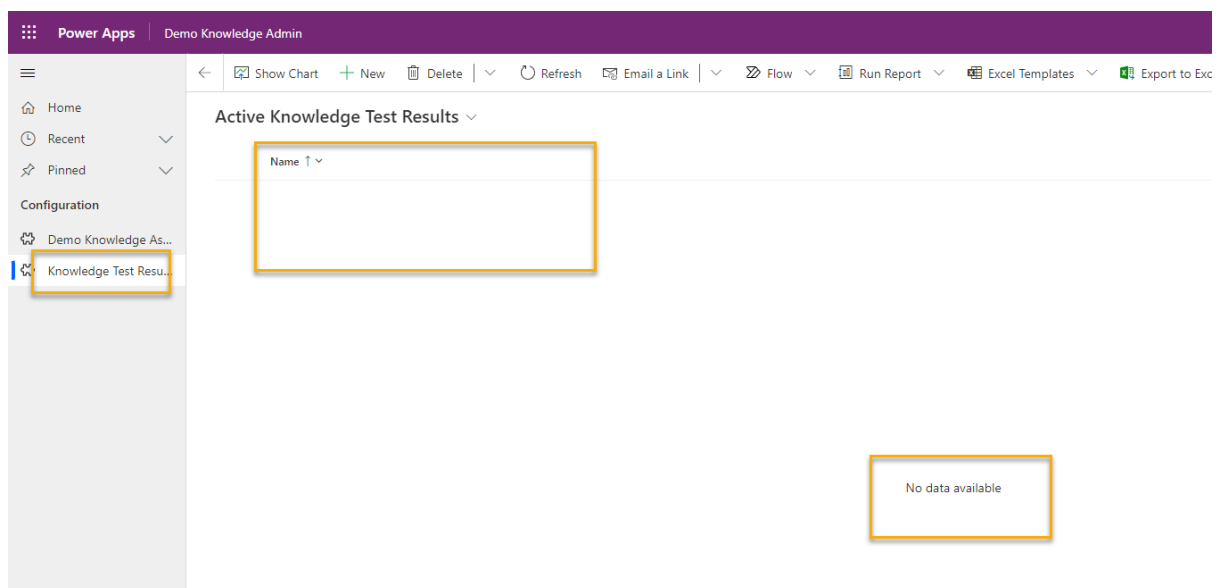
10. Select on **Knowledge Assessments** in the left bar.

11. The two rows you created will be visible in the view.



12. Select the **Knowledge Test Results**.

13. The view will load but you won't have any rows.



14. Click on the **Assessments** area at the bottom of the screen and click **Administration** to return to the Administration area.

The screenshot shows the 'Power Apps' interface for 'Demo Knowledge Admin'. The left sidebar contains navigation options: Home, Recent, Pinned, User Admin, and User. The main area displays a list of 'Enabled Users' with a table header 'Full Name' and a sort icon. The list includes users such as # AIBuilder_StructuredML_Prod_CDS, # AIBuilderProd, # AriaMdlExporter, # BAP, # BizQA, # CCADDataAnalyticsML, # CDSFileStorage, # CDSGlobalDiscovery, # CDSReportService, # CDSUserManagement, # D365OfficeDataSvc, # DAMS, # DAMSIsland, # DataLakeStorage, # DataServices, # DataSyncFramework-API, and # DataSyncFramework-CAN. The bottom left shows the 'Administration' tab selected.

Full Name
AIBuilder_StructuredML_Prod_CDS
AIBuilderProd
AriaMdlExporter
BAP
BizQA
CCADDataAnalyticsML
CDSFileStorage
CDSGlobalDiscovery
CDSReportService
CDSUserManagement
D365OfficeDataSvc
DAMS
DAMSIsland
DataLakeStorage
DataServices
DataSyncFramework-API
DataSyncFramework-CAN

15. You can close the model-driven app.

Lab 4.2: Practice Lab – Modifying forms

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. In this practice you will be continuing your work on the model-driven Knowledge Admin app. In this practice, you will be modifying the **auto generated forms** to add the new columns you added in the data-modeling practice.

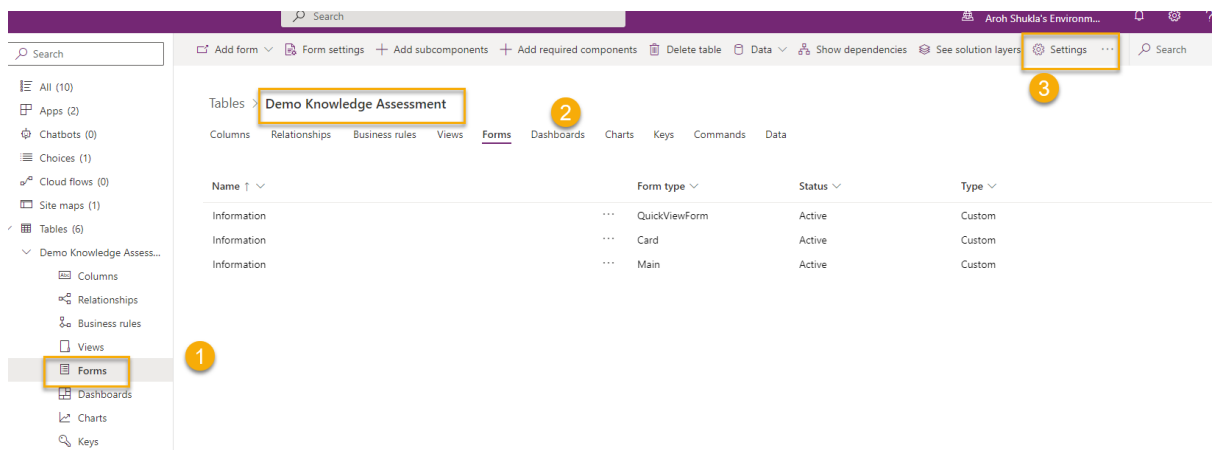
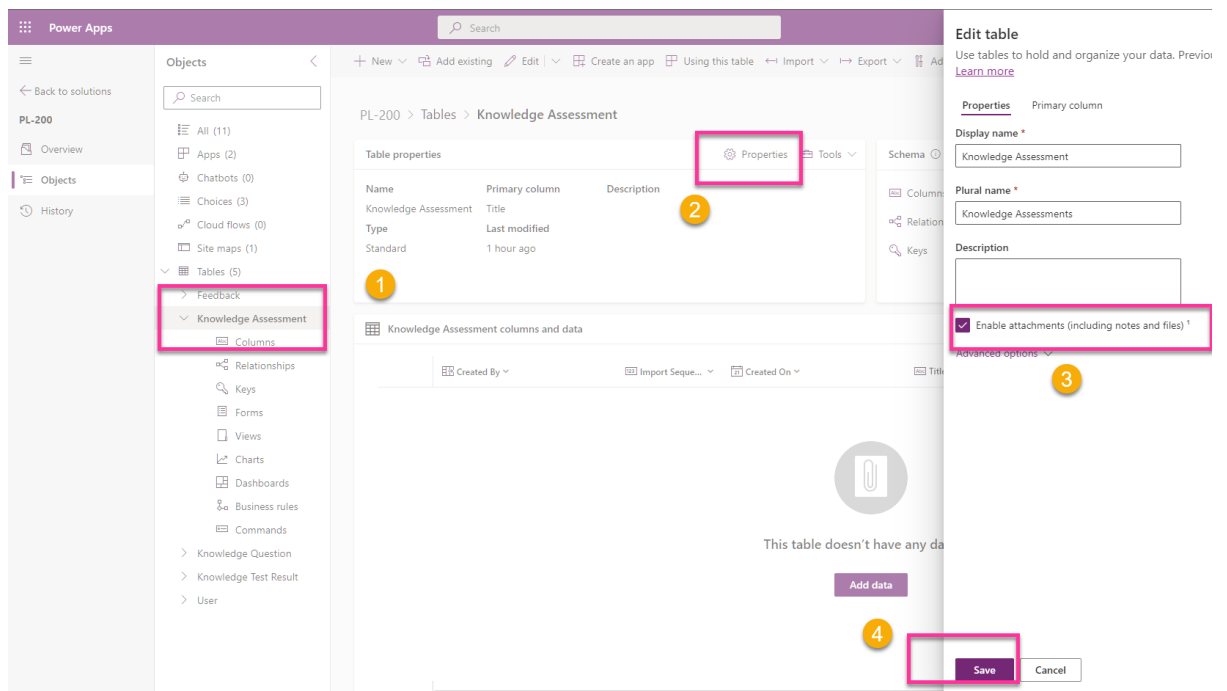
Exercise 1 – Edit the Knowledge Assessment Form

In this exercise, you will edit the form for the Knowledge Assessment table.

Task 1 – Enable Notes on the Knowledge Assessment table

Initially when the table was **created notes were not enabled**. Since then the client Fabrikam has determined that they like to be able to track notes against the knowledge assessments. We are going to make this change before getting into the form editor, because this is the easiest way to perform these configuration steps. The same is true, for example, if you need to add any columns: you should always try to add the columns before jumping into the editor.

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in the **Practice** environment you created.
3. Select **Solutions**.
4. Open the **Common Data Service Default Solution**.
5. Open the **Knowledge Assessment** table.
6. Click **Settings** in the command bar (you may need to click the ... to see this option)



7. Check the **Enable Attachments** checkbox. This enables notes and files for the table.

8. Click **Save**.

Edit table

Use tables to hold and organize you data. Previousl
[Learn more](#)

Properties Primary column

Display name *

Plural name *

Description

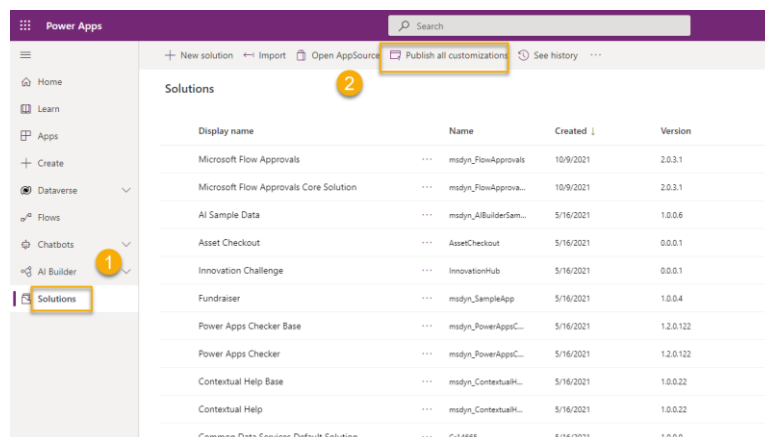
☒ Enable attachments (including notes and files) ¹

Advanced options ▾

Save

Cancel

9. Click **Common Data Service Default Solution** and select **Publish all customizations**.



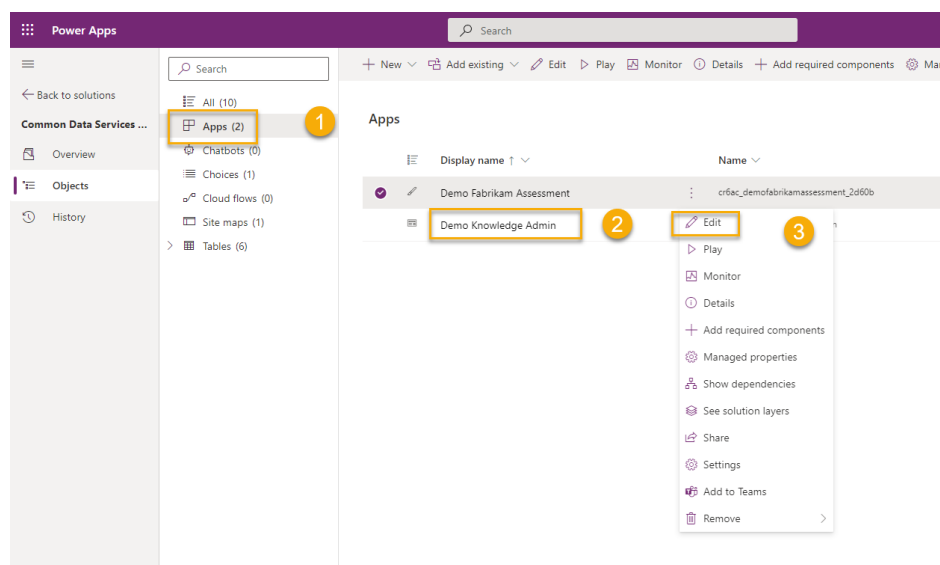
Task 2 – Edit the Knowledge Assessment form

In this task, you will perform the following **changes to the form**:

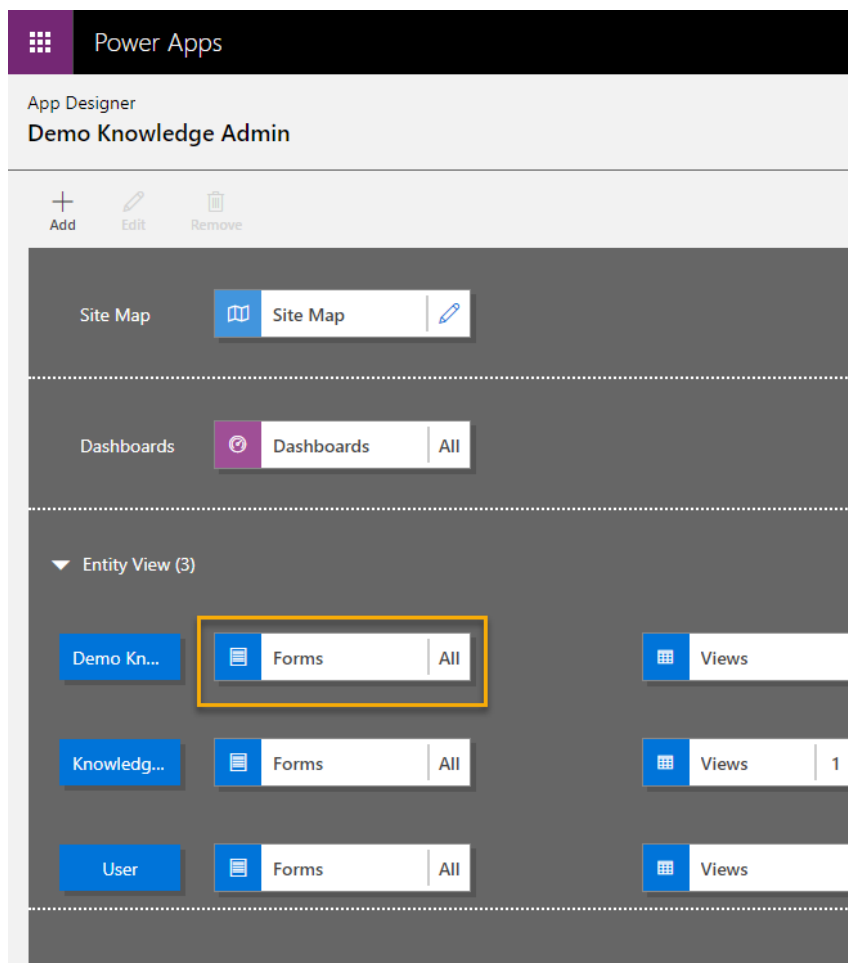
- Put columns in the header
- Insert the Timeline control
- Add a tab that contains a list of related assessment questions

To customize your form:

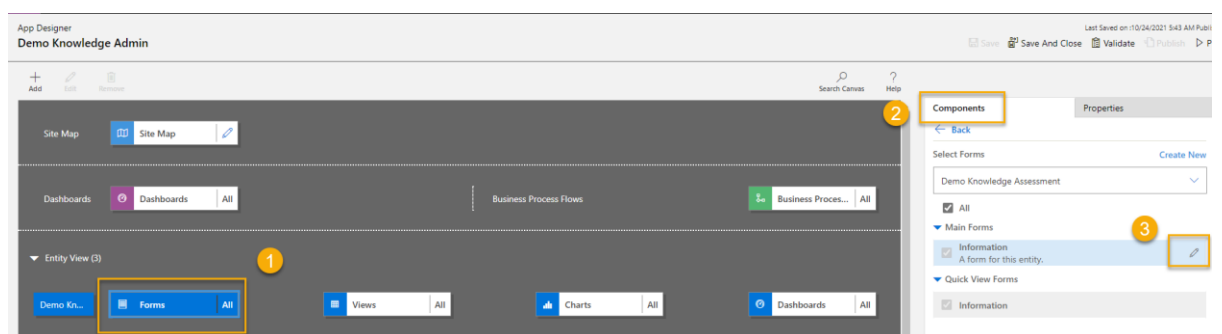
1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in the **Practice** environment you created.
3. Select **Solutions**.
4. Open the **Common Data Service Default Solution**.
5. Select the **Knowledge Admin** model-driven app.
6. Click **Edit**.



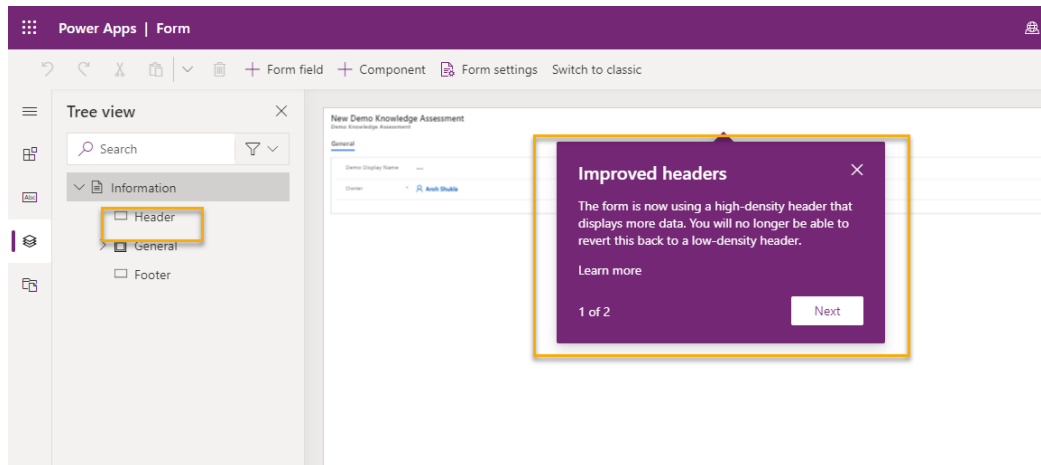
7. Locate the **Knowledge Assessment** table and select **Forms**.



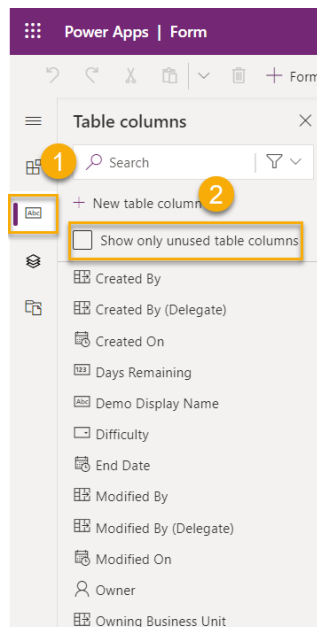
8. Go to the **Components** tab, hover over the **Information** form in the **Main Forms** section, and click **edit** (the pencil icon).



9. Click on the **Header** section of the form. (This is the top section of the form that says **New Knowledge Assessment**.)

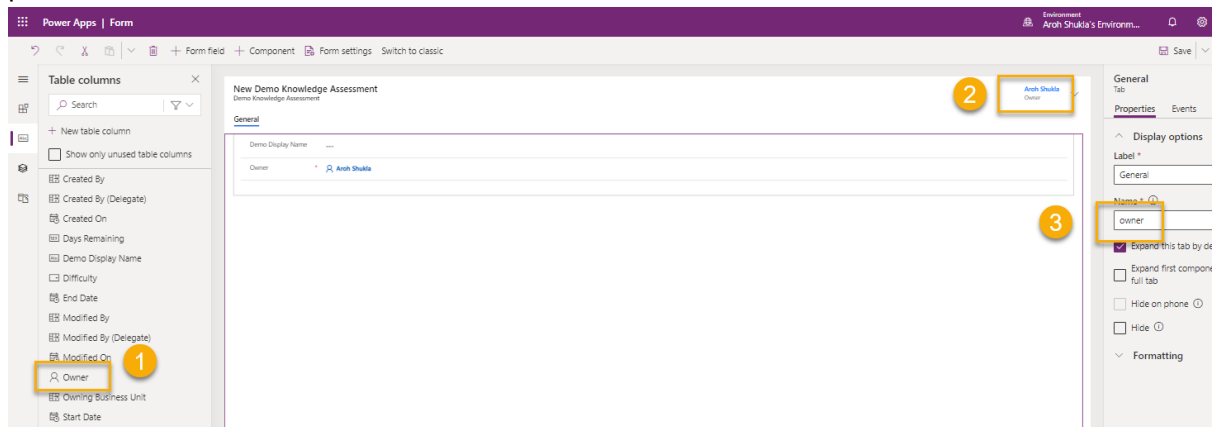


10. Select the **Table columns** tab and uncheck the **Show only unused columns** checkbox.



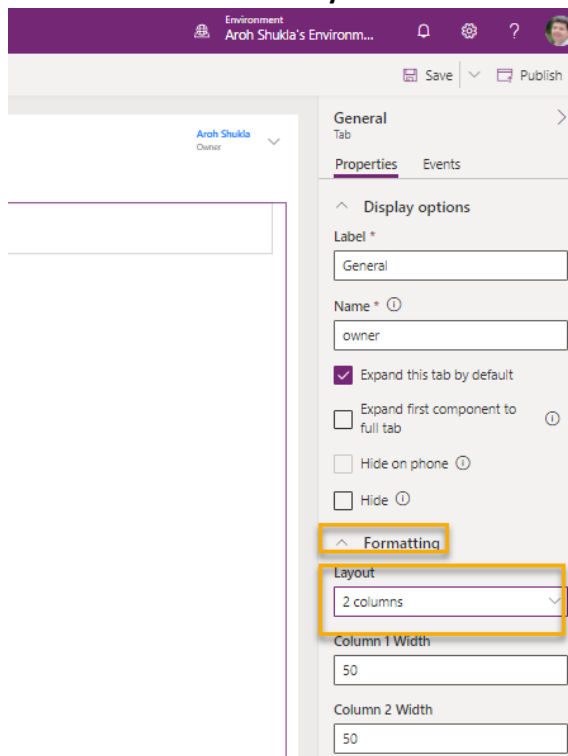
11. Drag the **Owner** column for the and place it in the **header** on the right side of the form. You should now have two **Owner** columns on the form: one in the **General** section, and one in the **header**.

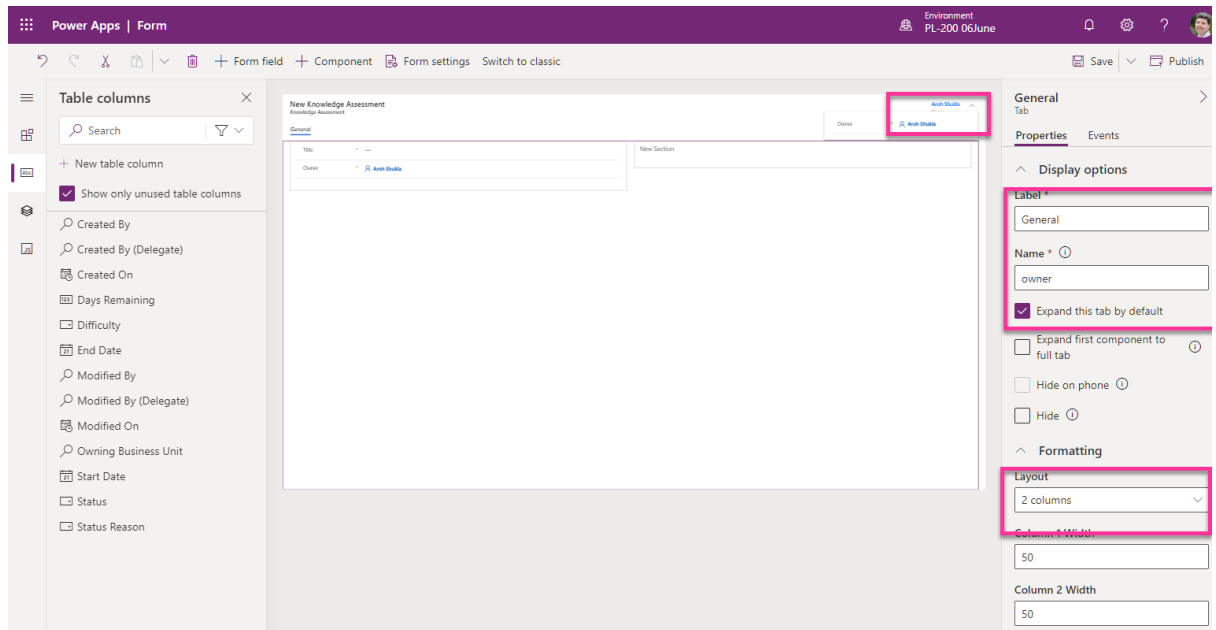
12. Select the **General** tab by clicking on it. Enter **General** in the **Name** field in the Properties pane.



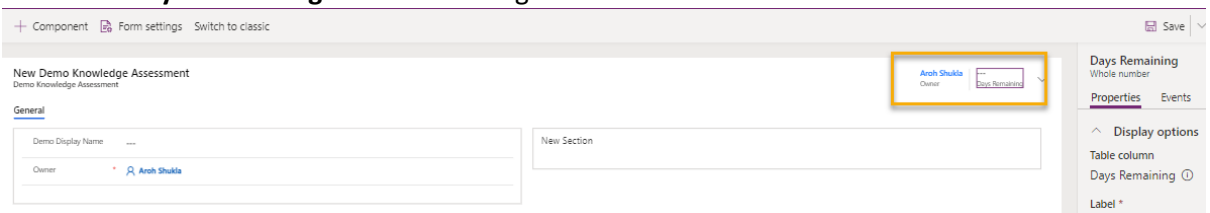
13. Expand the **Formatting** section.

14. Select **Two Columns** for **Layout**.. Click **Save**.



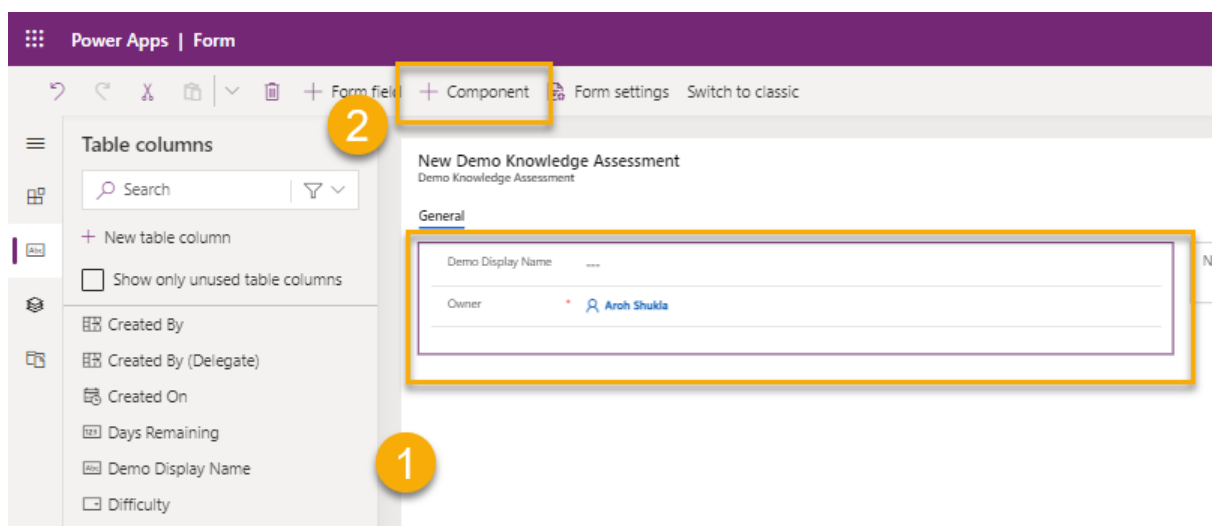


15. Select the **Days Remaining** column and drag it to the header next to **Owner**.

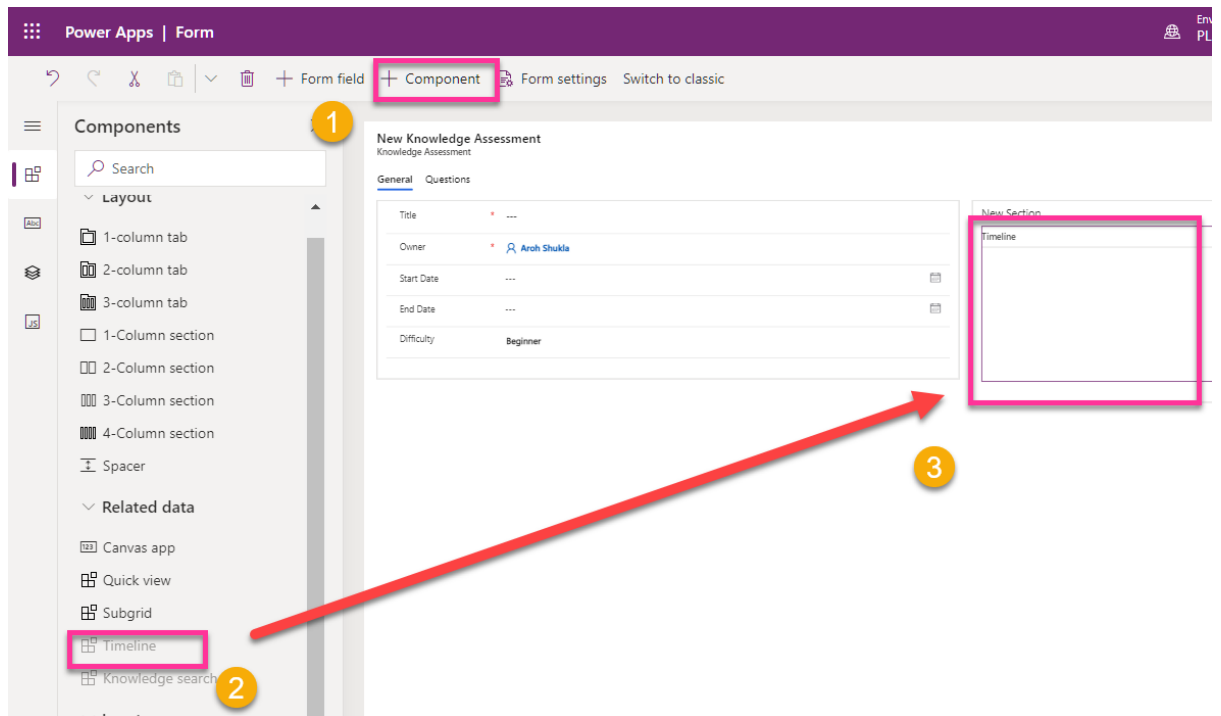


16. Select the new section of the **General** tab.

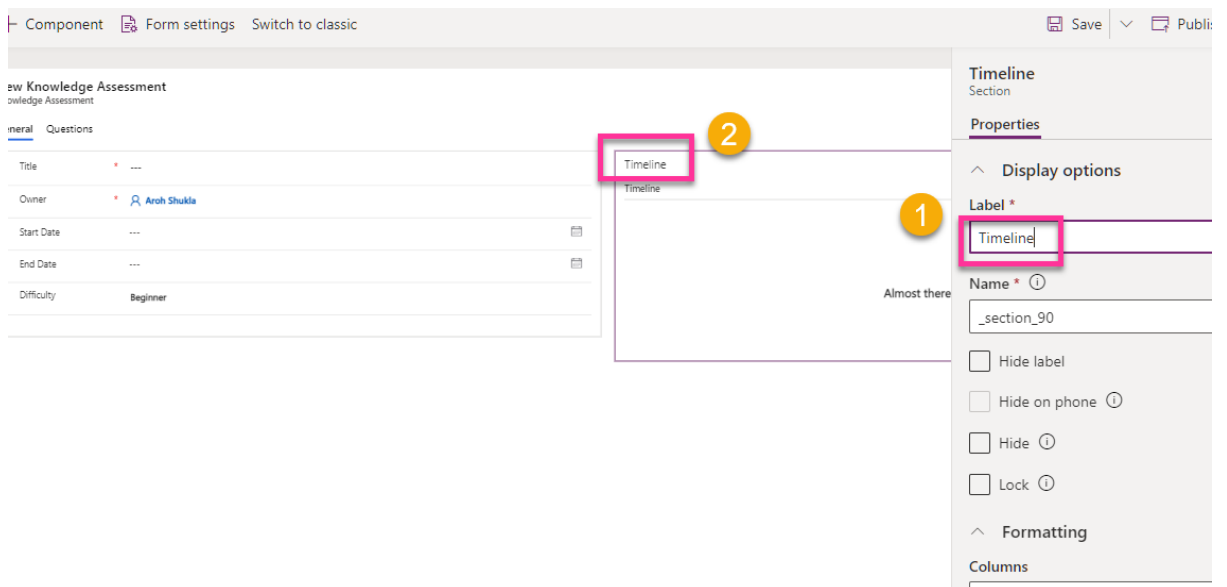
17. Select the **Component** tab.



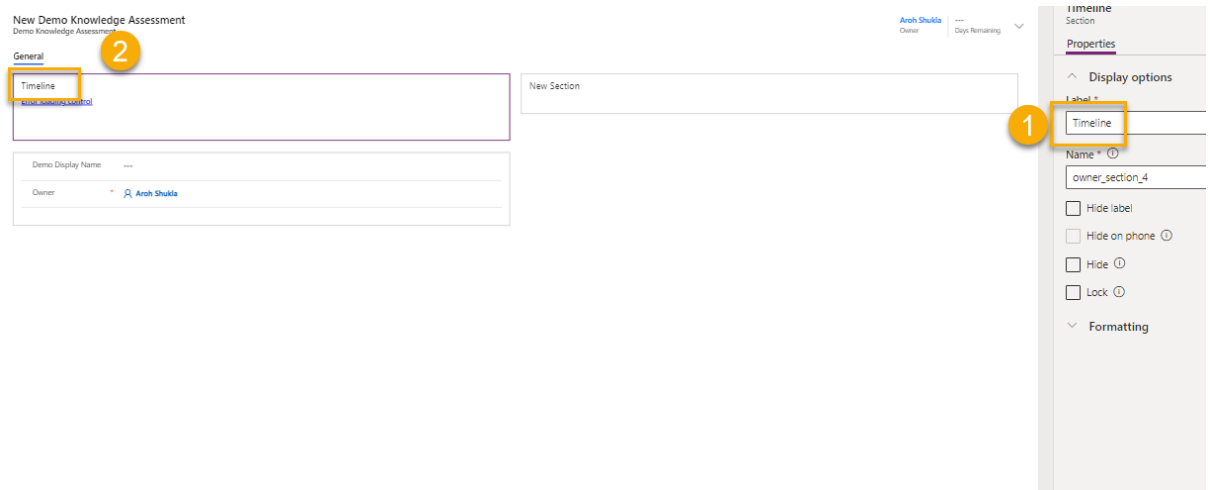
18. Click **Timeline** from the **Related data** section in the Components pane and **drag** it to the New Section.



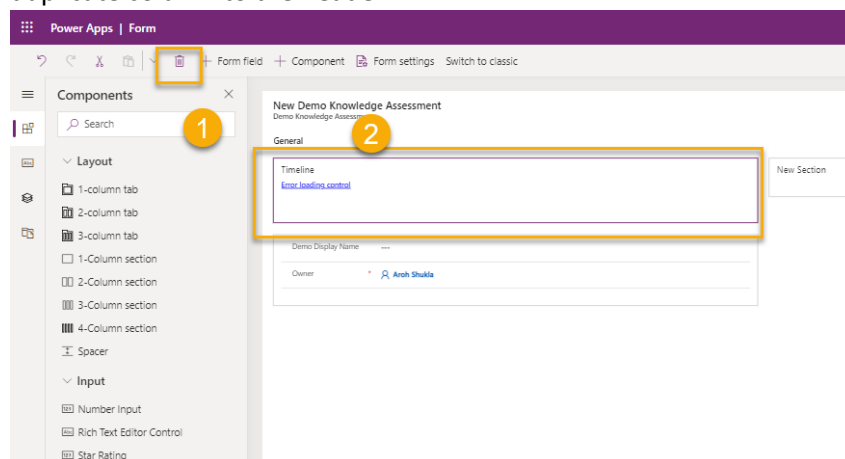
19. After the timeline is filled into the New Section, select the **New Section** that the timeline was just added to. Change the **Label** to **Timeline** and change the **Name** to **Timeline**.



20. Select the **Owner** column from the **General** section.



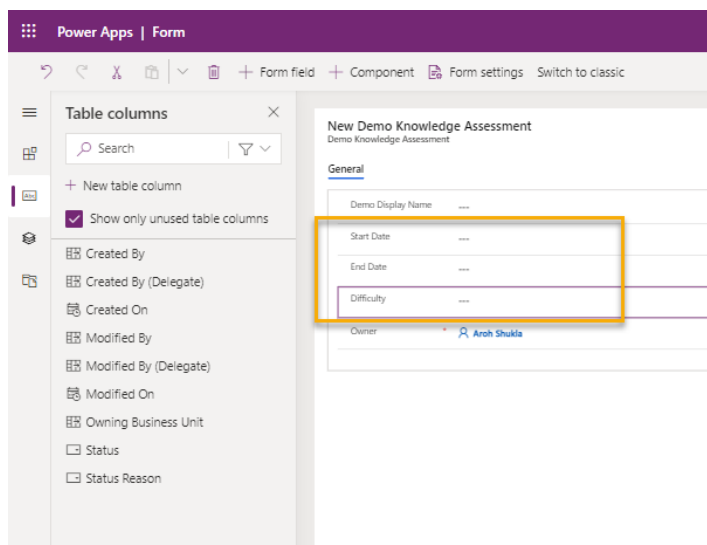
21. Click the **trash** button from the top menu. We are removing this column because we added a duplicate column to the header.



22. Add the **Start Date** column to the **General** section and place it below the **Title** column. You can add columns to the form by dragging the column from the Table columns and dropping it in the section you want to add the column to.

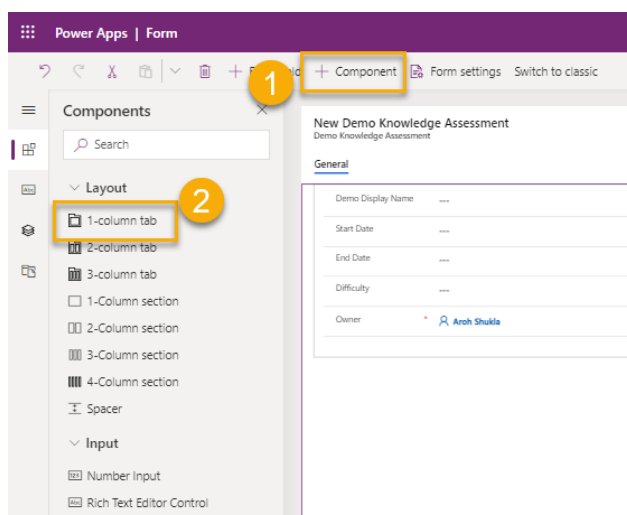
23. Add the **End Date** to the **General** section and place it below the **Start Date** column.

24. Add the **Difficulty** column to the **General** section and place it below the **End Date** column.



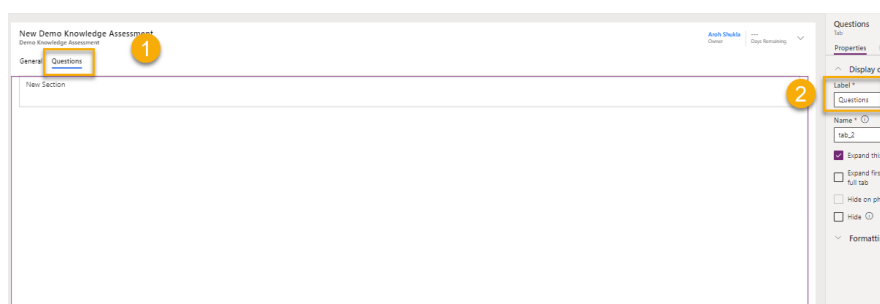
25. Select the **Component** tab.

26. Click **1 column tab**. A new tab will be added to the form.



27. Click on the new tab.

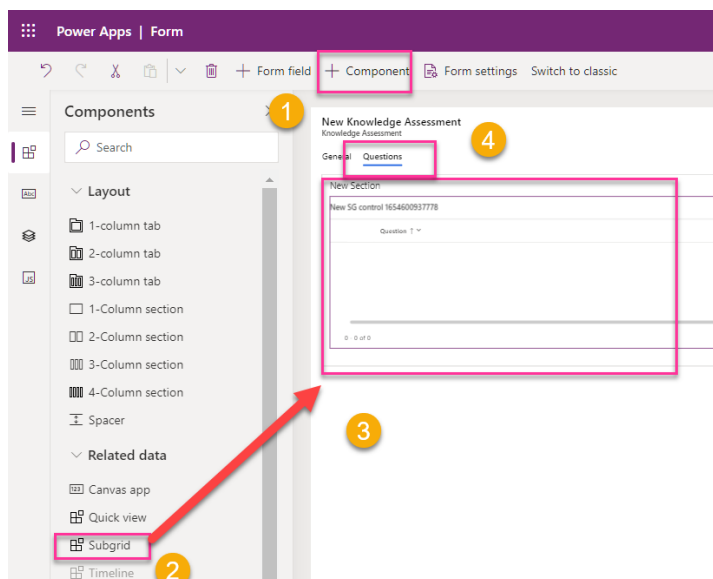
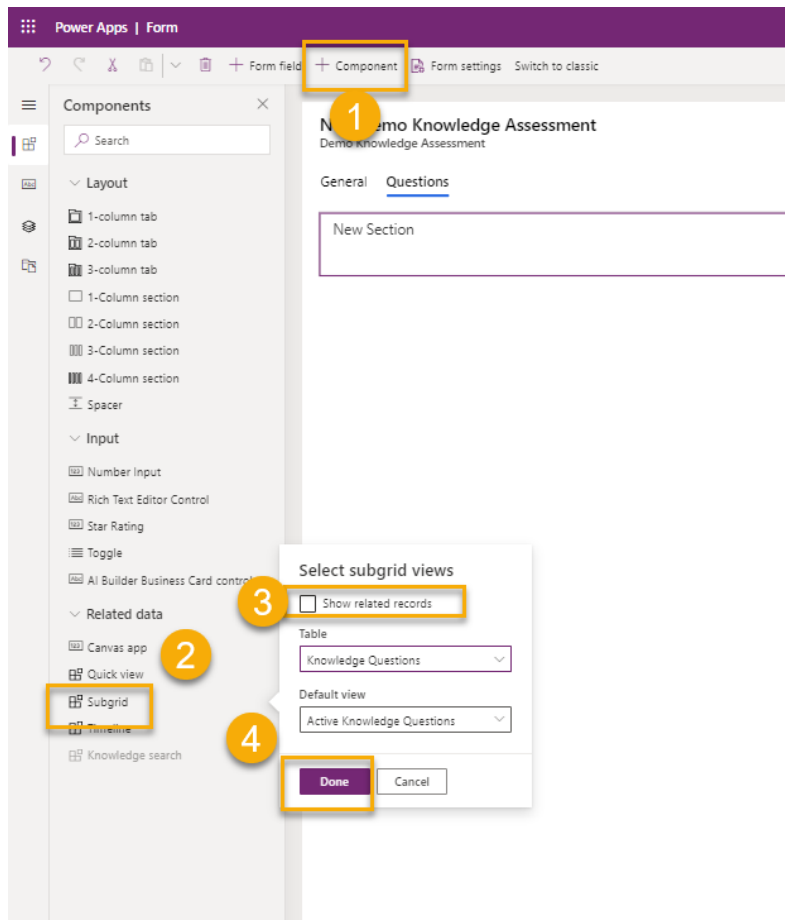
28. Change the **Label** to **Questions**.



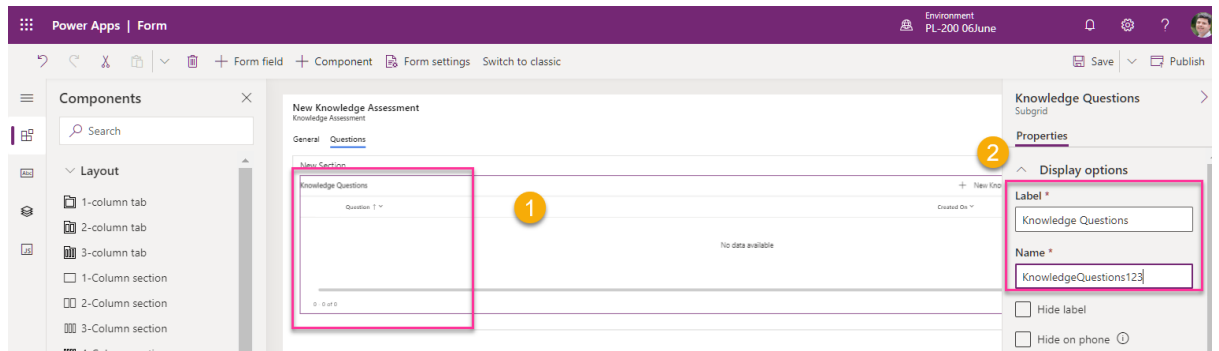
29. Select the **Questions** tab.

30. Click the **Components** tab.

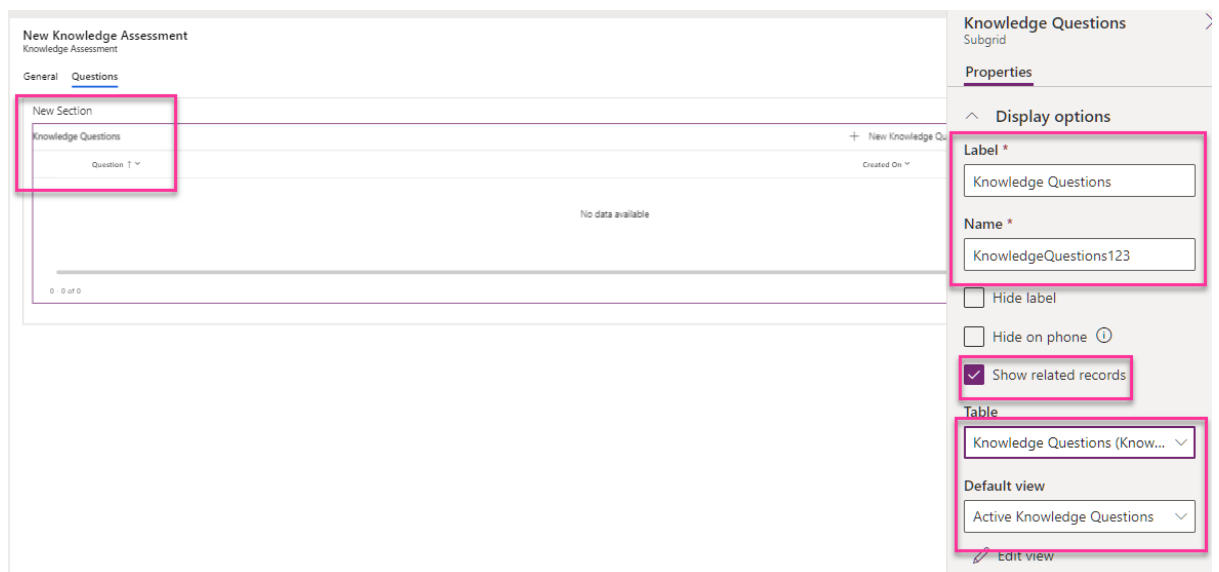
31. Click **Subgrid** from the **Related data** section. Check the **Show related records** check box and select **Knowledge Questions** for Table. Then click **Done**.



32. In the right properties tab, enter **Knowledge Questions** for **Label** and **KnowledgeQuestions** for **Name**.



33. Make sure that **Show related records** is checked.



34. Make sure **Knowledge Questions (Knowledge Assessment)** is selected for **Table**.

Subgrid

Properties

Display options

Label *

Knowledge Questions

Name *

KnowledgeQuestions

☐ Hide label

☐ Hide on phone

☒ Show related records

Table

Knowledge Questions (Demo K...)

Default view

Active Knowledge Questions

☐ Allow users to change view

Maximum number of rows

4

☐ Use available space

Components

35. Select the **New Section** that the subgrid was added to. In the Properties tab, enter **Knowledge Questions** for **Label** and **KnowledgeQuestions** for **Name**.

New Demo Knowledge Assessment

Demo Knowledge Assessment

Aradh Shukla

Days Remaining

Knowledge Questions

General Questions

Knowledge Questions

Knowledge Questions

New Knowledge Ques... Add Existing Knowled... Flow

Search this view

Question 1

Created On

No data available

Knowledge Questions

Properties

Display options

Label *

Knowledge Questions

Name *

KnowledgeQuestions

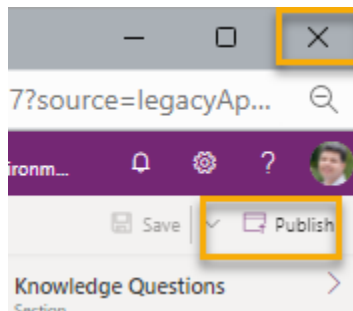
☐ Hide label

☐ Hide on phone

36. Click **Save**.

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

38. **Close the form designer tab.** You should return to the model-driven app designer.



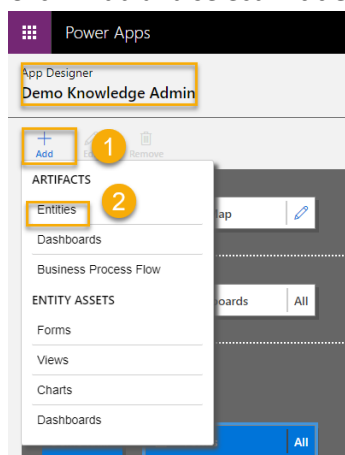
39. **DON'T** close the app designer.

Exercise 2 – Edit the Knowledge Question Form

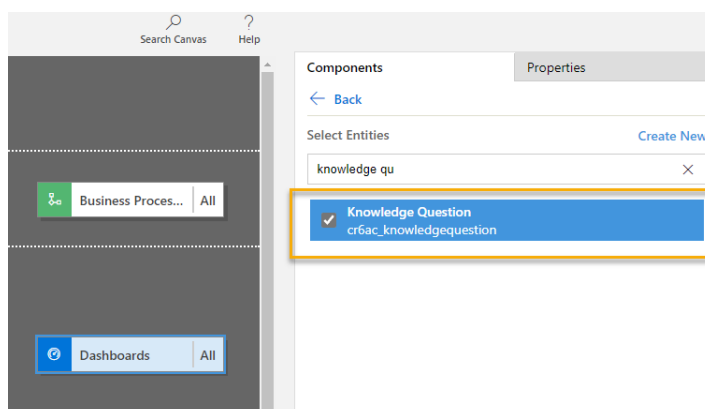
In this exercise, you will edit the form for the Knowledge Question table.

Task 1 – Edit the main form

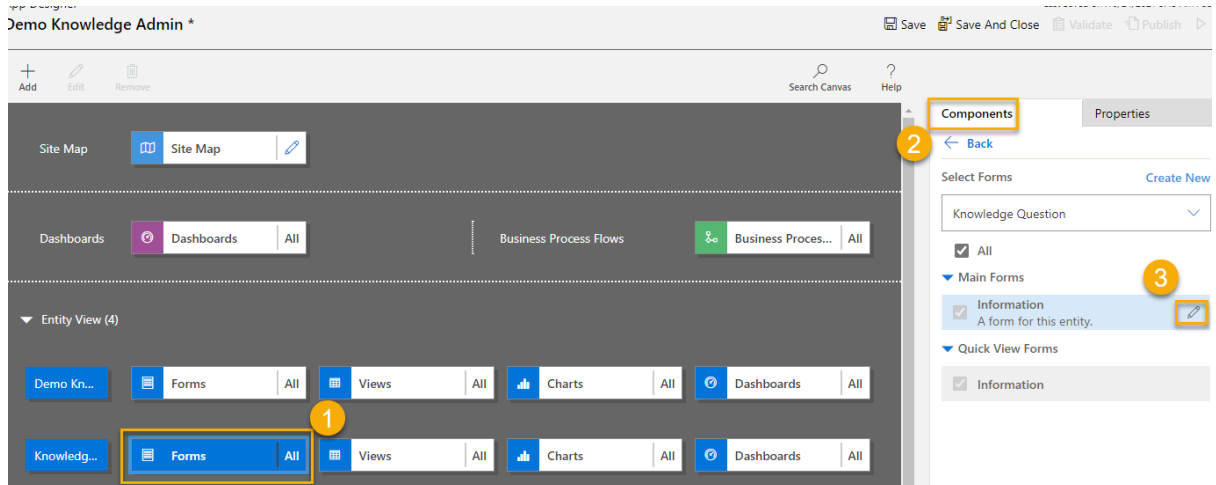
1. Make sure you are in the app designer.
2. Click **+Add** and select **Entities**.



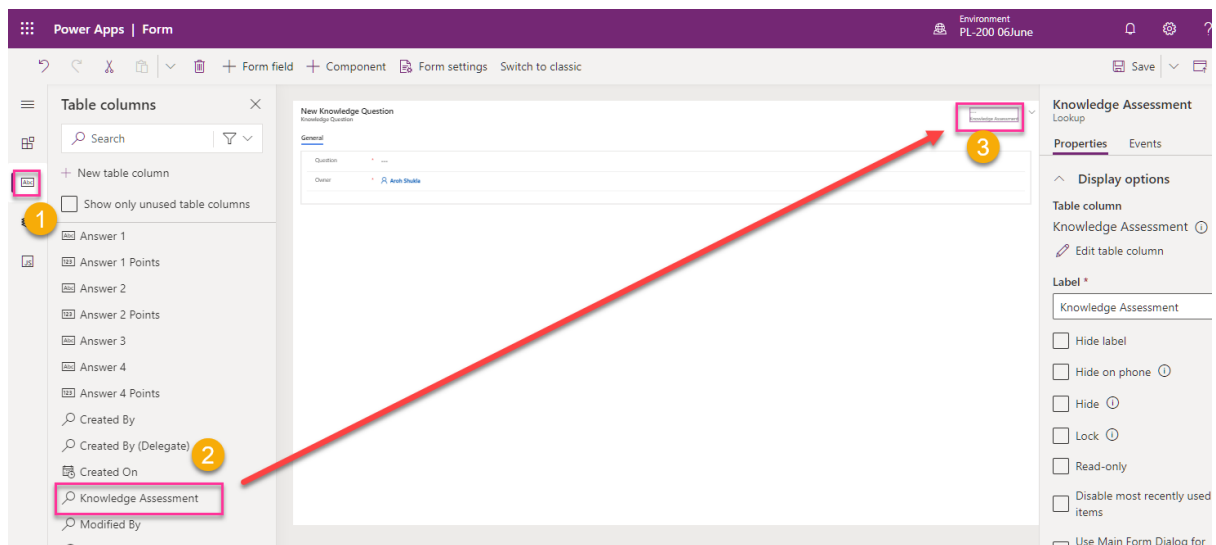
3. Locate the **Knowledge Question** table and select it.



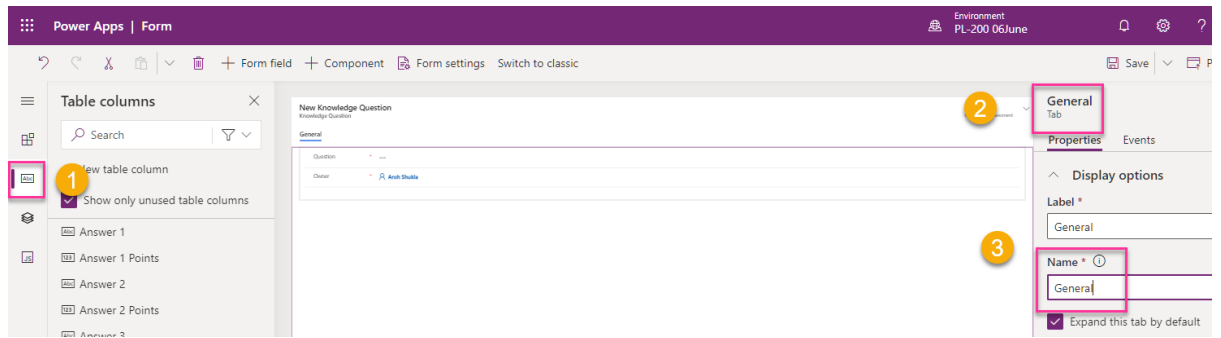
4. After the **Knowledge Question** table is added to the application, select **Forms** for the **Knowledge Question** table.



5. Hover over the **Information** form in the **Main Form** section and click **edit** (the pencil icon).
6. Select the **Header** by double clicking on it.
7. Add the **Knowledge Assessment** column to **Header** (the top part of the form) and place it on the right side of the header.

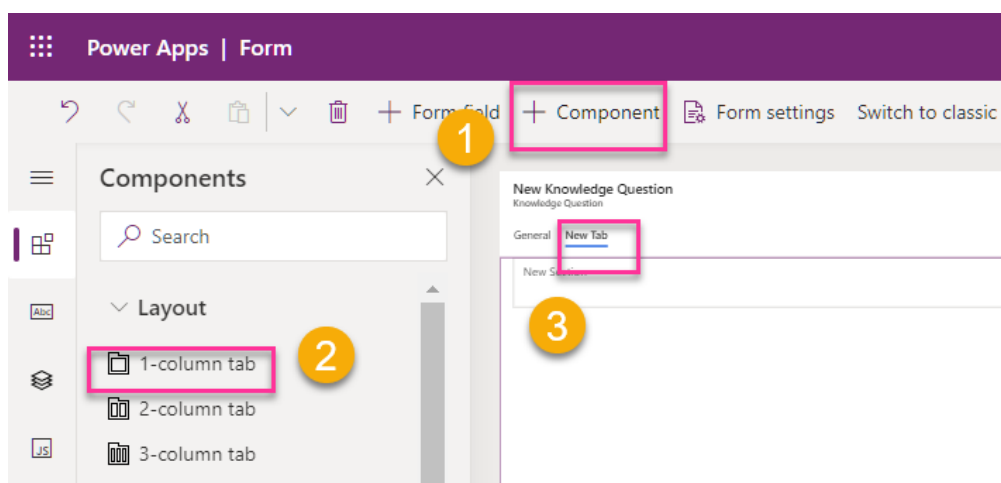


8. Select the **General** tab by double clicking. In the right **Properties** tab, enter **General** for Name.



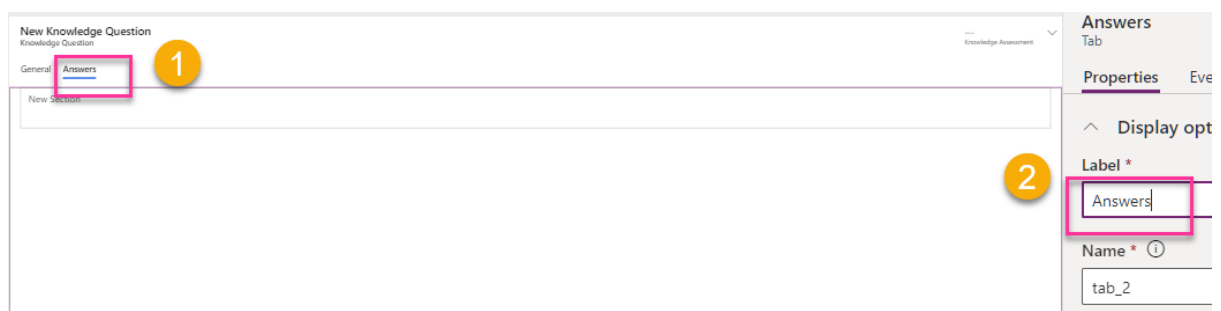
9. Select **+ Component** from the command bar.

10. Click **1-Column** section.



11. Double click on the new section.

12. Enter **Answers** for Label.



Select the **Table columns** tab on the left menu.

13. Add **Answer 1** column to the **Answers** section.

14. Add **Answer 1 Points** after the **Answer 1**.

15. Repeat the two steps above for each Answer and Points.

The screenshot shows the Power Apps Form editor interface. On the left, the 'Table columns' pane is open, displaying a list of columns: 'Answer 1', 'Answer 1 Points', 'Answer 2', 'Answer 2 Points', 'Answer 3', 'Answer 4', and 'Answer 4 Points'. The 'Answer 1' column is highlighted with a red box. In the center, the 'New Knowledge Question' form is shown, with the 'Answers' tab selected. The form contains a table with columns for 'Answer' and 'Points'. The 'Answer' column is highlighted with a red box. The 'Points' column is highlighted with a red box.

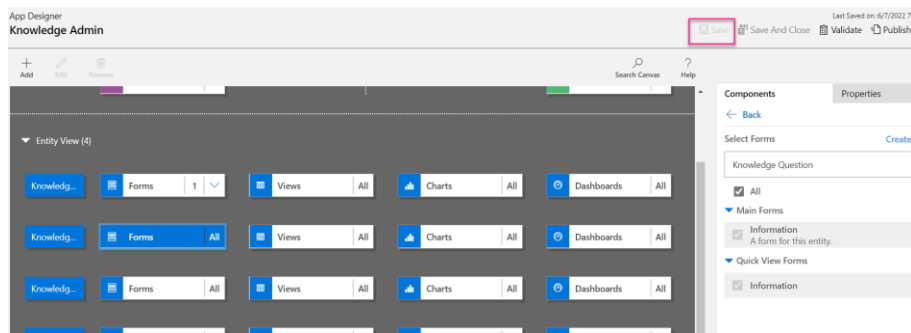
16. Click **Save**.

17. Click **Publish** and wait for the publish to complete.

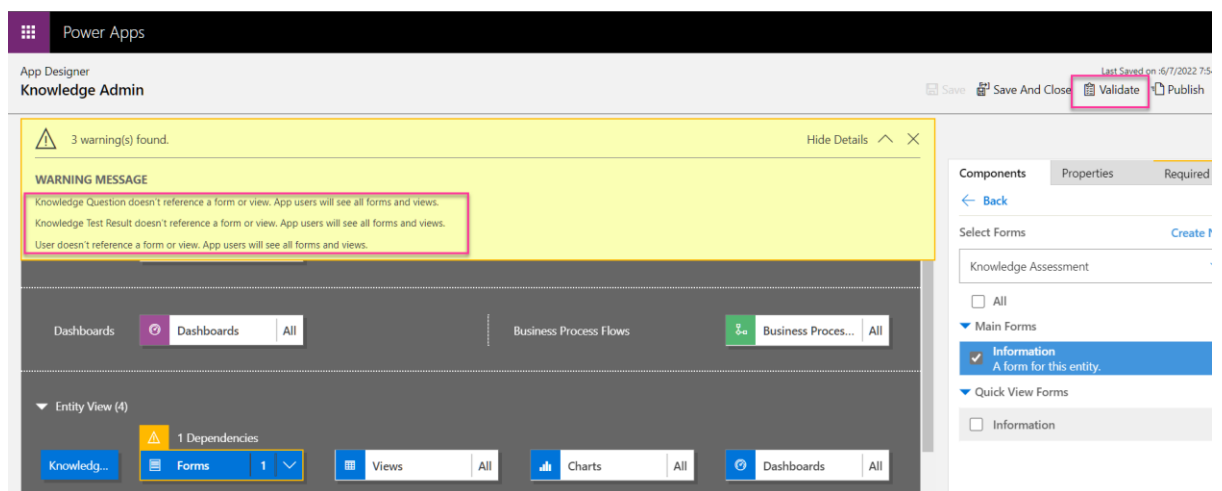
The screenshot shows the Power Apps Form editor interface. On the left, the 'Table columns' pane is open, displaying a list of columns: 'Answer 1', 'Answer 1 Points', 'Answer 2', 'Answer 2 Points', 'Answer 3', 'Answer 4', and 'Answer 4 Points'. The 'Answer 1' column is highlighted with a red box. In the center, the 'New Knowledge Question' form is shown, with the 'Answers' tab selected. The form contains a table with columns for 'Answer' and 'Points'. The 'Answer' column is highlighted with a red box. The 'Points' column is highlighted with a red box. On the right, the 'Properties' pane is open, showing the 'Answers' tab. The 'Label' property is set to 'Answers'. The 'Name' property is set to 'tab_2'. The 'Expand this tab by default' checkbox is checked. The 'Publish' button is highlighted with a red box and a yellow circle with the number 2.

18. Close the form editor. You should return to the model-driven app designer.

19. Click **Save** to save the changes to the application.



20. Click **Validate** and make sure there are no errors. You **can ignore** the warnings.

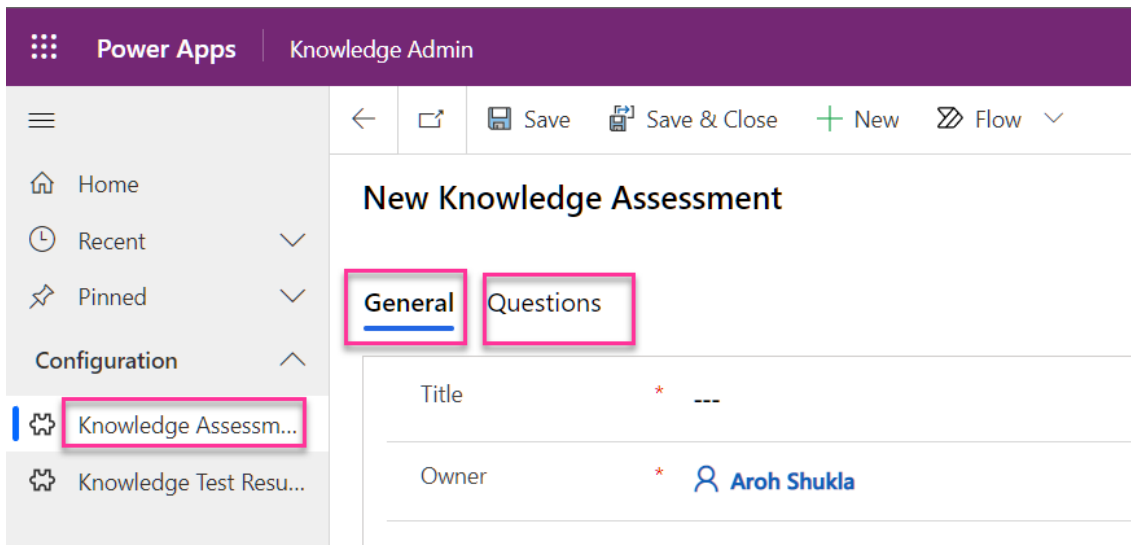


21. Click **Publish** to publish your changes.

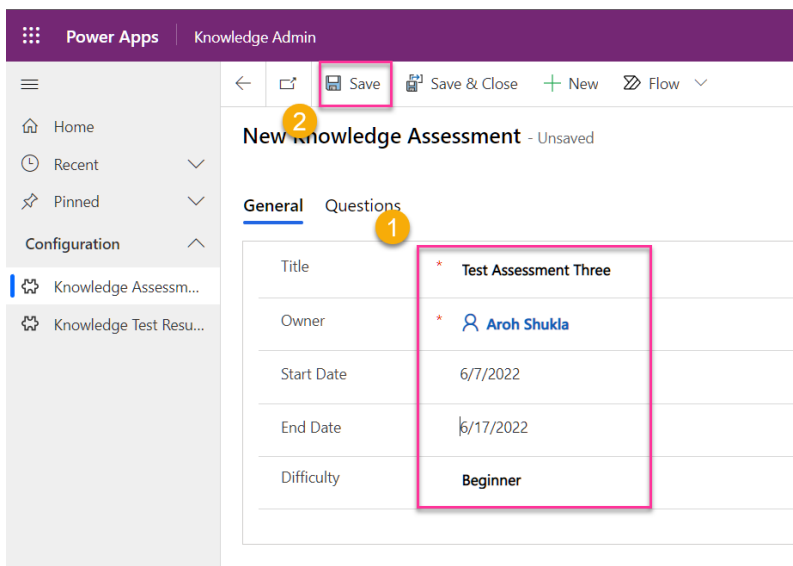
22. **DON'T** close the app designer.

Task 2 – Test Your Work

1. Click **Play**.
2. Switch from the **Administration** area to the **Assessments** area in the bottom left. Select the **Knowledge Assessment** table and click **+ New**.
3. The form should have two tabs: **General** and **Questions**.



- 4.
5. The General tab should have two sections: one with General information (Title, Start Date, End Date, and Difficulty) and one with the **Timeline**.
6. Enter **Test Assessment Three** for **Title**.
7. Select today's date for **Start Date** and select ten days into the future for **End Date**.
8. Select **Beginner** for **Difficulty**.
9. Click **Save**.



10. Make sure the **Days Remaining** value was calculated correctly.

The screenshot shows the top of a Power App interface. At the top, there's a navigation bar with icons for 'Back Access', 'Assign', 'Share', 'Email a Link', 'Flow', and a dropdown menu. Below this, the user 'Aroh Shukla' is identified as the 'Owner'. A pink box highlights a '10 Days Remaining' indicator with a dropdown arrow. Below this is a section titled 'Timeline' with a search bar and a note entry field.

11. Select the **Questions** tab.

12. Click **+ New Knowledge Question**.

The screenshot shows the 'Test Assessment Three' interface with the 'Questions' tab selected, indicated by a yellow circle with the number '1'. The 'New Knowledge Question' button is highlighted with a pink box and a yellow circle with the number '2'. The interface also shows a 'Knowledge Questions' section with a 'Question' dropdown and a 'Created On' field.

13. Close the application without creating **Knowledge Question** record.

The screenshot shows the 'New Knowledge Question' form in the Power Apps interface. The 'Save & Close' button is highlighted with a pink box. The form has two tabs: 'General' and 'Answers'. The 'Question' field contains the text 'What is your name?' and is highlighted with a pink box. The 'Owner' field is set to 'Aroh Shukla'.

14. You should return to the app designer. Click **Save and Close** to close it.

Lab 4.3: Practice Lab – Modify views

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. In this practice you will be continuing your work on the model-driven Knowledge Admin app. In this practice, you will be modifying the auto generated views to add the new columns you added in the data-modeling practice.

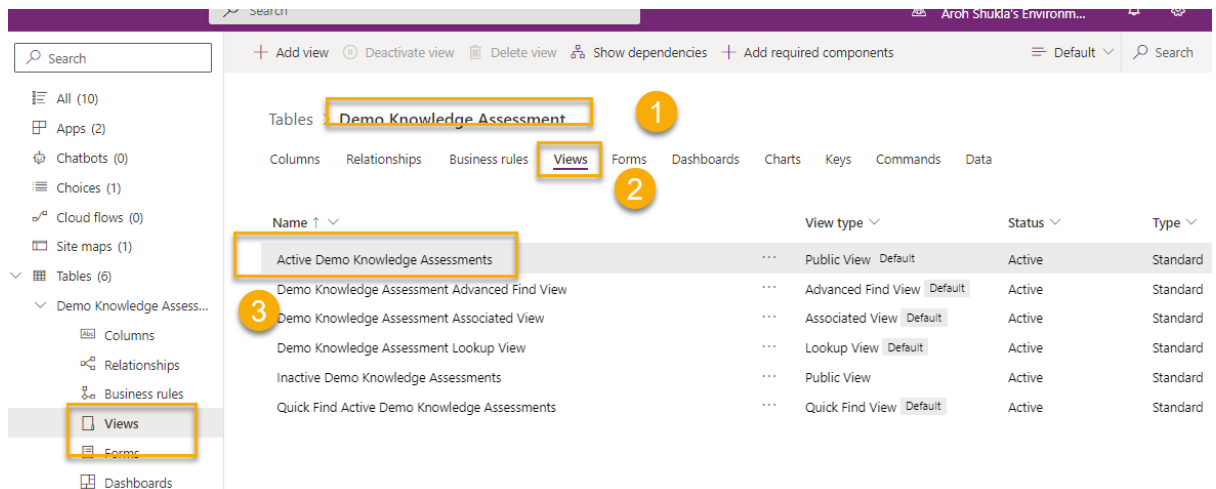
Exercise 1 – Edit the Knowledge Assessment View

In this exercise, you will edit the view for the Knowledge Assessment table. By default, the auto generated views only show the primary column and created on date.

Task 1 – Edit the Knowledge Assessment active item view

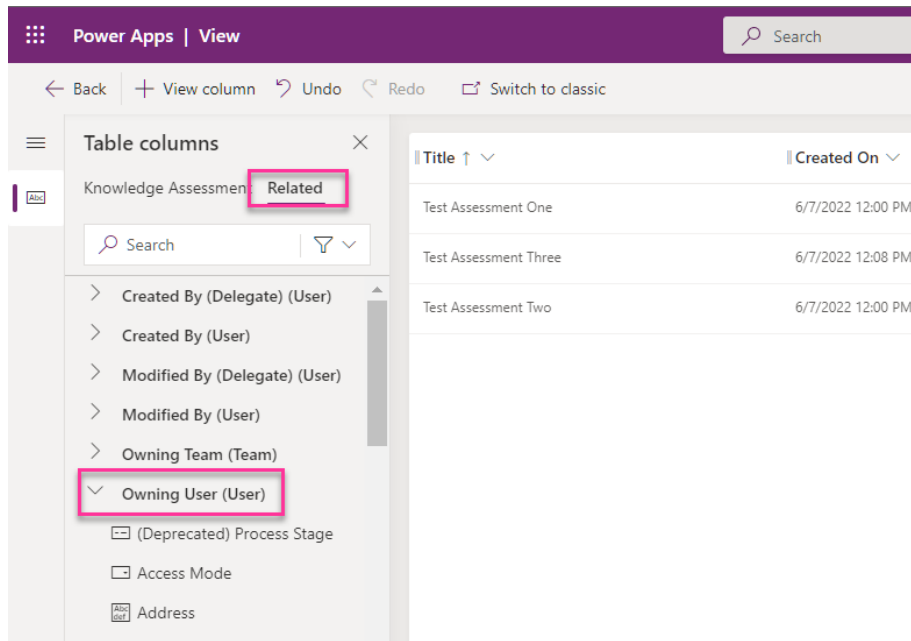
1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Open the **Common Data Services Default Solution**.
5. Open the **Knowledge Assessment** table.
6. Select the **Views** tab.

- Click to open the **Active Knowledge Assessments** view.



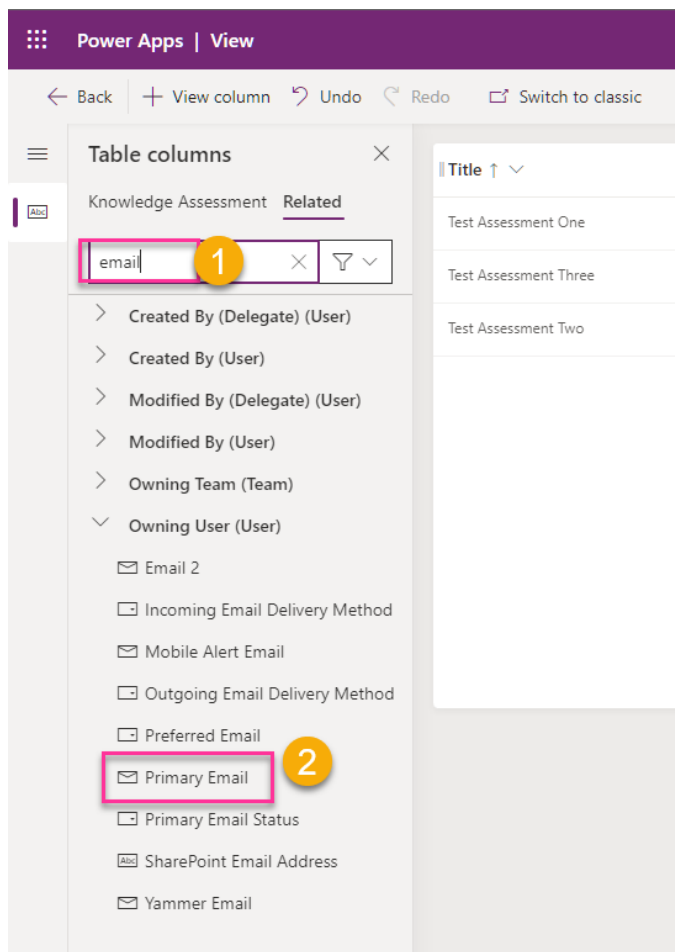
Task 2 – Add and Remove Columns from View

- The **Active Knowledge Assessment** view currently has two columns.
- Click on the **Status Reason** column to add it to the View.
- Click on the **Owner** column to add it to the View.
- Click on the **Modified By** column to add it to the View.
- Click on the **Modified By** column header, select **+ Insert view column**.
- Select **Modified On** to add this column before the Modified By column. The view should now have six columns.
- You will now remove the **Created On** column. Click on the header of the **Created On** column.
- Click **Remove**. The **Created On** column will be removed from the view.
- You will now add a column from a related table to the view. From the **Table columns** side bar, select the **Related** tab.
- All the tables that the **Knowledge Assessment** table has a **N:1** relationship with will be listed here. Expand **Owning User (User)**.

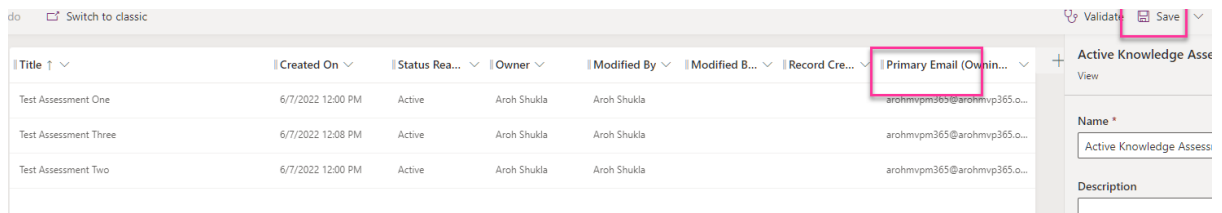


11. Enter **Email** on the search box and enter.

12. Select **Primary Email**. The **Primary Email** will be added to the view.



13. Click **Save**.



The screenshot shows a table with columns: Title, Created On, Status Reason, Owner, Modified By, Modified By, Record Created, Primary Email (Owner), and Active Knowledge Assessment. The 'Save' button is highlighted in the top right corner.

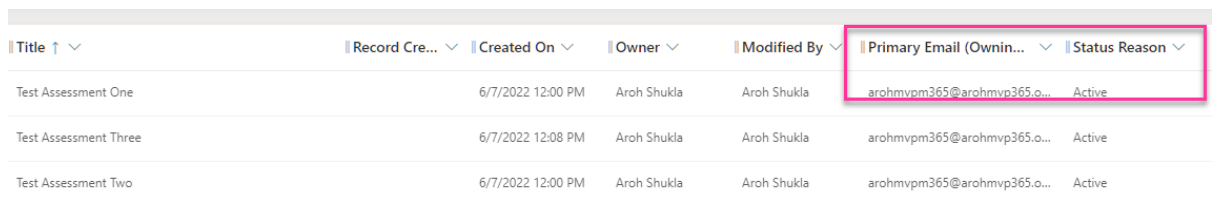
Title	Created On	Status Reason	Owner	Modified By	Modified By	Record Created	Primary Email (Owner)	Active Knowledge Assessment
Test Assessment One	6/7/2022 12:00 PM	Active	Aroh Shukla	Aroh Shukla			arohmvp365@arohmvp365.o...	
Test Assessment Three	6/7/2022 12:08 PM	Active	Aroh Shukla	Aroh Shukla			arohmvp365@arohmvp365.o...	
Test Assessment Two	6/7/2022 12:00 PM	Active	Aroh Shukla	Aroh Shukla			arohmvp365@arohmvp365.o...	

14. **Do not** close this window.

Task 3 – Reorder View Columns and Change Column Width

Generally, you will always want to have the order of the columns in view be the highest value to lowest unless you have other specific needs.

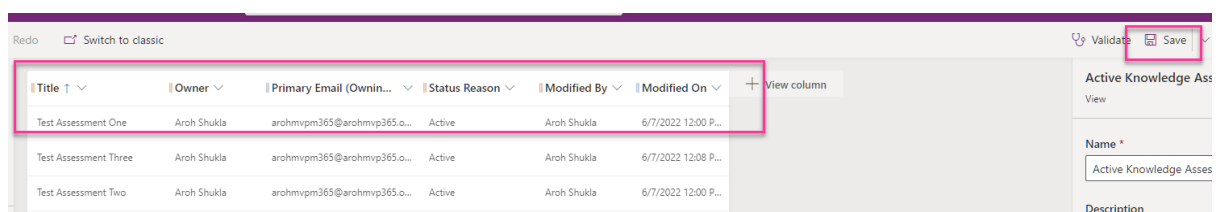
1. You will now reorder the columns. Select the **Owner** column header and click **Move Left**.
2. You can also reorder columns by drag/drop. Drag the **Primary Email** column header and drop it to the left of the **Status Reason** column.



The screenshot shows the table after reordering. The columns are: Title, Record Created, Created On, Owner, Modified By, Primary Email (Owner), and Status Reason. The 'Primary Email' column is now to the left of the 'Status Reason' column.

Title	Record Created	Created On	Owner	Modified By	Primary Email (Owner)	Status Reason
Test Assessment One		6/7/2022 12:00 PM	Aroh Shukla	Aroh Shukla	arohmvp365@arohmvp365.o...	Active
Test Assessment Three		6/7/2022 12:08 PM	Aroh Shukla	Aroh Shukla	arohmvp365@arohmvp365.o...	Active
Test Assessment Two		6/7/2022 12:00 PM	Aroh Shukla	Aroh Shukla	arohmvp365@arohmvp365.o...	Active

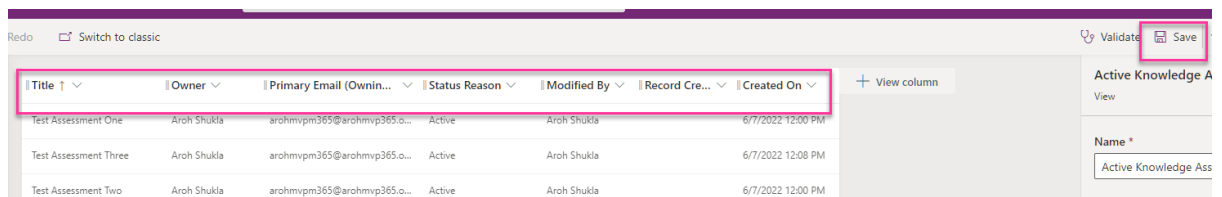
3. Move the **Modified On** column to right of the **Modified By** column.
4. The columns order should now be **Title, Owner, Primary Email, Status Reason, Modified By, and Modified On**.
5. You will now make the **Title** and **Primary Email** columns wider. Select the **Title** column header and drag the right edge to the right. The **Title** column should get wider.
6. Select the **Primary Email** column header and drag the right edge to the right until the entire email addresses are visible.



The screenshot shows the table after width adjustments. The columns are: Title, Owner, Primary Email (Owner), Status Reason, Modified By, and Modified On. The 'Title' and 'Primary Email' columns are wider.

Title	Owner	Primary Email (Owner)	Status Reason	Modified By	Modified On
Test Assessment One	Aroh Shukla	arohmvp365@arohmvp365.o...	Active	Aroh Shukla	6/7/2022 12:00 P...
Test Assessment Three	Aroh Shukla	arohmvp365@arohmvp365.o...	Active	Aroh Shukla	6/7/2022 12:08 P...
Test Assessment Two	Aroh Shukla	arohmvp365@arohmvp365.o...	Active	Aroh Shukla	6/7/2022 12:00 P...

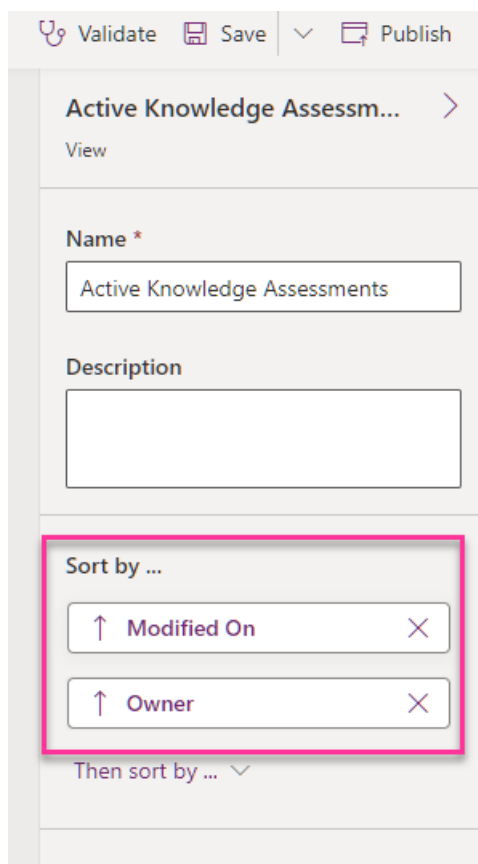
7. Click **Save**.

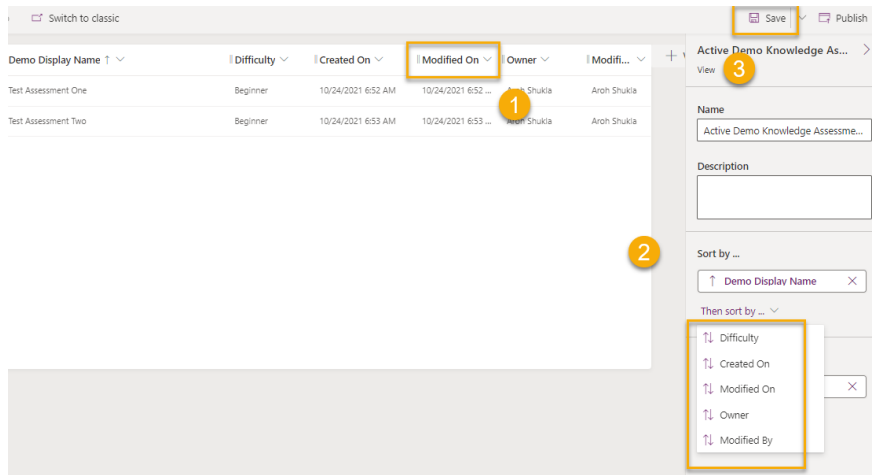


Task 4 – Sorting

The View is now sorted by the **Title (A-Z)**. You will configure the sorting to be based on the **Modified On** column first.

1. Locate the **Sort By...** area located in the view properties.
2. Remove the default value. We want to sort **Modified On**.
3. Click **Sort By** and select **Modified On**.
4. Click **Then Sort By** and select **Owner**.
5. Click **Save**.

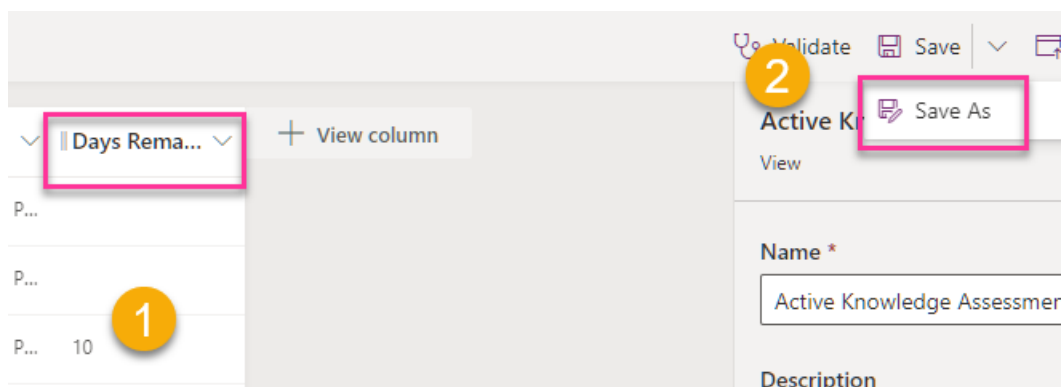




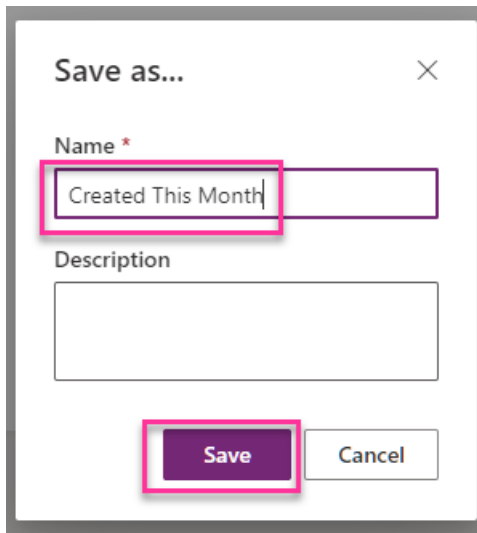
Task 5 – Use Save as to create a copy

In this task, you will use the **Save As feature** to create a template for new views. An easy way to create views is to create the first one with all the columns you want, then save as the view and change the filter to what the new view needs.

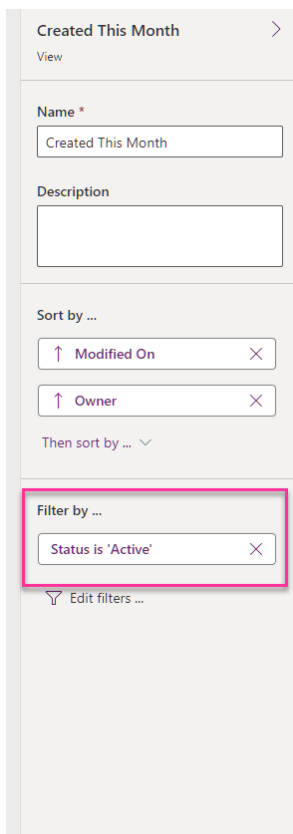
1. Add **Days Remaining** as the last column in the view.
2. Then click the **dropdown** button next to the Save button and select **Save As**.



3. Enter **Created This Month** for Name and click **Save**.

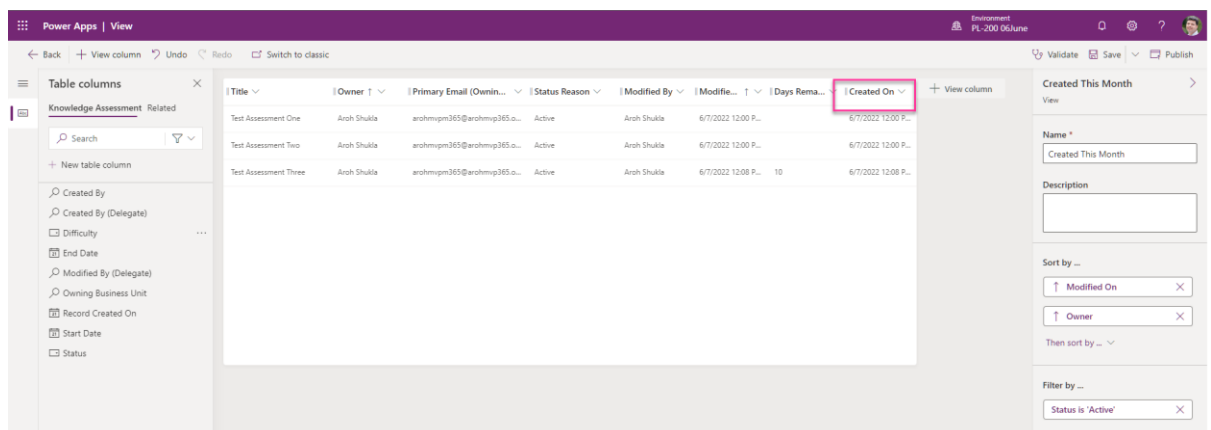
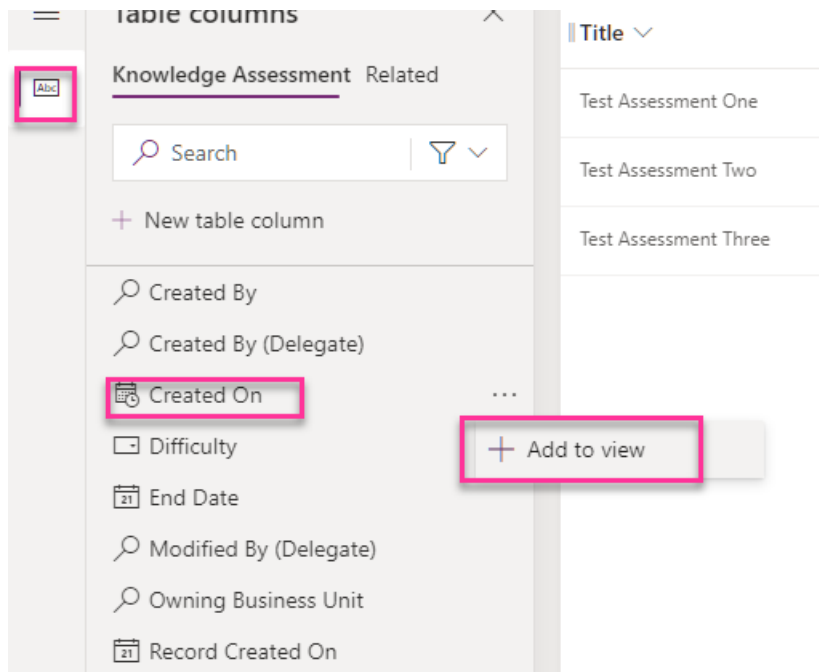
A 'Save as...' dialog box with a close button (X) in the top right. It contains a 'Name *' field with the text 'Created This Month' and a 'Description' field. At the bottom, there are 'Save' and 'Cancel' buttons. The 'Name' field and the 'Save' button are highlighted with red rectangles.

4. Locate the **Filter By** section of the **View** property. You should have **Status is 'Active'**.

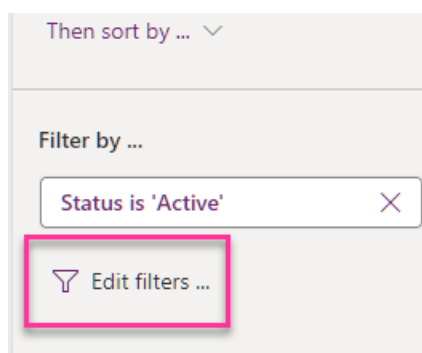
A 'View' configuration panel for 'Created This Month'. It includes a 'Name *' field with 'Created This Month', a 'Description' field, a 'Sort by ...' section with 'Modified On' and 'Owner' selected, and a 'Filter by ...' section with 'Status is 'Active'' selected. The 'Filter by ...' section is highlighted with a red rectangle. At the bottom, there is an 'Edit filters ...' link.

All records have a status column; if you don't filter to only show active, you may have records showing in your list that are not editable or meant to be inactive. Inactive is used in Microsoft Dataverse to mark records as soft deleted as an alternate to physically deleting the records.

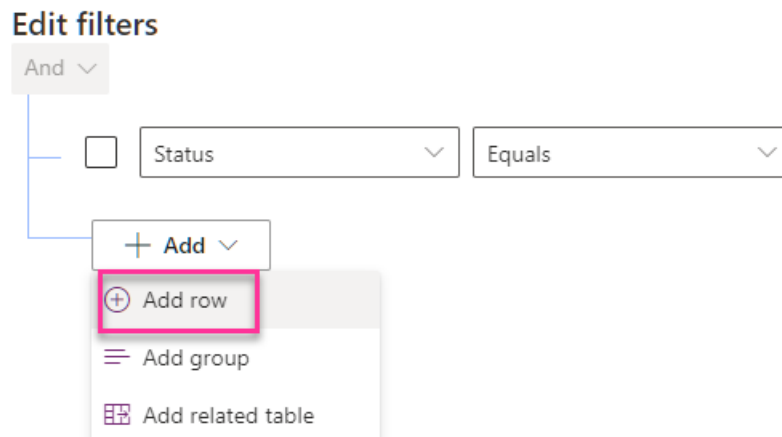
5. You will add the **Created On** column back to the view. Select **Created On** from the **Table columns**.



6. In the **Properties** pane, select **Edit filters**.

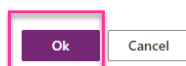
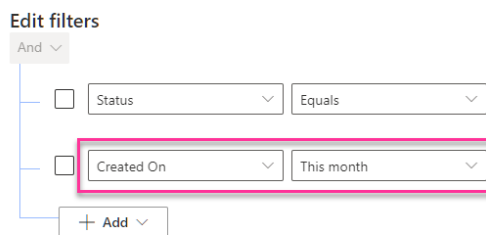


7. In the pop-up, click + **Add** and select + **Add row**.



8. In the first dropdown, select **Created on**. In the second dropdown, select **This Month**. Make sure the box for both rows are checked.

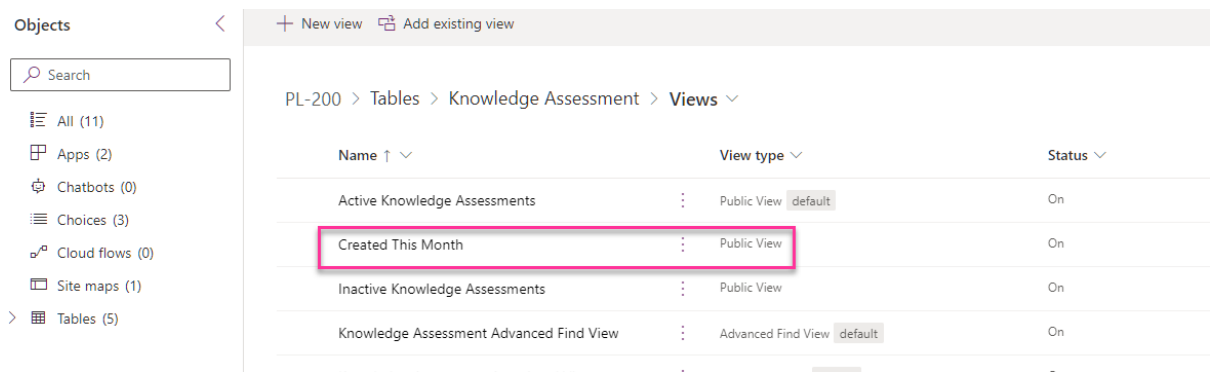
9. Click **OK**.



10. Click **Save**.

11. Click **Publish**.

12. Click the **back** button.

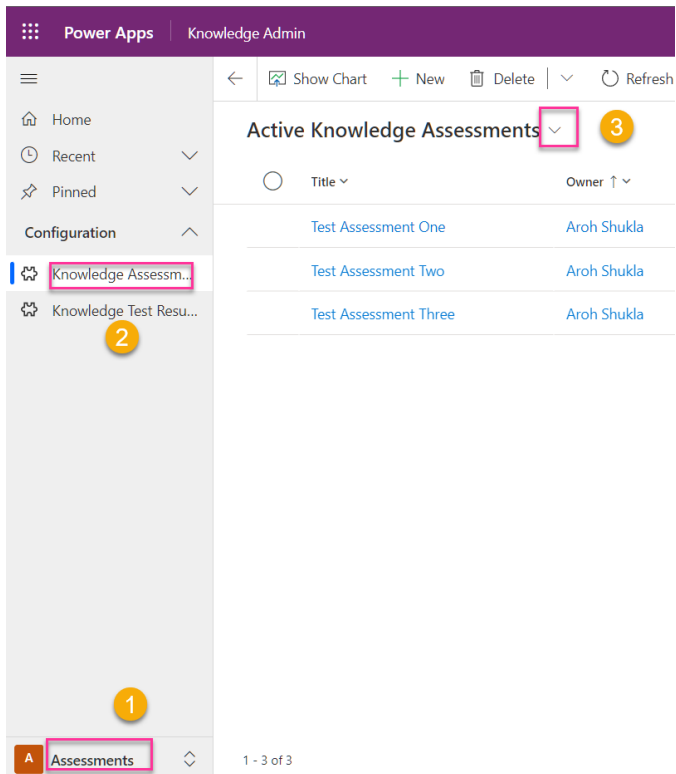


13. From the navigation breadcrumbs, click on the solution name **Common Data Services Default Solution**.

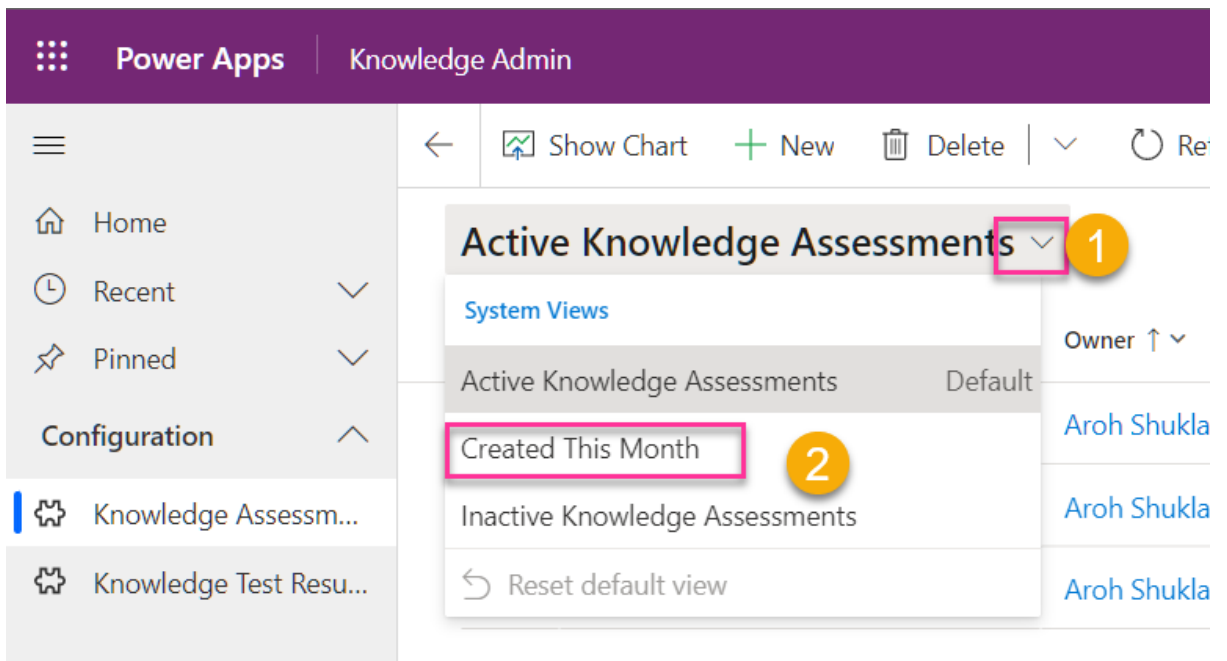
14. Click **Publish All Customizations**.

Task 6 – Test your Views

1. While still on <https://make.powerapps.com>, select **Apps**.
2. Click on the **Knowledge Admin** model-driven application and select **Play**. Switch from **Administration** to **Assessments**.
3. The **Active Knowledge Assessments** view will be loaded. Make sure the columns you selected are there in the order you selected. (You may need to use the view drop-down to re-select the view and cause it to refresh.)



- Click the **Select a view** dropdown next to the **Active Knowledge Assessments** view title and choose the **Created This Month** view.



- Make sure the columns are showing in the order you selected.

Lab 4.4: Build charts

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. In this practice you will be continuing your work on the model-driven Knowledge Admin app. In this practice, you will be creating a chart to use as a leader board to show the top 5-point earners based on the Knowledge Test Result data.

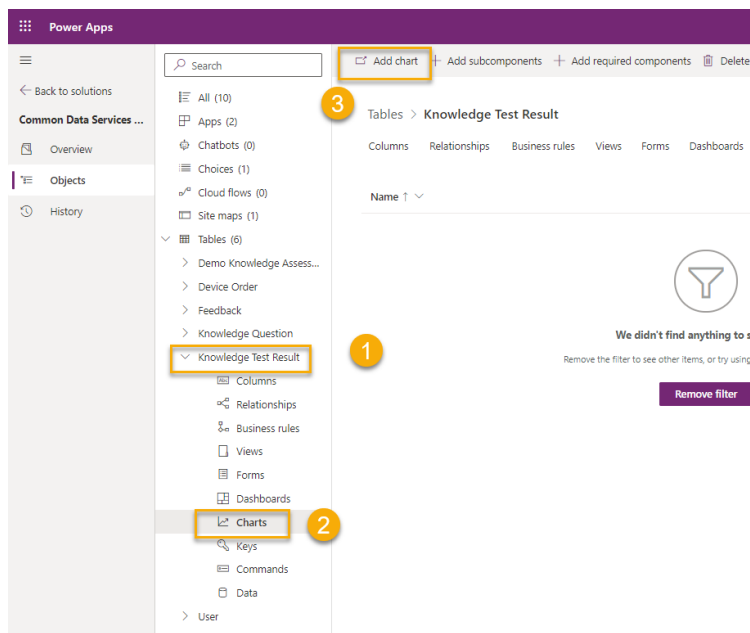
Exercise 1 – Create a chart

In this exercise, you will create a chart using the Knowledge Test Result data.

Task 1 – Edit the Knowledge Assessment active item view

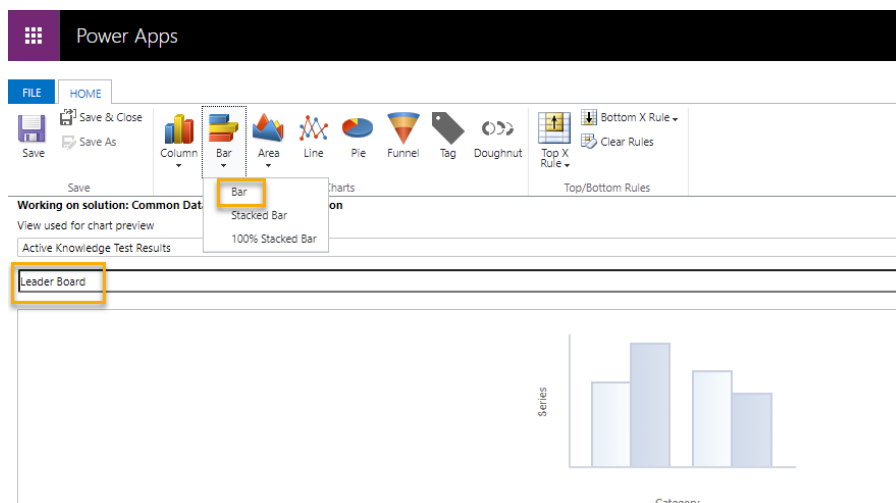
1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Open the **Common Data Services Default Solution**.
5. Click on the **Knowledge Test Result** table.
6. Select the **Charts** tab.

7. Click **Add Chart**.

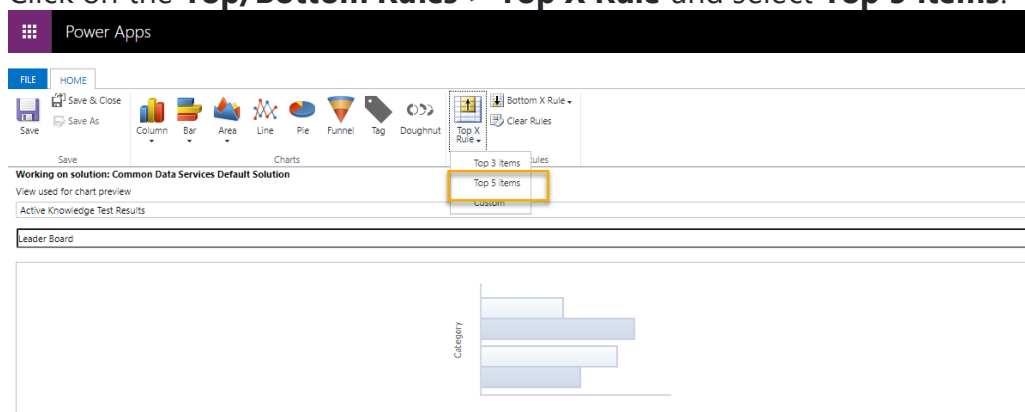


8. Enter **Leader Board** for Name.

9. Click **Charts** > **Bar** to expand the dropdown and select **Bar**.



10. Click on the **Top/Bottom Rules** > **Top X Rule** and select **Top 5 Items**.



11. Select **Total Points** for **Legend Entities (Series)**.

12. Select **Owner** for **Horizontal (Category) Axis Label**.

13. Click **Save > Save and Close**.

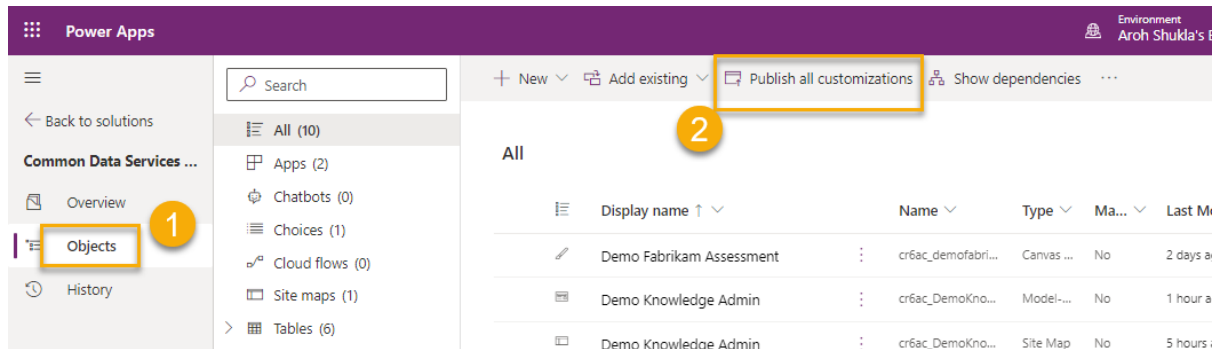
The screenshot shows the Power Apps interface with the 'Leader Board' chart. The chart is a bar chart with 'Category' on the x-axis and 'Series' on the y-axis. The legend shows 'Total Points' as the series, with an aggregation of 'Avg'. The horizontal axis label is set to 'Owner'. The chart displays four bars of different heights. The interface includes a top bar with 'Power Apps' and a sidebar with 'FILE' and 'HOME' tabs. The main area shows the chart and its configuration options.

14. Click **Done**.

The screenshot shows the Power Apps interface with the navigation breadcrumbs. The breadcrumbs are 'Tables > Knowledge Test Result > Leader Board'. The 'Charts' tab is selected in the top navigation bar. The 'Leader Board' chart is visible in the main area. The interface includes a top bar with 'Power Apps' and a sidebar with 'Back to solutions' and 'Common Data Services ...'.

15. From the navigation breadcrumbs, click on the solution name **Common Data Service Default Solution**.

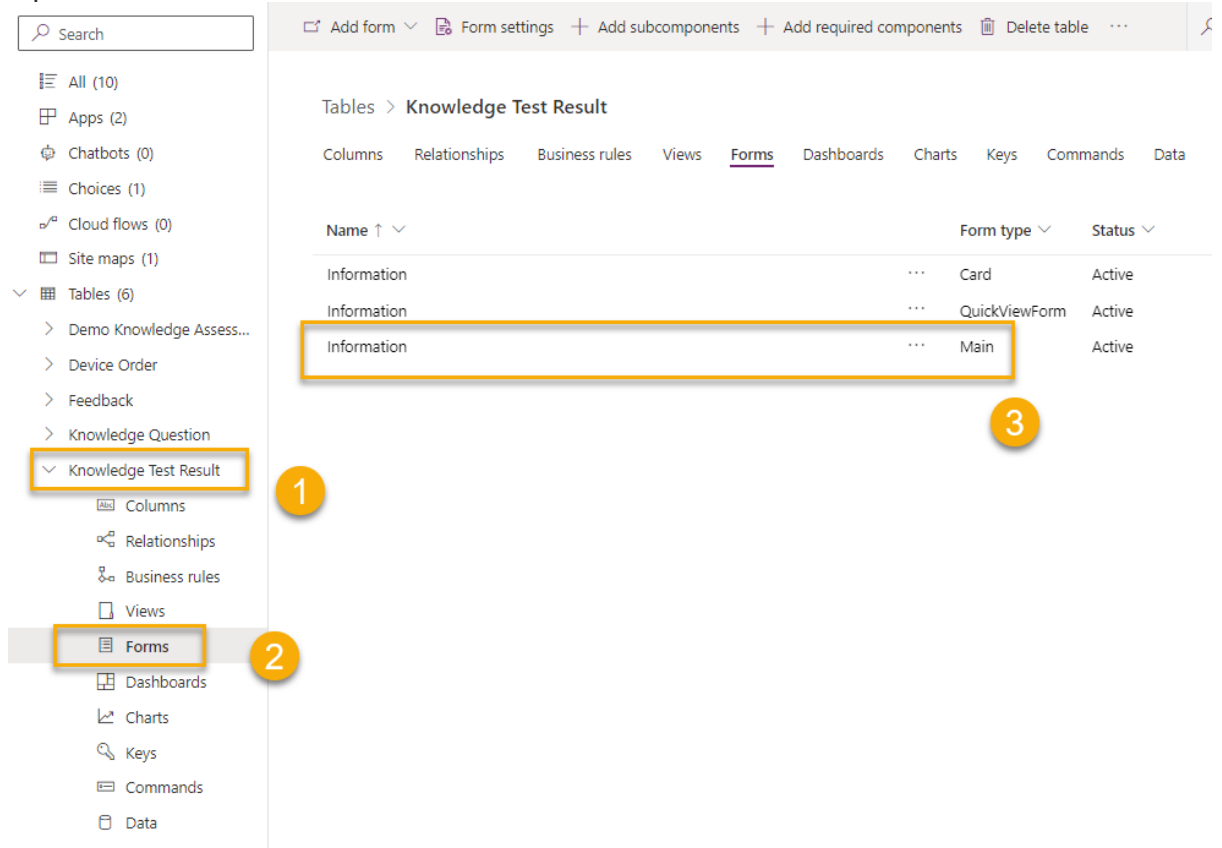
16. Click **Publish All Customizations** located in the command bar.



Task 2 – Modify Knowledge Test Result form

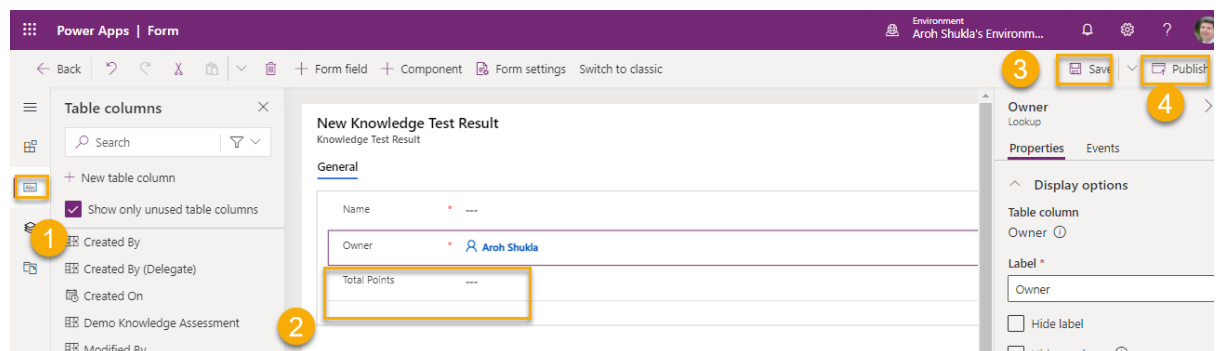
In this task, you will be modifying the Knowledge Test Result form, so you can input some data to test your chart.

1. Make sure you are still on <https://make.powerapps.com> and you are in your **Practice** environment.
2. Select **Solutions**.
3. Open **Common Data Services Default Solution**.
4. Click on the **Knowledge Test Result** table.
5. Select the **Forms** tab.
6. Open the **Information Main** form.



7. Select the **General** tab of the form.

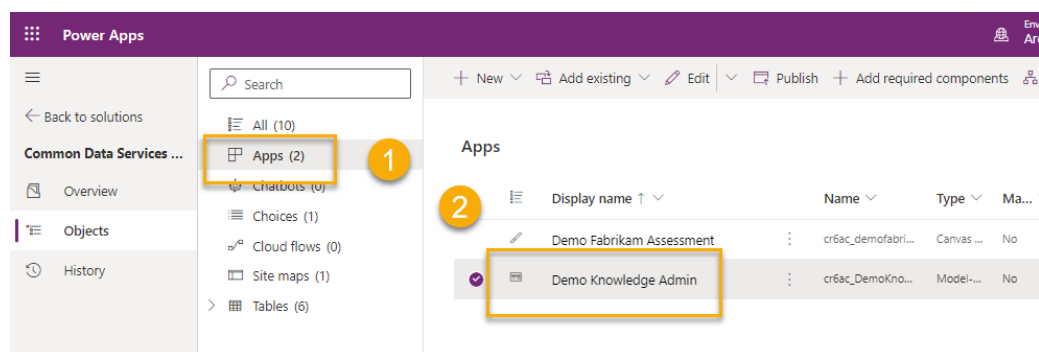
8. Go to the **Table columns** and click on the **Knowledge Assessment** column. The Knowledge Assessment column will be added to the form.
9. From the **Table columns**, click on the **Total Points** column. The Total Points column will be added to the form.
10. Click **Save**.
11. Click **Publish** and wait for the publishing to complete.



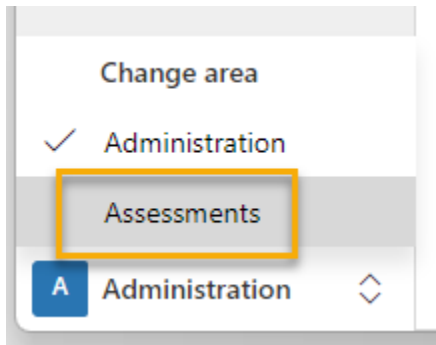
12. Click **back** to close the form editor.

Task 3 – Create Rows and Test the Chart

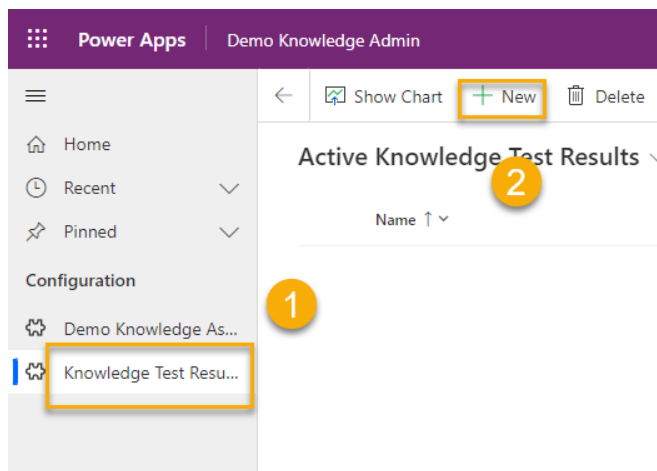
1. Make sure you are still on <https://make.powerapps.com> and you are in your **Practice** environment.
2. Select **Apps**.
3. Select the **Knowledge Admin** model-driven application and click **Play**.



4. Click on the **Administration** area and select **Assessments**.

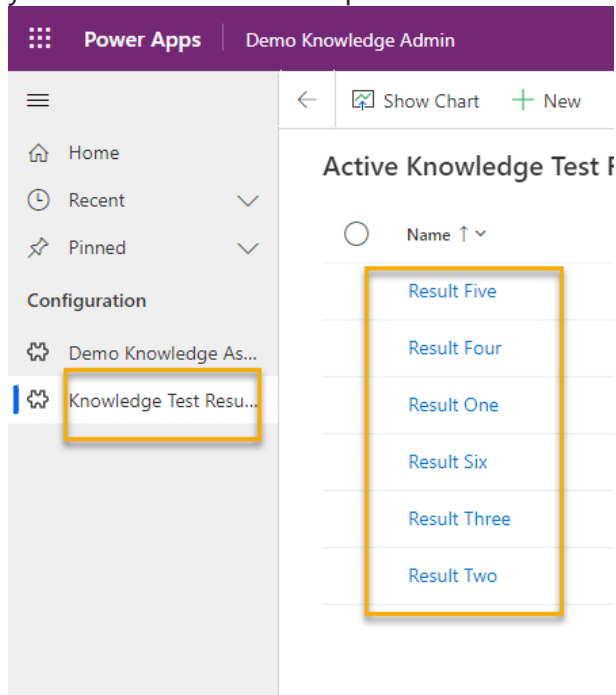


5. Select **Knowledge Test Results**.
6. Click **+ New**.



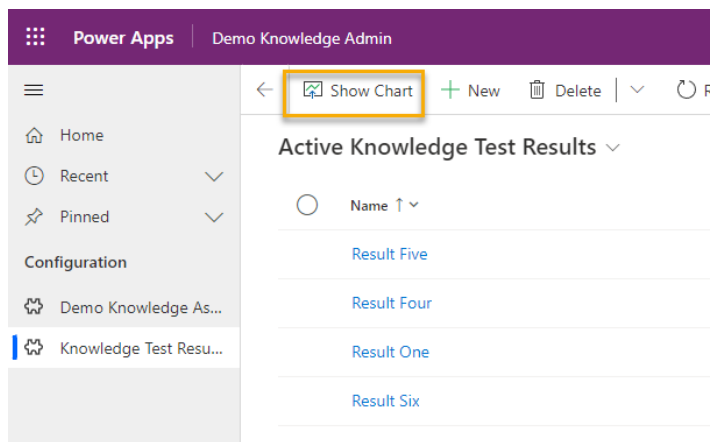
7. Enter **Result One** for **Name**, **180** for **Total Points**, and click **Save**.
8. Click **+New** again.
9. Enter **Result Two** for **Name**, **250** for **Total Points**, and click **Save**.

10. Add four more records. You can provide any name you want but make sure you enter random total points.

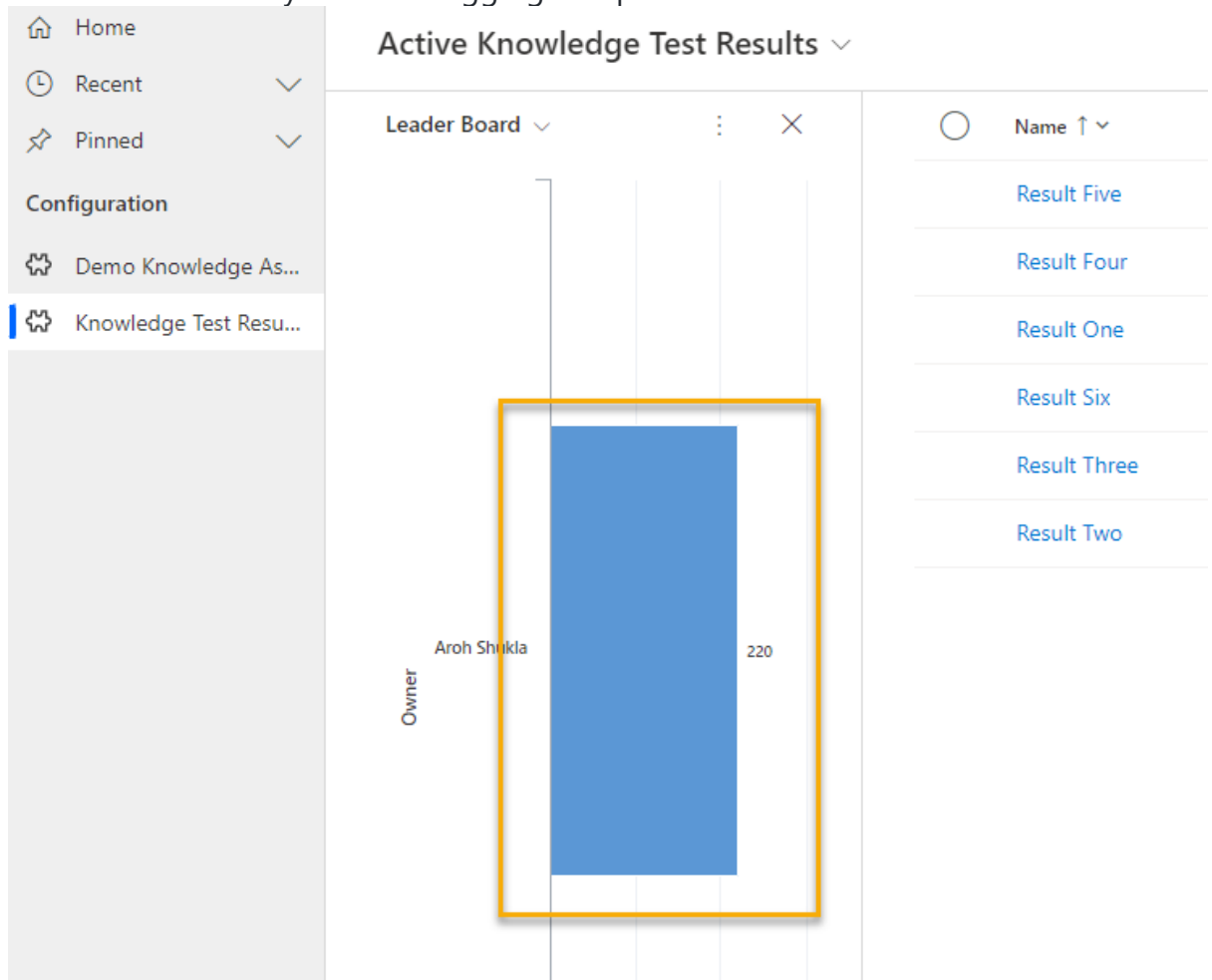


11. Select **Knowledge Test Results** again. The **Active Knowledge Test Results** view will load.

12. Click **Show Chart**.



13. The chart will show your user's aggregated points.



Lab 4.5: Practice Lab – Build dashboards

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

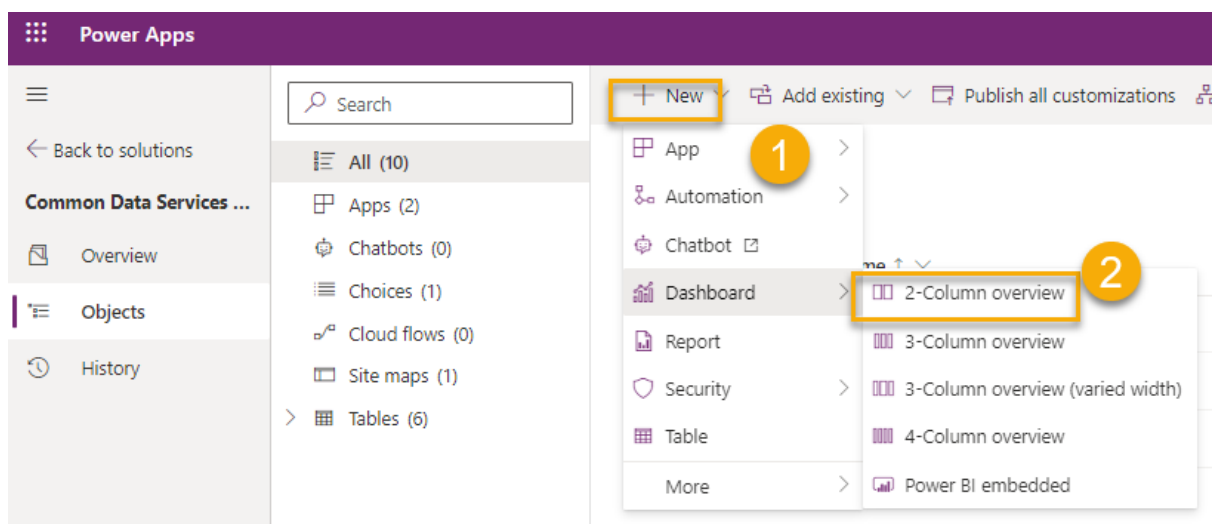
You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You will be continuing your work on the model-driven Knowledge Admin app. In this practice, you will be creating a dashboard and modifying the app to include it.

Exercise 1 – Create a dashboard

In this exercise, you will create a dashboard using existing charts and views.

Task 1 – Create the dashboard

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Open the **Common Data Services Default Solution**.
5. Click **+ New** and select **Dashboard** and **2-Column Overview**. *Note:* Always pick the template that best fits what you plan to build. You can always remove some of the cells you are not using or adjust their sizes.

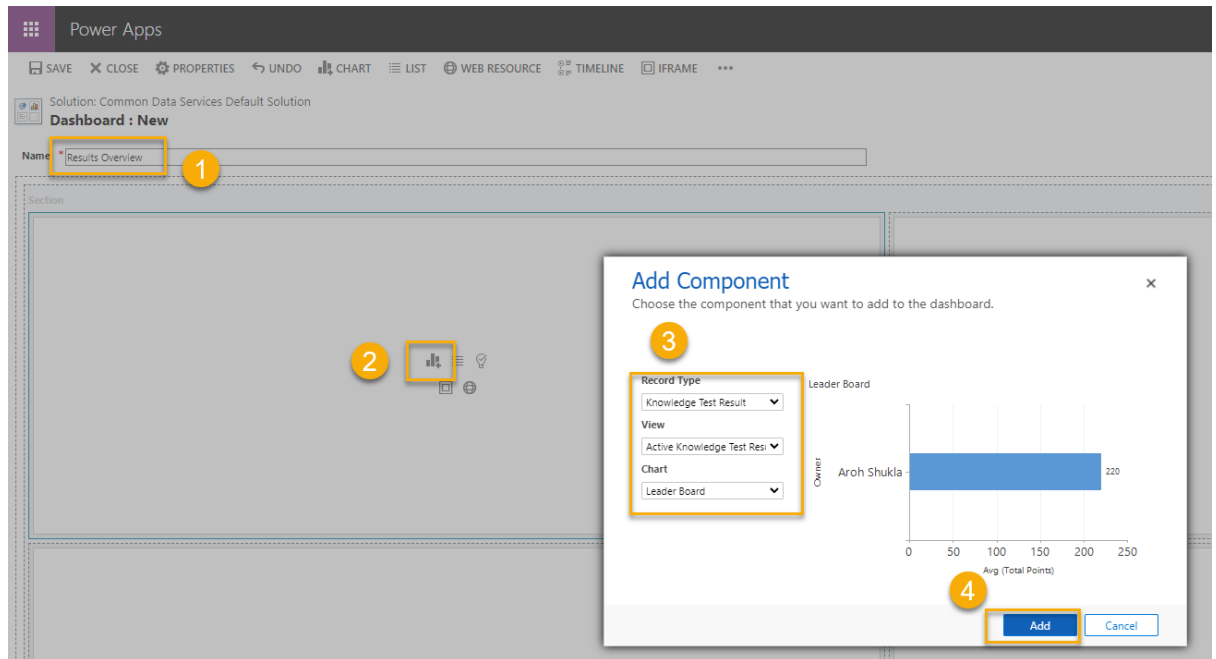


6. Enter **Results Overview** for Name.

The screenshot shows the Power Apps interface for creating a new dashboard. The top bar is black with the Power Apps logo and text. Below it is a navigation bar with icons for SAVE, CLOSE, PROPERTIES, EDIT COMPONENT, CHART, LIST, and WEB. The main area shows a solution named 'PL-200' and a dashboard titled 'Dashboard : New'. The 'Name' field is highlighted with a pink box and contains the text 'Results Overview'. Below it is a 'Section' field which is empty.

7. Locate the top left quadrant of the dashboard. You will see icons in the middle of the quadrant, which are buttons allowing you to add components. In the top left quadrant, click the **Insert chart** icon, which looks like a bar graph with a plus sign.
8. Select **Knowledge Test Result** for **Record Type**.
9. Select **Active Knowledge Test Results** for **View**.
10. Select **Leader Board** for **Chart**.

11. Click **Add**.



12. Locate the top right quadrant of the dashboard. Click the **Insert list** icon, which looks like a bulleted list.

13. Select **Knowledge Assessments** for **Record Type**.

14. Select **Active Knowledge Assessments** for **View**.

15. Click **Add**.

16. Click **Save** to save the dashboard.

17. Click **Close**.

18. Click **Done**.

Task 2 – Edit the Knowledge Admin App

For your dashboard to show up in the model-driven app you must edit the app module and added to the definition

1. Make sure you are still in <https://make.powerapps.com> and you have your **Practice** environment selected.
2. Open **Common Data Services Default Solution**.
3. Click on the **Knowledge Admin** model-driven application. The app designer should open.
4. Select **Dashboards**.
5. Uncheck the **All** checkbox if it is checked.

6. Check the **Results Overview** checkbox.
7. Uncheck any other checked dashboards.
8. Go to the **Entity View** area and see if any other entities were added. If yes, select each and click **Remove**.
9. Click **Save**.
10. Click the **edit** (the pencil) icon next to Site Map.
11. Select the **Assessments** area.
12. Select the **Configuration** group.
13. Click **+ Add** and select **Subarea**.
14. Select **Dashboard** for **Type**.
15. Select **Results Overview** for **Default Dashboard**.
16. Drag the **Dashboards** subarea you just added and drop it above the **Knowledge Assessments** subarea.
17. Drag the **Assessments** area and drop it to the left of the **Administration** area to switch the order.
18. Click **Save**.
19. Click **Publish** to publish the sitemap.
20. Click **Save and Close** to close the site map designer.
21. Click **Validate** to validate your changes. You can ignore the warnings.
22. Click **Publish** to publish the application.
23. Click **Save and Close** to close the app designer.
24. Click **Done**. Deselect the Knowledge Admin model-driven app.
25. Click **Publish All Customizations**.

Task 3 – Test Your Changes

1. Make sure you are still in <https://make.powerapps.com> and you have the **Practice** environment selected.
2. Select **Apps**.
3. Select the **Knowledge Admin Model-Driven application** and click **Play**. (If your dashboard does not load immediately, click the **Home** button in the left menu to refresh the app.)
4. The Dashboard will load and **Results Overview** will be selected by default.

Lab 4.6: Practice Lab – Build a canvas app

Important Notice (Effective November 2020):

Common Data Service has been renamed to Microsoft Dataverse. Some terminology in Microsoft Dataverse has been updated. For example, entity is now table and field is now column.

While the application is in the process of updating its user experience, some references to terminology like the Common Data Service (now **Dataverse**), entity (now **table**), field (now **column**), and record (now **row**) may be out of date. Please keep this in mind as you work through the labs. We expect to have our content fully up to date very soon.

For more information and for a complete list of affected terms, please visit [What is Microsoft Dataverse?](#)

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You have been assigned to continue work on the **Fabrikam Knowledge canvas app** that we started creating in the prior module. In this practice you will be starting **to build out the screens** and connecting to the data **in Microsoft Dataverse**.

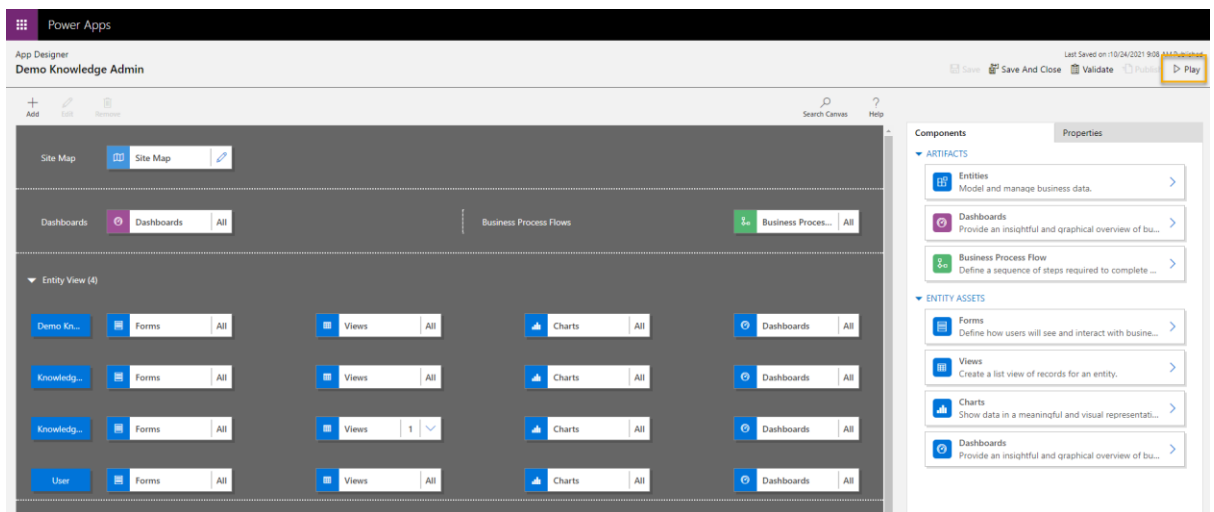
Exercise 1 – Setup the Data Sources from Microsoft Dataverse

In this exercise, you will be associating the data sources needed with the application.

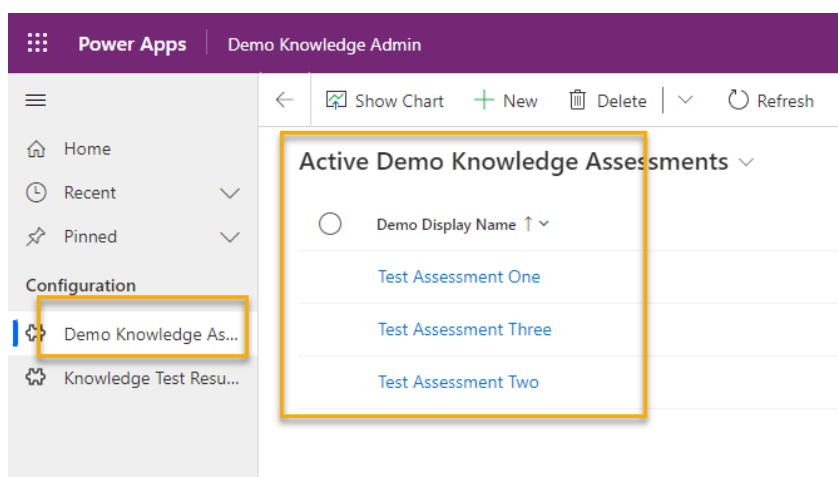
Task 1 - Enter data into Knowledge Admin application

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Select **Common Data Services Default Solution**.

5. Select the **Knowledge Admin** model-driven app and select **Play**.



6. Navigate to **Knowledge Assessments**. You should have three **Test Assessments** listed in your view.



7. Open **Test Assessment One**.
- Enter a **Start date** and an **End date**.
 - Enter a **Difficulty**.

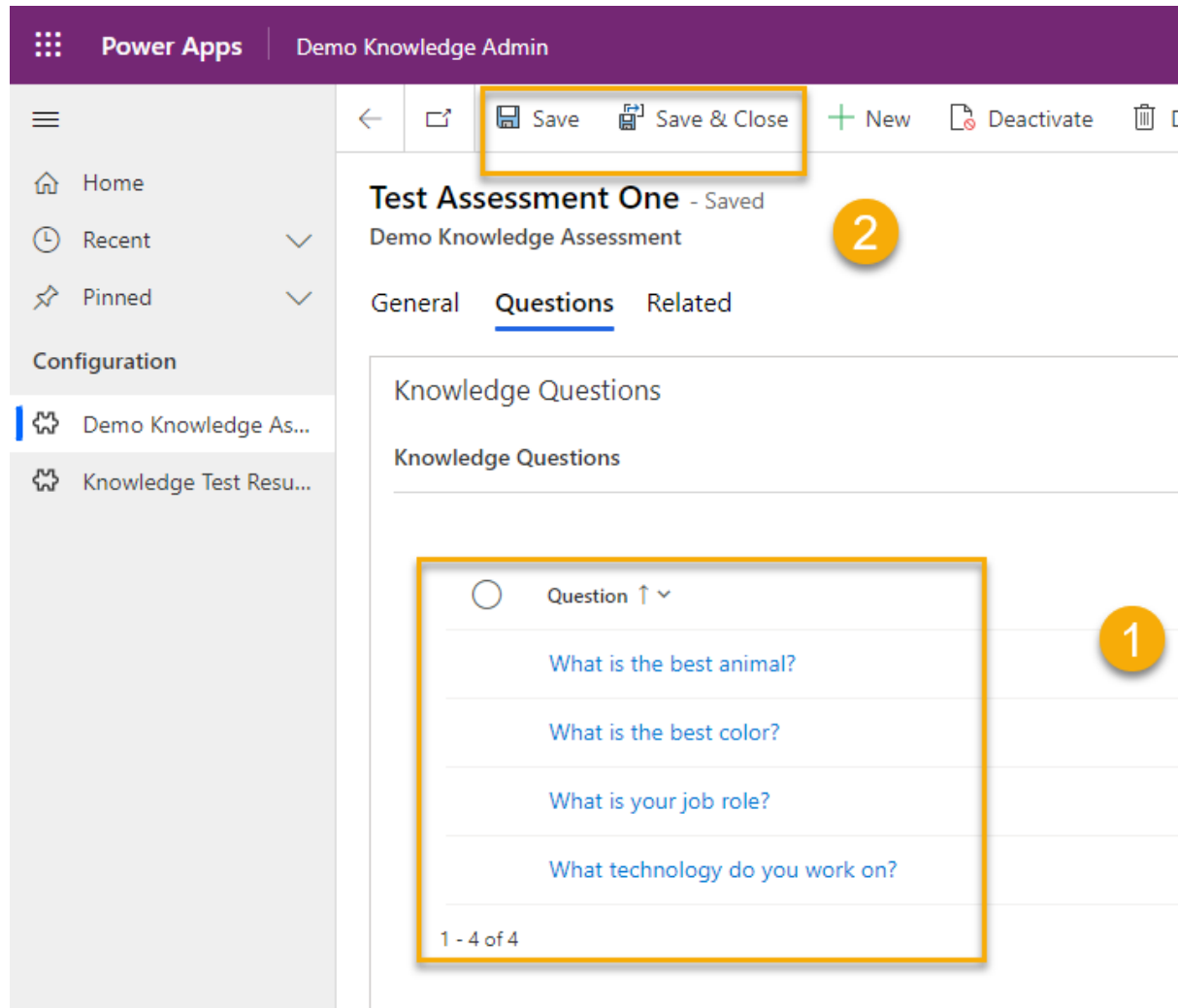
- Navigate to the **Questions** tab.

- Click **+ New Knowledge Question**.

- Enter a question for **Question**. (Examples: What is the best color? What is the best animal? What is your job role? What technology do you work on? Use your imagination!)

- Enter answers and answer points for four possible answers to your question. Enter some answers with negative points (wrong answers) and some with positive points (correct answers).

- Click **Save**.

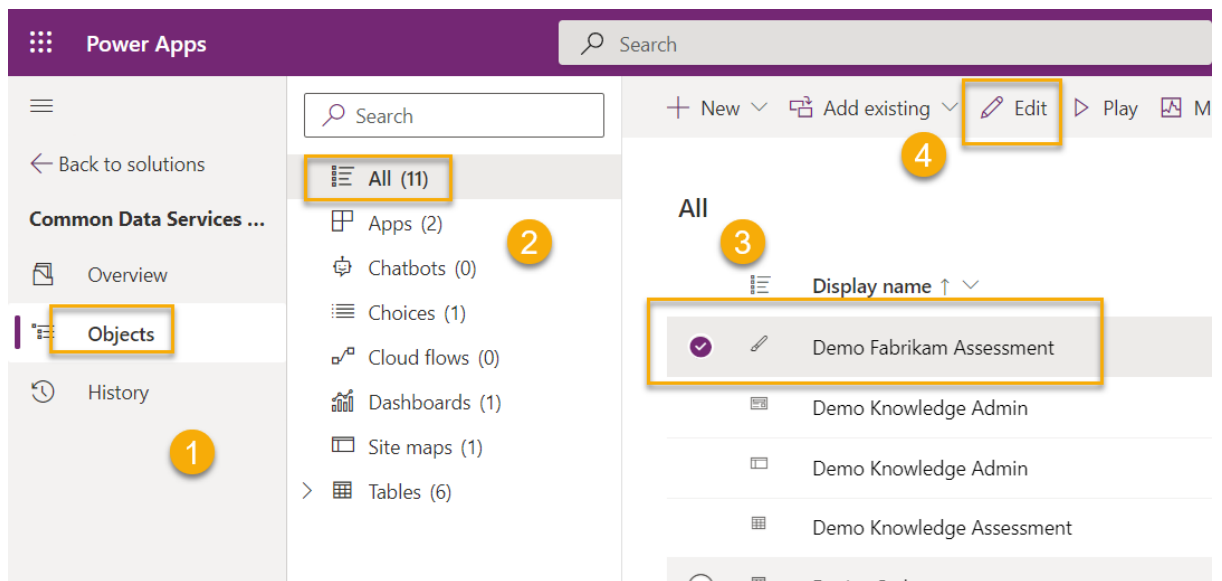


- Repeat Step 7 for Test Assessments Two and Three. You can create multiple questions for each Test Assessment if you have time.
8. When all Test Assessments have data in the **General tab** and all have at least one associated **Question**, close the model-driven app.

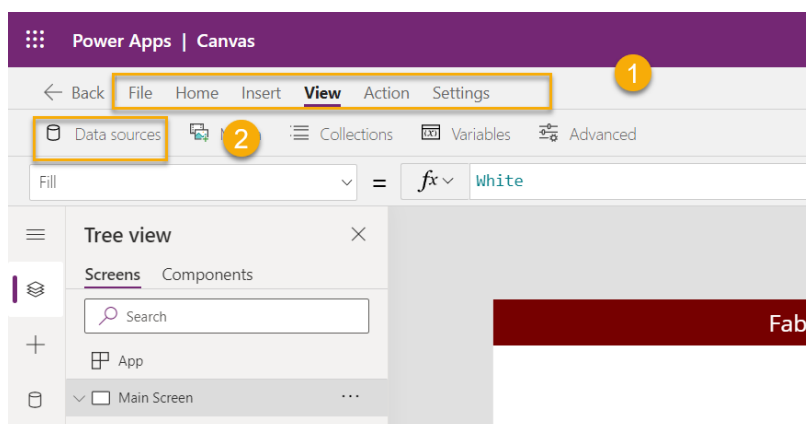
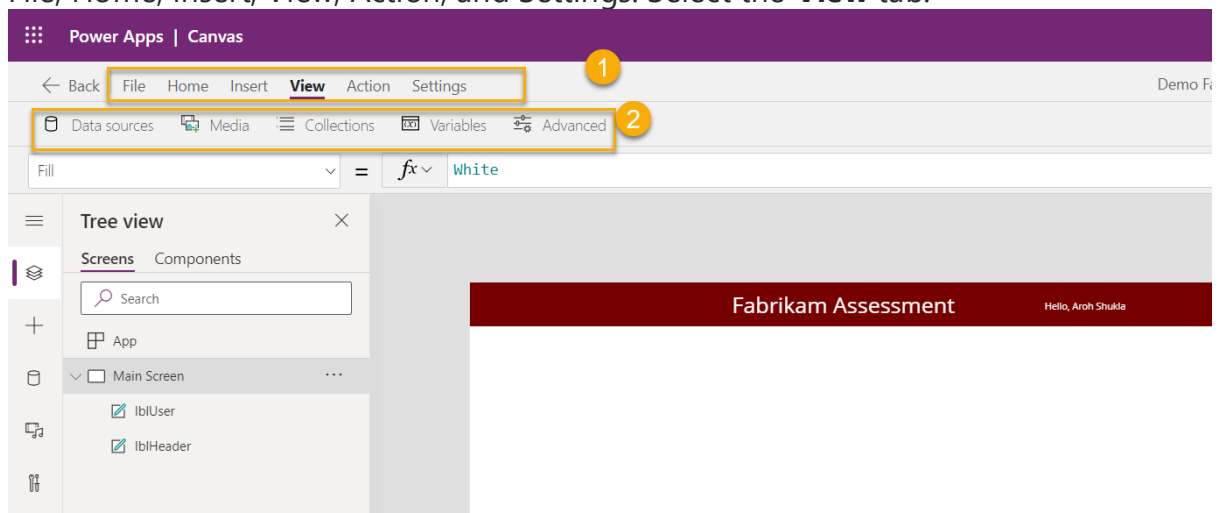
Task 2 – Set up data sources

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Select **Common Data Services Default Solution**.
5. Select the **Fabrikam Assessment** Canvas application.

- Click on the **Edit** button located on the command bar.

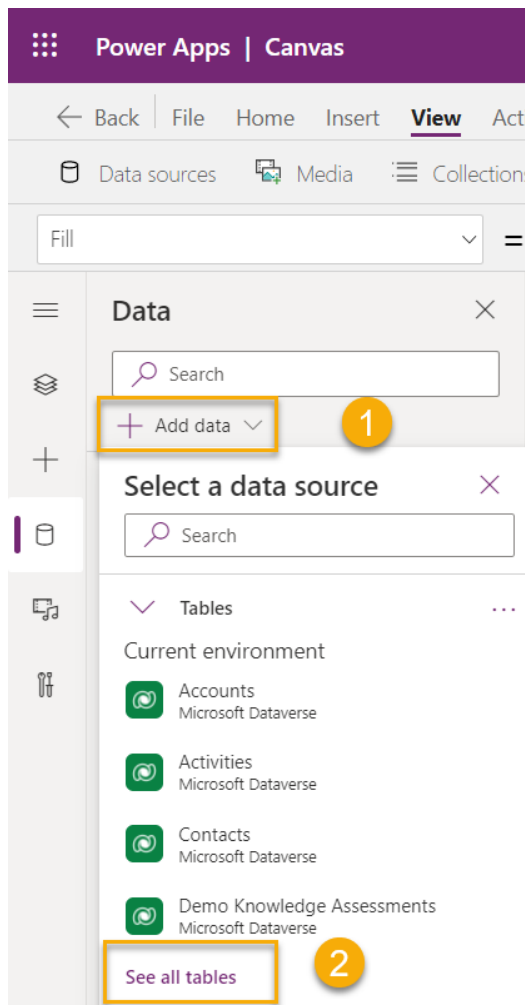


- The app designer should open. There are 6 tabs on top of the app designer: File, Home, Insert, View, Action, and Settings. Select the **View** tab.



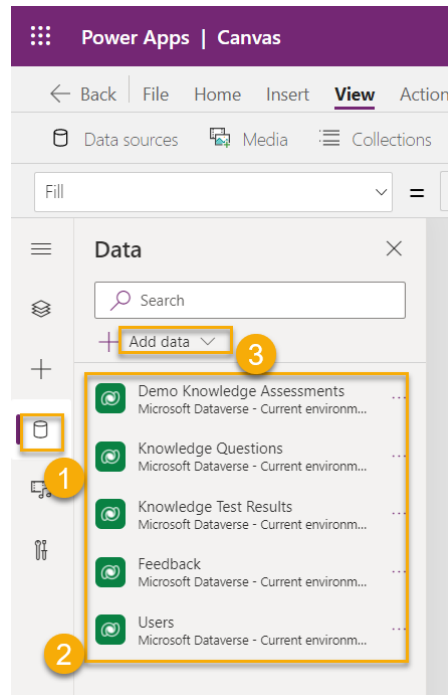
- Click on the **Data Sources** button.
- Click **Add data**.

10. You will be presented with a list of tables. Expand to see all tables by selecting **See all tables**.

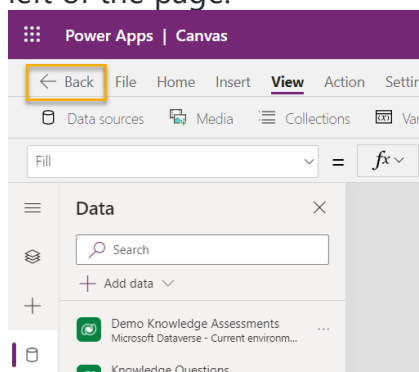


- Add the **Knowledge Assessments**, **Knowledge Questions**, **Knowledge Test Results**, **Feedback**, and **Users** tables. You

can use the Search feature to make it quicker to find the tables.



11. The data from the tables you selected will now be available for your application. Close the **Data** pane.
12. Click on the **File** tab and click **Save**. Saving your work periodically is always a good idea.
13. To go back to the app designer, click on the **Back** button located on the top left of the page.



14. Do not close the App designer.

Common Power Apps Functions and Properties

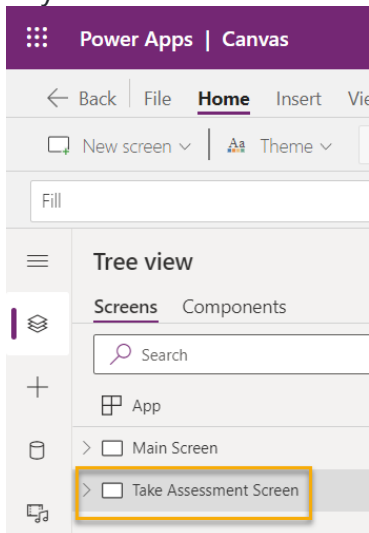
1. Galleries

Exercise 2 – Setup screens for Knowledge Assessment and Taking Assessment

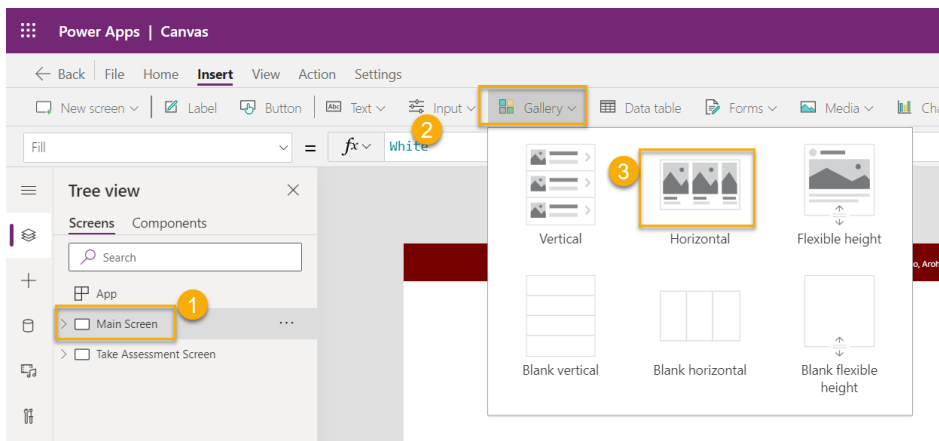
In this exercise, you will be adding a list of Knowledge Assessments to the main screen, and then adding navigation to allow employees to take the assessment.

Task 1 – Setup Knowledge Assessment screen

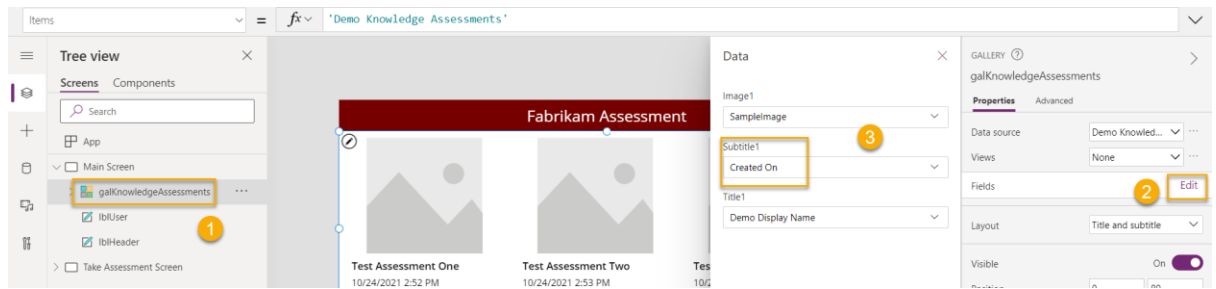
1. In the **tree view**, click on the ellipses (...) next to **Main Screen** and select **Duplicate Screen**.
2. Click on the ellipses (...) button of the new screen and click **Rename**.
3. Rename the Screen **Take Assessment Screen** *Note: It is always good to give components a good name so when you reference them later there will not be any confusion.*



4. Select the **Main Screen**.
5. Select the **Insert** tab from the top command bar. Click **Gallery** and select **Horizontal**.

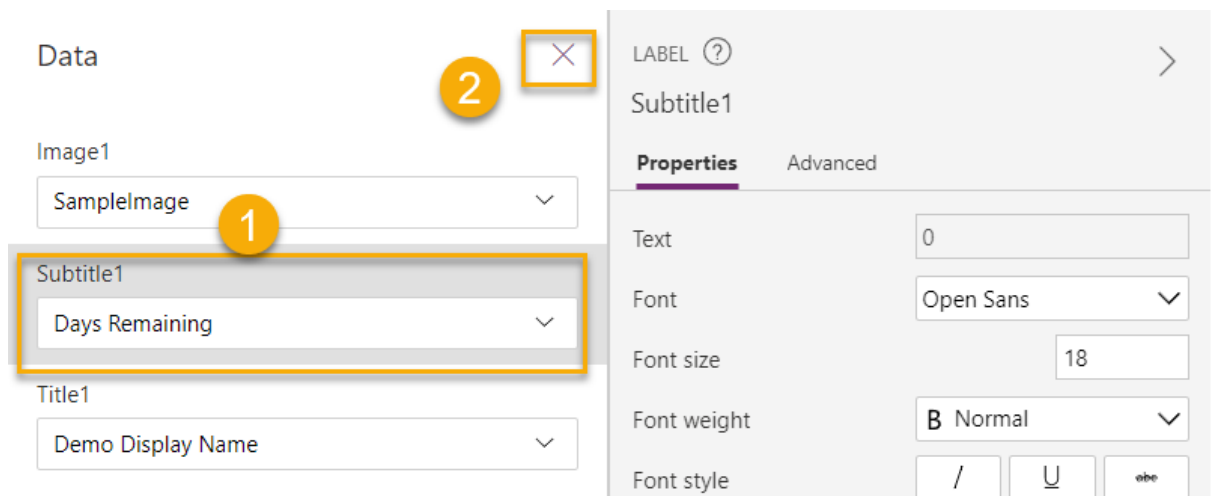


6. A **Data Source** pop-out will appear next to the Gallery pane to select the data source. Select **Knowledge Assessments**.
7. In the Properties tab, locate **Fields** and click **Edit**.

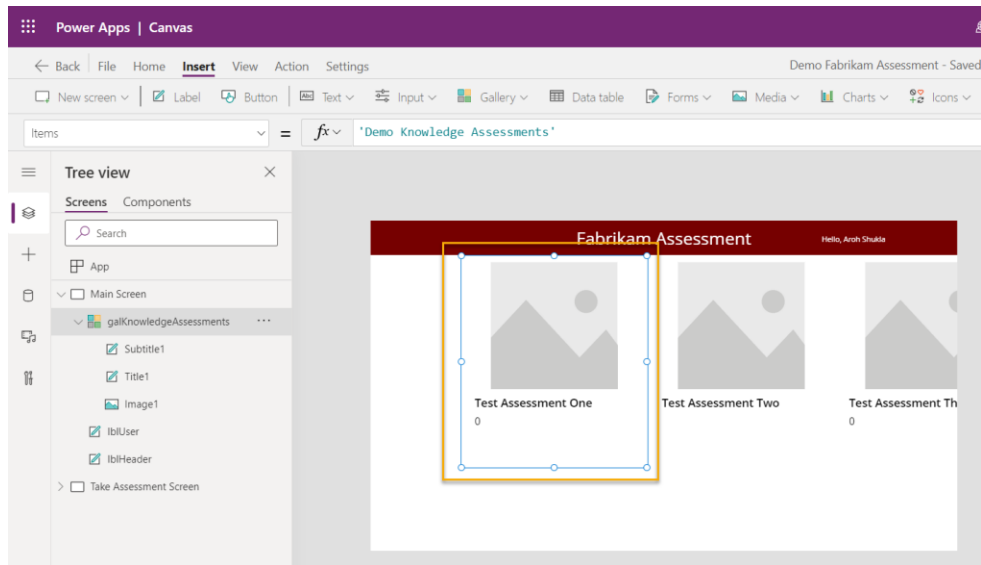


Change the Subtitle to **Days Remaining** by selecting the column from the dropdown.

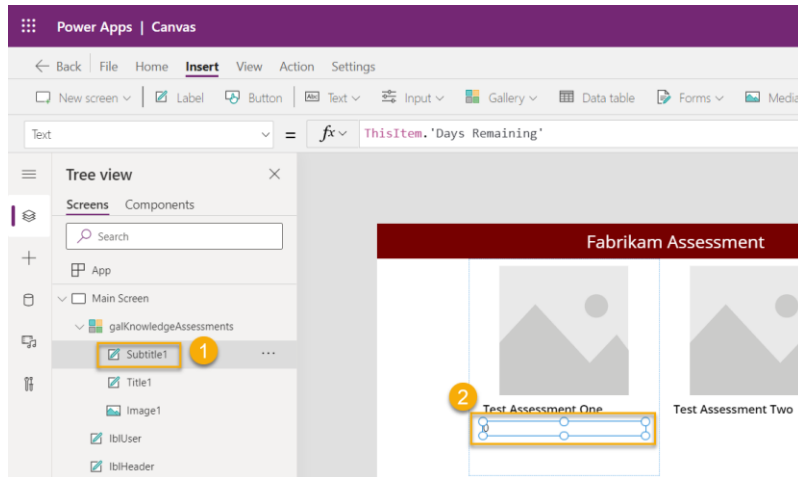
8. Close the **Data** pane.



9. In the left-hand tree view, locate the gallery, right click and select rename. Rename the Gallery **Knowledge Assessment List**. = galKnowledgeAssessments
10. Resize the **Gallery** so it takes all the space below the header by clicking on the gallery and dragging the image area to fit the space.
11. Select the **first item** of the **Knowledge Assessment List** gallery. Make sure you are selecting the item in the designer.

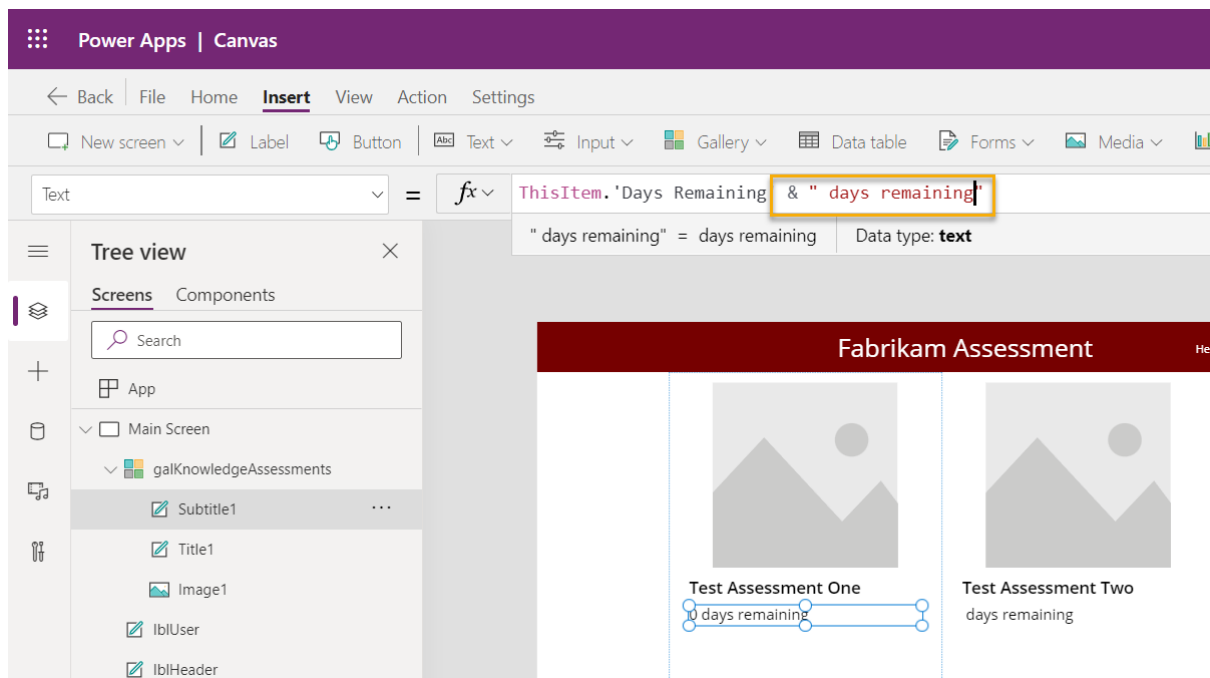


12. Click on the knowledgeAssessmentList **subtitle** control from the control tree on the left.



13. Select the **Text** property in the designer function list (fx) and paste the snippet below. This snippet will add the text " Days remaining" to the end of the number. If you have issues with the formula, try typing it out manually instead of copying and pasting.

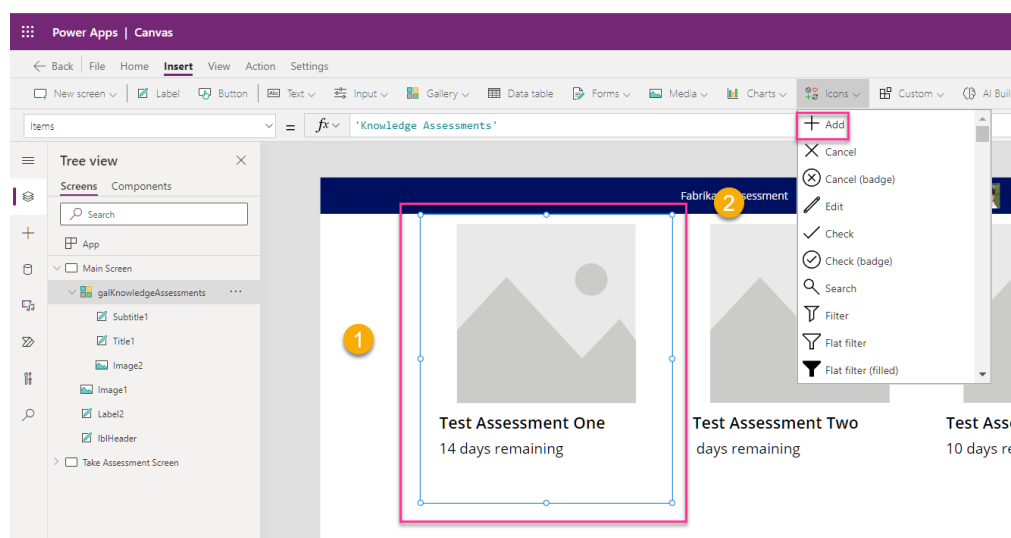
ThisItem.'Days Remaining' & " days remaining"



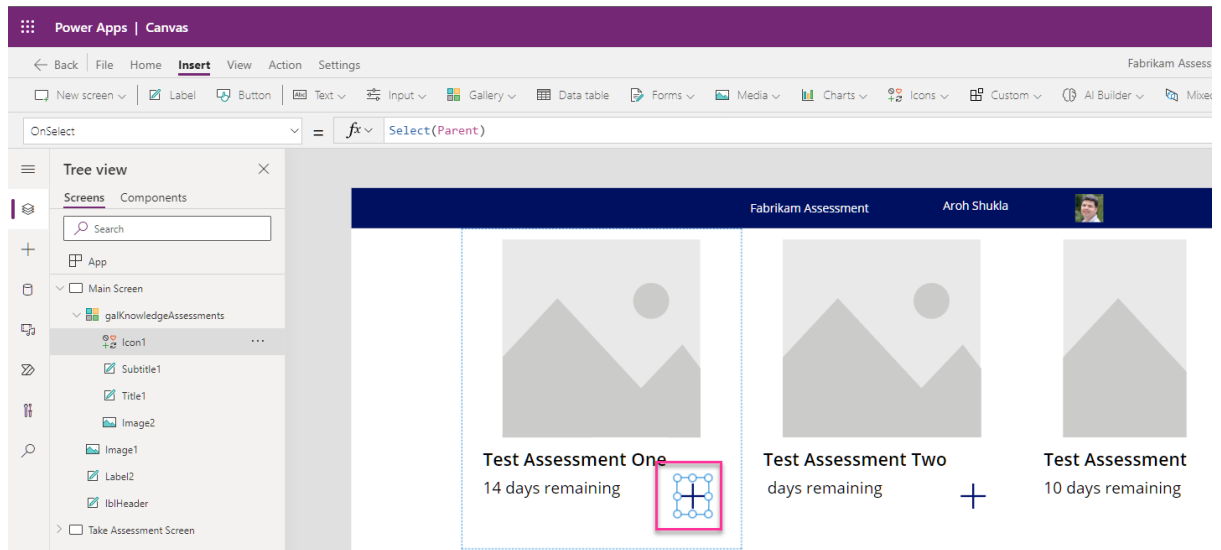
13. Depending on your test data you may have some items that currently just say "days remaining" and some that have a number (e.g., "10 days remaining").

14. With the **subtitle** on the **Knowledge Assessment List** still selected, go to the **Insert** tab and click **Icons**.

15. Select the **+ Add** icon.



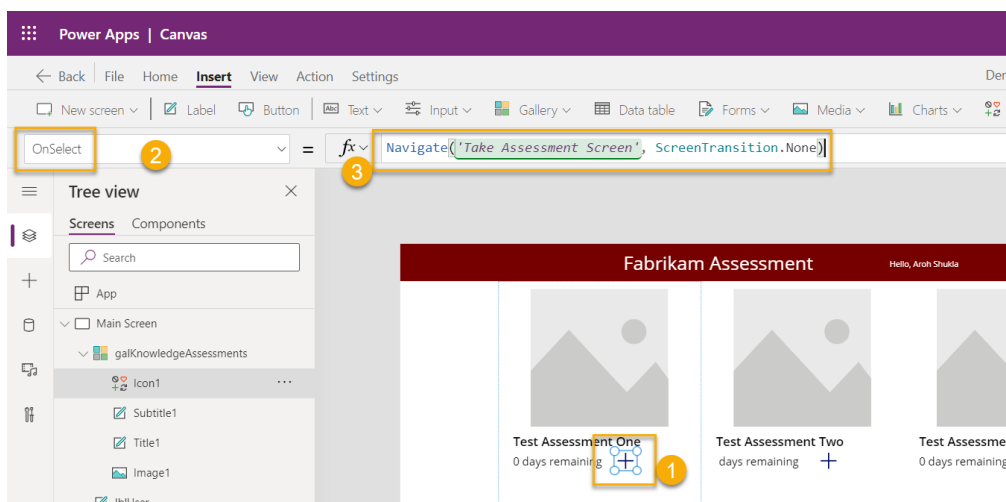
16. Move the icon to below the **days remaining** subtitle by dragging it with your mouse.



17. Select the icon. Navigate to the **Advanced** tab of the Properties pane. Select the **OnSelect** property and set it the snippet below. This snippet will let the user navigate to the Take Assessments screen when they click on the icon. If you have issues with the formula, try typing it out manually instead of copying and pasting.

Navigate('Take Assessment Screen', ScreenTransition.None)

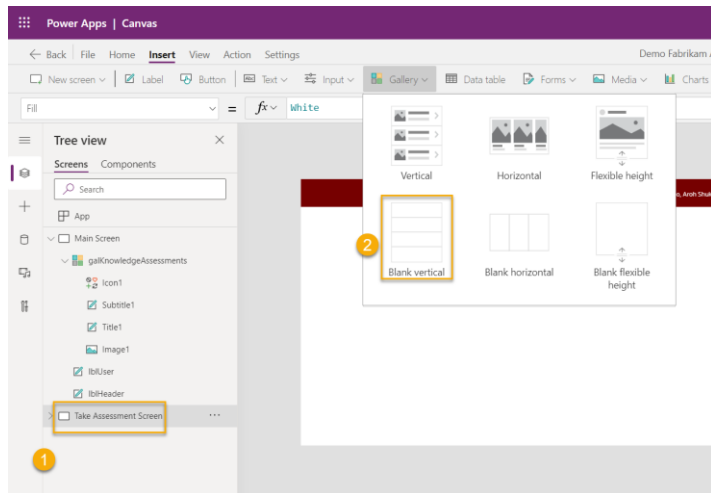
Note: If the designer shows a red line under your function it could be due to the name of the screen being different. If that happens adjust the name used to be the same as your second screen.



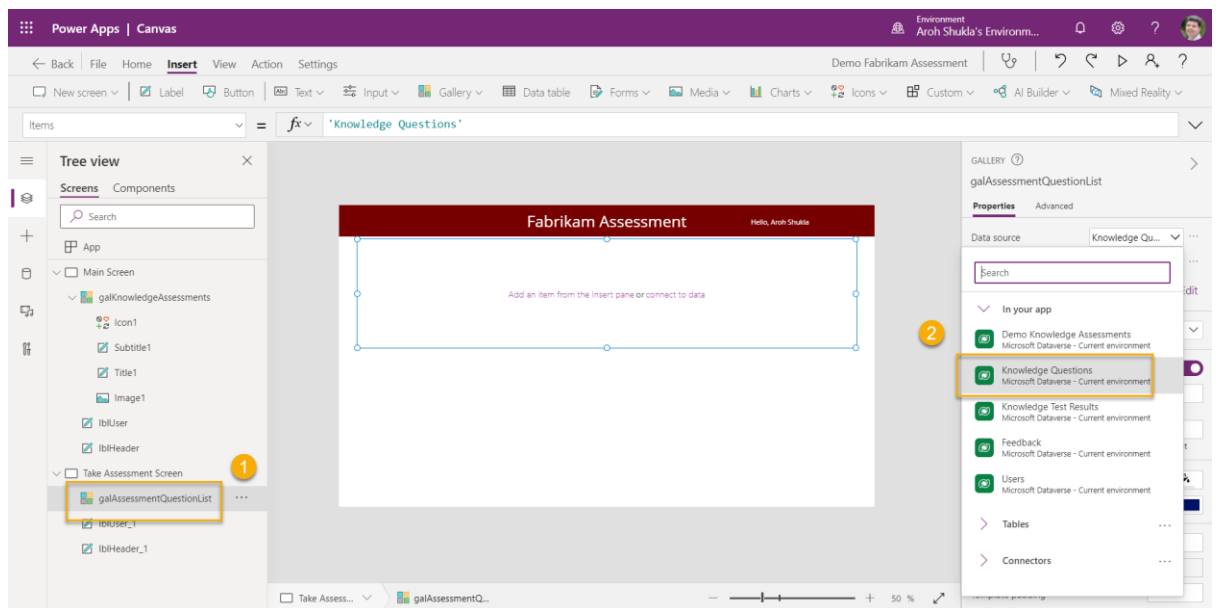
Task 2 – Setup Taking Assessment screen

In this task we will be setting up **the display of the questions**. In subsequent practices you will be **scoring and storing the results**.

1. Select the **Take Assessment Screen**.
2. With the **Take Assessment Screen** still selected, go to the **Insert** tab, click **Gallery** and select **Blank Horizontal**.

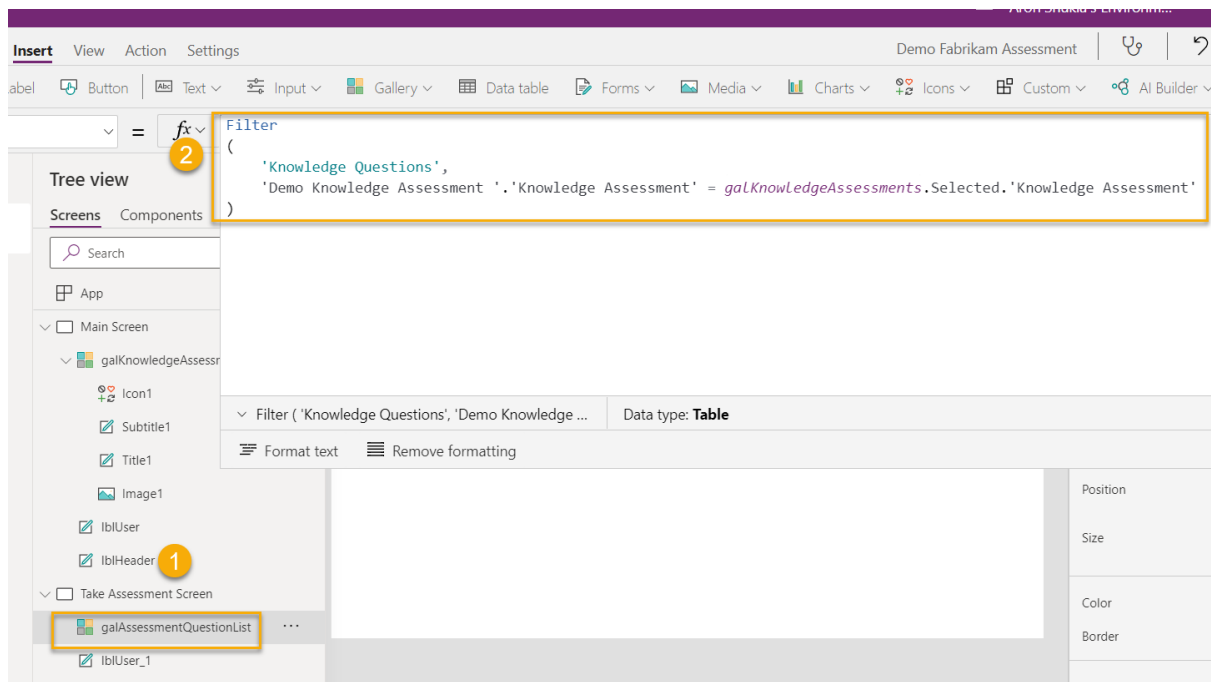


3. The **data source** pop-out will come into view. Close it.
4. Rename the gallery **Assessment Question List**.
5. Select the **Assessment Question List** gallery.

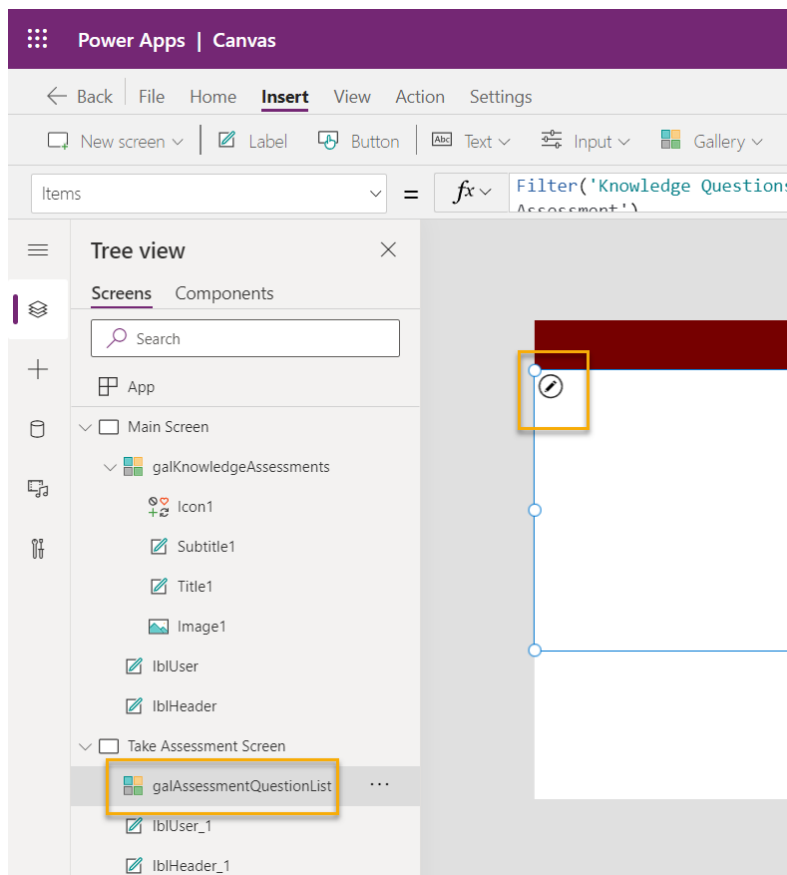


6. Select the **Items** property in the **Advanced** section of the Properties pane. Set it to the snippet below. This snippet will filter the Knowledge Questions for the selected Knowledge Assessment. If you have issues with the formula, try typing it out manually instead of copying and pasting.

Filter('Knowledge Questions', 'Knowledge Assessment'.Knowledge Assessment' = 'Knowledge Assessment List'.Selected.Knowledge Assessment')



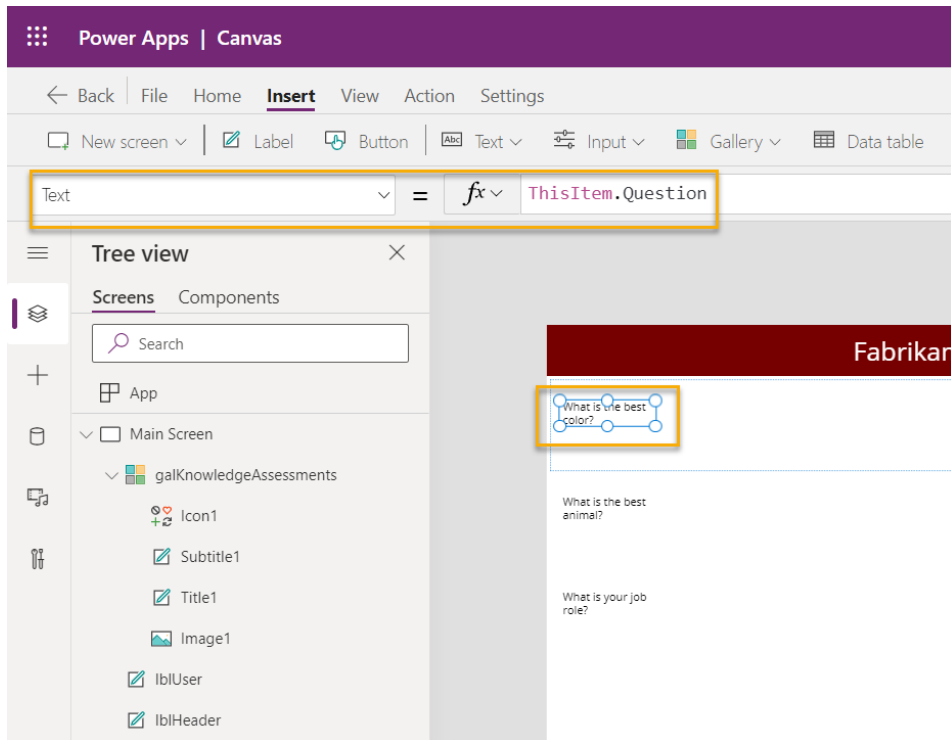
7. Resize the **Assessment Question List** until it takes up all the space below the header.
8. Select the **Assessment Question List** gallery in the canvas.
9. Click on the **Edit gallery** button (this looks like a pencil icon).



10. Click + **Insert** and select **Label**.

11. Select the label you just added and set the **Text** property to **Question** using the formula bar. (It is possible this will be set automatically for you. Make sure to verify.)

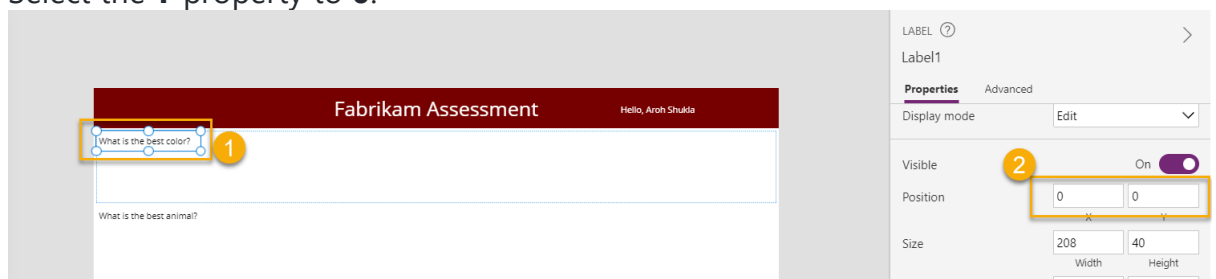
ThisItem.Question



12. If you don't see any questions display in your app preview, click on **mainScreen** and, while holding the alt key, use the mouse to click on the next icon on one of the assessment records. You should then navigate to the takeAssessment screen. If you still don't see questions show up, check in the model-driven app that you have created some test data.

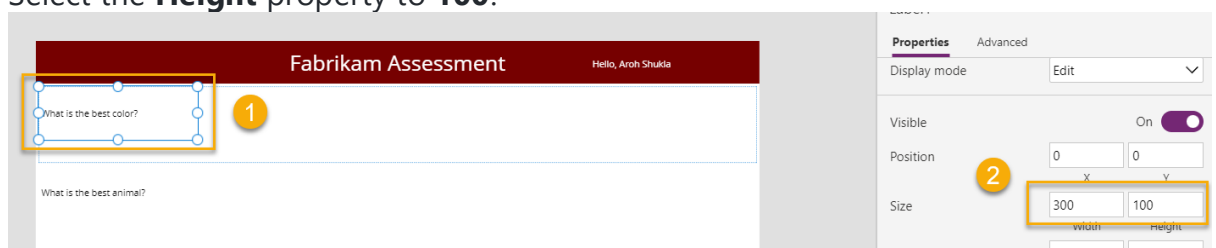
13. With the label still selected, set the **X** property to **0**.

14. Select the **Y** property to **0**.



15. Select **Width** property and set it to **300**.

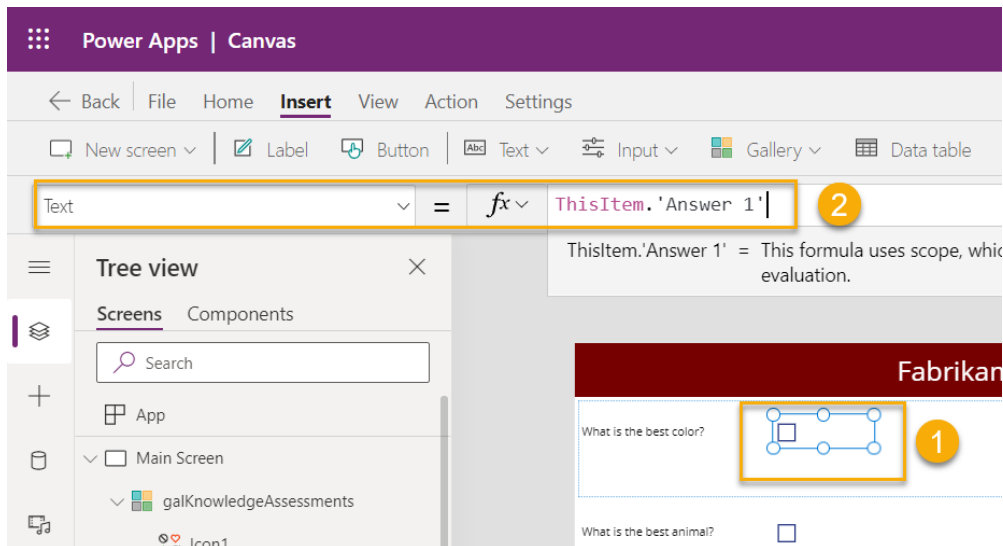
16. Select the **Height** property to **100**.



17. From the **Insert** tab, click **Input** and **Check box**.

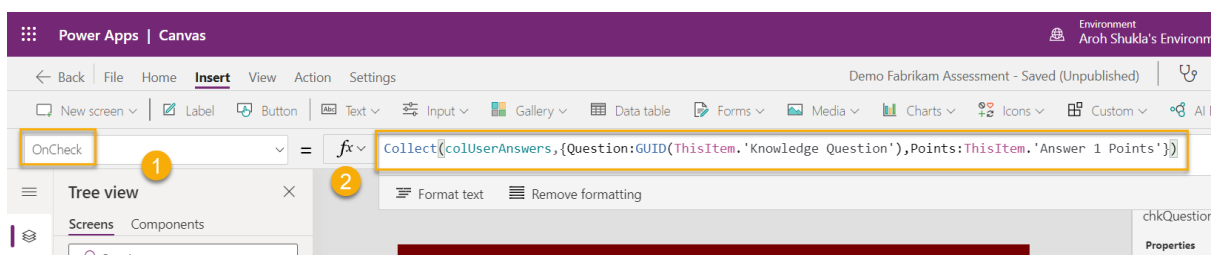
18. Move the new checkbox below the Question label.
19. Select the **Text** property of the new checkbox and from the **fx** equation bar at the top, set it to **Answer 1**.

ThisItem.'Answer 1'



20. By using the **ThisItem.** syntax you are referencing a data column from the current record.
21. Set the **Width** property to **300** or drag it to expand the width of the control.
22. With the checkbox control selected, navigate to the property panel on the right side of the screen. Select the Advanced tab and set the **OnCheck** property to the snippet below. This snippet will add the points of the check answer to a Collection name UserAnswers.

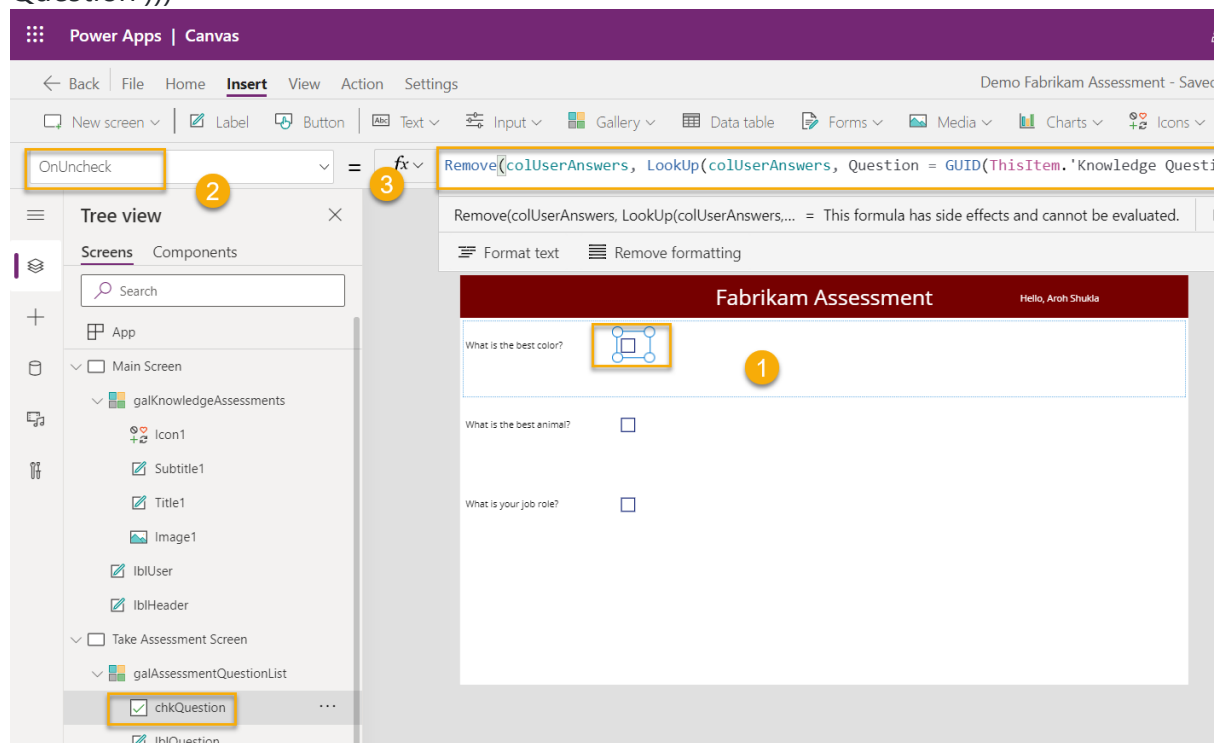
*Collect(UserAnswers, {Question:GUID(ThisItem.'Knowledge Question'),
Points:ThisItem.'Answer 1 Points'})*



*Collect(UserAnswers, {Question:GUID(ThisItem.'Knowledge
Question'), Points:ThisItem.'Answer 1 Points'})*

23. Set the **OnUnCheck** property to the snippet below. This snippet will remove the points of the uncheck answer form the Collection when the user unchecks the answer.

`Remove(UserAnswers, LookUp(UserAnswers, Question = GUID(ThisItem.'Knowledge Question')))`

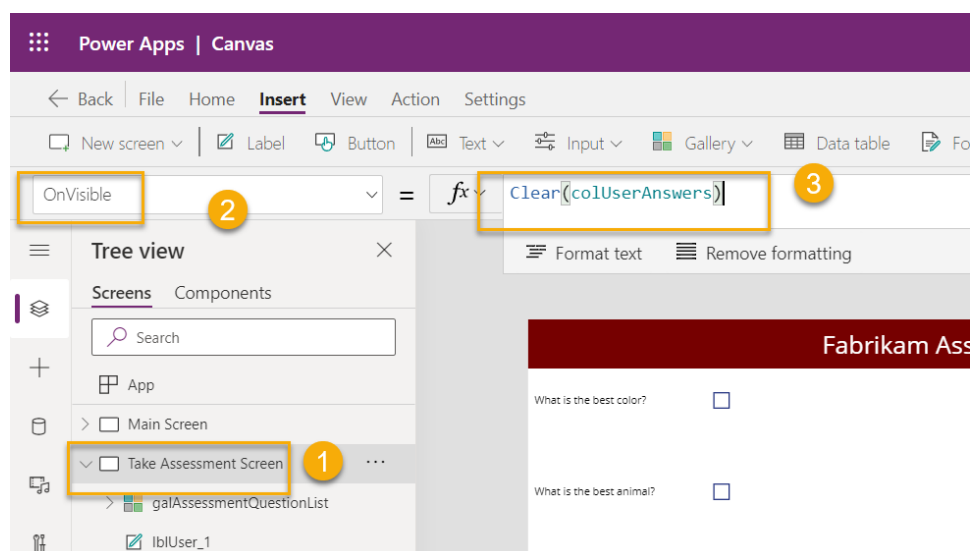


`Remove(UserAnswers, LookUp(UserAnswers, Question = GUID(ThisItem.'Knowledge Question')))`

24. Select **Take Assessment Screen** in the Tree view.

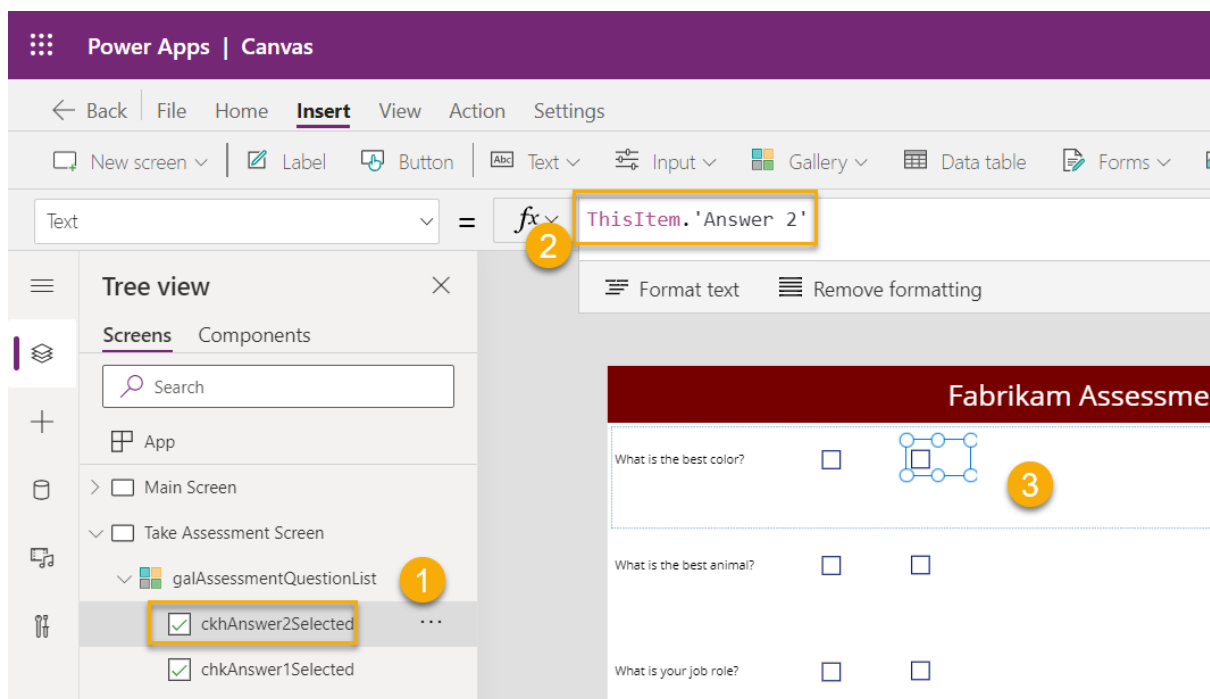
25. Select the **OnVisible** property and paste the snippet below. This will clear the prior answers each time they select another question.

`Clear(UserAnswers)`



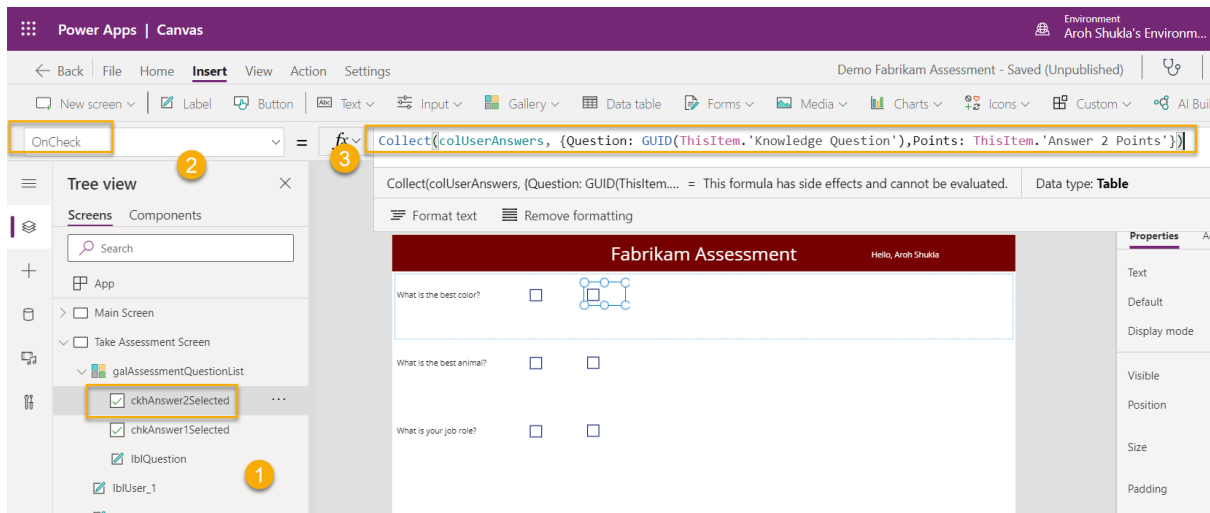
26. In the left control tree, select the checkbox and rename the checkbox **Answer1 Selected**.
27. With **Answer1 Selected** still selected, go to the **Insert** tab, select **Input**, and select **Checkbox** again. We are going to add the additional answer checkboxes and do a similar setup for each.
28. Move the new checkbox below the **Answer1 Selected** checkbox.
29. Select the **Text** property of the new checkbox and set it to **Answer 2**.

`ThisItem.'Answer 2'`



30. Set the **Width** property to **300**.
31. Set the **OnCheck** property to the snippet below. This snippet will add the points of the check answer to the Collection.

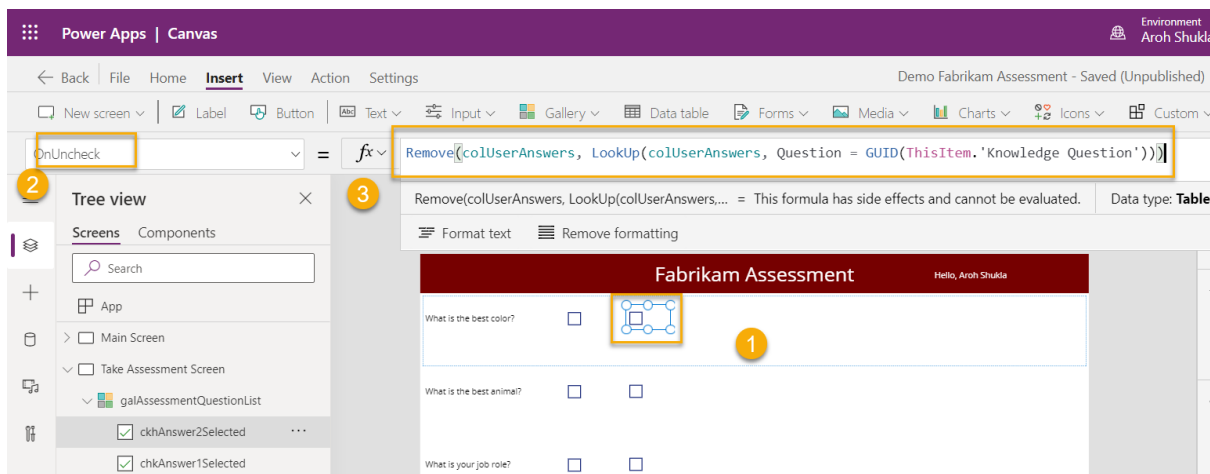
`Collect(UserAnswers, {Question:GUID(ThisItem.'Knowledge Question'),
Points:ThisItem.'Answer 2 Points'})`



Collect(colUserAnswers, {Question: GUID(ThisItem.'Knowledge Question'),Points: ThisItem.'Answer 2 Points'})]

32. Set the **OnUnCheck** property to the snippet below. This snippet will remove the points of the uncheck answer form the Collection.

Remove(UserAnswers, LookUp(UserAnswers, Question = GUID(ThisItem.'Knowledge Question')))



33. Rename the checkbox **Answer2 Selected**.

34. With **Answer2 Selected** still selected, go to the **Insert** tab, select **Input**, and select **Check box**.

35. Move the new checkbox below the **Answer2 Selected** checkbox.

36. Select the **Text** property of the new checkbox and set it to **Answer 3**.

ThisItem.'Answer 3'

37. Set the **Width** property to **300**.

38. Set the **OnCheck** property to the snippet below. This snippet will add the points of the check answer to the Collection.

```
Collect(UserAnswers, {Question:GUID(ThisItem.'Knowledge Question'),  
Points:ThisItem.'Answer 3 Points'})
```

39. Set the **OnUnCheck** property to the snippet below. This snippet will remove the points of the uncheck answer form the Collection.

```
Remove(UserAnswers, LookUp(UserAnswers, Question =  
GUID(ThisItem.'Knowledge Question')))
```

40. Rename the checkbox **Answer3 Selected**.

41. With **Answer3 Selected** still selected, go to the **Insert** tab, select **Input**, and select **Check box**.

42. Move the new check box below the **Answer3 Selected** checkbox.

43. Select the **Text** property of the new checkbox and set it to **Answer 4**.

ThisItem.'Answer 4'

44. Set the **Width** property to **300**.

45. Set the **OnCheck** property to the snippet below. This snippet will add the points of the check answer to the Collection.

```
Collect(UserAnswers, {Question:GUID(ThisItem.'Knowledge Question'),  
Points:ThisItem.'Answer 4 Points'})
```

46. Set the **OnUnCheck** property to the snippet below. This snippet will remove the points of the uncheck answer form the Collection.

```
Remove(UserAnswers, LookUp(UserAnswers, Question =  
GUID(ThisItem.'Knowledge Question')))
```

47. Rename the checkbox **Answer4 Selected**.

48. Select **Take Assessment Screen**.

49. Go to the **Insert** tab and click **Button**.

50. Drag and place the button below the **Assessment Question List**.

51. Select the button and set the **Text** property to **"Score Assessment"**.

52. Make the button larger until the text doesn't wrap.

53. Click **File** and **Save**.

Lab 4.7: Practice Lab – Work with data and services

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You have been assigned to continue work on the Fabrikam Knowledge canvas app that we started creating in the prior module. In this practice you will be working with the Microsoft Dataverse connector to filter the list, save the results of the assessment in Microsoft Dataverse and add support for submitting feedback using the Edit Form.

Exercise 1 – Filtering Data

Task 1 – Filter Knowledge Assessments

In this task, you will filter the Knowledge Assessment to show only Active rows that have Start Date in the past and End Date is in the future.

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Select **Common Data Service Default Solution**.
5. Select the **Fabrikam Assessment** Canvas application.
6. Click on the **Edit** button located on the command bar.
7. Wait for the app designer to load.
8. Select the **Knowledge Assessment List** gallery and click the **Advanced** tab in the Properties pane.
9. Set the **Items** Property to the snippet below. This snippet will filter the Knowledge Assessment rows and the list will show only the active rows with Start Date in the past and End Date in the future. *Note:* if you type this instead of pasting it, you will see how the editor helps you build expressions.

The screenshot displays the Microsoft Power Apps interface. On the left, the 'Objects' pane shows a tree view with 'Columns' selected under 'Knowledge Assessment'. The main area shows a list of columns for the 'Knowledge Assessment' entity. The 'Status' column is highlighted with a red box. On the right, the 'Edit column' pane is open for the 'Status' column. It shows the 'Display name' as 'Status', the 'Description' as 'Status of the Knowledge Assessment', and the 'Data type' as 'Choice'. The 'Required' property is set to 'System required', and the 'Searchable' property is checked. The 'Choices' section shows two options: 'Active' with a value of 0 and 'Inactive' with a value of 1. The 'Advanced options' section is also visible.

Column Name	Field Name	Data Type
Days remaining	cr00e_DaysRemaining	Whole number
Difficulty	cr00e_Difficulty	Choice
End Date	cr00e_EndDate	Date only
Import Sequence Number	ImportSequenceNumber	Whole number
Knowledge Assessment	cr00e_KnowledgeAssessm...	Unique identifier
Modified By	ModifiedBy	Lookup
Modified By (Delegate)	ModifiedOnBehalfBy	Lookup
Modified On	ModifiedOn	Date and time
Owner	OwnerId	Owner
Owning Business Unit	OwningBusinessUnit	Lookup
Owning Team	OwningTeam	Lookup
Owning User	OwningUser	Lookup
Record Created On	OverriddenCreatedOn	Date only
Start Date	cr00e_StartDate	Date only
Status	statecode	Choice
Status Reason	statuscode	Choice

Edit column
Previously called fields. [Learn more](#)

Display name *
Status

Description
Status of the Knowledge Assessment

Data type *
Choice

Required
System required

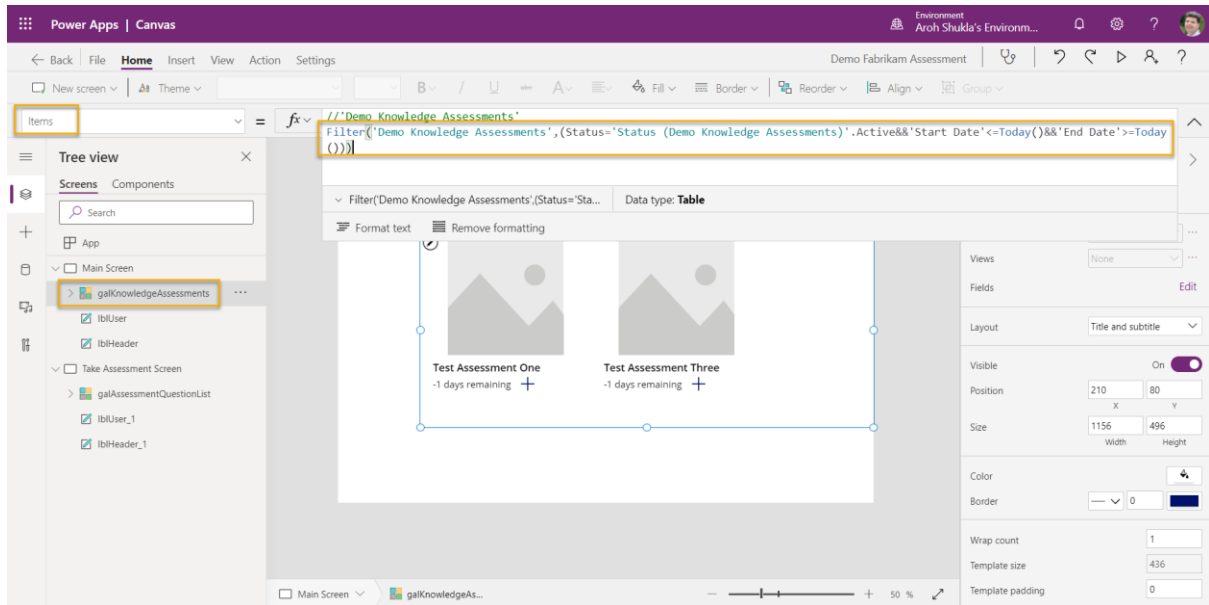
Searchable
☒

Choices

Label *	Value *
Active	0
Inactive	1

Advanced options

Filter('Knowledge Assessments', (Status = 'Status (Knowledge Assessments)'.Active && 'Start Date' <= Today() && 'End Date' >= Today()))



Filter('Demo Knowledge Assessments', (Status='Status (Demo Knowledge Assessments)'.Active&&'Start Date'<=Today()&&'End Date'>=Today()))

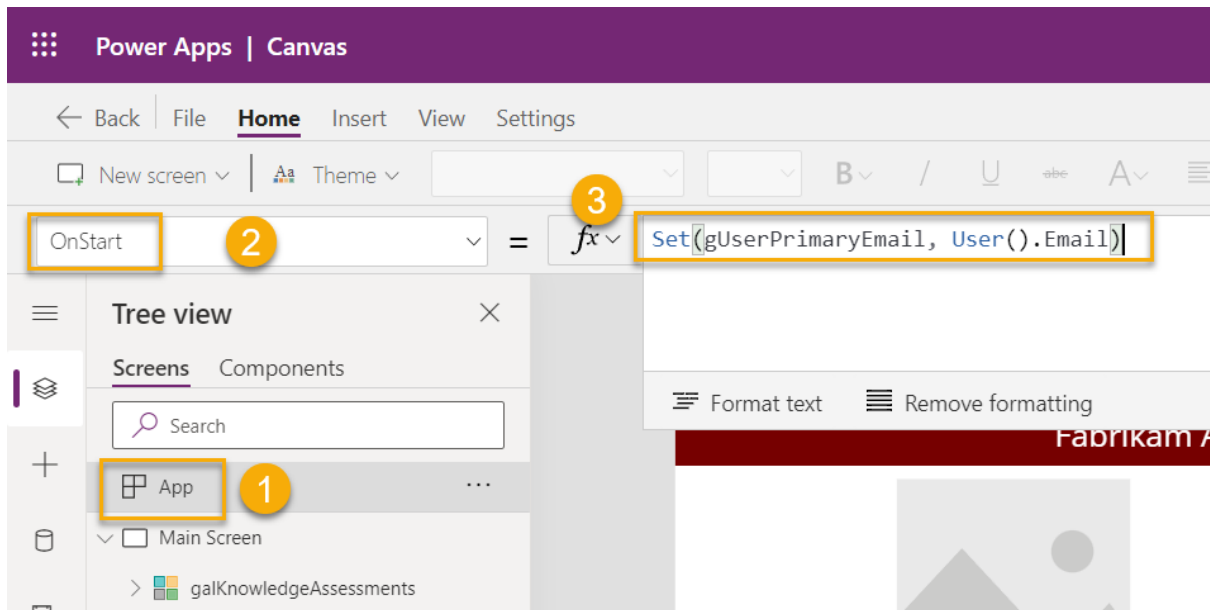
10. Click **File** and **Save** your changes.
11. Click on the **Back** button.
12. Do not close the app designer.

Task 2 – Get Current User

In this task, you will get the current User and save it in a global variable. We are doing this during OnStart so that it only happens once, and the data is available for use elsewhere in the app. We will be using this to retrieve a filtered list of test results submitted by this user.

1. In the tree view, select the **App**.
2. Select the **OnStart** property and set it to snippet below. This snippet will create a global variable **UserPrimaryEmail** that will hold the current user's email.

Set(UserPrimaryEmail, User().Email)



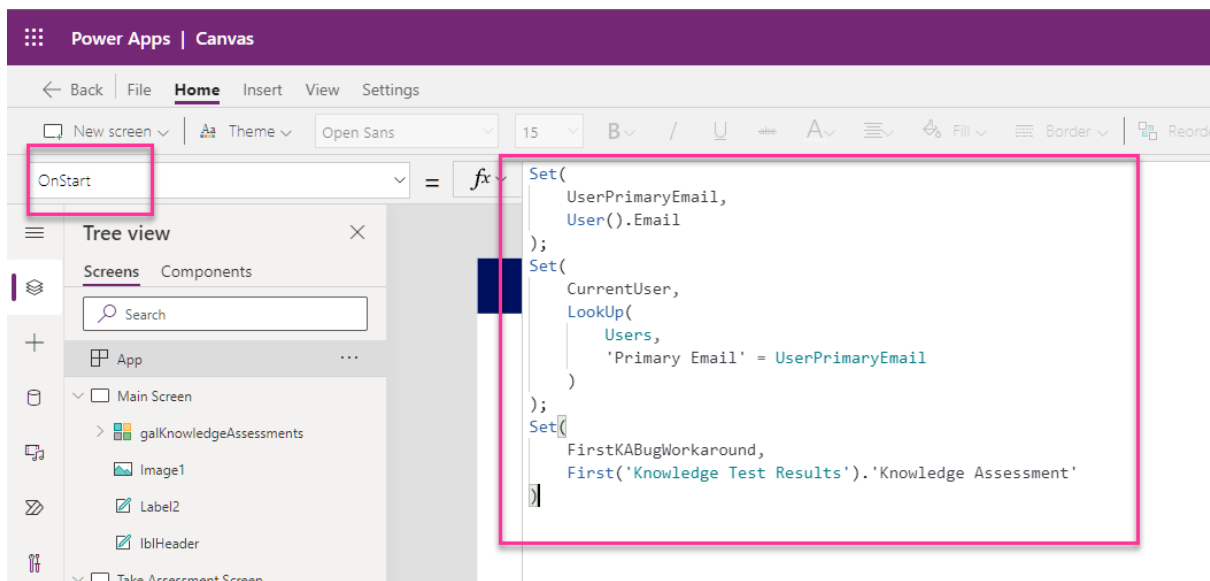
Set(UserPrimaryEmail, User().Email)

3. Add the snippet below to the **OnStart** property, after the snippet already there. This snippet will first terminate the first function with semicolon, get the current User and save it in a global variable name **CurrentUser**.

;Set(CurrentUser, LookUp(Users, 'Primary Email' = UserPrimaryEmail))

4. Add the snippet below to the **OnStart** property, after the snippets already there. Add the following function to work around an existing bug that does not properly load the metadata for related properties. In the future this workaround will not be required.

;Set(FirstKABugWorkaround, First('Knowledge Test Results'). 'Knowledge Assessment')



;Set(gFirstABugWorkAround, First('Knowledge Test Results'). 'Demo Knowledge Assessment ')

5. Your **OnStart** property should now have the above three snippets. Click **File** and **Save**.

6. Select the **back** button to navigate back to the **Fabrikam Assessment** app designer.

Task 3 – Save Total Points

In this task, you will create a **Patch** that will create a Knowledge Test Result row. Using the Patch function allows us to on demand **create a row with just specific properties being passed**. In this case, we will be using the sum function to get a total of our points that are stored in our **in-memory collection** based on the answers the user provided.

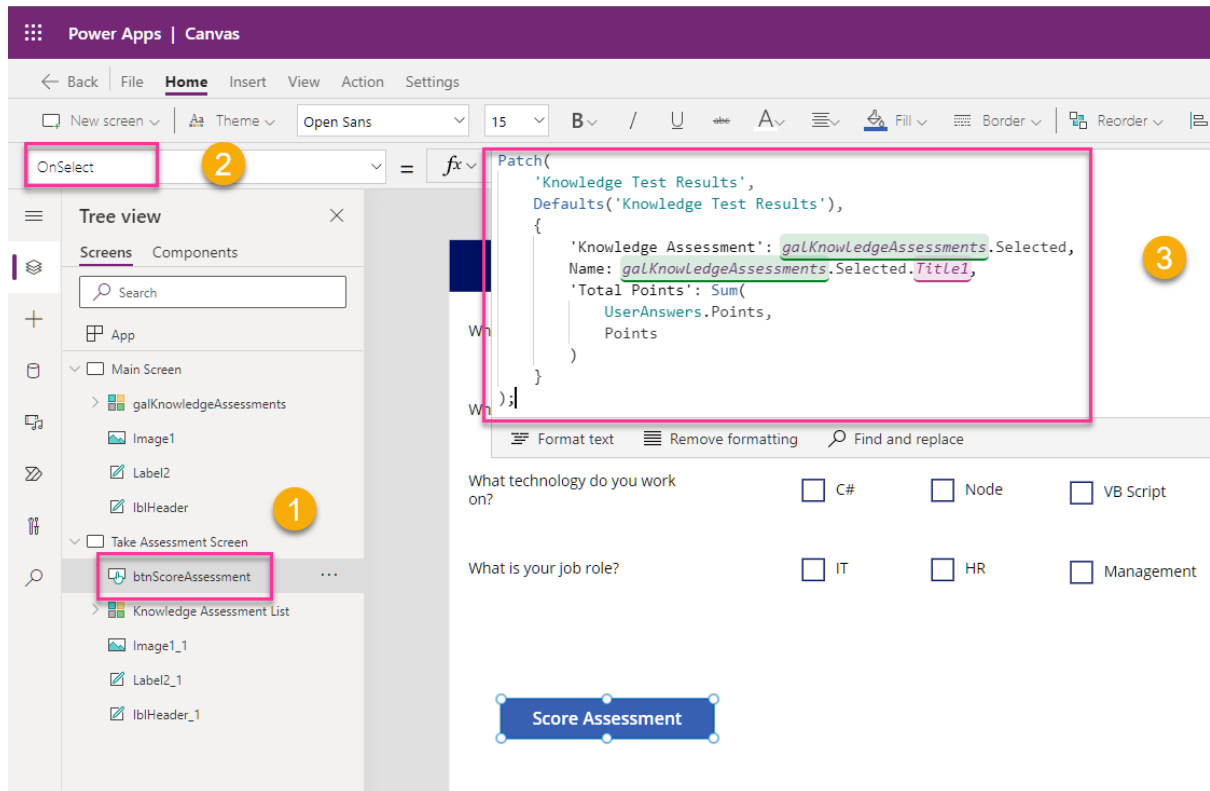
1. Expand the **Take Assessment Screen**.
2. Locate the button and rename it **Score Button**.
3. While you still have the **Score Button** selected, select the **Advanced** tab of the Properties pane. Set the **OnSelect** property to snippet below. This snippet will create a new Knowledge Test Result row. **Note:** For long formulas, you can expand the **fx** bar to format your formula in a larger view.

```
Patch('Knowledge Test Results',Defaults('Knowledge Test Results'),{'Knowledge Assessment':'Knowledge Assessment List'.Selected,Name:'Knowledge Assessment List'.Selected.Title, 'Total Points': Sum(UserAnswers.Points,Points)});
```

The screenshot displays the Power Apps Canvas environment. On the left, the 'Tree view' pane shows the app structure, with 'Take Assessment Screen' expanded and 'btnScore' selected. In the center, the 'OnSelect' property is being edited, and the formula bar is expanded to show the following code:

```
//Patch('Knowledge Test Results', Defaults('Knowledge Test Results'), {'Knowledge Test Results', Defaults('Knowledge Test Results'), {'Knowledge Assessment': galKnowledgeAssessments.Selected, Name: galKnowledgeAssessments.Selected.Title, 'Total Points': Sum(colUserAnswers.Points, Points)}});
```

Below the formula bar, a warning message states: "Patch('Knowledge Test Results', Defaults('Knowled... = This formula has side effects and cannot be evaluated." To the right, a button labeled 'Score Button' is shown on the canvas.

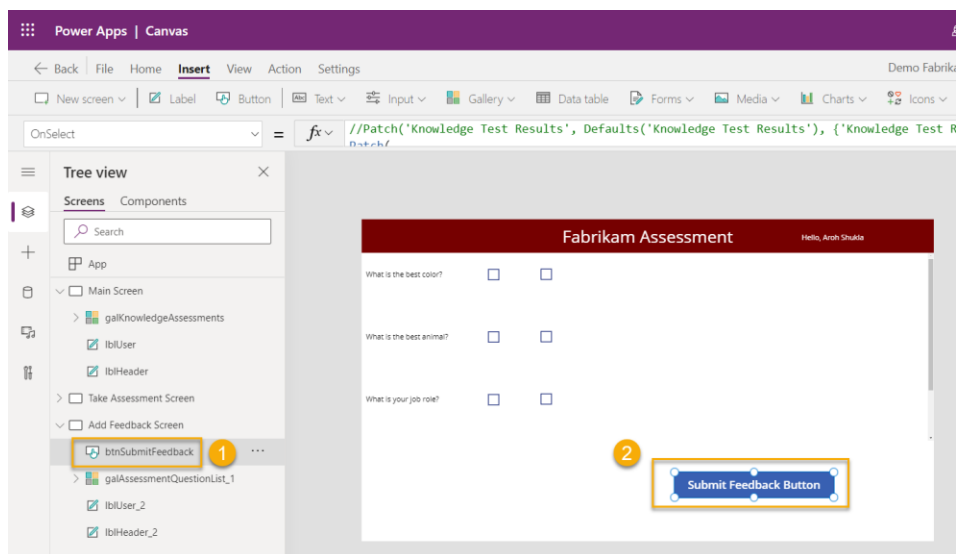


Task 4 – Add Feedback Screen

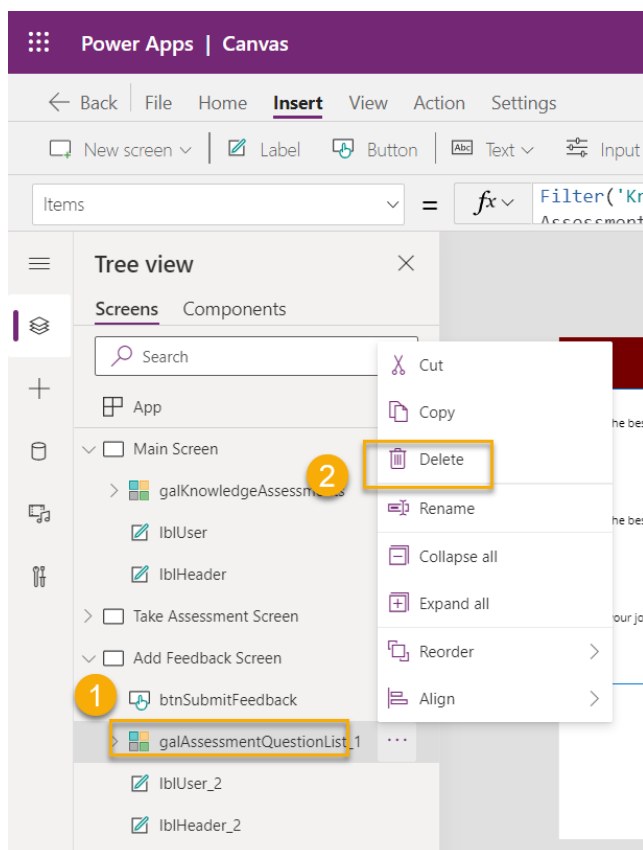
In this task, you will add a new screen to the applications. This screen will let the user submit feedback. This task demonstrates how to use the EditForm to create a new row.

1. Click on the ellipses button of the **Take Assessment Screen** and click **Duplicate Screen**. We are creating a duplicate screen because we want all our screens to look the same and we don't want to recreate the header every time we add a new screen.
2. Rename the duplicate screen **Add Feedback Screen**.
3. Rename the Button on the **Add Feedback Screen** to **Submit Feedback Button**.

4. Change the **Text** property of the **Submit Feedback Button** to "Submit Feedback".

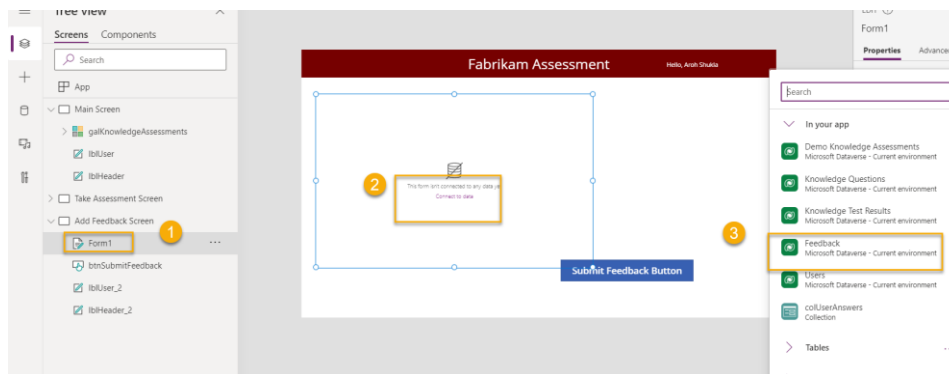


5. Click on the ellipses button of the **Assessment Question List** inside the **Add Feedback Screen** and click **Delete**.

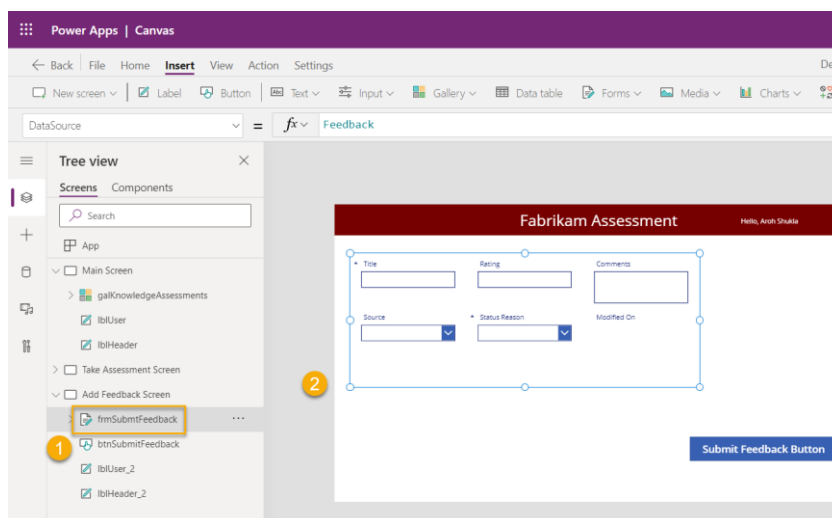


6. Select the **Add Feedback Screen**.
7. From the **Insert** tab, click **Forms** and then click **Edit**.

8. In the Property panel on the right, select **Feedback** for **Data Source**. (If you are already on the Advanced tab, you will need to switch to the Properties tab.)

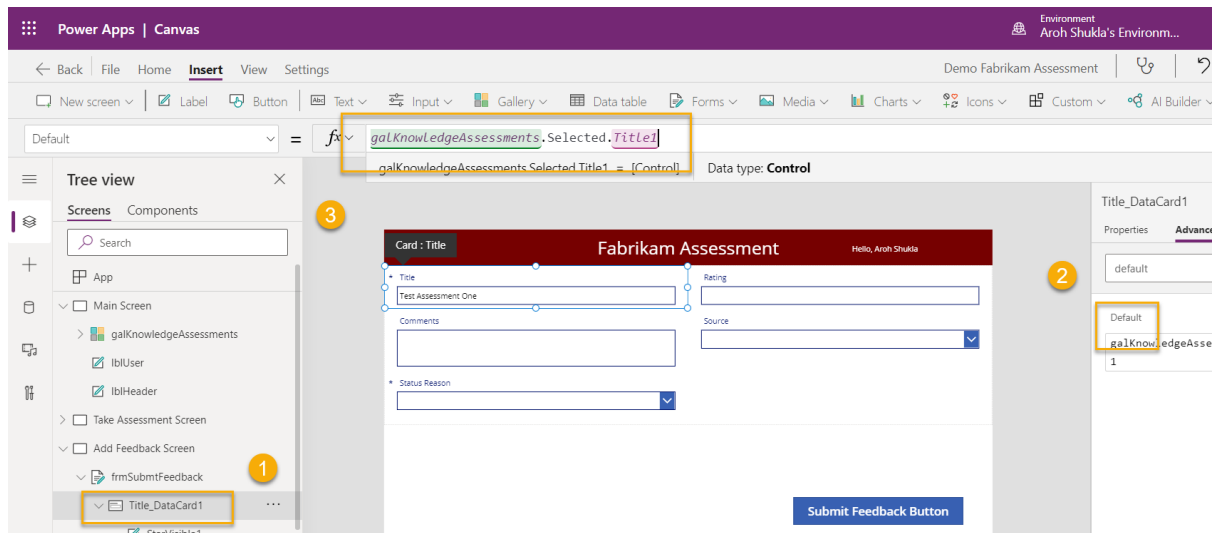


9. Go to the tree view and rename the form **Feedback Form**.
10. Resize and reposition the **Feedback Form** to your liking.
11. From the tree view, expand the **Feedback Form**.



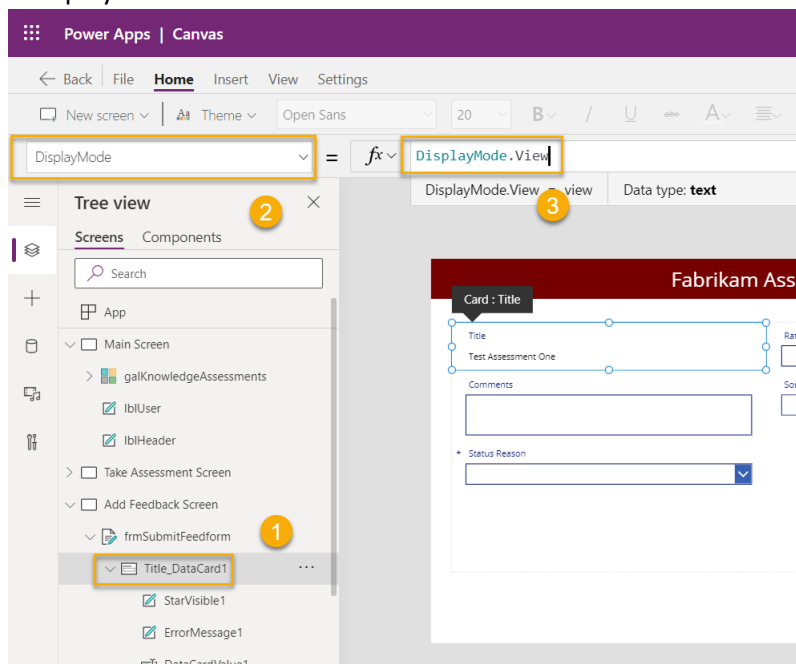
12. Select the **Title** column. In the **Advanced** pane, select **unlock** and go to the **Data** section.
13. Set the **Default** property to the **Title** of the selected **Knowledge assessment**.

'Knowledge Assessment List'.Selected.Title

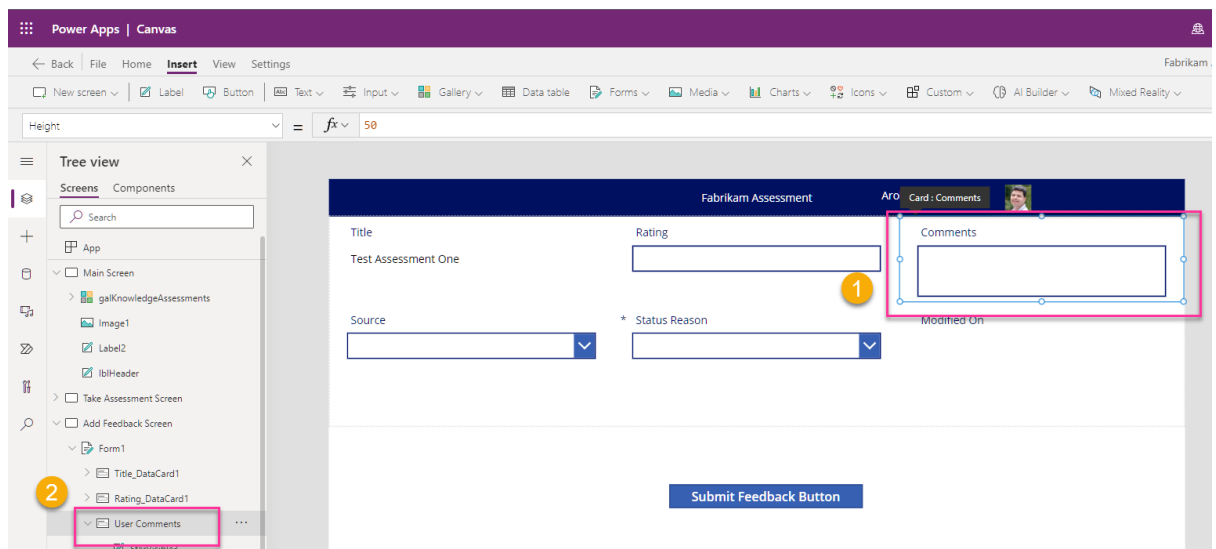
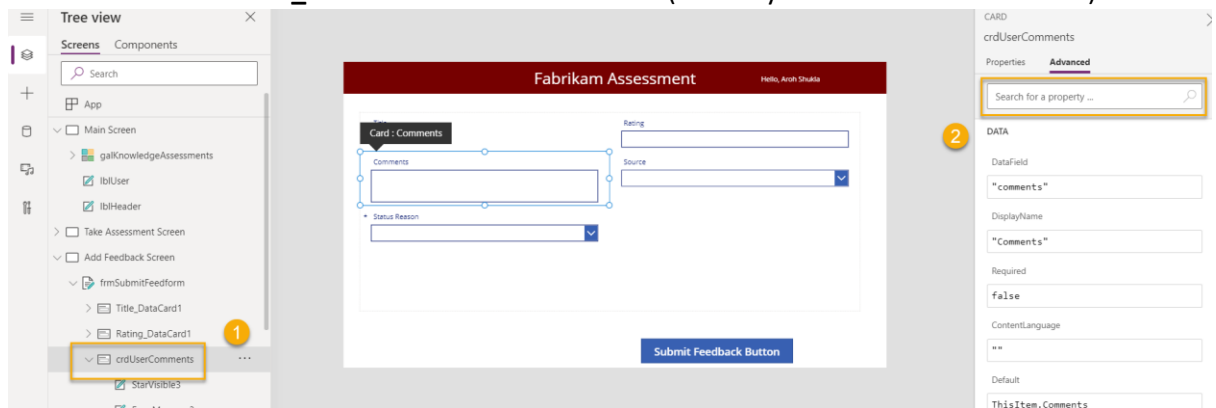


14. With the **Title** data card still selected, select the **Properties** tab. Locate the **DisplayMode** property and set it to **View**.

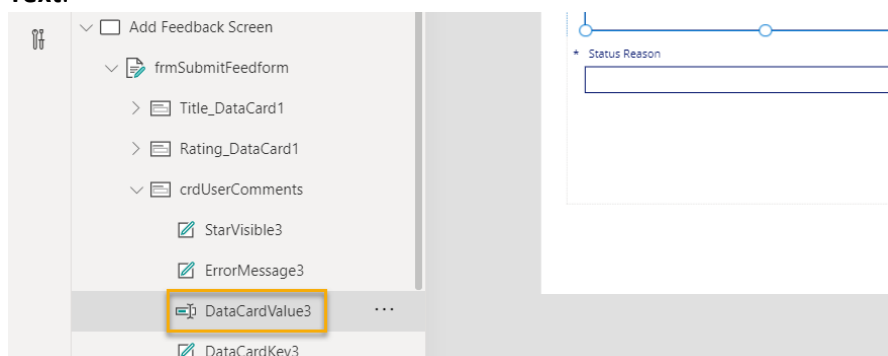
DisplayMode.View

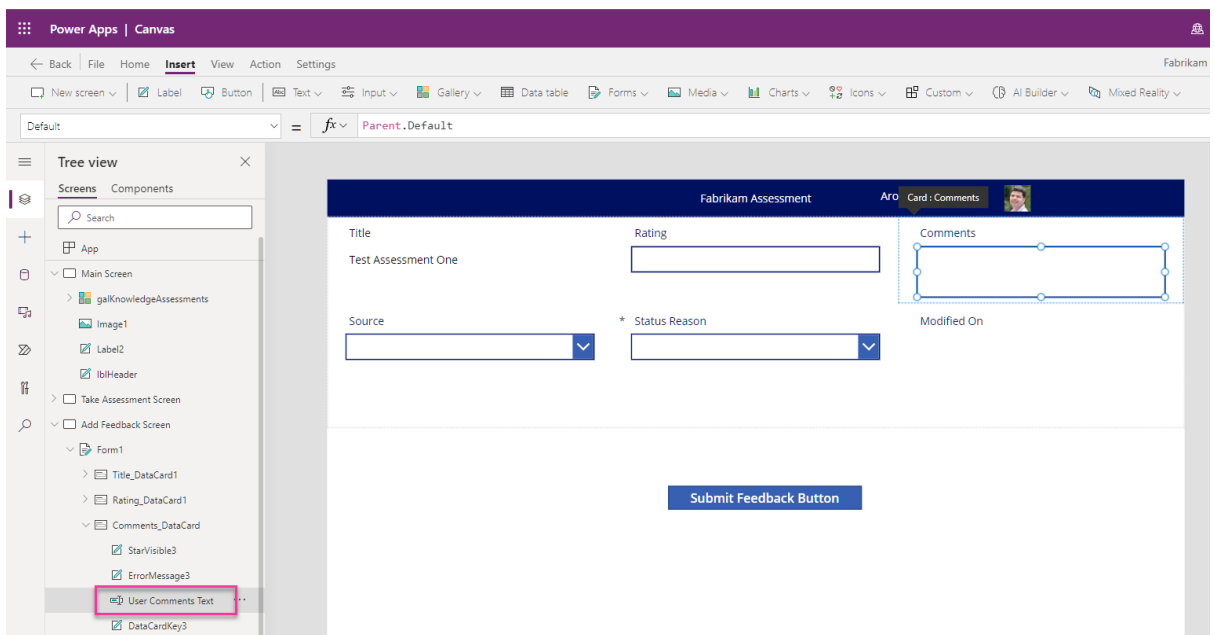
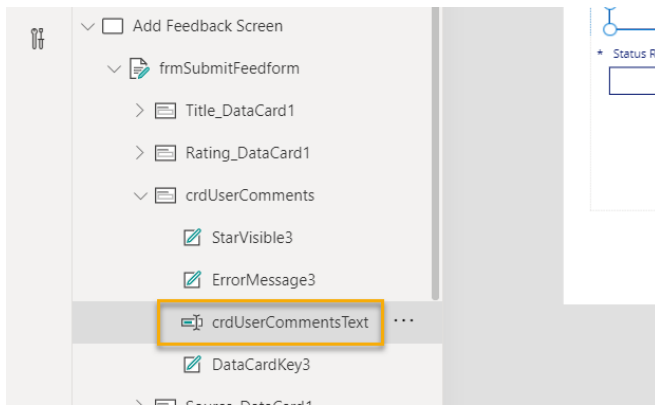


15. Rename the **Comments_DataCard** to **User Comments**. (You may need to click **Unlock** first.)



16. Expand the **User Comments** data card and rename the **DataCardValue** to **User Comments Text**.

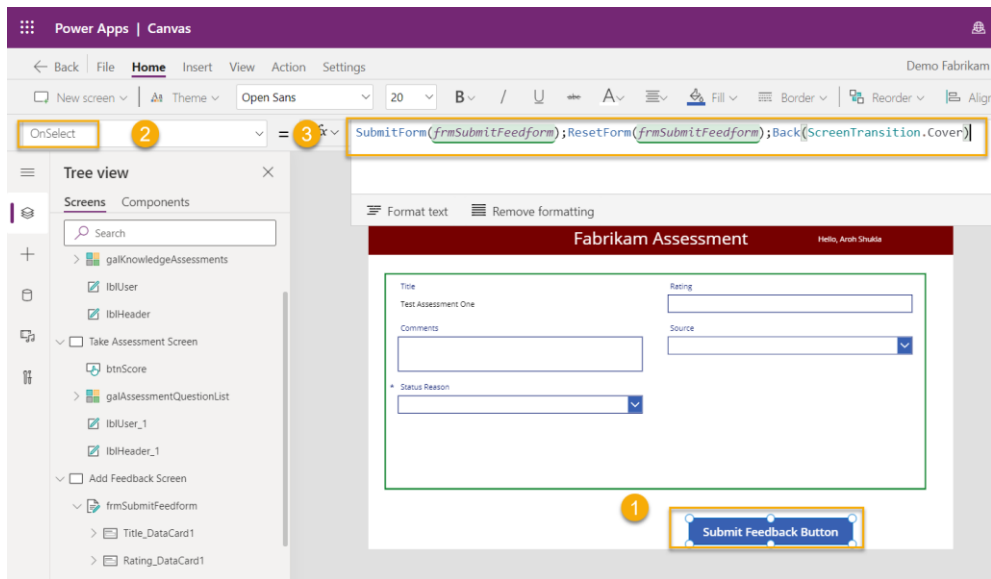




17. Select the **Submit Feedback Button**.

18. Replace the **OnSelect** property value with the snippet below. This snippet will submit the form, reset the form, and navigate back to the previous page.

```
SubmitForm('Feedback Form');ResetForm('Feedback Form');Back(ScreenTransition.None)
```

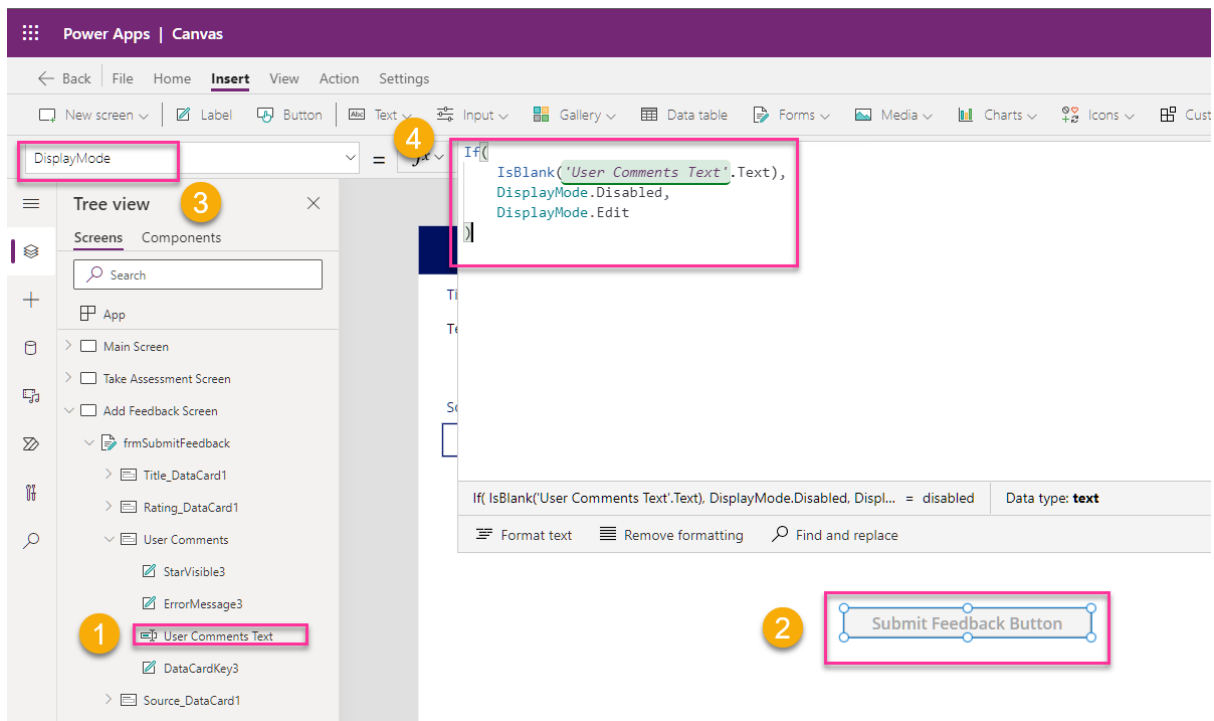


SubmitForm(frmSubmitFeedform);ResetForm(frmSubmitFeedform);Back(ScreenTransition.Cover)

19. With the **Submit Feedback Button** still selected, return to the **Properties** tab and select the **DisplayMode** property (click on the words **Display mode**).

20. Replace the **DisplayMode** property value with snippet below. This snippet will enable the button if the comments filed has value and disable it if the comments field is blank.

If(IsBlank('User Comments Text'), DisplayMode.Disabled, DisplayMode.Edit)

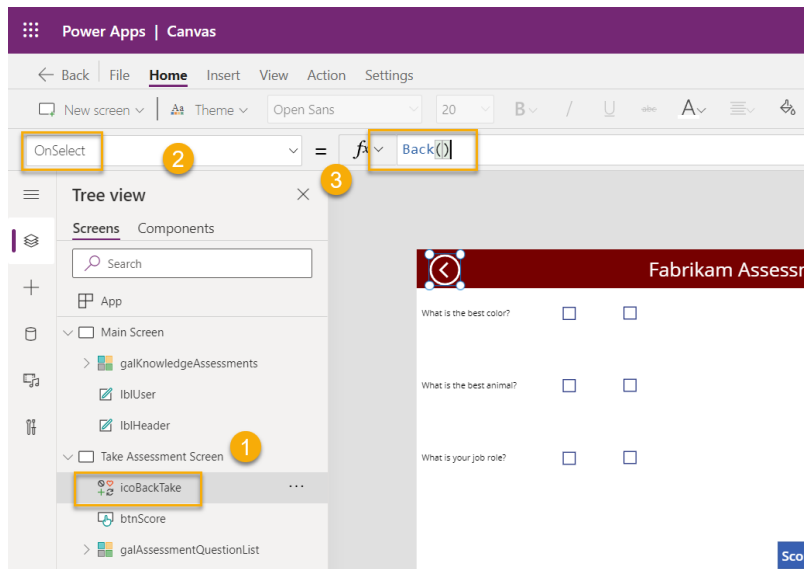


If(IsBlank(crdUserCommentsText.Text),DisplayMode.Disabled,Edit)

21. Select the **Take Assessment Screen**.

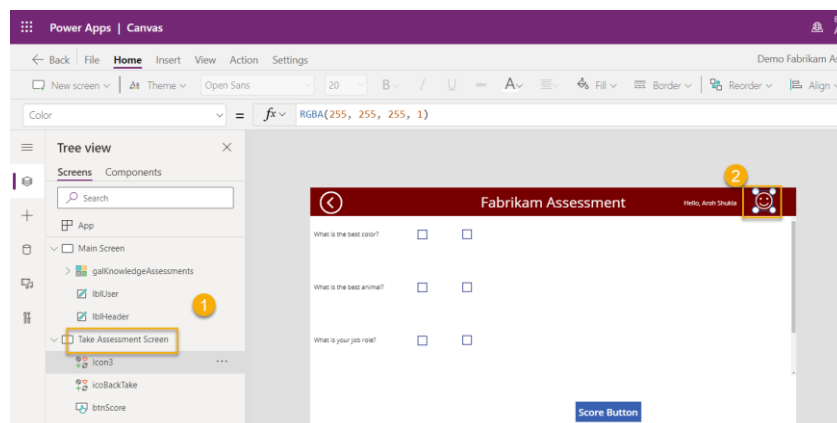
22. Go to the **Insert** tab, navigate to **Icons** in the top menu, and select **Left**.
23. Resize and place the icon on the left side of the header.
24. Set the **Color** property of the icon to **White**.
25. Set the **OnSelect** property of the icon to the snippet below. This snippet will navigate back to the previous page.

`Back()`



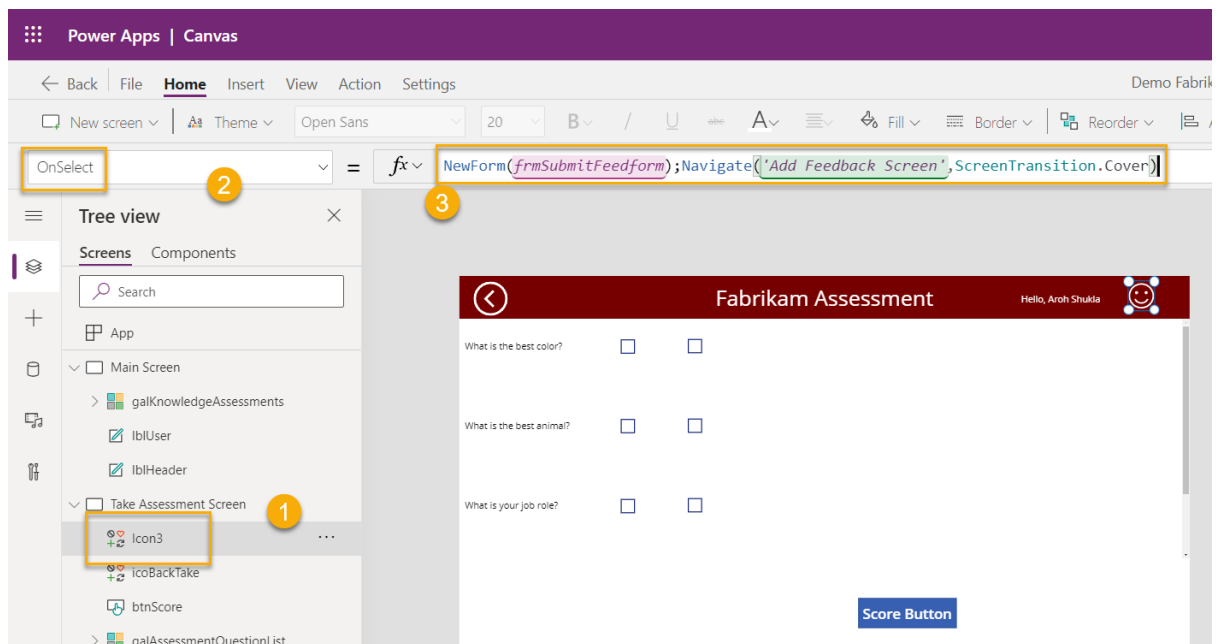
`Back()`

26. Select the **Take Assessment Screen**.
27. Click **Insert**, navigate to **Icons** in the top menu, and select the **Emoji - Smile** icon.
28. Place the icon in the right side of the header and next to **username**.
29. Set the **Color** property of the icon to **White**.



30. Set the **OnSelect** property of the Emoji icon to the snippet below.

`NewForm('Feedback Form');Navigate('Add Feedback Screen', ScreenTransition.None)`



`NewForm(frmSubmitFeedform);Navigate('Add Feedback Screen',ScreenTransition.Cover)`

31. Click **File** and **Save** to save your application.

Lab 4.8: Practice Lab – User experience

Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a project for your client Fabrikam. You have been assigned to continue work on the Fabrikam Knowledge canvas app that we started creating in the prior module. In this practice you will be providing the user with visual feedback of which questions they got right and wrong. You will also be enabling the score button only if the user has provided some answers.

Exercise 1 – Customizing the User Experience

Task 1 – Show the Assessment Result

In this task, you will show the assessment result to the user. In this task you will use a local variable **ShowResults** to indicate if the results should show. It will be updated upon the user clicking the score button. Each item will then use an expression to highlight if the answer is right or wrong, only when **ShowResults** is true.

1. Navigate to <https://make.powerapps.com>.
2. Make sure you are in your **Practice** environment.
3. Select **Solutions**.
4. Select **Common Data Services Default Solution**.
5. Select the **Fabrikam Assessment** Canvas application.
6. Click on the **Edit** button located on the command bar.
7. Wait for the app designer to load.
8. Select the **Take Assessment Screen**.
9. Select the **OnVisible** property of the **Take Assessment Screen** and replace the value with the snippet below. This snippet will re-add the Clear function and add a new function that will initialize a variable **ShowResults** and set it to **false**.

```
Clear(UserAnswers);UpdateContext({ShowResults:false})
```

10. Select the **OnSelect** property of the **score Button**.
11. Add the snippet below to the content you currently have. This snippet will add a function that will set the **ShowResults** value to **true**.

```
;UpdateContext({ShowResults:true})
```

12. Select **Answer4 Selected** checkbox of the **assessment Question List**.
13. Select the **Fill** property of **Answer4 Selected** and set it to the snippet below. This snippet will:
 - Set the Fill Color to White if ShowResults is false.
 - Set the Fill Color to Red if ShowResults is true, the checkbox is checked, and the Points value is less than 0.

- Set the Fill Color to Green if ShowResults is true, the checkbox is checked, and the Points value is more than 0.

If>ShowResults, If('Answer4 Selected'.Value = true && ThisItem.'Answer 4 Points' > 0, Green, If('Answer4 Selected'.Value = false, White, Red)), White)

14. Select the **Fill** property of **Answer3 Selected** checkbox and set to the snippet below.

If>ShowResults, If('Answer3 Selected'.Value = true && ThisItem.'Answer 3 Points' > 0, Green, If('Answer3 Selected'.Value = false, White, Red)), White)

15. Select the **Fill** property of **Answer2 Selected** checkbox and set to the snippet below.

If>ShowResults, If('Answer2 Selected'.Value = true && ThisItem.'Answer 2 Points' > 0, Green, If('Answer2 Selected'.Value = false, White, Red)), White)

16. Select the **Fill** property of **Answer1 Selected** checkbox and set to the snippet below.

If>ShowResults, If('Answer1 Selected'.Value = true && ThisItem.'Answer 1 Points' > 0, Green, If('Answer1 Selected'.Value = false, White, Red)), White)

Task 2 – Disable/Enable Button

In this task, you will disable the score button if there are no answers selected and enable it when there is at least one answer selected.

1. Select the **Score Button**.
2. With the **ScoreButton** selected, set the **DisplayMode** property to the snippet below. This snippet will disable the button if there are no answers selected and enable it if there is at least one answer selected.

If(CountRows(UserAnswers) > 0, DisplayMode.Edit, DisplayMode.Disabled)

Task 3 - Create the Results Screen

In this task, you will copy the Main Screen and rename it Results Screen.

1. Click on the ellipses button of Main Screen and select Duplicate Screen.
2. Click on the ellipses button of the new screen and click Rename.
3. Rename the new screen **Results Screen**.
4. Select the **Knowledge Assessment List** under the **Results Screen**. Click on the ellipses button and click **Delete**.
5. Make sure the **Insert** tab is selected. Click **Gallery** and select **Horizontal**.
6. The **Data source** pop-out will come to view. Select **Knowledge Test Results** for data source.
7. Rename the gallery to **User Result List**.
8. Delete the image in **User Result List**. You will receive an error with a red X - Hover over the X and select **Edit in the formula bar**.

9. Delete the formula in the **fx** bar to remove the error.
10. Select the **User Results List** gallery.
11. In the **Advanced** tab, select the **Items** property and set it to the snippet below.

Filter('Knowledge Test Results', Owner = CurrentUser)

11. Return to the **Properties** tab. Click **Edit** on the Fields property. For Title, using the dropdown, select the **createdon** value.
12. For the Subtitle element, using the dropdown, select **crxxx_totalpoints**. (crxxx refers to your unique prefix.)
13. Select the **Results Screen** and navigate to the **Insert** tab. Add the **Left** icon to the upper left corner. Change the color to **white**.
14. Set the Left icon OnSelect to this snippet.

Back()

Task 4 – Add Button for Results Screen

In this task, you will add a button to the Main Screen. This button will navigate to the Results page.

1. Select the **Main Screen**.
2. Go to the **Insert** tab and click **Icons**.
3. Select the ... **More** icon.
4. Place the icon in the left side of the header.
5. Change the **color** of the icon to **White**.
6. Select the **OnSelect** property of the icon and provide the function below. This function will run when the icon is clicked and navigate to the Results Screen.

Refresh(Users);Navigate('Results Screen', ScreenTransition.None)

Task 5 – Test Your Work

In this task, you will run and test the applications.

1. Select the **Main Screen**.
2. Click **Play**.
3. Click on the ... **More** icon.
4. You should navigate to the **Results Screen**. This page might be empty because you didn't take any tests yet.
5. Click on the **Back** button.
6. You will be taken back to the **Main Screen**.
7. Click on the take test icon of one of the **Assessments**.

8. The questions should load, and the **Score Assessment** button should be **Disabled**. This is because you must select at least one answer before you can submit your answers.

Note: If you do not see any data, you need to use the model-driven app to create some assessment questions with answers.

9. Select some answers.
10. The **Score Assessment** button will now be enabled.
11. Click on the **Score Assessment** button.
12. The answers that have more than 0 points will become **Green** and the answers that have 0 zero points will become **Red**.
13. Click on the **Emoji** button.
14. You will be taken to the **Feedback Screen**.
15. The Submit Feedback button will be **Disabled**. This is because you must provide a comment before you can submit the feedback.
16. Provide a **Comment**.
17. The Submit Feedback will become **Enabled**.
18. Click **Submit Feedback**.
19. Your **Feedback** will be submitted, and you will navigate back to the **Assessment Screen**.
20. Click on the **Back** button.
21. You will go back to the **Main Screen**.
22. Click on the ... **More** icon.
23. You will be taken to the **Results Screen**. You should see at least one result in the **Results** list.
24. Click on the **Back** button.
25. You will go back to the **Assessments Screen**.
26. Close the **Preview**.
27. Click **File** and **Save**.
28. Click **Close** to close the app designer.

Task 6 – Other things you can try

Now that you have built a basic canvas app that interacts with the Dataverse, here are some things you can try on your own to make the app better. **The following steps are optional and are more advanced to challenge your learning. These are not expected or required to all be completed.**

- Try different ways of presenting the Test Results – for example you could try the Data Grid control.

- Add an image control to the Main Screen and show the user's profile image using `User().Image`. Note: You will need to setup a profile image for the user you are using for it to show more than the default image.
- You can add an image to the Knowledge Assessment table and then change the Main Screen list of Assessments to show the image. Note: after you add the table image in Dataverse, you will need to upload an image via the model-driven app. You will also need to go to View-Data Sources and refresh the Knowledge Assessment table metadata.
- Think about how else you might improve the app using the knowledge you've gained during the practices. You can always Save As your app, and try any changes you want without impacting your completed work!

Power Apps Portal

Search

Environment
arohmvp365 (default)

Canvas app from blank
Canvas app

Model-driven app from blank
Model-driven app

Portal from blank
Portal

All templates →

Learning for every level

Get started with Power Apps
Beginner 51 mins

Author a basic formula to change properties in a...
Beginner 42 mins

Work with external data in a Power Apps canvas app
Intermediate 43 mins

Manage and share ap Power Apps
Beginner 4

Your apps

1

Your trial portal app will expire in 28 days. To keep it, convert it to production. Learn

2

Edit

Browse

Share

Settings

Delete

Details

Name	Owner	Type
PL-200 Demo Emp Info	Aroh Shukla	Canvas
PL-200 Demo Employee I	Aroh Shukla	Canvas
My Portal Name	Aroh Shukla	Portal
Portal Management	Aroh Shukla	Model-driven

+ New page

Delete

Pages and navigation

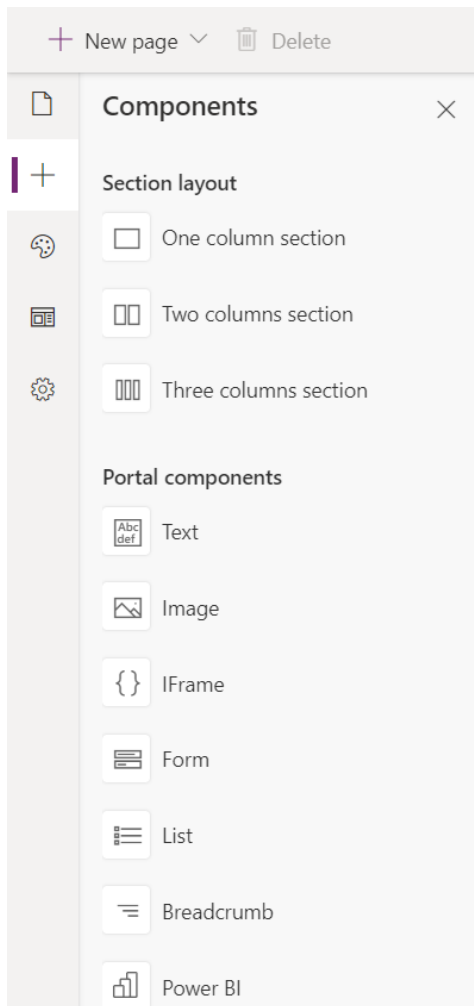
+ New page

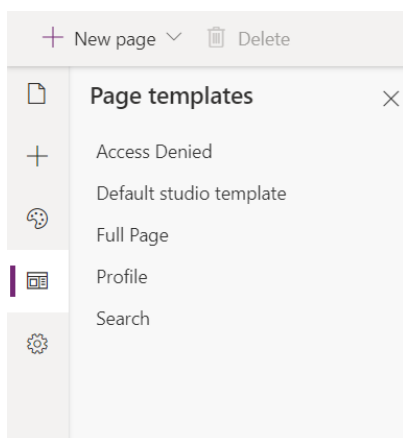
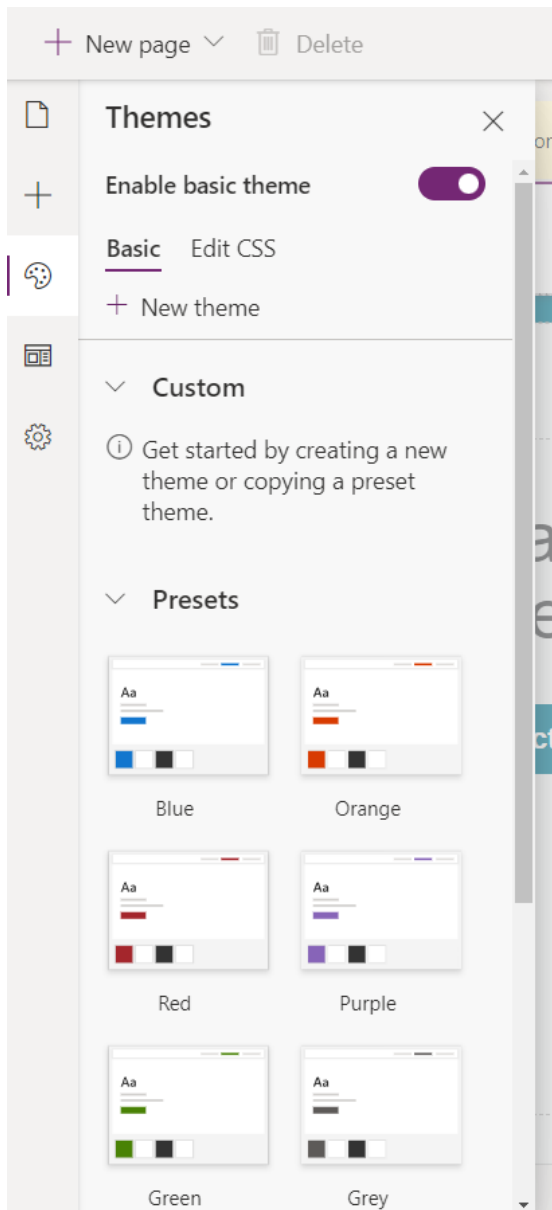
Home

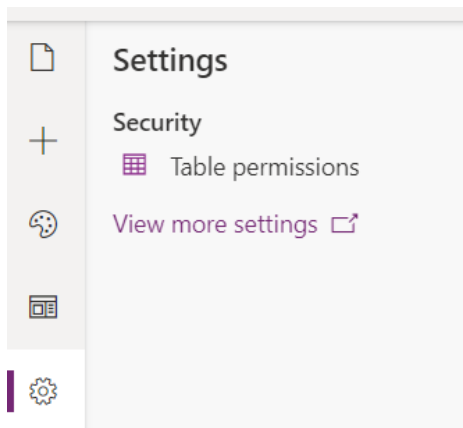
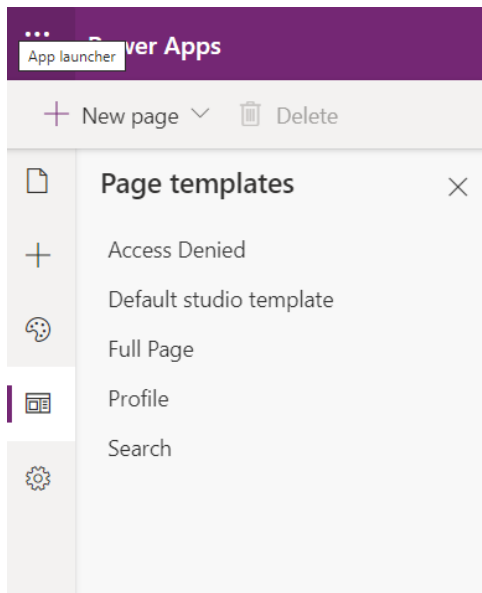
Pages

Contact us

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Portal Management

Portal Languages

Web Pages

Web Templates

Security

Contacts

Table Permissions

Invitations

Publishing State T...

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Website Access Pe...

Ads

Show Chart

Active Site Set

Name ↑

Authenticat

Authenticat

Authenticat

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