

Module 4: Make canvas apps with Power Apps

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 environment.
3. Select **Solutions**.
4. Select **Assessment**.
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 environment.
3. Select **Solutions**.
4. Select **Assessment**.
5. Select the **Fabrikam Assessment** Canvas application.
6. Click on the **Edit** button located on the command bar.
7. 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.
8. Click on the **Data Sources** button.
9. 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 Studio, click on the **Back** button located on the top left of the page.
14. Do not close the App Studio.

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**.
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'})

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

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'})

32. Set the **OnUnCheck** property to the snippet below. This snippet will remove the points of the uncheck answer from 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 from 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 from 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, click **Input** and then 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**.