Getting Started with PowerApps

Lab Time: 60 minutes

Lab Folder: C:\Student\Modules\04_PowerApps\Lab

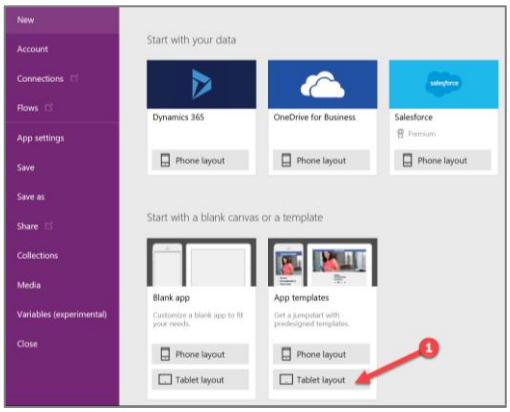
Lab Overview: In this lab you will learn how to ….

Lab Prerequisite: Note that you will need a valid twitter account in order to complete this lab.

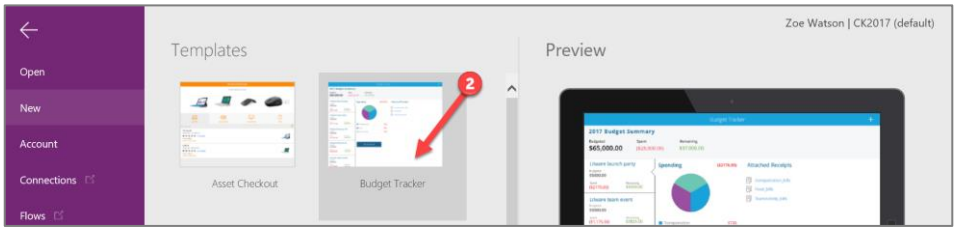
Exercise 1 - Create an App from Template

In the first lab you will begin by creating a Budget Tracker App from a built-in template. For this exercise, use PowerApps Studio for Web, however the same steps apply for PowerApps Studio for Windows.

1. Run the PowerApps app from the Start Menu, this will launch PowerApps Studio. If you do not see PowerApps in your Start Menu, search for PowerApps and then click on the app to launch. In PowerApps Studio **New**, click **Tablet layout** under *App Templates*.

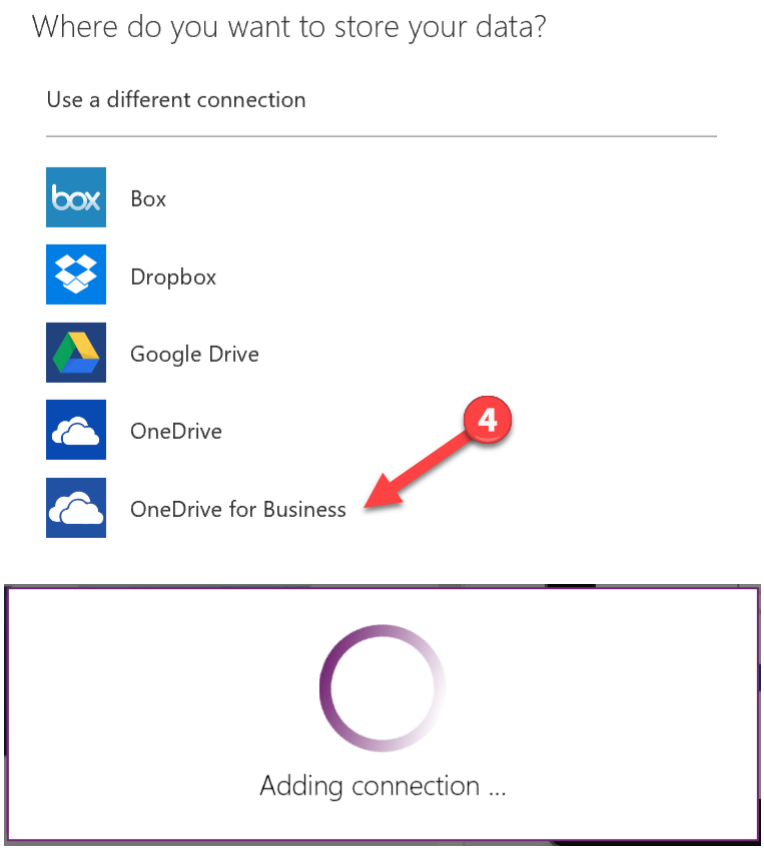


2. Click on Budget Tracker.

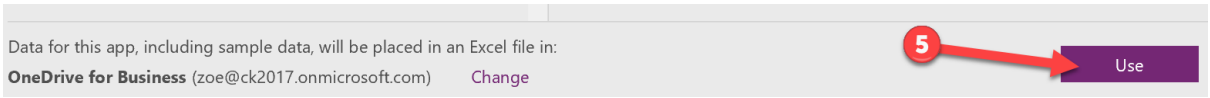


3. Next you will need to choose a cloud connection to use for where the app will save the data to. At the bottom of the panel, click **Choose**.

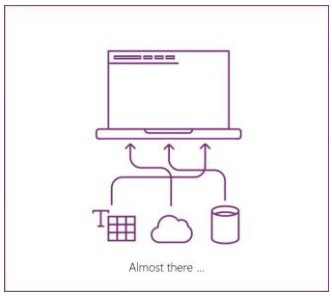
4. Click **OneDrive for Business** and wait for the connection to get added.



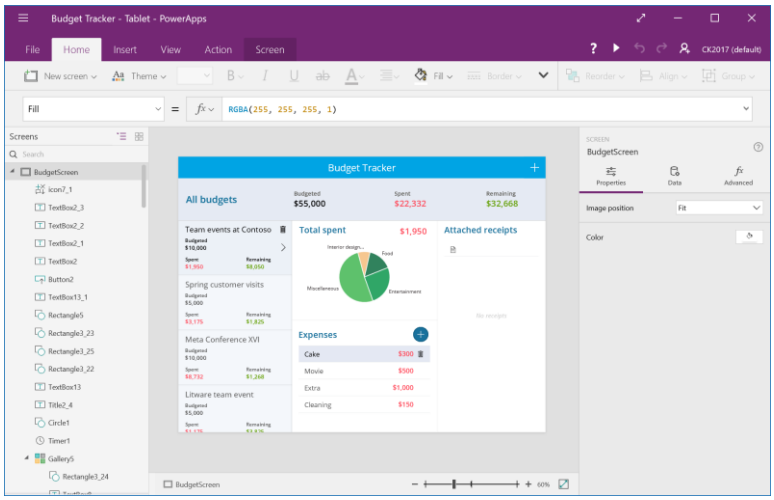
5. Once the connection has been added, it will show up below then click **Use**.



6. A dialog window will display while it's creating the app and when finished the app will be open to the default screen.



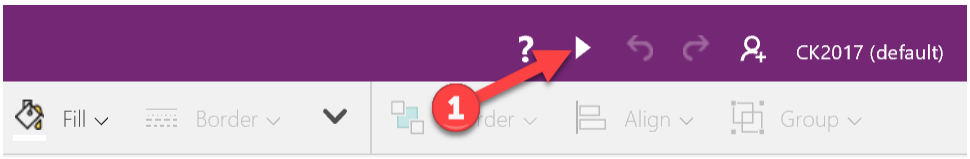
7. Once the app is created, it will open in PowerApps Studio default workspace. The default workspace is where you'll spend most of your time customizing your apps.



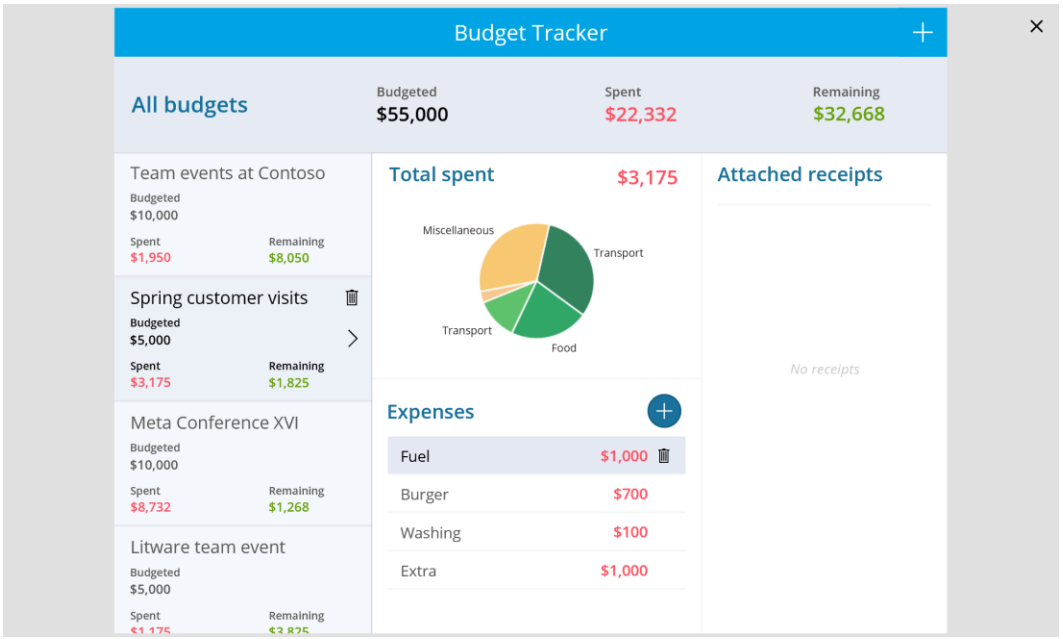
8. Run the App. Before you make any changes to the app, follow the steps in this section to explore how the app works in **Preview** mode.

a) Design and develop apps in the default workspace, but test them in **Preview** mode before you share them with others.

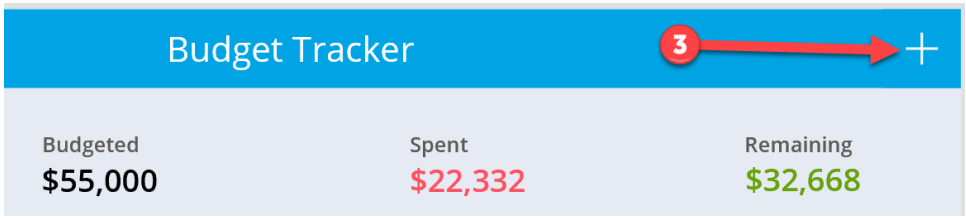
b) To preview the app, click on the **Preview** icon (or press **F5** on the keyboard).



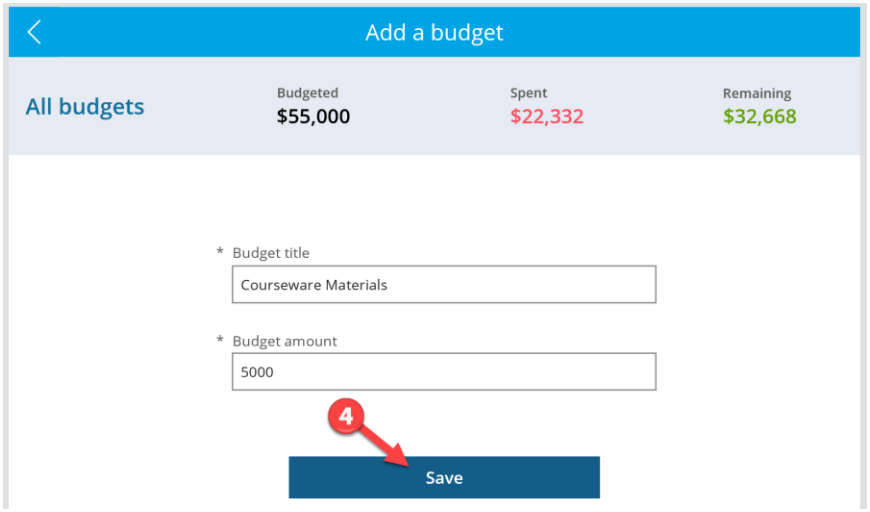
c) Navigate around in the app in preview mode. Notice the data changes depending on which budget item you click on.



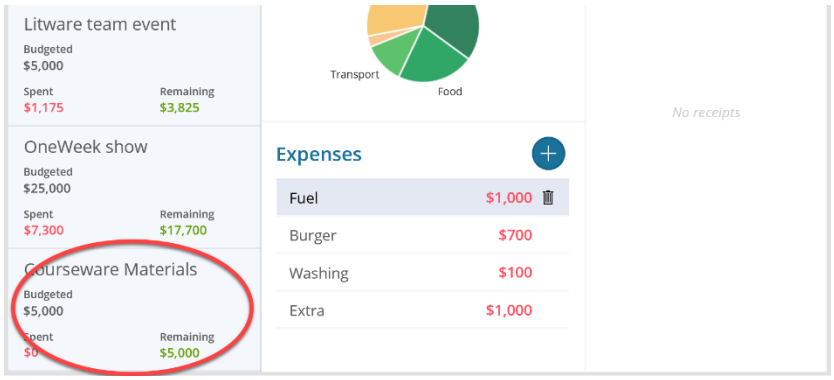
9. To preview what it's like to add a new item, click the **plus +** icon.



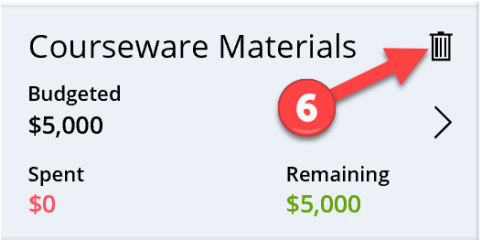
10. Add a new item then click **Save**.



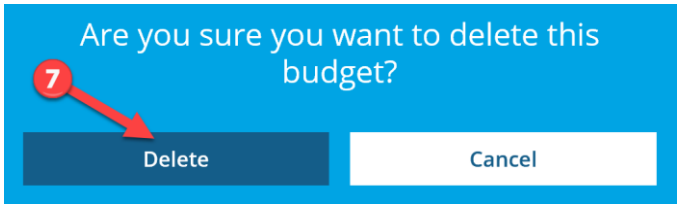
11. Notice the new item you entered has been added.



12. To delete, click the item and the click **delete** icon.



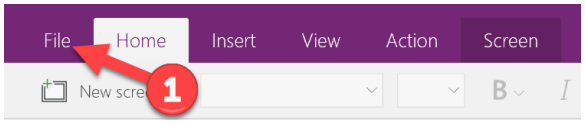
13. When prompted, click **Delete**.



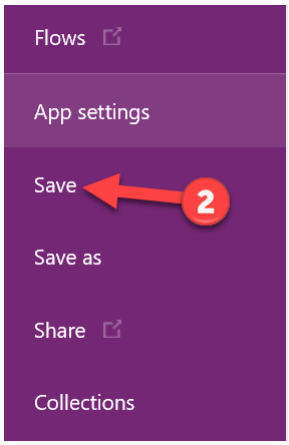
14. To exit preview mode, click the **X** located upper right-hand side.

Now let's go ahead and save the app.

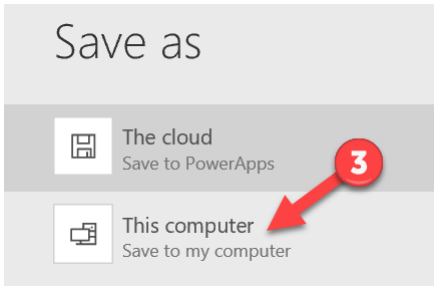
15. Click on the **File** tab.



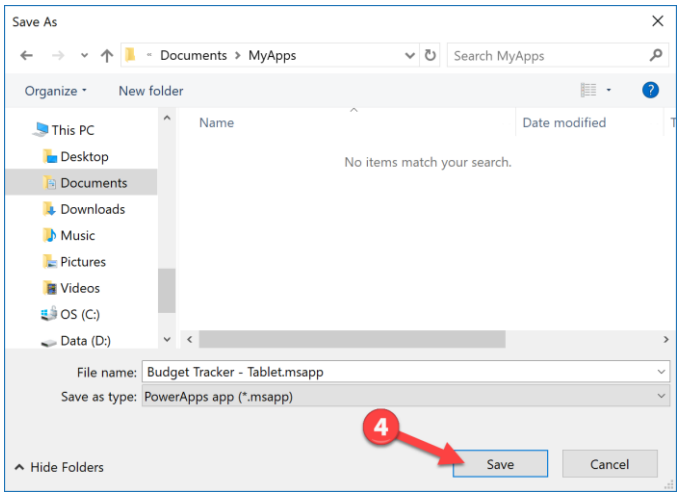
16. Click **Save**.



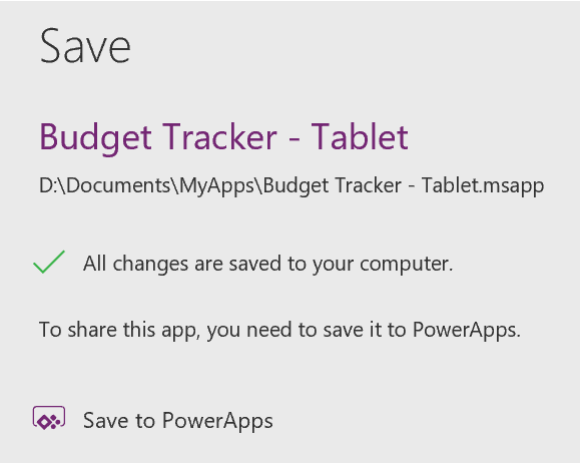
17. You'll have two options to save: *The cloud* or *This computer*. Click **This computer** to save the app locally.



18. It may default to the *Documents* folder. Create a new folder called **MyApps**, open it and then save the file to the folder. *(If you saved to a different location, make note of the location you saved the app too.)*



Once the app is saved locally, you will see the success message as well as see a link Save to PowerApps. You would only want to click on this if you are ready to share your app however since you are going to make more changes, do not click on this option.



Delete Sample Data

PowerApps created from templates include sample data when the app is created. You have a choice to delete the sample data especially if you decide to customize the app and use it for your business.

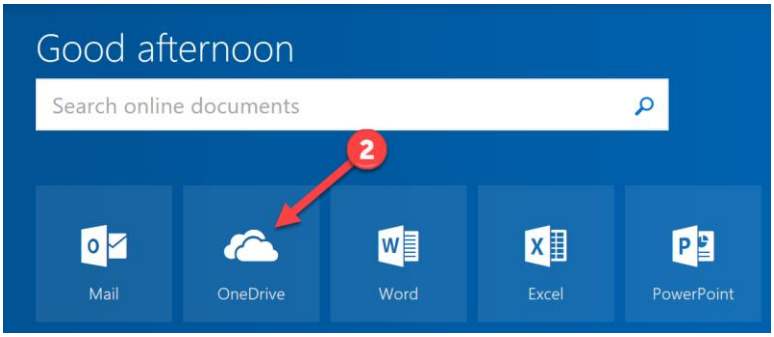
There are two ways to delete sample data from an app you created from a template:

Option 1: Delete the items directly in the app. With this method, you must delete each item one by one until all are deleted.

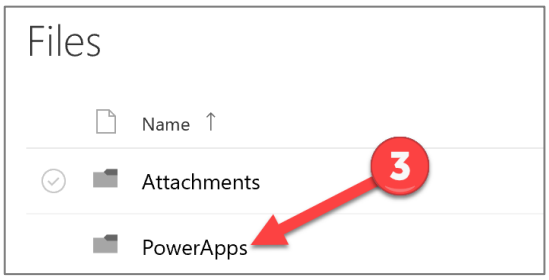
Option 2: Go directly to the Excel file where the app data is being stored and remove the data from the file. This method is quicker and more efficient.

19. Delete sample data:
    a) Before making updates to the data, go ahead and close the app by clicking on **Close**.

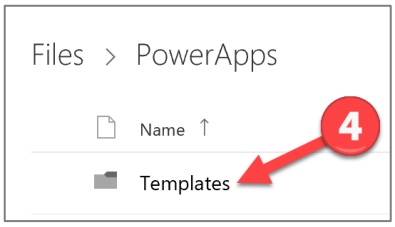
    b) Since the data is stored in OneDrive for Business you will need to open OneDrive in Office 365. Open browser, navigate to https://portal.office.com and click **OneDrive** tile.



20. You will see two folders in your OneDrive. Attachments and PowerApps. Click on **PowerApps**.

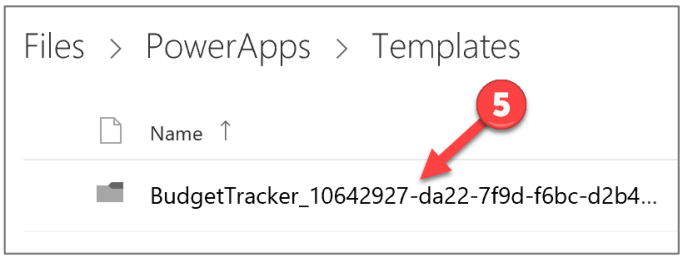


21. Click on Templates

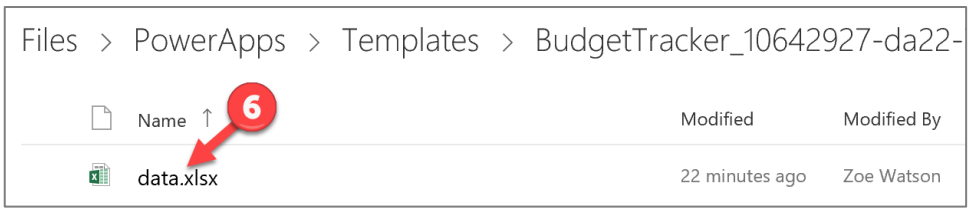


You will see a folder with name prefix 'BudgetTracker' followed by a GUID or you may see many folders with the name prefix 'BudgetTracker'. Each time you create an app from a template, a folder for that template is created for you on the storage account you choose to use for the app. If you have many folders for the same app, open the most recent one.

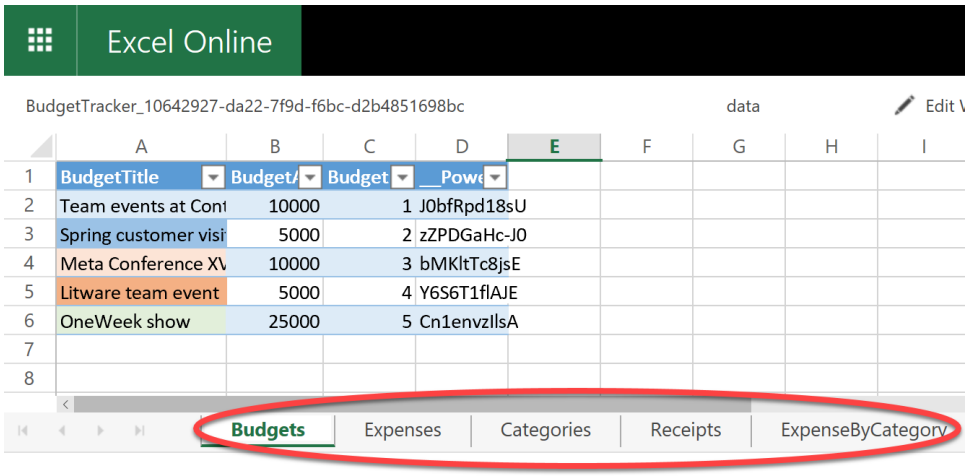
22. Click on the BudgetTracker_xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx folder.



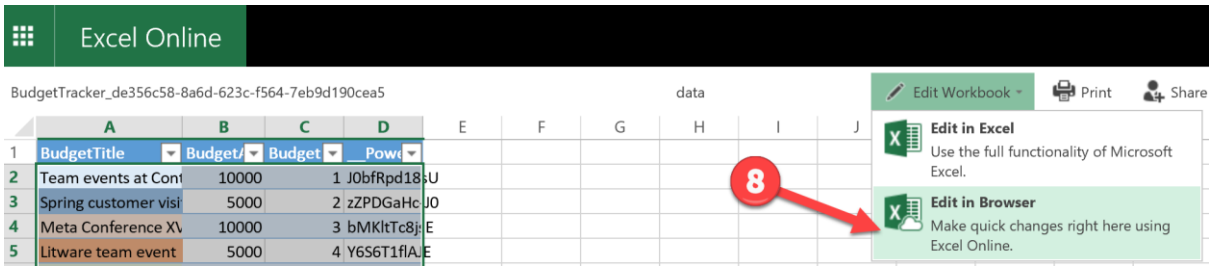
23. You will see a file named **data.xlsx** that contains sample data for the 'Budget Tracker' app. Go ahead and click on the file to open it in Excel Online.



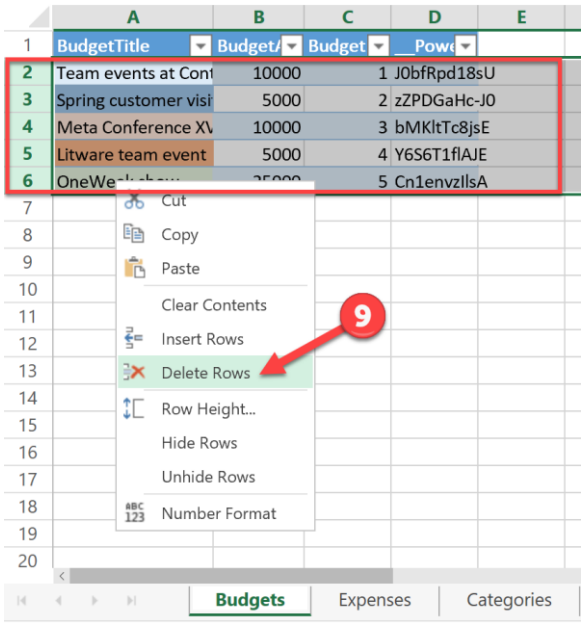
24. You will now see all the tables that contain data for the 'Budget Tracker' app created from template. Notice tables *'Budgets', 'Expenses', 'Categories', 'Receipts'*, and *'ExpenseByCategory'*.



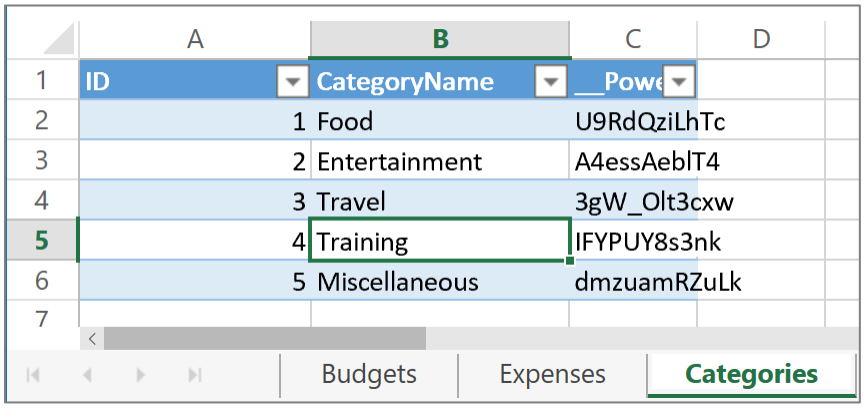
25. To edit the workbook, click **Edit Workbook** then choose **Edit in Browser**.



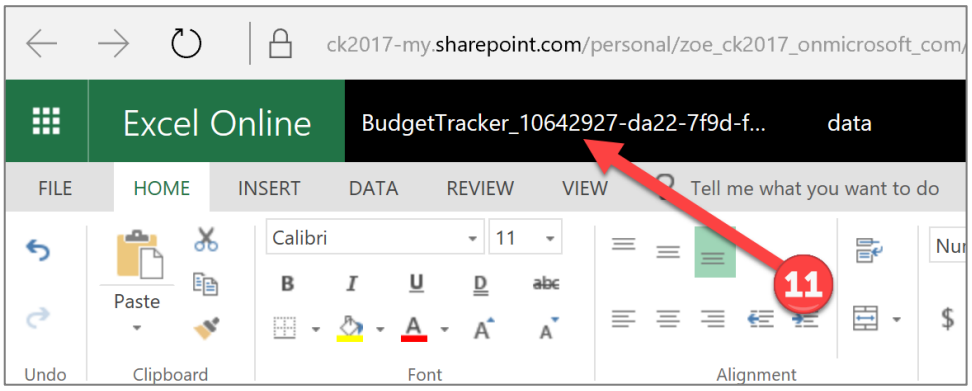
26. You can remove all the data rows (except the header row) from *'Budgets'*, *'Expenses'*, *'Receipts'* and *'ExpenseByCategory'* tables. Select the rows to delete, right-click and choose **Delete Rows**. Repeat the steps for each of the sheets listed above.



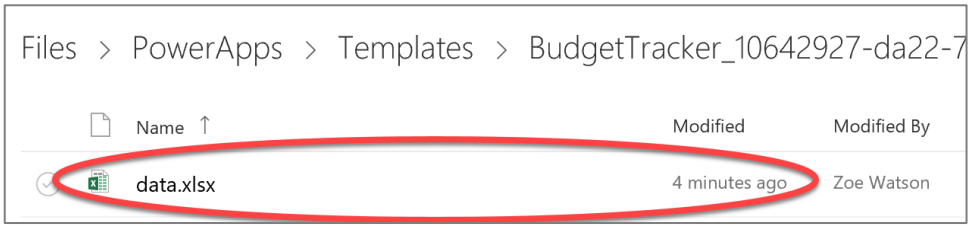
27. For the *'Categories'* table, you can modify the rows changing the expense categories to something more related to you or keep it the same.



28. To navigate back to the folder, click on the **BudgetTracker_xxxxxxxx..** link located at the top as indicated in the screenshot below.



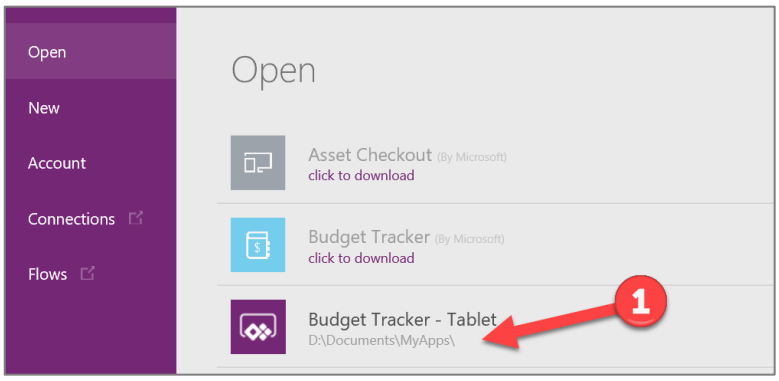
29. You should now be back in the folder and see that your data.xlsx file has been updated.



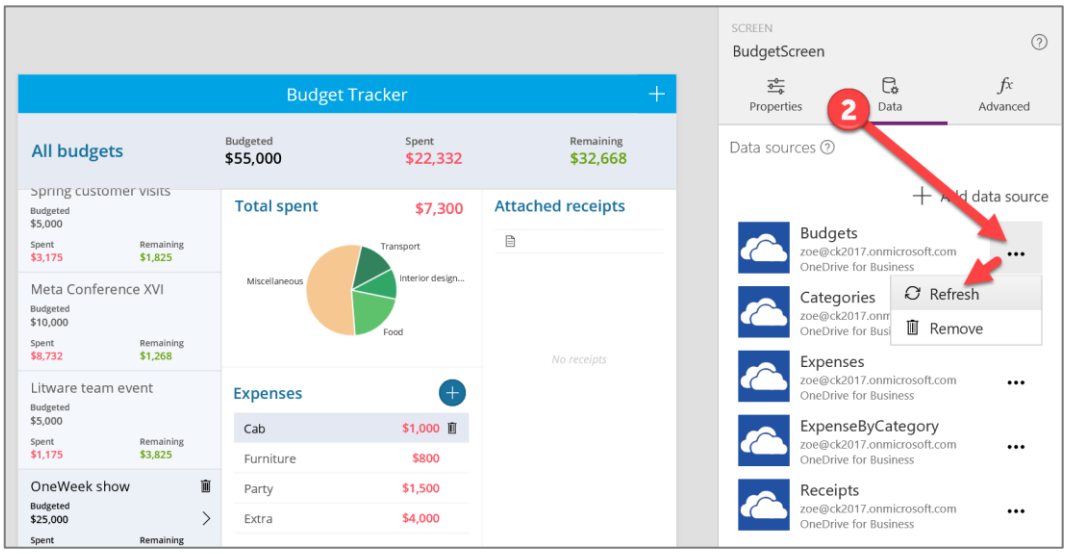
Preview App with Updated Data

Now that you deleted the sample data for the *Budget* Tracker app, go back to the PowerApps Studio for Windows app.

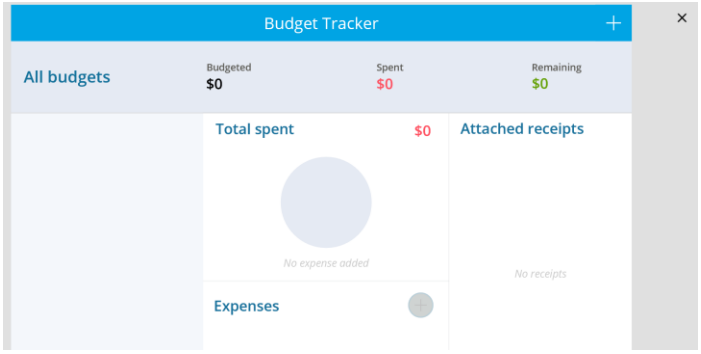
30. Since you closed the app in earlier steps, you should be on the Open panel. Click **Budget Tracker – Tablet** to open the app.



31. The app will still look like there is sample data in it. To refresh the data, click on the **Data panel** > **ellipses …** > **Refresh** for **Budgets**. Repeat for the remaining data sources.



32. Once the data is refreshed, the app will change showing no data. Go ahead and preview the app and verify it shows no data. To exit preview mode, click the **X**.

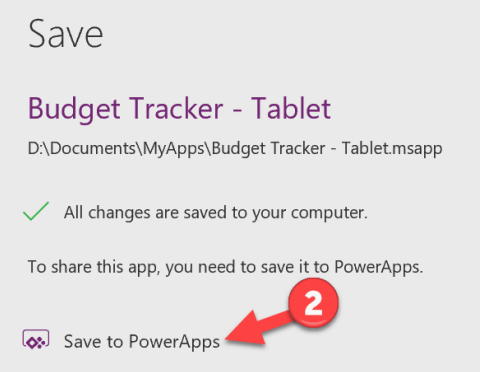


Save and Share App

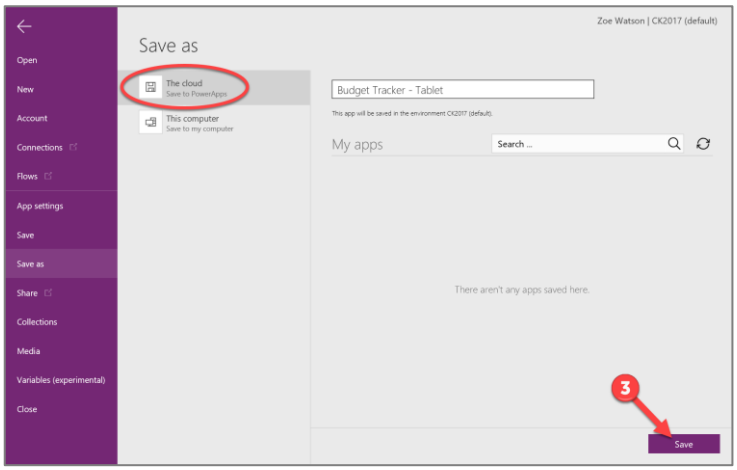
To save and share the *Budget Tracker* app, follow the steps below:

33. Click the **File** tab.

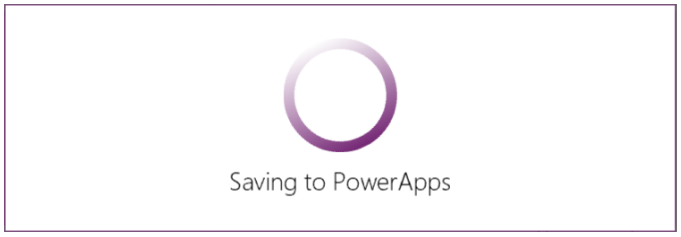
34. From Save, click Save to PowerApps.



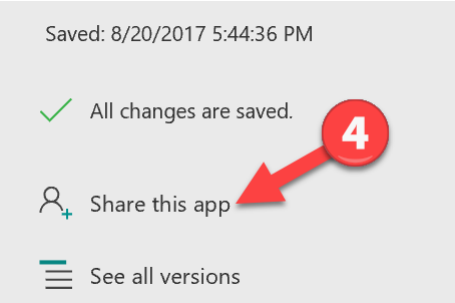
35. Ensure **The Cloud** is selected, then click **Save**.



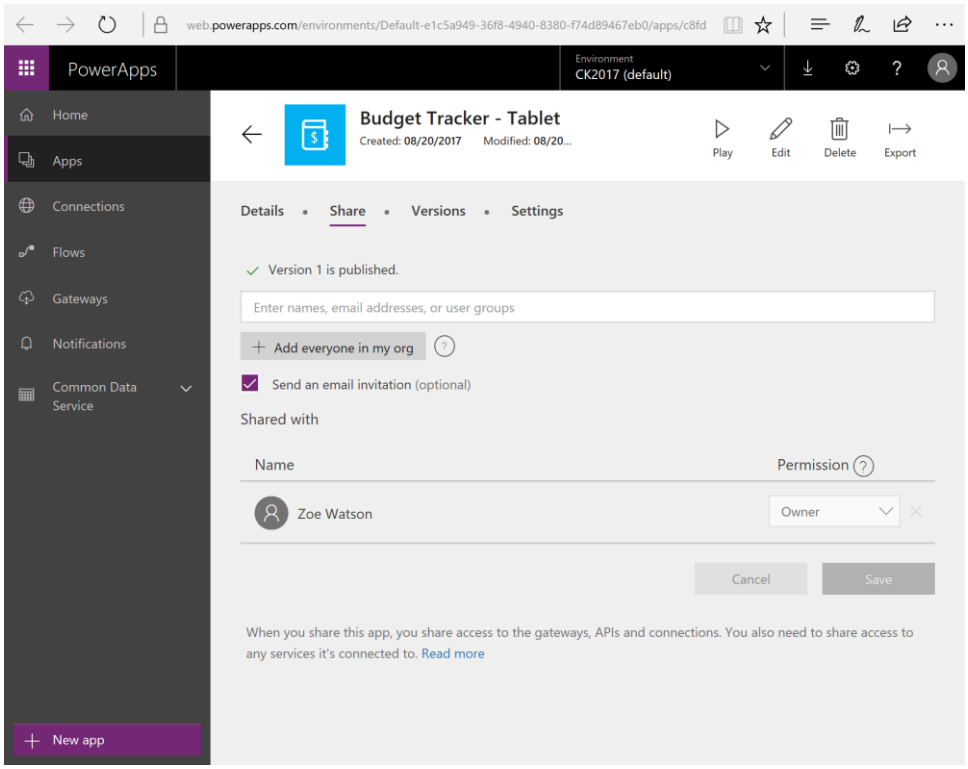
36. Watch it spin.



37. Click Share this app.

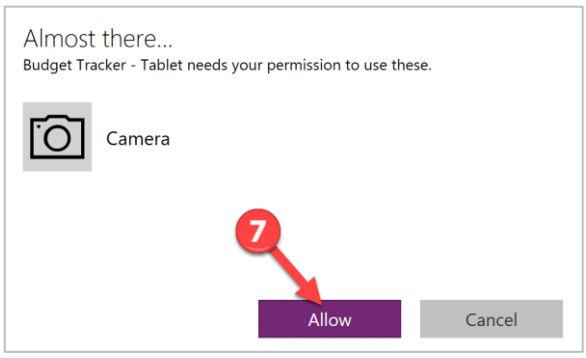


38. The browser will open the *Share* settings page for the *Budget Tracker – Tablet* app in https://web.powerapps.com. Here is where you can add more people to share the app with or Add everyone within your org. Since your trial tenant has only one user, do not worry about adding anyone else at this time and proceed with the next step.

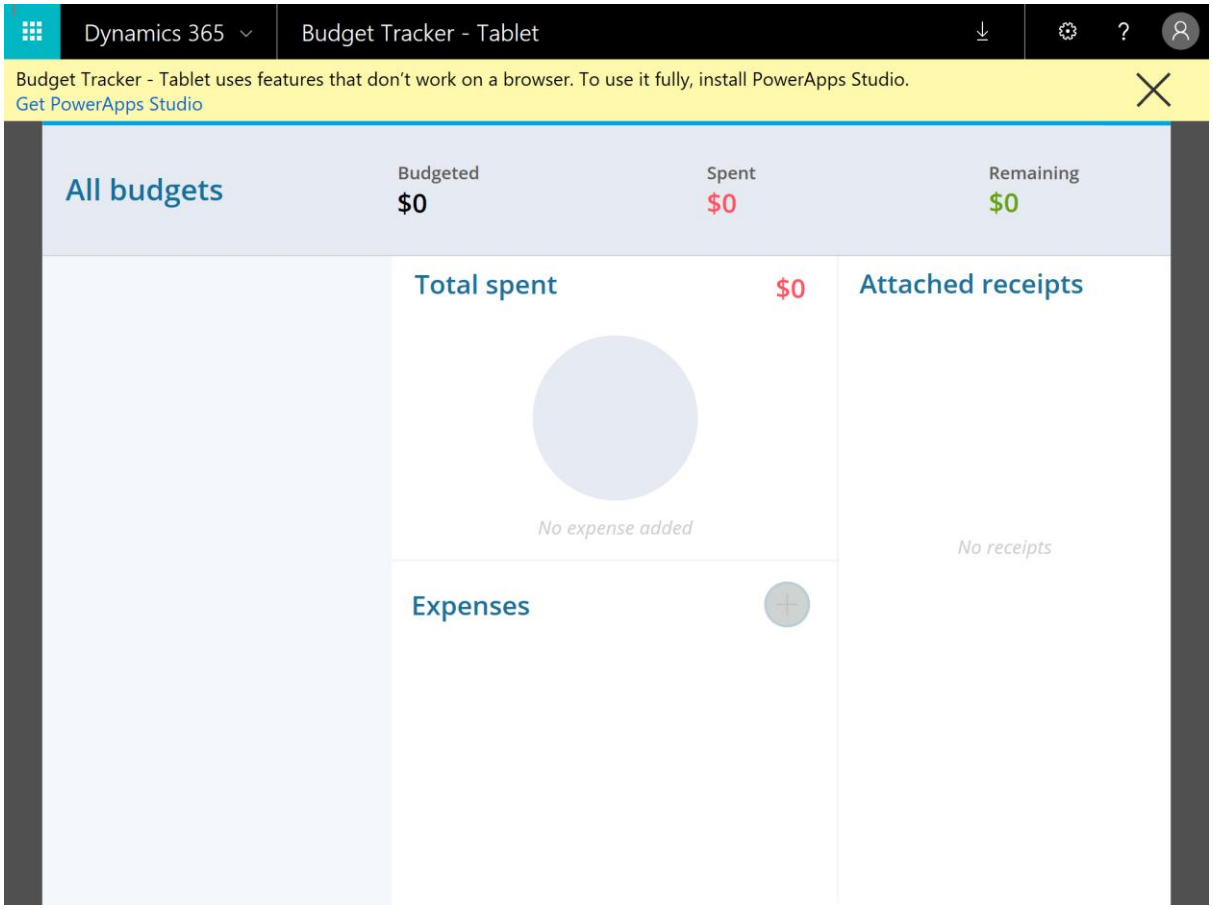


39. To preview the app in the browser, click **Play**.

40. Since the app uses the Camera, you may get Windows prompt to grant the app permissions to the computer's camera. If you get prompted, click **Allow**.



41. The app will open in Dynamics 365 and you may see a warning message about features that don't work on a browser. You can click the **X** and proceed to interact with the app.



Because the app was built for a tablet, some features may not work in the browser however this app should work fine if using the Edge browser.

Exercise 2 - Create App from SharePoint List

In PowerApps, you can automatically generate an app in which users can manage items in a custom SharePoint Online list. The app will have three screens in which users can:

BrowseScreen1 - browse through all records in the list

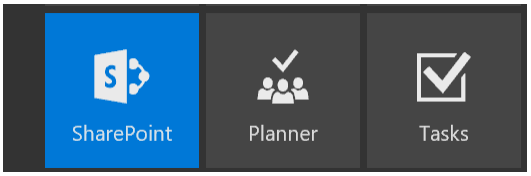
DetailsScreen1 - view all fields for a specific record

EditScreen1 - create or edit a record

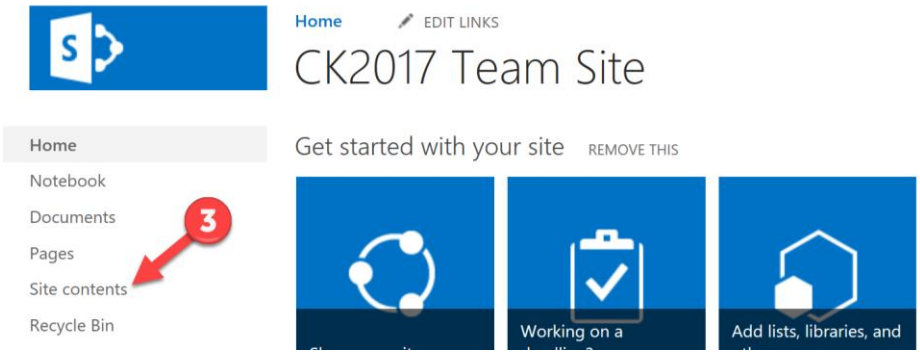
If you create an app of a custom list from the SharePoint Online command bar, the app appears as a view of that list. You can also run the app on a Windows Phone, iOS, or Android device, in addition to a web browser.

You can add data from a custom list but not a library. At this time, not all types of columns are supported and not all types of columns support all types of cards.

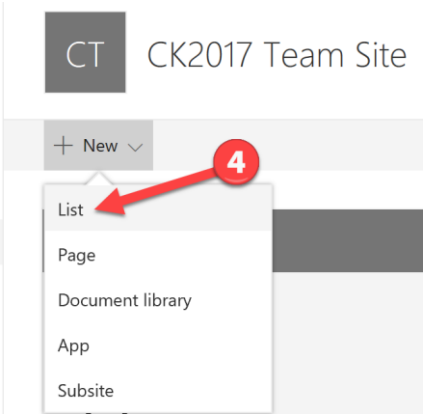
1. Create Vacation Request Custom List
   a) Click on the Office 365 **app launcher** and then click on **SharePoint** tile.



   b) Click on the **CK#### Team Site** you are following.
   c) Click on Site contents.

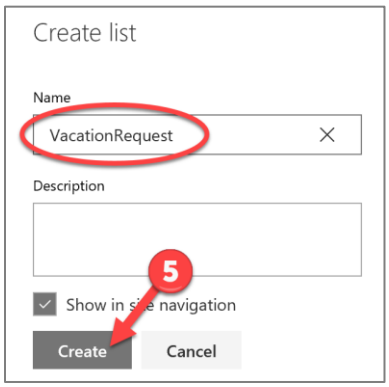


   d) Click **New** > **List**

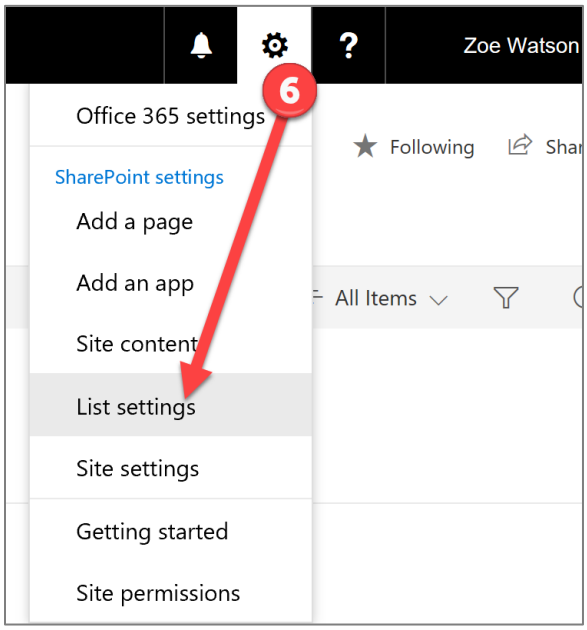


Your trial tenant is using the new modern interface. The modern interface is only available in SharePoint Online. If your company has an Office 365 tenant, your corporate SharePoint Online site may not have the modern interface if your admins are enforcing classic mode at the tenant level.

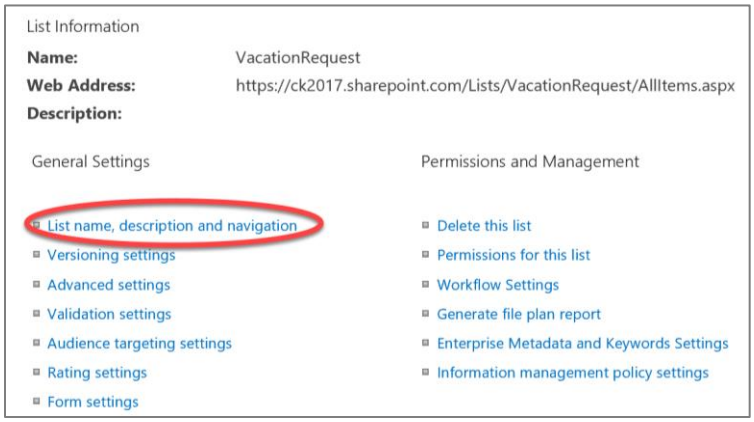
   e) Type **VacationRequest** for the name of the list (with no spaces). Using no spaces will give it a clean name and then you will rename the list in another step to add a space in the name. Click **Create**.



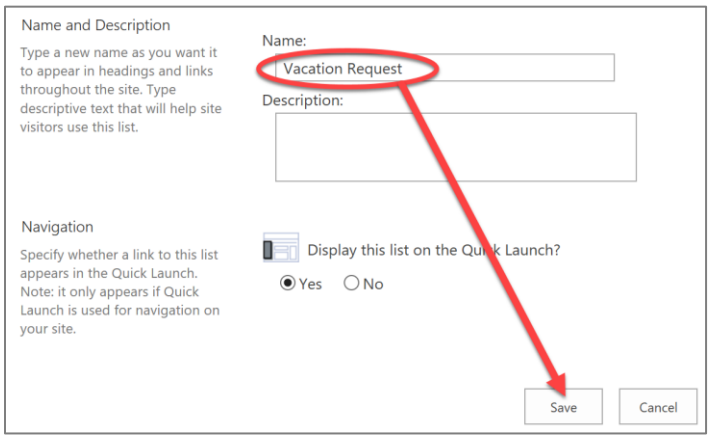
f) Click on the **Settings** icon then click **List settings**.



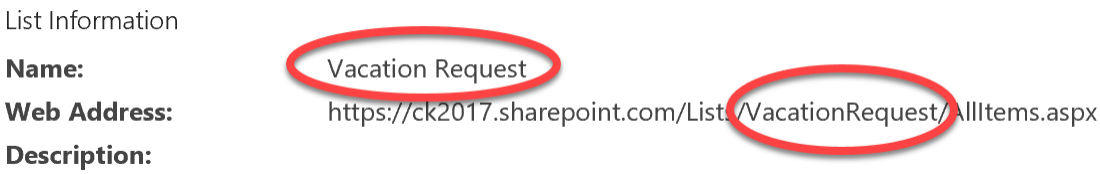
g) To change the display name, click List name, description and navigation.



h) Add a space in the name so it's **Vacation Request** then click **Save**.

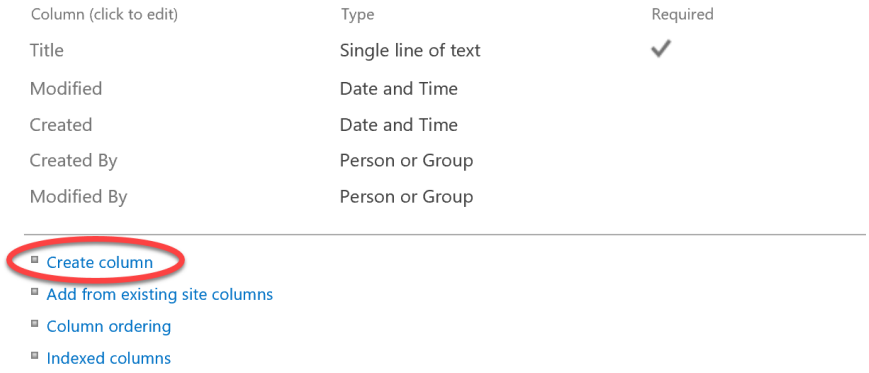


i) Notice the display name now shows **Vacation Request** but the URL remains intact as **VacationRequest**.



2. Add Custom Columns to List

a) Since the Vacation Request list is a custom list it currently only has a Title column. You will now need to add more columns to the list. You can create new list columns by clicking on **Create column.**



b) Then fill in the **Name** and choose the **Type**. Set any other properties then click **OK**. You will need to repeat the steps for each column are you are to create.

If any column name contains a space, PowerApps will show it as **"_x0020_"**. For example **"Column Name"** will display as **"Column_x0020_Name"**. That is because PowerApps uses the internal field names of SharePoint columns. The way to make it cleaner is to create each column without spaces first and then rename the column with a space. Such as if you create **Vacation Start Date** with spaces, the internal field name will be **Vacation_x0020_Start_x0020_Date** but if you create it as **VacationStartDate** then the internal field name will be **VacationStartDate**. Then you can rename it to **Vacation Start Date** and the internal field name will still be **VacationStartDate**. To save time in this lab, you have the choice to create the columns with or without spaces. While the best practice method is recommended, it does take time therefore it's up to you. Just be aware that you will want to follow best practice when you're working in your production environment.

3. Proceed with creating the following columns:

a) Vacation Start Date (date)

i) **Name:** Vacation Start Date

ii) **Type:** Date and Time
iii) **Required:** Yes

b) Vacation End Date (date)
i) **Name:** Vacation End Date
ii) **Type:** Date and Time
iii) **Required:** Yes

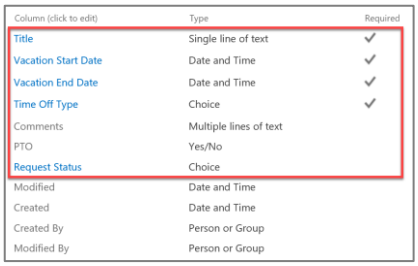
c) Time Off Type (choice)
i) **Name:** Time Off Type
ii) **Type:** Choice
iii) **Required:** Yes
iv) Choices:
(1) Jury Duty
(2) Sick
(3) Personal
(4) Vacation
(5) Other
v) **Default value:** blank (remove the default value)

d) **Comments** (multi-line text field)
i) **Name:** Comments
ii) **Type:** Multiple lines of text
iii) **Type of text to allow:** Plain text

e) PTO (Yes/No) – Paid time off column
i) Name: PTO
ii) Description: Uncheck if your requested leave is not paid time off.
iii) Type: Yes/No (checkbox)
iv) Default value: Yes

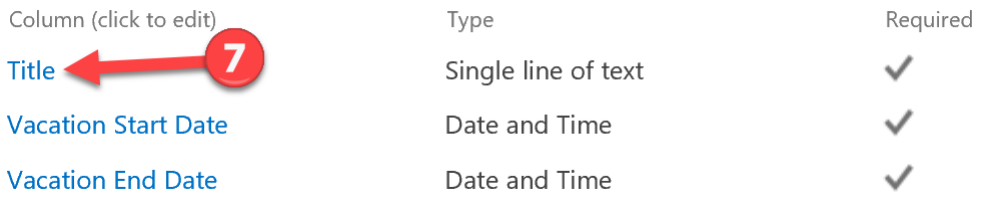
f) **Request Status** (choice) – This column will be used for the approval Flow that will be setup later in this course.
i) **Name:** Request Status
ii) **Type:** Choice
iii) Choices:
(1) Pending
(2) Approved
(3) Rejected
iv) Default value: Pending

4. When complete you should see the following columns in your list.

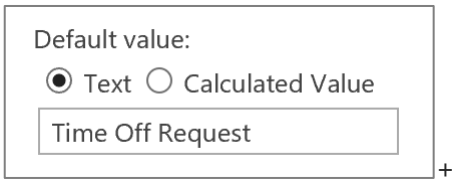


Column (click to edit)	Type	Required
Title	Single line of text	✓
Vacation Start Date	Date and Time	✓
Vacation End Date	Date and Time	✓
Time Off Type	Choice	✓
Comments	Multiple lines of text	
PTO	Yes/No	
Request Status	Choice	
Modified	Date and Time	
Created	Date and Time	
Created By	Person or Group	
Modified By	Person or Group	

5. Now click on the **Title** column.



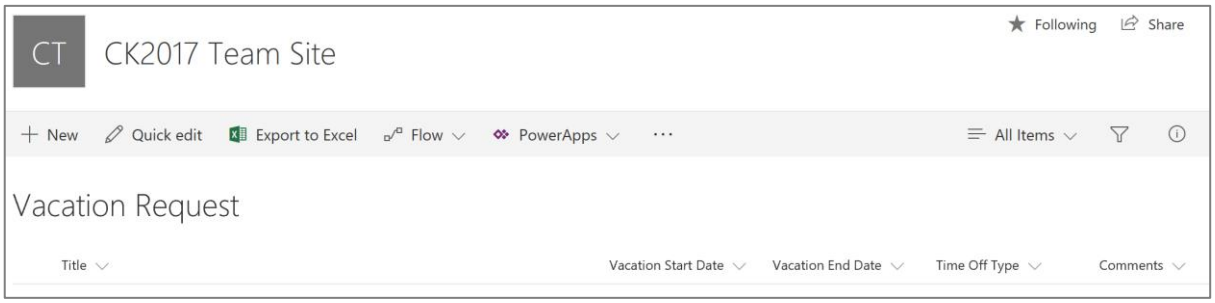
6. In the Default value, type **Time Off Request** then click **OK**. Instead of hiding the column, we'll go ahead and use it but will end up hiding it in our PowerApp.



+

7. To navigate back to the list, click **Vacation Request** in the bread crumb.

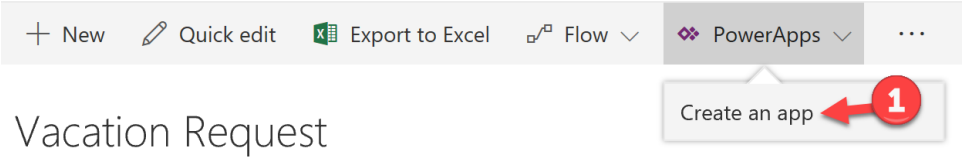
8. Here's how your list should look now in the modern view.



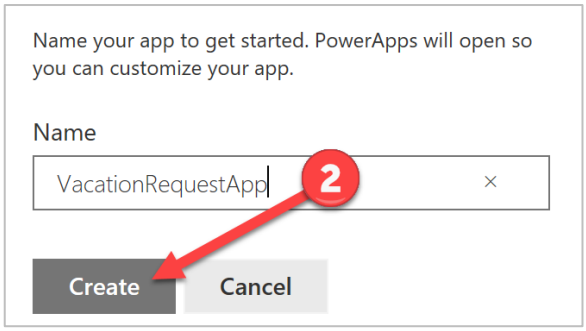
Create PowerApp from List

Now it's time to create a PowerApp for your Vacation Request list. To create follow the steps below:

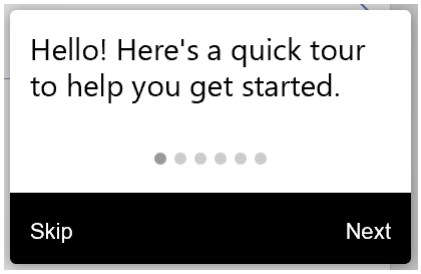
9. Click **PowerApps** on the *command bar*, then click **Create an app**.

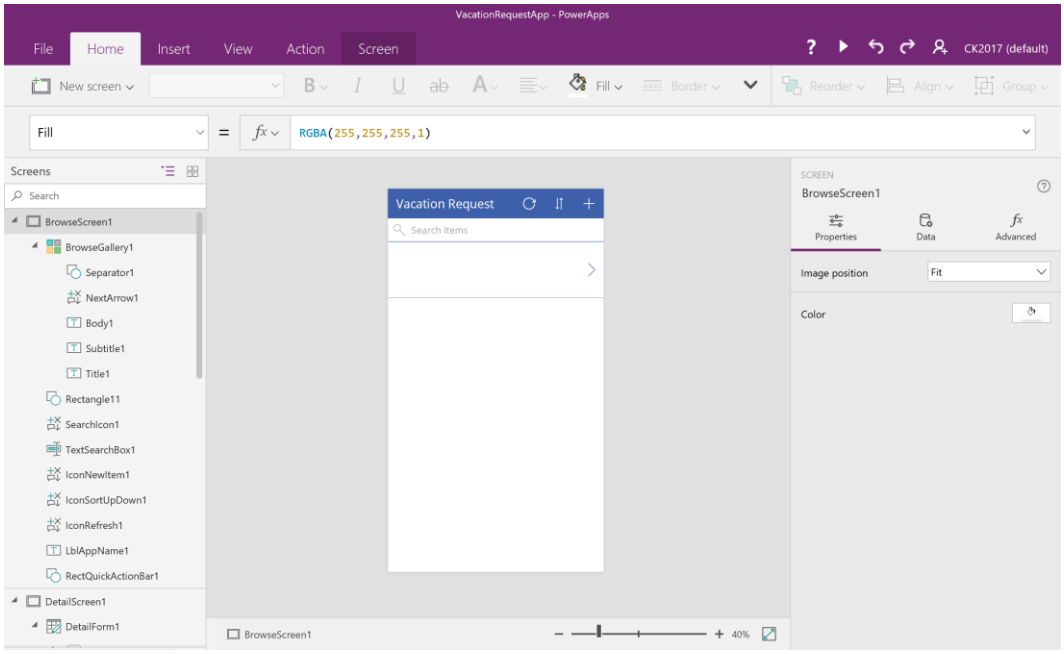


10. In the panel that appears, type **VacationRequestApp** then click **Create**.

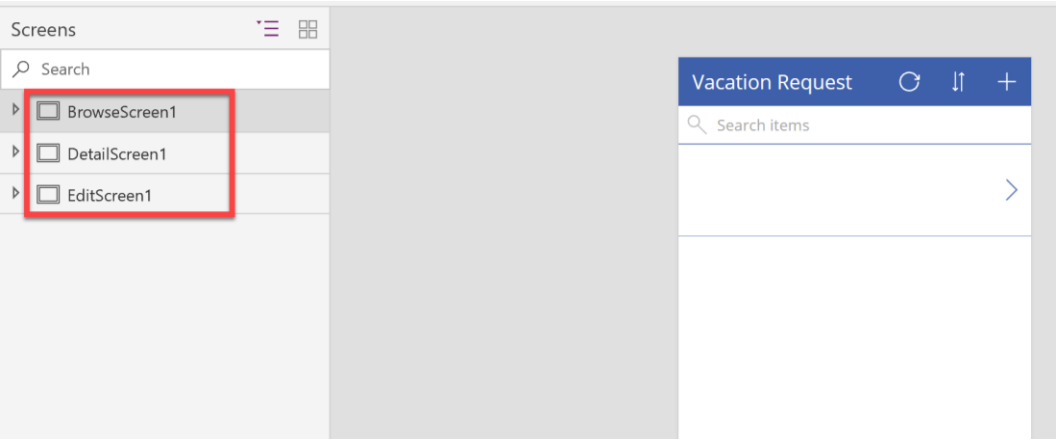


11. Wait for your app to be created. A new tab will appear in your web browser that shows the app you automatically generated based on your SharePoint list. You can **Skip** the quick tour.

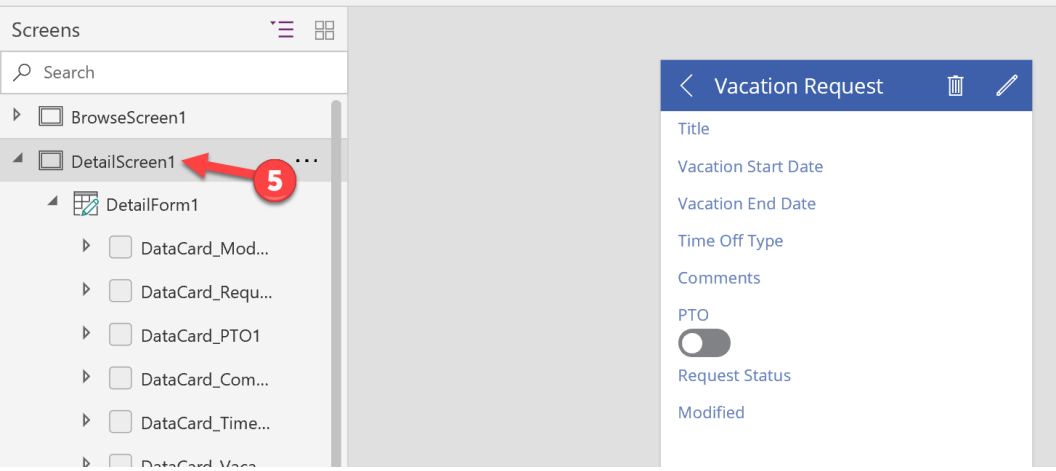




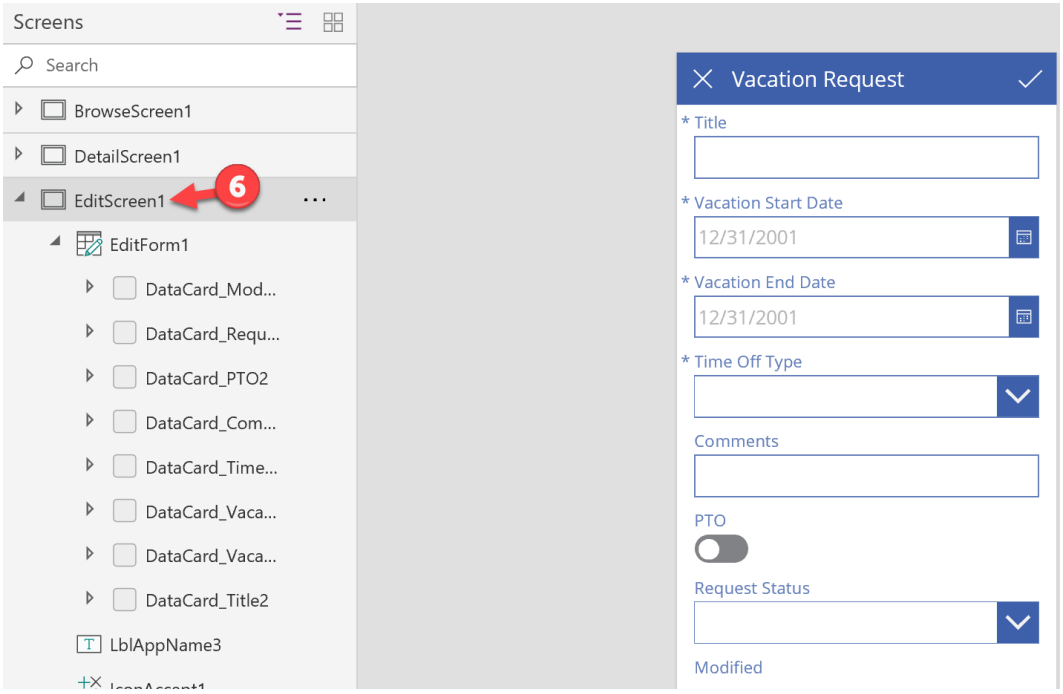
12. The app will have the BrowseScreen1, DetailScreen1, and EditScreen1.
    a) *BrowseScreen1* is what the screen that will display all items in the list.
    b) *DetialScreen1* is the screen for showing the details of a list item.
    c) *EditScreen1* is the screen for inputting the new item in the list.



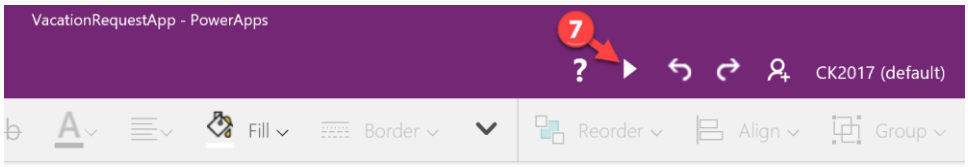
    d) To view DetailScreen1, click **DetailScreen1**.



    e) To view EditScreen1, click **EditScreen1**.

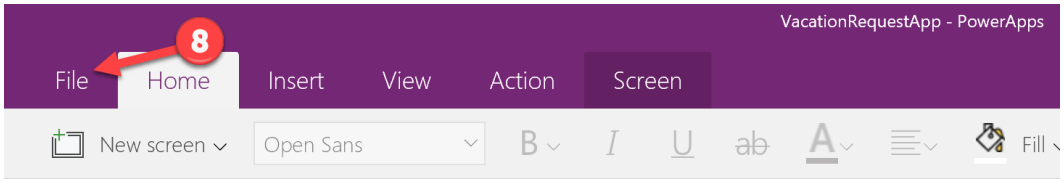


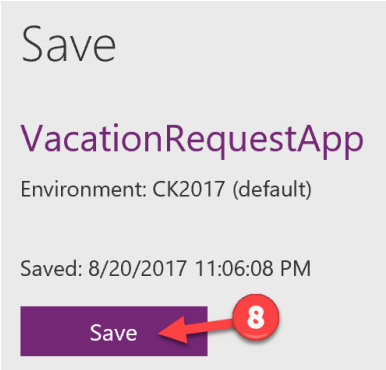
13. Go back to **BrowseScreen1**. Click **Preview** to preview the app.



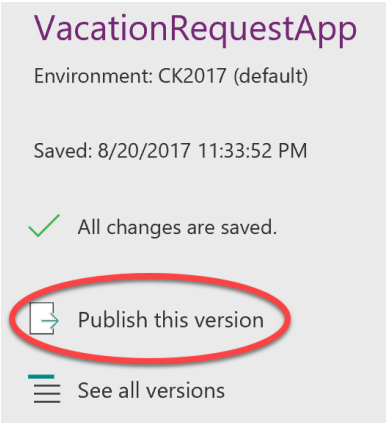
Once you're done previewing, click **X** to exit preview mode. You will customize this app in Module 3 so for now you will not make any changes to the app except to save the app.

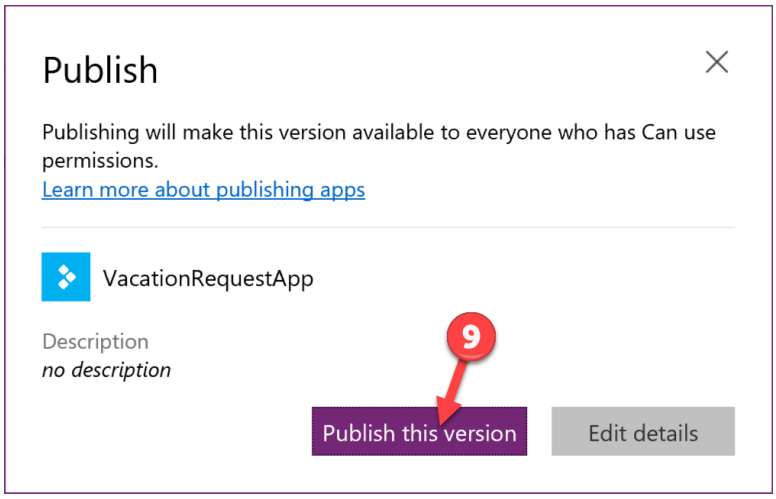
14. To save click on the **File** tab then click **Save**.



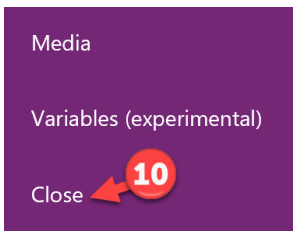


15. To publish, click **Publish this version** and then in the dialog click **Publish this version**.

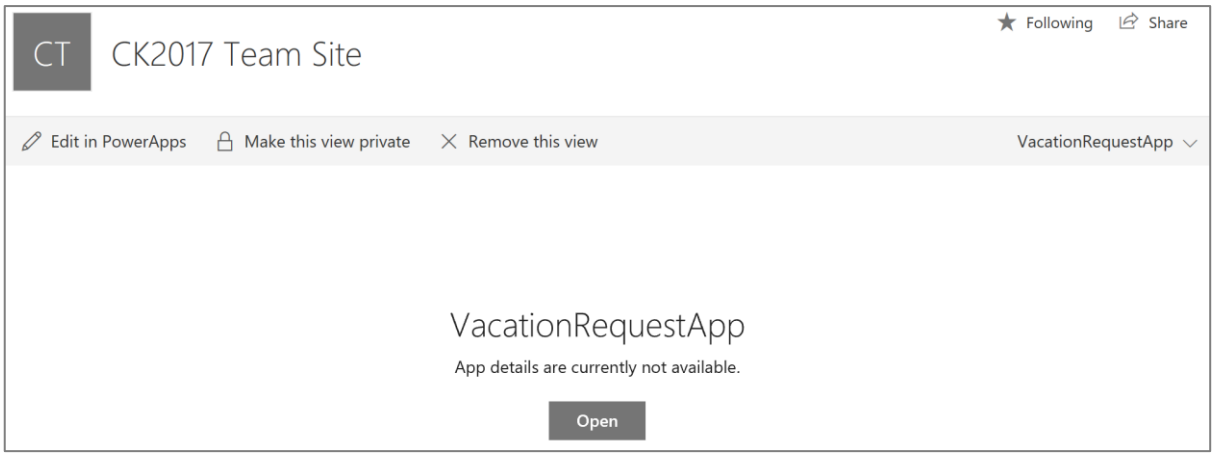




16. Click **Close**.



17. Close the browser tab and if prompted click **Leave this page**. Go back to your browser tab that has the Vacation Request list open. The list view has now been replaced with your PowerApp. The command bar should show *Edit in PowerApps*¸ *Make this view private*, and *Remove this view*. On the right-hand side the *View* selector will be defaulted to *VacationRequestApp* and you will see and **Open** button in the middle of the page.



18. Leave this list alone for now. You will do more with this app in a later lab.

You have completed the steps for this exercise.

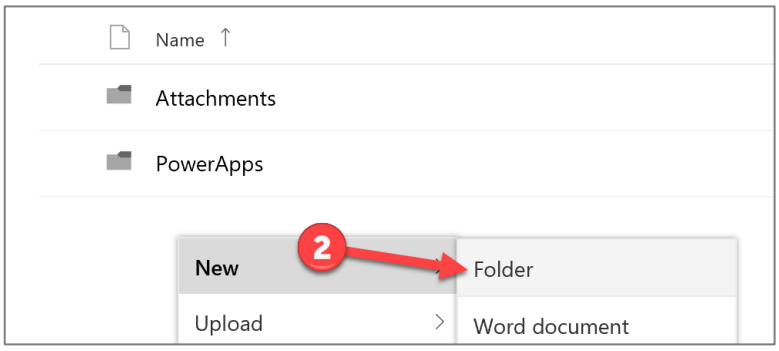
Exercise 3: Create App from Excel Data

Upload Excel File to OneDrive

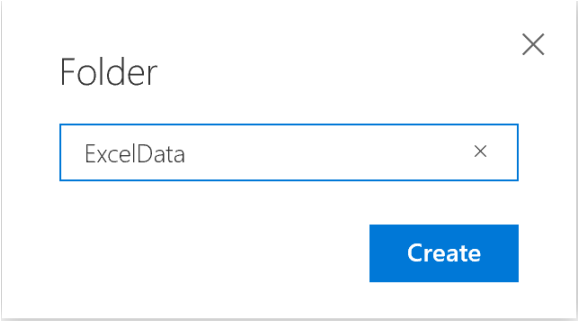
For this exercise, you will work with a sample Excel file that has flooring samples. To follow this tutorial exactly, download this Excel file and save it locally.

19. In the browser from Office 365 (https://portal.office.com) navigate to your OneDrive for Business by clicking on the **OneDrive** tile.

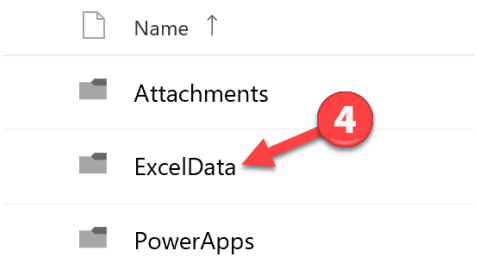
20. Right-click in the white area, choose **New** then click **Folder**.



21. Enter **ExcelData** for the name then click **Create**.



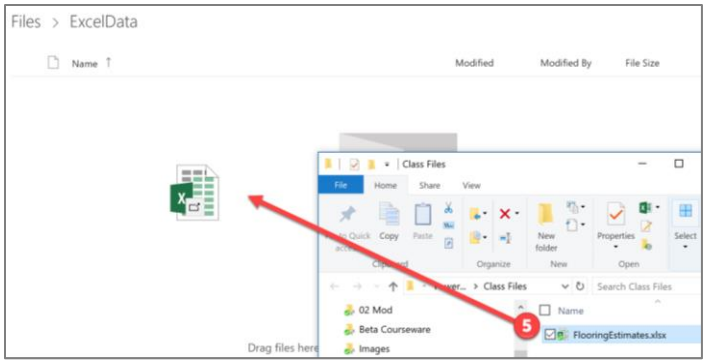
22. Click on **ExcelData** to open the folder.



23. Upload the *FlooringEstimates.xlsx* file to the newly created folder either by dragging from Windows Explorer or by using the **Upload** button.

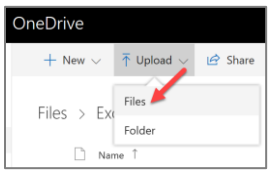
a) Option 1 (Windows Explorer):

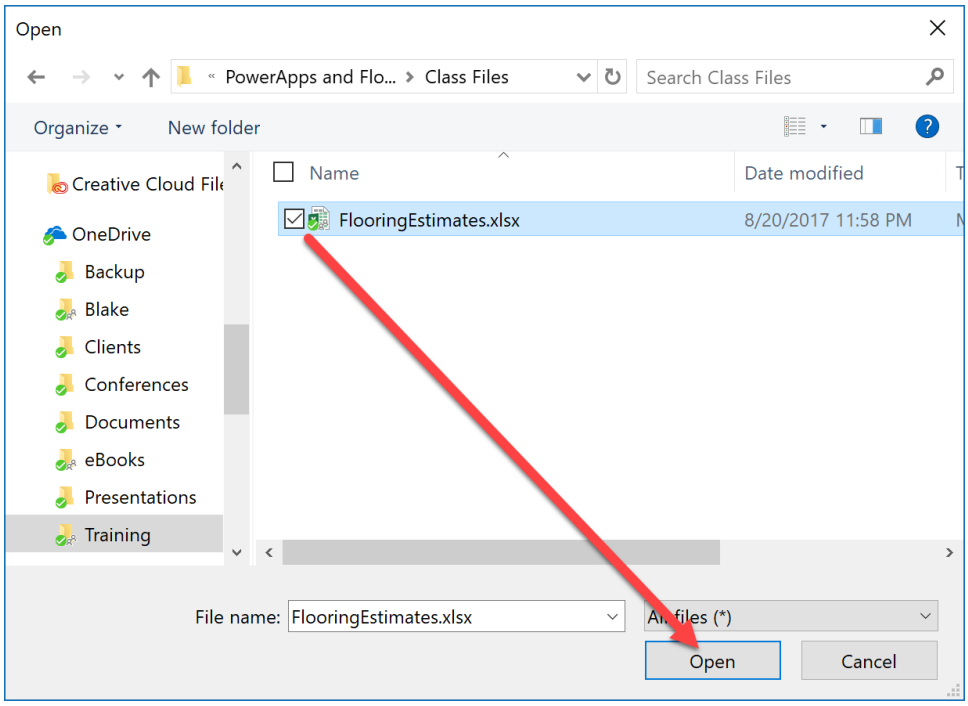
i) Drag the **FlooringEstimates.xlsx file** from Windows Explorer to the browser.



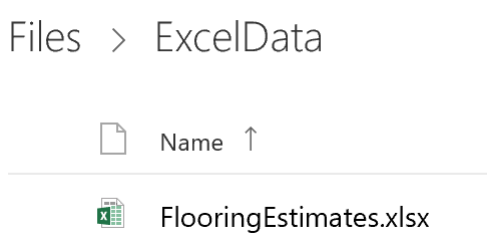
b) Option 2 (Upload button):

i) Click **Upload** > **Files** then browse to the **FlooringEstimates.xlsx** file, select the file then click **Open**.





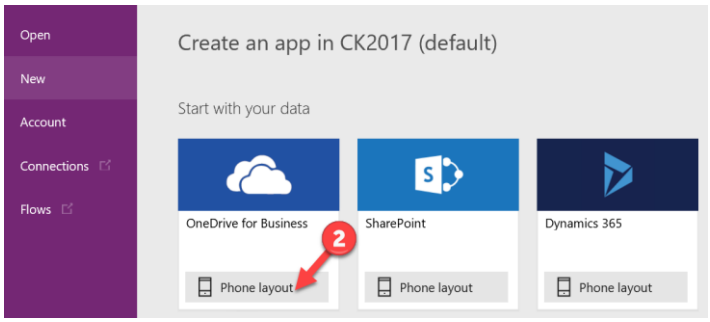
24. The *FlooringEstimates.xslx* file should now be uploaded to your OneDrive for Business in the *ExcelData* folder.



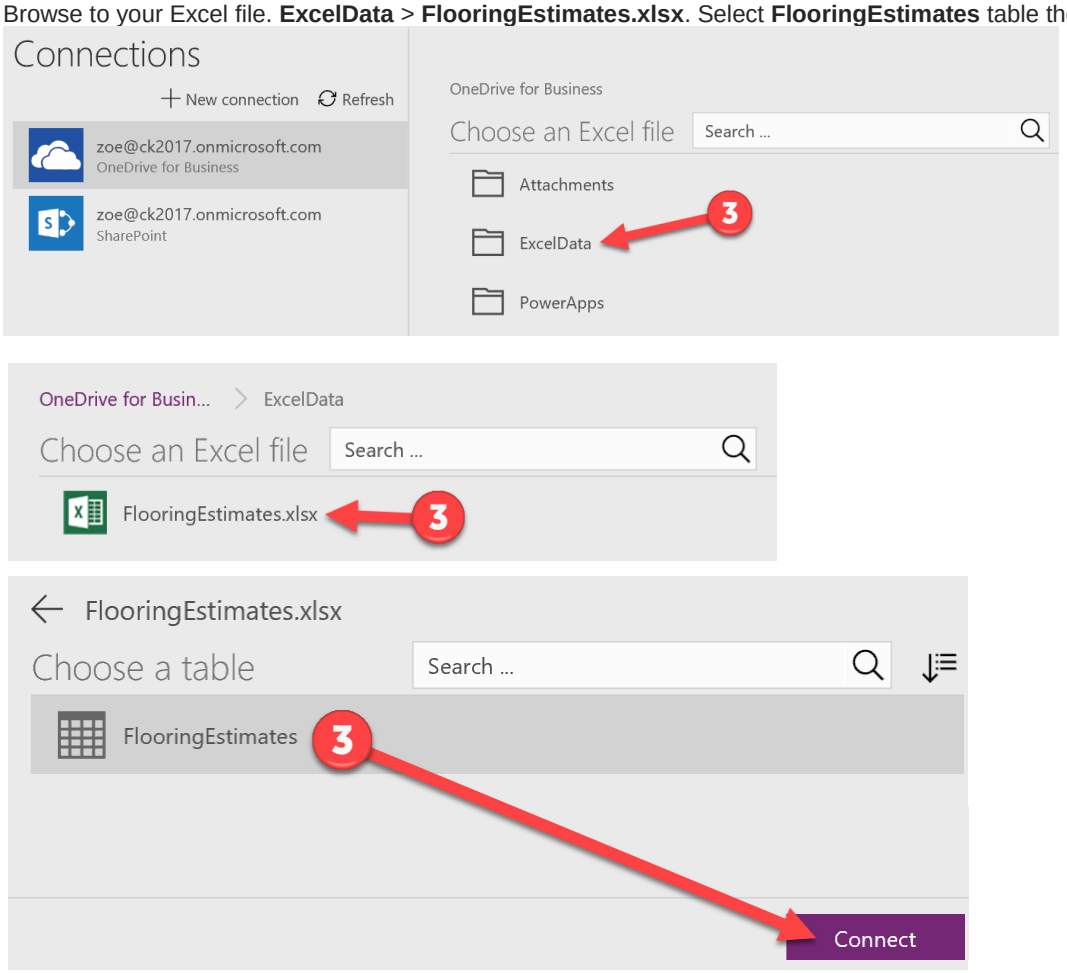
Now it's time to create a new PowerApp

25. Open PowerApps Studio if it is not already open. In PowerApps Studio, click **New**.

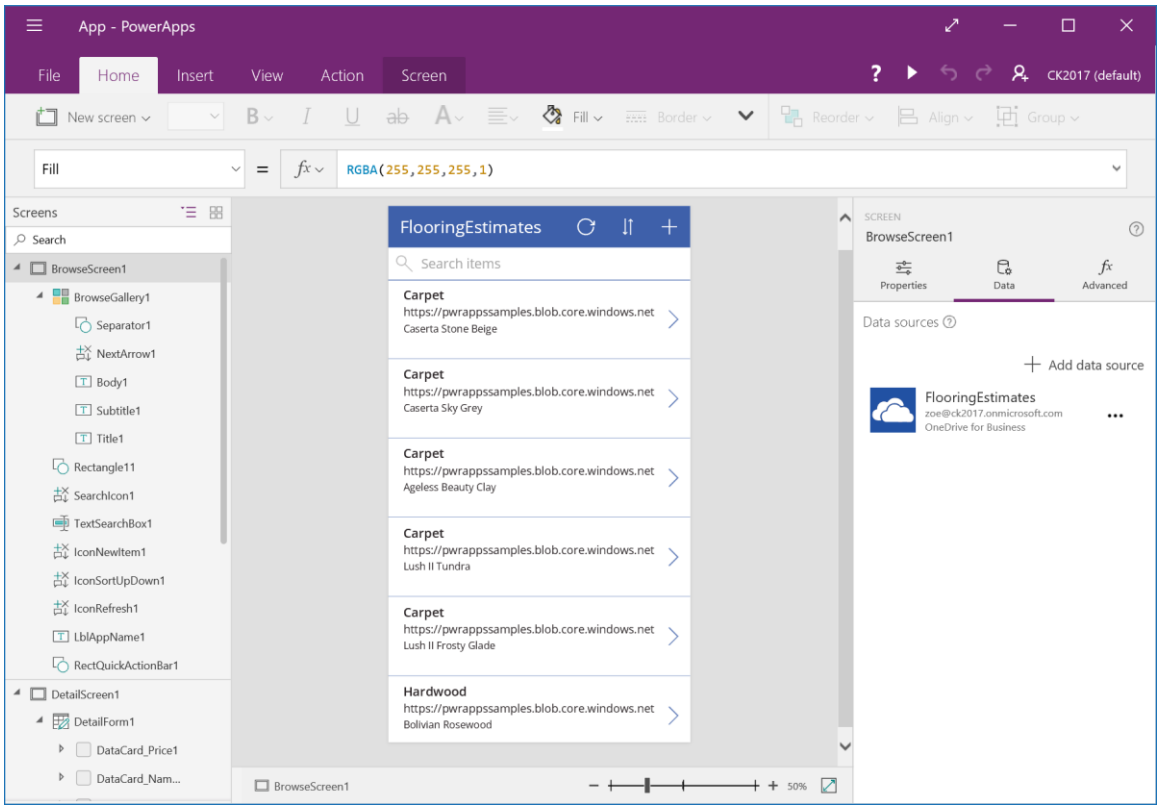
26. Since the Excel data file has been saved to *OneDrive for Business*, click **Phone layout**.



27. Browse to your Excel file. **ExcelData** > **FlooringEstimates.xlsx**. Select **FlooringEstimates** table then click **Connect**.



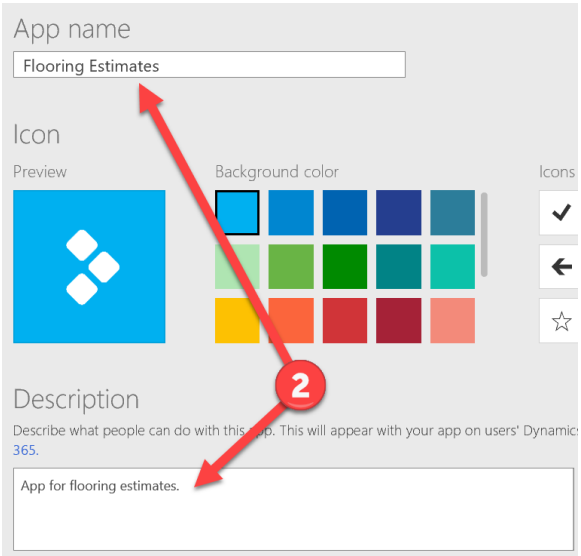
Once your app is created, it will open in the default layout.



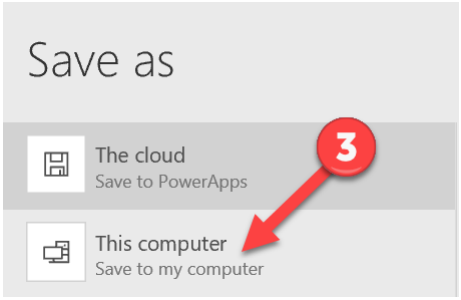
Save the App

Now save the app to your computer.

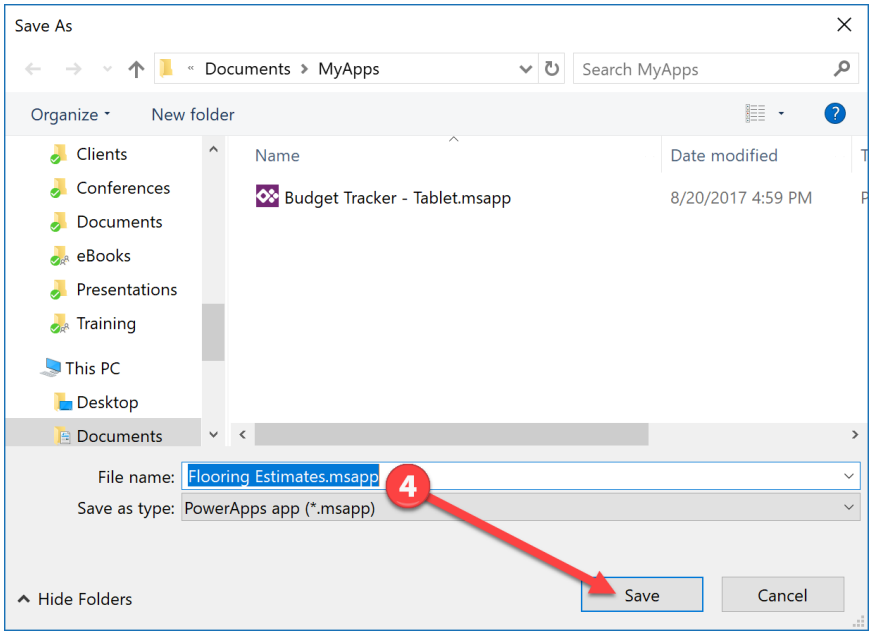
28. Click on the **File** tab.
29. In the *App settings* panel, change the following:
    a) **App name:** Flooring Estimates
    b) **Description:** App for flooring estimates.



30. Click **Save** in the left navigation, then click **This Computer**.



31. Browse to the location you want to save your app to then click **Save**.



32. After it's saved, click **Close**.

You have completed the exercise for this lab.