

Dynamics 365 Customer Insights

Customer Insights in a Day

Hands on Lab Guide

Module 4: PowerApps

V1.1, July 2019

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Feedback

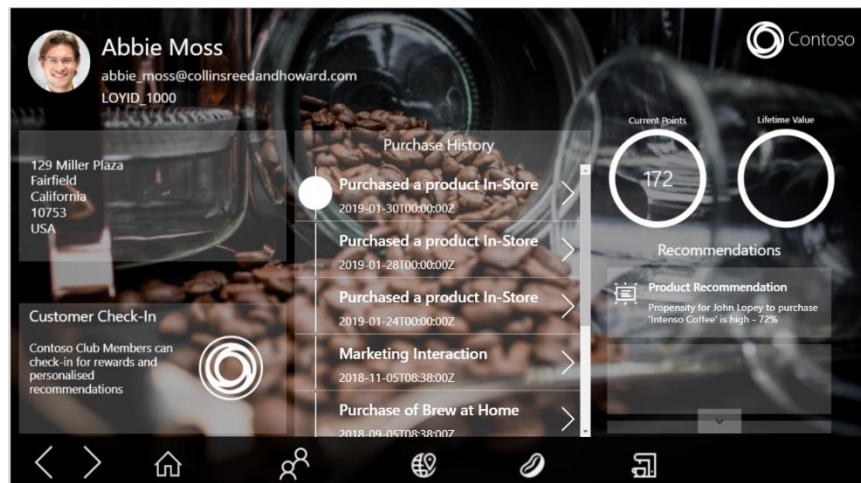
If you have feedback relating to the Customer Insights in a Day content or assets please send to ciadfeedback@microsoft.com.

Module Four Introduction

Personalised Service Greeter App

Contoso want to deliver personalized service and recommendations to customers whom visit their retail stores and café's and capture details of customers visiting their stores. To do this, they have decided to empower their Contoso Coffee Retail staff with a greeter app, empowering staff to have a more informed conversation with customers and deliver personalized service and recommendations.

As Project Manager for Contoso Coffee, you will create a Greeter App using PowerApps for Contoso retail staff who will be able to look-up unified customer profiles, capture customer check-ins and deliver personalized recommendations to customers.



Objectives

- Create Contoso Coffee Greeter App
- Connect app with Customer Insights Unified Profile
- Connect app with 'Customer Check In' Flow
- Deliver Personalised recommendations with Greeter App

Prerequisites

In order to complete this lab you will need to have completed

- Module 1 – Data Ingestion and Unification
- Module 2 – Dynamics 365 & Model Driven App
- Module 3 – Automation with Microsoft Flow

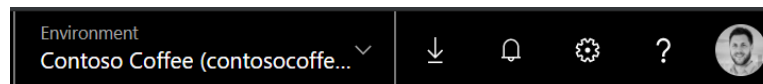
You will also require access to PowerApps. If you do not have access to Microsoft PowerApps you can sign-up for a trial at <https://powerapps.microsoft.com> (Please sign-up using the same account used to access Dynamics 365 in Module 2 and Flow in Module 3.)

Lab 9 – Contoso Coffee Greeter App

To create the Contoso Coffee Greeter App from this lab, you will import a templated app and connect the App to Customer Insights and Flow.

Task 1 – Import the Greeter App Template

1. Sign-In to <https://make.powerapps.com> and select the environment in which you are working (This should be the same environment that you used to create your Flows in the previous Lab & Customer Service Hub in Module 2).

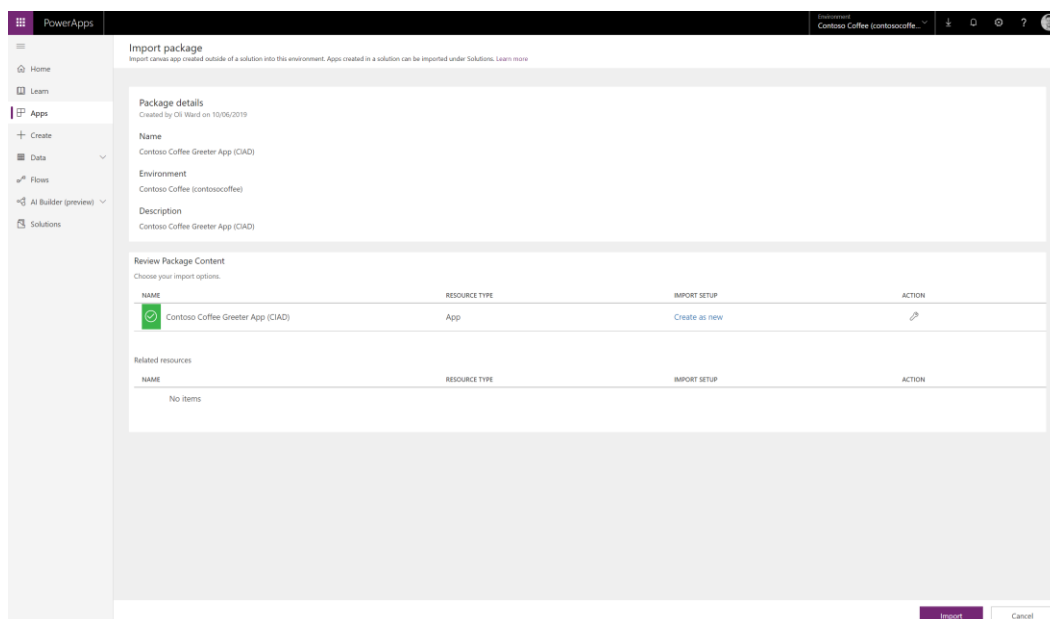


2. Click **Apps** in the left-hand menu, and then click **Import Package (Preview)** from the top menu bar.

← Import package (preview)

3. Click the **Upload** button and select the **ContosoCoffeeGreeter(CIAD)vXX.zip** included with the module content, then **Upload**.

4. On the next page, select '**Create as New**' on the Import Setup, then click **Import**



5. Once the package has completed it's import click **Apps** in the left menu, you should see your imported app listed.

Recent apps				
Shared with me Apps I can edit Org apps				
	Name	Modified	Owner	Type
	Contoso Coffee Greeter App (CIAD)	54 sec ago	You	Canvas

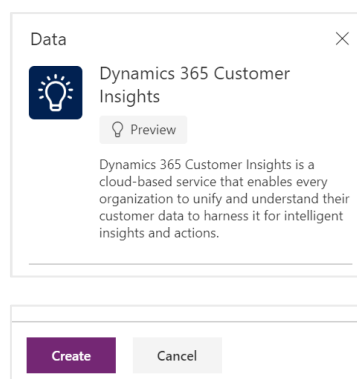
6. Click the '...' icon next to it's Name and select **Edit** to load the app in Edit Mode.



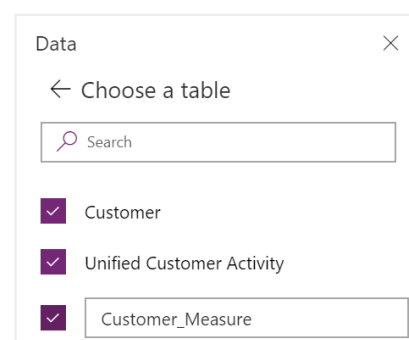
Task 2 – Connect to Data Source(s)

In this task, we will use the Customer Insights Connector, to connect the Greeter PowerApp to your Customer Insights Instance.

1. In the top menu bar, click **View** then select **Data Sources**
2. In the **Data** menu that opens on the right, click + **Add data source**
3. Click **New Connection** and search for the **Dynamics 365 Customer Insights** connector
4. Select the connector and then click **Create**. If prompted, sign-in with your credentials for your Customer Insights

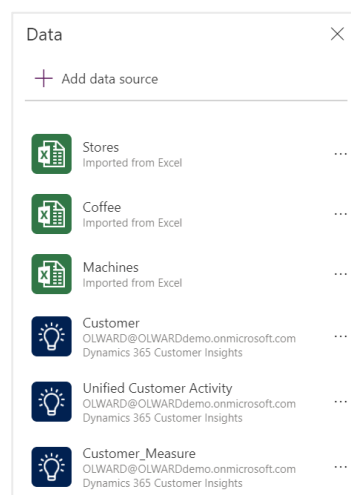


5. Select **Customer, Unified Activity** and type **Customer_Measure** into the *Enter custom table name* box. Then click **OK**



6. You should see these three tables listed as data connections within your Greeter App.

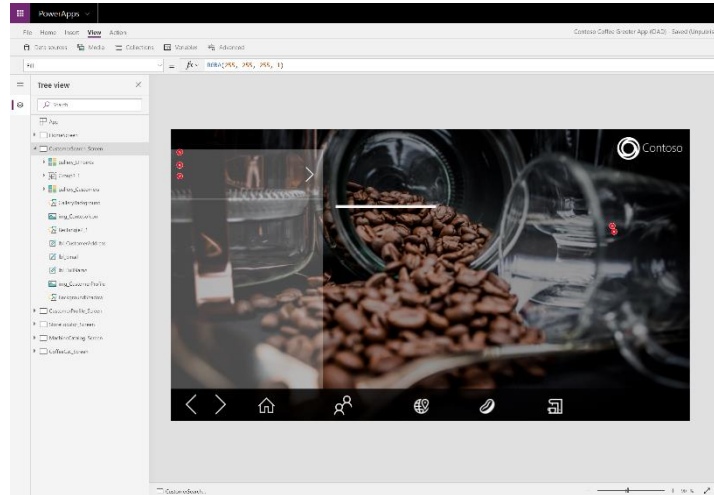
Congratulations! You have established a connection to Customer Insights within your PowerApp.



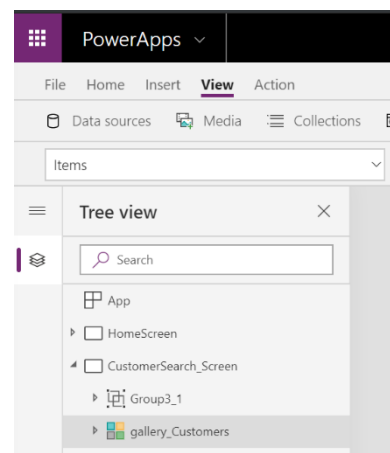
Task 3 – Configure the Customer Search Screen

In this task you are going to connect Customer Insights data to the Customer Search and Customer Profile screens within the greeter app. This will enable Contoso Coffee Retail staff to find and view customer information when they greet them in store.

1. Within the Greeter PowerApp in Edit mode, open the **CustomerSearch_Screen** screen via the Tree View

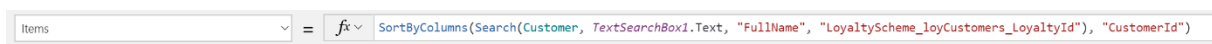


2. From within the Tree View, select **gallery_Customers**. Then select **Items** from within the *Property* drop down.



3. With the **Items** property selected, add the following into the formula bar:

SortByColumns(Search(Customer, TextSearchBox1.Text, "FullName", "LoyaltyScheme_loyCustomers_LoyaltyId"), "CustomerId")

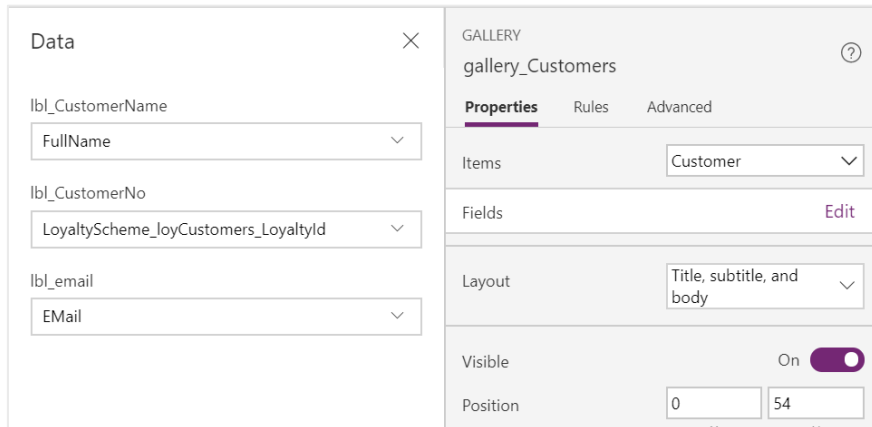


This is connecting to the **Customer** data entity we created in steps 6&7 from Customer Insights. You may see some data within the Gallery, this is being pulled from the Unified Customer Profile. The additional formula is ordering the content of the gallery and linking the filter to the 'Search' bar.

4. You are going to update the Customer gallery to show customers Full Name, email address and Contoso Club ID.

With the *gallery_Customers* gallery selected, set the properties shown within the right-hand menu as follows...

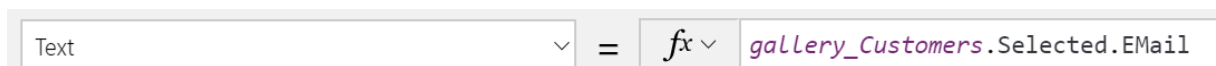
Property	Value	
Items	Customer	
Layout	Title, Subtitle and body	
Fields	lbl_CustomerName	FullName
	lbl_CustomerNo	LoyaltyScheme_loyCustomers_LoyaltyId
	lbl_email	EMail



You should now see that the Customer Gallery is populated with the names, email and loyalty scheme IDs of Contoso Coffee customers, using our Unified Profiles from Customer Insights.

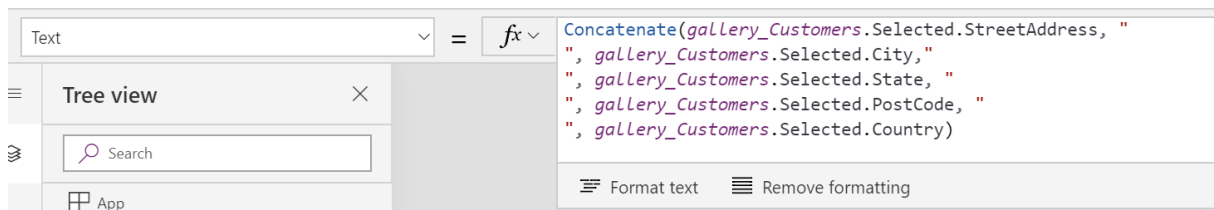
- Next, we will setup the Customer Search screen to show some key info from the customers profile when the greeter selects them in the gallery.

Within the *Tree View* select **lbl_Email** (outside of the gallery) and set the **Text** Property of the label to **gallery_Customers.Selected.Email**



- Within the *Tree View* select **lbl_FullName** and set the **Text** Property of the label to **gallery_Customers.Selected.FullName**
- Within the *Tree View* select **lbl_CustomerAddress** and set the **Text** property of the label to

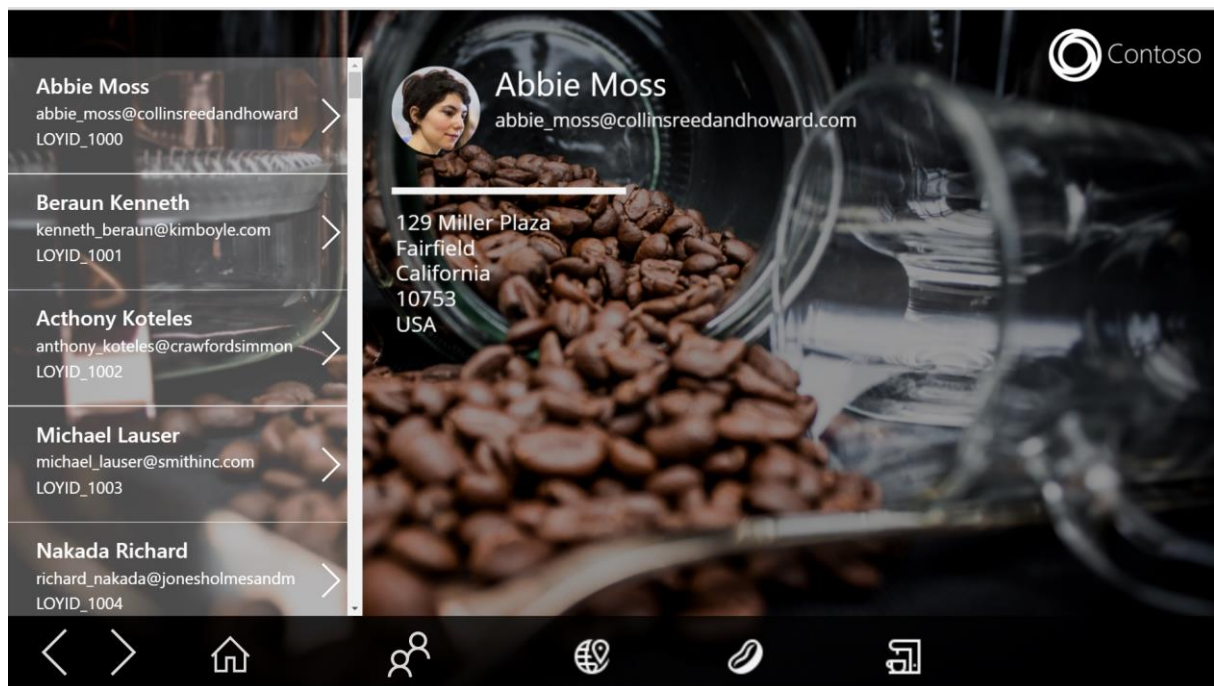
```
Concatenate(gallery_Customers.Selected.StreetAddress, "
", gallery_Customers.Selected.City, "
", gallery_Customers.Selected.State, "
", gallery_Customers.Selected.PostCode, "
", gallery_Customers.Selected.Country)
```

8. Finally, within the *Tree View* select the **img_CustomerProfile** image and set the **Image** property to
["https://<ORGANIZATION URL>/"](#) &
gallery_Customers.Selected.entityimage_url



Where <Organization URL> is the URL for your Dynamics 365 Customer Service instance you used earlier. e.g. <https://myorgname.crm4.dynamics.com>

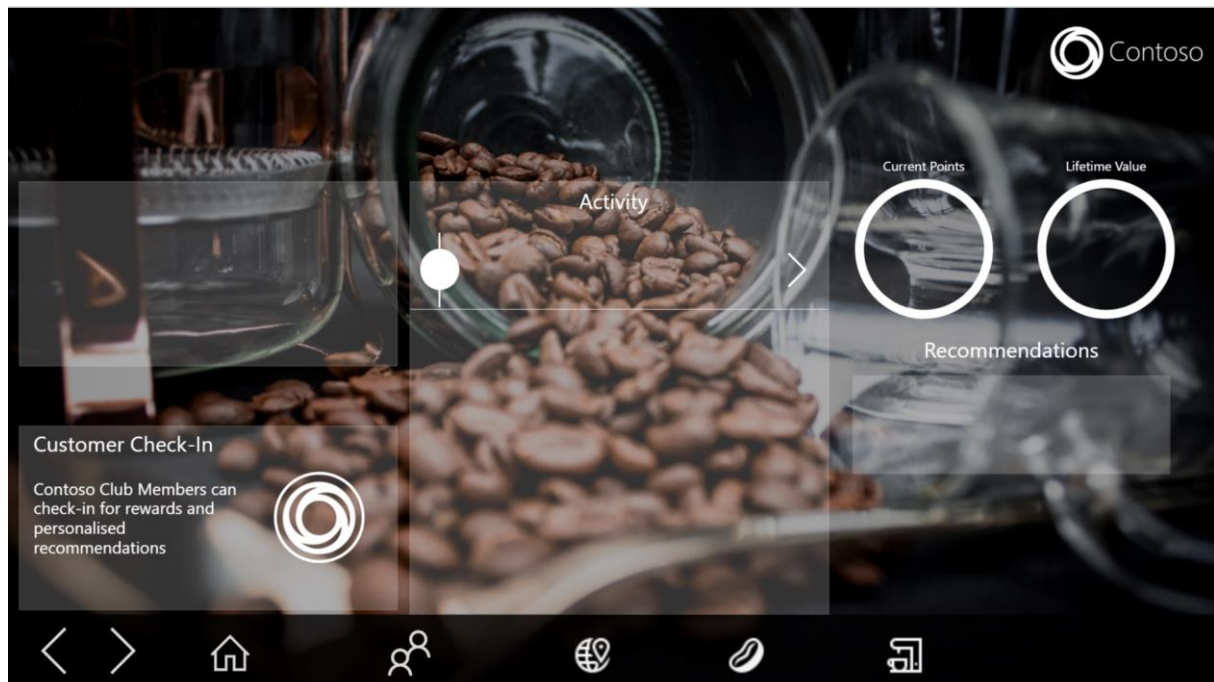


Congratulations, you have now configured the Customer Search screen within the Greeter App. In the next Task, we will configure different aspects of the Customer Profile Screen.

Task 4 – Configure the Customer Profile Screen

Here we will embed the same Customer Profile data as we did in the Customer Search screen, before moving on to embed a unified view of interactions as well as KPIs and recommendations.

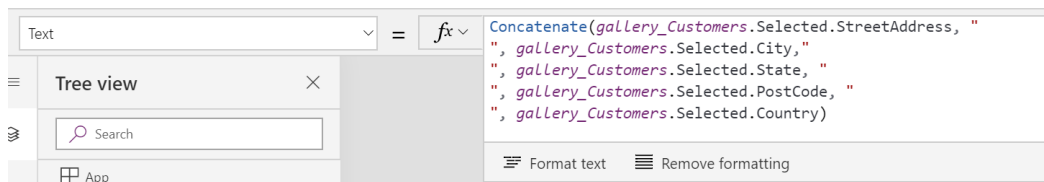
1. With the PowerApp in Edit mode, select the **CustomerProfile_Screen** from the Tree View on the left menu.



2. First you'll add customer information from the Unified Profile as per the Customer Search Screen.
 - a. Within the *Tree View* select **lbl_emailAddress** and set the **Text** Property of the label to **gallery_Customers.Selected.Email**



- b. Within the *Tree View* select **lbl_CustomerFullname** and set the **Text** Property of the label to **gallery_Customers.Selected.FullName**
- c. Within the *Tree View* select **lbl_LoyaltyID** and set the **Text** property of the label to **gallery_Customers.Selected.LoyaltyScheme_loyCustomers_LoyaltyId**
- d. Within the *Tree View* select **lbl_Cust_Address** and set the **Text** property of the label to **Concatenate(gallery_Customers.Selected.StreetAddress, ", ", gallery_Customers.Selected.City, ", ", gallery_Customers.Selected.State, ", ", gallery_Customers.Selected.PostCode, ", ", gallery_Customers.Selected.Country)**



3. Finally, within the *Tree View* select the **img_CustomerProfileImage** image and set the **Image** property to "<https://<ORGANIZATION URL>/>" & **gallery_Customers.Selected.entityimage_url**

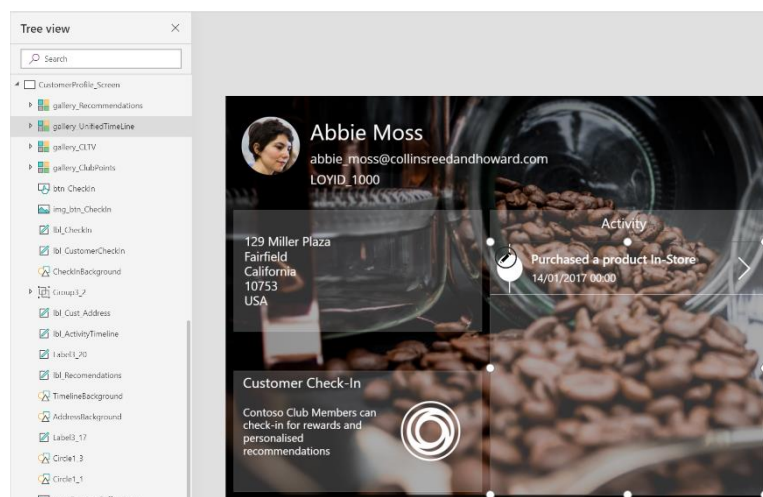


Where <Organization URL> is the URL for your Dynamics 365 Customer Service instance you used earlier. e.g. <https://myorgname.crm4.dynamics.com>

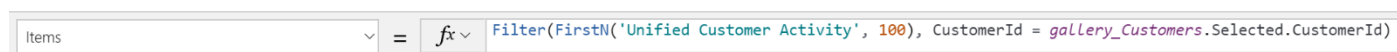
Task 5 - Embed Unified Activities

In this task we will embed a unified timeline of activities ingested into Customer Insights within the Customer Profile Screen. This will give Contoso Coffee retail staff visibility of any recent interactions.

1. Within the Greeter PowerApp in Edit mode, open the **CustomerProfile_Screen** screen via the Tree View and select the gallery **gallery_UnifiedTimeLine**



2. With the gallery selected, select the **Items** property from the property drop-down and enter the following within the formula bar to filter all Unified Customer Activity records to only display the top 100 for the current Customer Profile
Filter(FirstN('Unified Customer Activity', 100), CustomerId = gallery_Customers.Selected.CustomerId)



3. With the *gallery_UnifiedTimeLine* gallery selected, set the properties shown within the right-hand menu as follows...

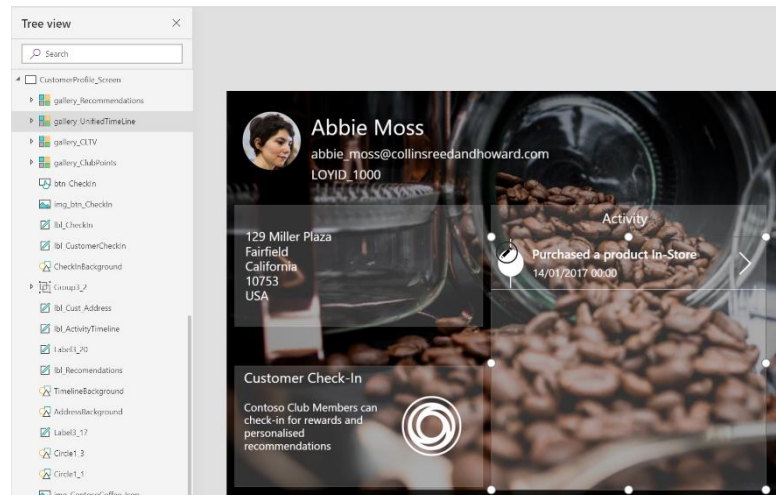
Property	Value	
Layout	Title and subtitle	
Fields	Title2	Title
	Subtitle2	Text(DateTimeValue(ThisItem.ActivityTime, "en-GB"), DateTimeFormat.ShortDate)

Task 5 – Embed KPIs to Profile Page

In this task you will embed key customer KPIs that we calculated as 'Customer Measures' in Module 1. Namely, **Total Club Points** (Loyalty Scheme Points) and **Customer Lifetime Spend**.

Contoso Club Loyalty Points

1. Within the Greeter PowerApp in Edit mode, open the **CustomerProfile_Screen** screen via the Tree View and select the gallery **gallery_ClubPoints**



2. Select the **Items** property from the drop down and set the formula as follows:

Filter(Customer_Measure, CustomerId = gallery_Customers.Selected.CustomerId)

3. Select the **Text** property from the drop down and set the formula as follows to display the contacts corresponding LifetimeRewardPoints.

ThisItem.TotalClubPoints

Contoso Lifetime Value / Spend

1. Within the Greeter PowerApp in Edit mode, open the **CustomerProfile_Screen** screen via the Tree View and select the gallery **gallery_CLTV**

2. Select the **Items** property from the drop down and set the formula as follows:

Filter(Customer_Measure, CustomerId = gallery_Customers.Selected.CustomerId)

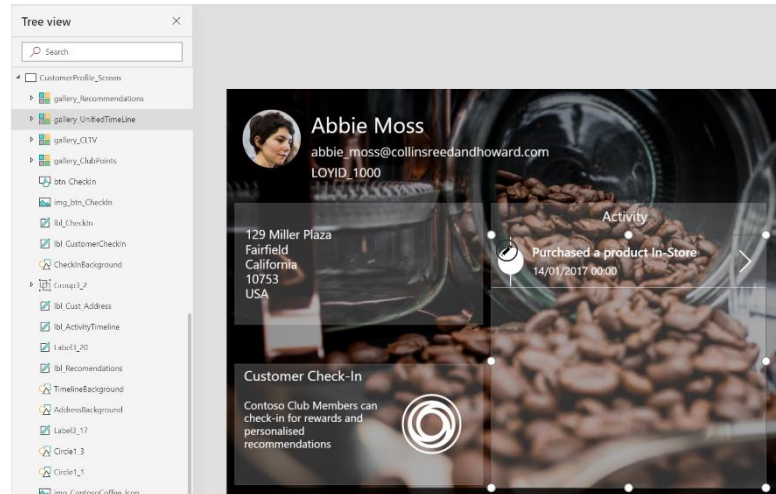
3. Select the **Text** property from the drop down and set the formula as follows to display the contacts corresponding CLTV value.

ThisItem.LifetimeSpend

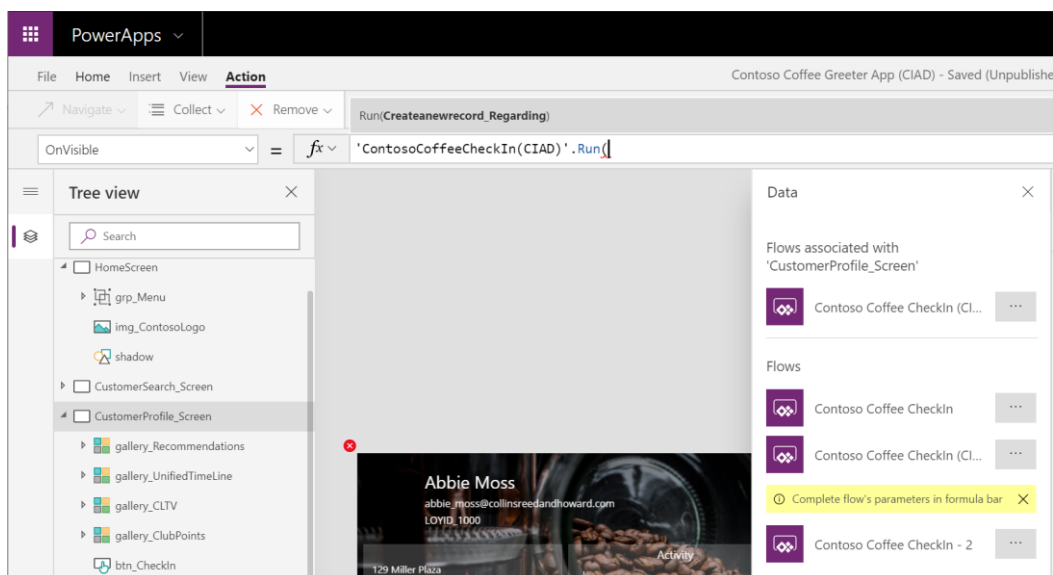
Task 6 – Connect Customer Check-In Flow

In this task, you will connect the 'Customer Check-In Flow' to your greeter app so that Contoso Coffee Retail staff are able to capture the visit of a customer & details of topics/conversations they have had with customer.

1. Within the Greeter PowerApp in Edit mode, open the **CustomerProfile_Screen** screen via the Tree View and select the button **btn_CheckIn**

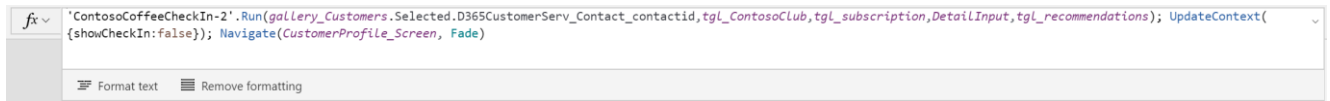


2. With the button **btn_CheckInDialog** selected, select the **On Select** property in the **Property** drop-down.
3. Click the **Action** item in the top menu.
4. On the Action menu, click **Flows**. In the Data fly-out that appears, select your **Contoso Coffee CheckIn** Flow that you created in the earlier lab.



5. You should notice that you're prompted to complete the Flows parameters within the formula bar. When you created the Flow in Module 3, we determined that several attribute values would be asked for when the Flow was executed. Here we can pass these values as parameters to fulfill this need.

- ContactId, Contoso Club (Boolean), Contoso Subscription (Boolean), DetailInput, (Text), Personal Recommendations (Boolean)



The screenshot shows a function editor with a formula bar containing the following text: `'ContosoCoffeeCheckIn-2'.Run(gallery_Customers.Selected.D365CustomerServ_Contact_contactid,tgl_ContosoClub,tgl_subscription,DetailInput,tgl_recommendations); UpdateContext({showCheckIn:false}); Navigate(CustomerProfile_Screen, Fade)`. Below the formula bar, there are two buttons: 'Format text' and 'Remove formatting'.

Function should read as below:

'ContosoCoffeeCheckIn(CIAD)'.Run(gallery_Customers.Selected.D365CustomerServ_Contact_contactid,tgl_ContosoClub,tgl_subscription,DetailInput,tgl_recommendations); UpdateContext({showCheckIn:false}); Navigate(CustomerProfile_Screen, Fade)

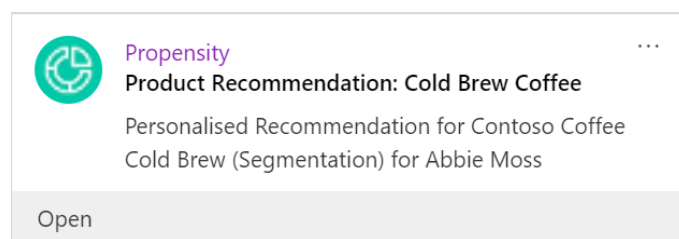
Task 7 – Surface Personalised Recommendations

Dynamics 365 includes the ability to create 'Insight Cards'. These cards highlight to users, timely, actionable insights gathered from Dynamics 365, Office 365 and LinkedIn – Three huge stores of business, interaction and relationship data that center around customers.

It is now possible to define and generate custom Insight Cards using Microsoft Flow based on insights you obtain from other sources.

With Customer Insights, allowing you to generate insight through **Measures** and **Segments** as well as extend Customer Insights using **Azure Machine Learning** to make **predictions** such as next steps, churn or propensity to take up an offer – These are all insights that you may wish to drive an action with a customer.

In this task, we will surface the Insight Cards generated during Module 3 using Flow, within the Greeter App, allowing the Contoso Retail staff to have a more focused, personalized interaction with their customer.



EXAMPLE INSIGHT CARD

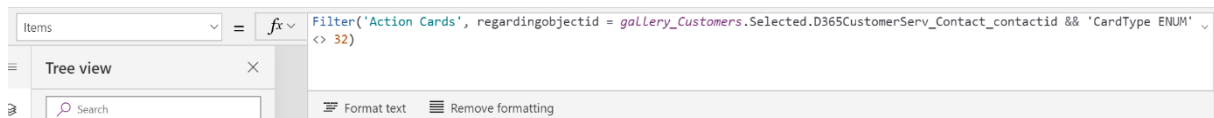
Configure the Recommendations Gallery

1. Create a connection to **Common Data Service** (Dynamics 365). To do this, click **View** in the top menu bar and then **Data Sources**.
2. In the **Data** menu that appear to the right of your canvas, select **+ Add data source**
3. Click **+ New connection**, then search for the **Common Data Source** connector. Select the connector and click **Create**.
4. In the **Choose an entity** page, select **Action Cards** then click **Connect**

Set the Recommendations Gallery to display Insight Cards associated to the current contact.

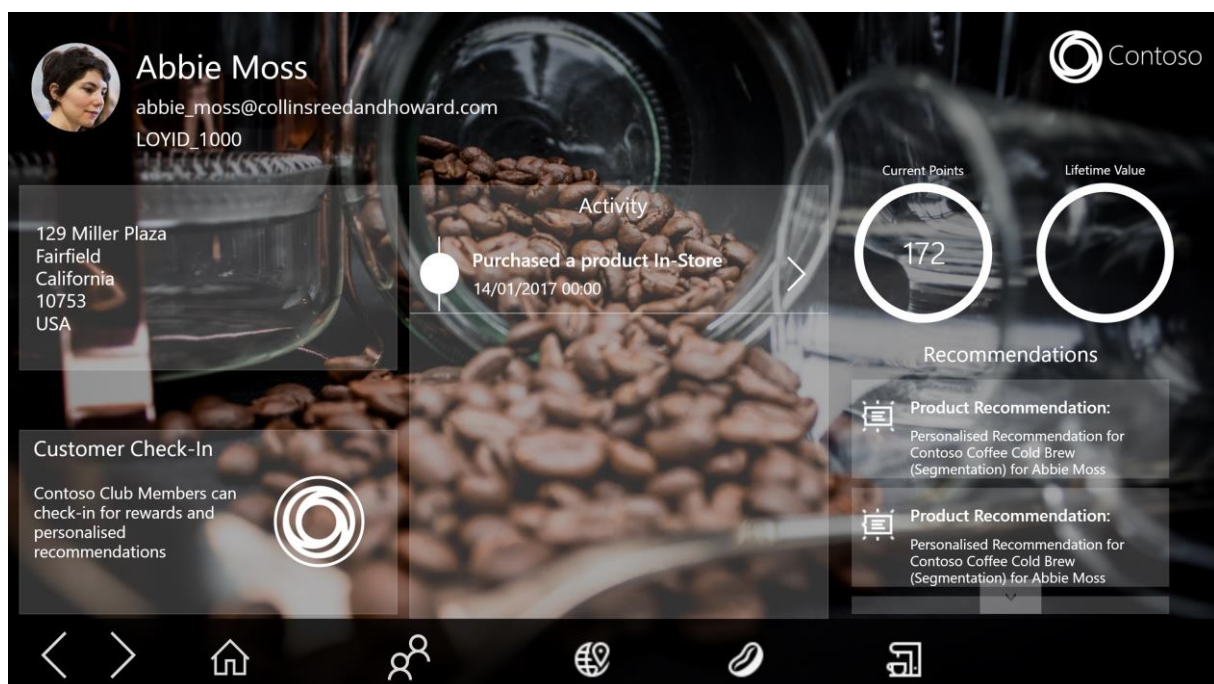
1. Within the Greeter PowerApp in Edit mode, open the **CustomerProfile_Screen** screen via the Tree View and select the gallery **gallery_Recommendations**
2. Select the **Items** property from the property drop-down, then set the formula to return only Insight Cards relating to the current Customer Profile as below:

**Filter('Action Cards', regardingobjectid =
gallery_Customers.Selected.D365CustomerServ_Contact_contactid &&
'CardType ENUM' <> 32)**



3. **Save** and **Publish** your App.

You should now see that the 'Recommendations Gallery' contains some example Recommendations using the Insight Cards you generated in Module 3, using Microsoft Flow.



Task 8 – Test & Explore the Greeter App Experience

Congratulations! You have now configured a simple greeter app for Contoso Coffee Retail staff. In this task, you will explore the Greeter App experience

1. In a browser tab, navigate to <https://powerapps.microsoft.com>. If required sign-in.
2. Click **Apps** in the left-hand menu, and then run your **Contoso Coffee Greeter App (CIAD)**



3. Imagine you are a member of Contoso Coffee Retail staff and you greet them within the store...
 - a. Look up Abbie Moss' record (LOYID_1000)

b. Open Abbie Moss' record:

- **Review Activity History**

Note that you can identify Abbie's recent purchase history, and that she has made several in-store purchases of brew-at-home coffee.

Review Abbie's Club Balance and Lifetime Value

- Combining her purchase history with insight on her 'Current Points' and 'Lifetime Value', you are able to ascertain that Abbie is both a frequent and high-value customer.

Review recommendations made for Abbie

- Looking at her personalised recommendations, you see that there is a recommendation for Abbie to take-up the 'Connected Contoso' offer. This is Contoso Coffee's new subscription service, where she can enjoy Contoso

brew-at-home coffee delivered to her home and re-ordered by her connected Contoso Coffee Machine.

- **Abbie is interested in this offer. You tap the Product Recommendation.**
This highlights some further detail of the recommendation and links to further detail on the product. Abbie decides to take up this recommendation. You click 'Send to App' to send the details and offer to Abbie's Contoso Consumer App.
- **Finally, you click the 'Customer Check-In' button**
This allows you to capture Abbie's visit to the store as well as details of the recommendations you discussed with Abbie and captures this detail against her record in Dynamics 365 as an activity.