Interactive Communication Document

In this exercise we will create Web Channel Document based on Form Data Model. The Web Channel Document will contain document fragments, charts and table.

At the end of the exercise you will have good understanding of the various elements that will make up the web channel document

The data for this web channel document will be fetched from REST API. The WAR file is deployed in the tomcat server on your machine.

Test the following url

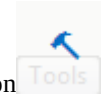
http://localhost:8080/SampleRest/webapi/getStatement/6953

You should see some sample data being returned. The number 6953 is the account id of the person whose statement is being fetched.

To create the Interactive Channel Document, we will follow the following steps

1. **Create Data Source in the Cloud Services. Most Interactive Communication documents will depend on data source fetch the data**

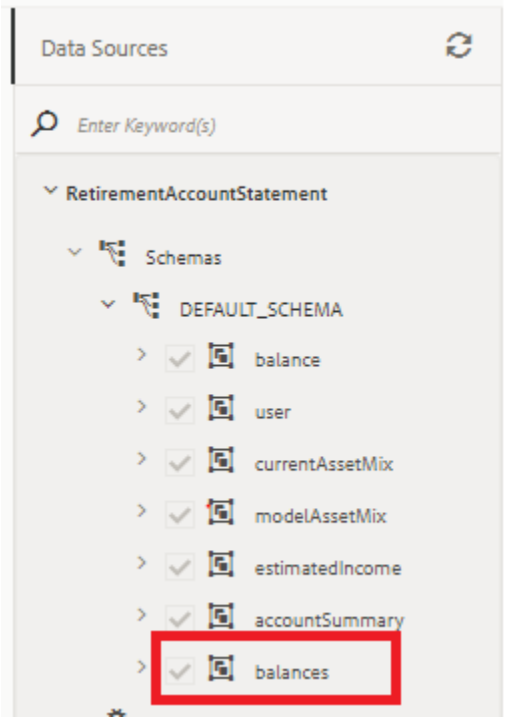
    a. Point your browser to
    b. http://localhost:4502/aem/start.html

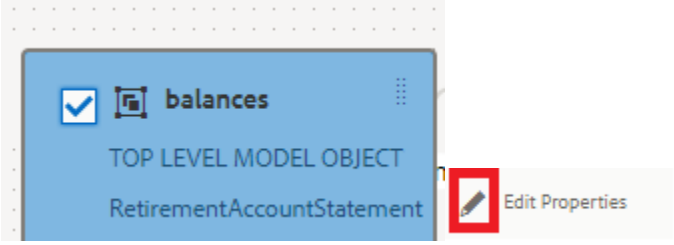
    c. Click on Tools icon 

    d. Then Click on Cloud Services | Data Sources
    e. Click on global (Make sure you are NOT selecting the checkbox)
    f. Click the Create Icon
    g. Specify Title as “RetirementAccountStatement”
    h. Select “RESTful Service” from the Service type drop down list
    i. Click “Next”
    j. Select “File” as from the “Swagger Source Drop Down”
    k. Browse and select the RetirementStatement.json file under the **c:\L722\assets folder**
    l. Make sure authentication type is set to “None”
    m. Click “Create”

2. **Create Form Data Model.** Form Data Model provides an intuitive user interface to create a unified data representation schema of business entities and services across connected data sources.
    a. Point your browser to
    b. http://localhost:4502/aem/start.html
    c. Click on 
    d. Click on Forms | Data Integrations
    e. Click Create | Form Data Model
    f. Specify Title as “RetirementAccountStatement”
    g. Click the Browse icon of the Data Source Configuration and select “global” and click on the “Select” button
    h. Click “Next”
    i. Select the Data Source create in earlier step(RetirementAccountStatement)
    j. Click **Create and then Edit** to open the Form Data Model in edit mode

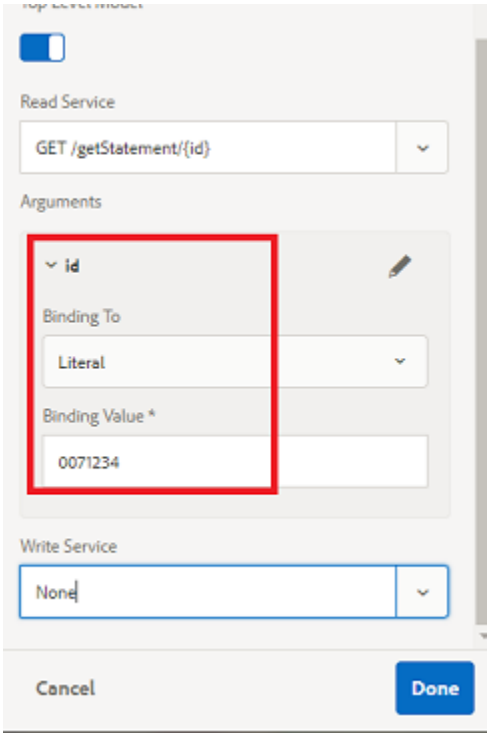
We have created Restful based Data Source and then create Form Data Model using that data source. The next step we will configure the Form Data Model and make sure the Form Data Model is working correctly

3. **Configure and Test Form Data Model**
    a. Expand the “RetirementAccountStatement” node
    b. Expand the “Schemas”
    c. Select the “balances” object (The last object in the hierarchy) and click “Add Selected”
    d. 

    e. Click the “Add” button in the subsequent dialog box
    f. Click Save button
    g. What you see is the Data Model Diagram with the associations between the various objects
    h. Select the “balances” Top Level Object
    i. 

    j. Click on “Edit Properties”

k. Configure the “Read and Write Service” as shown below

l. 

m. Click “Done “and then click “Save” to save your changes

4. **Test Form Data Model**
   a. Select “balances” Top Level Object
   b. Click “Test Model Object”
   c. Click “Test”
   d. You should see json data being returned in the right-hand side

Congratulations!!! You have successfully configured your Form Data Model to fetch data from the WAR file that is deployed on the tomcat server. We will now use this Form Data Model as the basis for our web channel document.

Create Interactive Communication Document for Web Channel

Point your browser to

http://localhost:4502/aem/forms.html/content/dam/formsanddocuments/401kstatement

Click Create

Specify Title as “401KStatement”

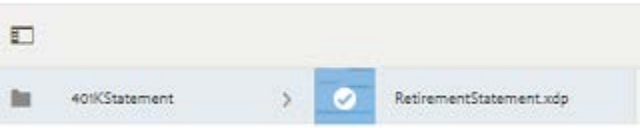
Select “retirementaccountstatement” as your Form Data Model

Select Form Data Model Prefill Service from the Prefill Service Drop Down List

Click Next

Print Template – This is the XDP which is created using AEM Forms Designer.

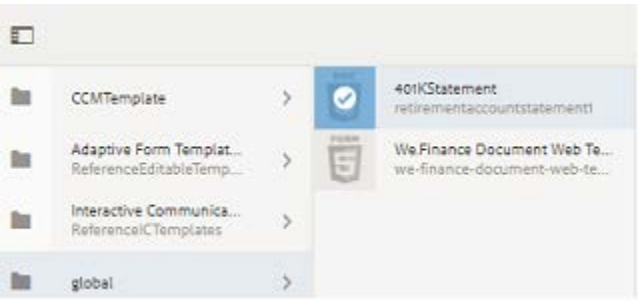
Select the Print template shown below



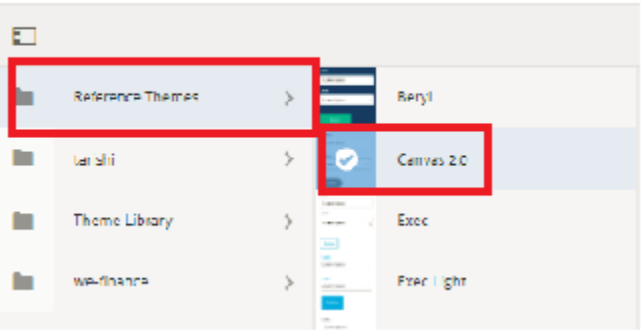
Web channel Template

Click the Checkmark to browse for web channel template

Select 401KStatement under the global folder

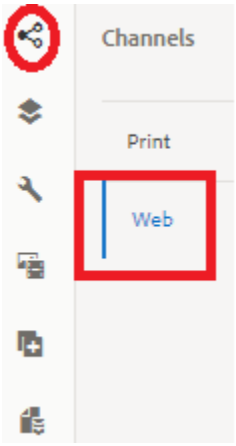


Select appropriate theme as shown



Click Create and then Edit to open the document. Make sure you are in the edit mode

Select the appropriate channel. For this exercise we are primarily focused on creating web channel document. So, make sure you select Web channel as shown here. You can toggle between Web and Print channels using the same interface.



You will now notice a web channel document that is divided into logical sections. We will add content to these sections a little later in our exercise.

Create Document Fragment

We will now create a document fragment that will hold the Recipient Name and Address. The data for this will be fetched by the Form Data Model. Document fragments are authored using easy to UI web based interface. Document fragments typically contain static text as well as data fetched from the underlying data source of the Form Data Model.

Point your browser to

http://localhost:4502/aem/forms/assets.html/content/apps/cm/modules/401kstatement

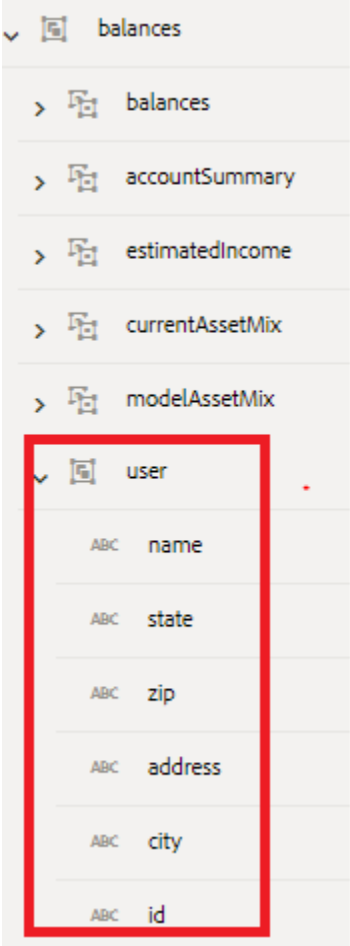
Click “Create | Text”

Specify Title as RecipientNameAddress

Data Model – “Form Data Model” and select RetirementAccountStatement

Click **“Next**” after selecting the Form Data Model

On the left-hand side, you will see the elements from the data model. You can collapse the objects and keep the user object visible as shown in the screen shot below**. Make sure you select the user object under the “balances” nodes as shown in the screen shot.**



Select the name element and double click it to include it in the document fragment. Hit the “Enter” on your keyboard to add the next element on the new line.

Similarly add address, city, state, zip and id. Your document fragment should look like this

name
address
city
state - **zip**
Account Number - id

Account Number is static text in the above document fragment

Click save to save the Document Fragment

Adding content to target areas

Add Logo's to the Document

Point your browser to Forms And Documents

http://localhost:4502/aem/forms.html/content/dam/formsanddocuments-fdm

Open the Interactive Communication Document created in earlier step in edit mode

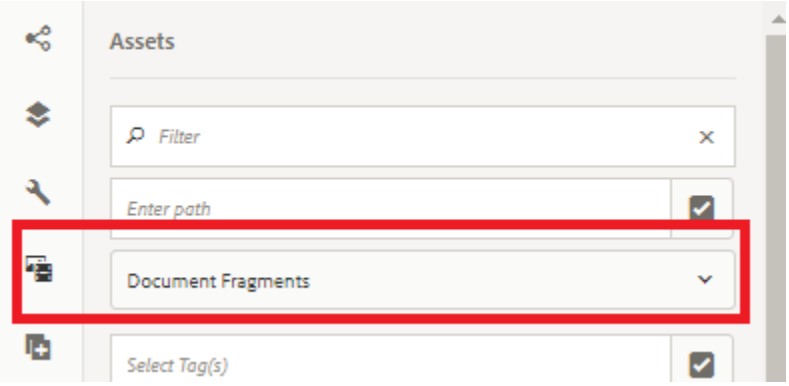
Select the Assets icon from the left tool bar as shown

Make you are filtering the asset types by images as shown

Drag and drop the Adobe Logo on to your LeftHeaderTargetArea

Drag and drop the WeFinance Logo on to your Right Header Target Area

Change the asset type from images to Document Fragments



Drag the RecipientNameAndAddress Fragment on to the LeftHeaderTargetArea

Drag the **AccountSummary** Fragment on to the RightHeaderTargetArea

Preview the Interactive Communication Document by clicking on the preview button on the top right-hand side of the document.

Configure table

We will now add a table to this document to display the various transactions associated with the account.

Make sure you switch back to **Edit** mode before you add the table

The steps to configure and style table are available in video **C:\L722\assets\TableConfiguringAndStylingWeb.mp4.**

Make sure you open the mp4 video using vlc player.

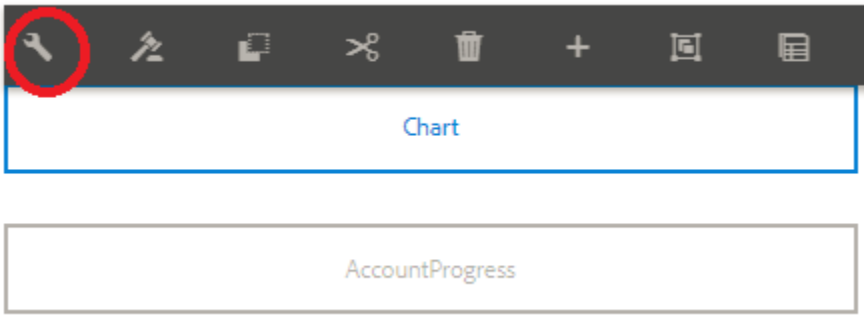
Add and configure Chart component

We are now going to configure our first chart component. The chart will show the progress of the account. The x axis will have the "year" and the "y" axis will have the account balance for that year. To populate charts or table we need to have repeating set of data.

Open the Interactive Communication Document in edit mode

Click on the "Account Progress" panel and click the "+" icon and add "Chart" component from the list of available components

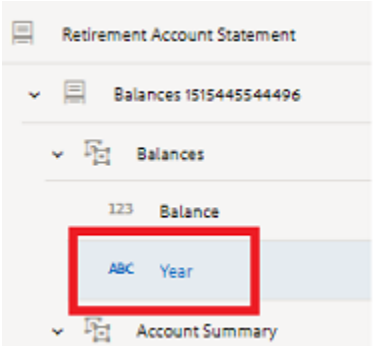
Click newly added chart component and click the configure icon as shown below. This will open the configuration properties sheet for the chart

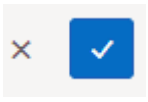


Select "**Line**" as your chart type

Specify "**Year**" as title for X axis

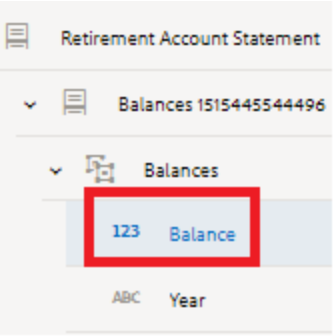
Select the "Year as the data model object as shown in the screen shot below and make sure you select the blue check mark icon to save your changes



Select the blue check mark to save your changes 

Specify **Amount** as title for Y axis

Select Balance as the data model object as shown below



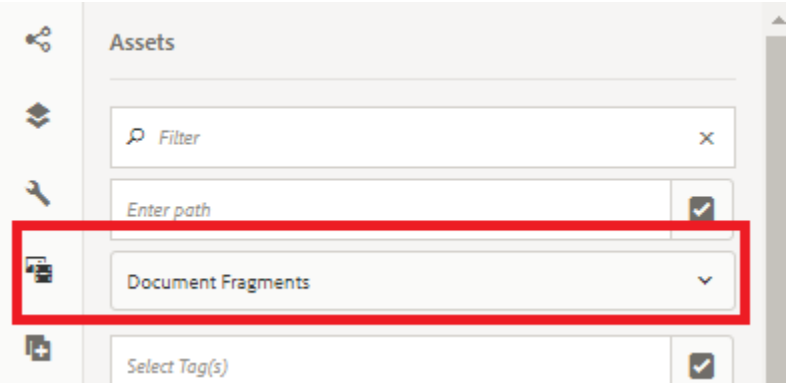
Save your changes by selecting blue check mark

Preview the document to see the chart populated with data

RetirementOutlook Panel

In the Retirement Outlook panel, we will add a pre-defined document fragment. This document fragment has static text which highlights the expected contributions and income

Select the “Assets” icon from the left tool bar as shown



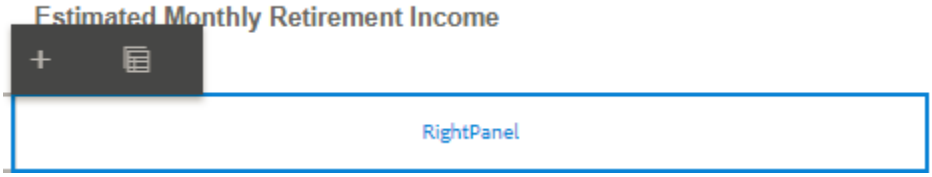
Filter Asset Types by Document Fragments

Drag and Drop the “RetirementIncomeOutlook” fragment onto the “leftpanel”

We will now add a chart component that will show the monthly estimated income based on the contributions

You can also follow the video to add the chart component or follow the instruction mentioned below. The video is in **c:\L722\assets\ ConfiguringColumnChart.mp4.Make sure you open the mp4 video using vlc player**

Select the RightPanel and click the “+” icon and insert chart component to this panel

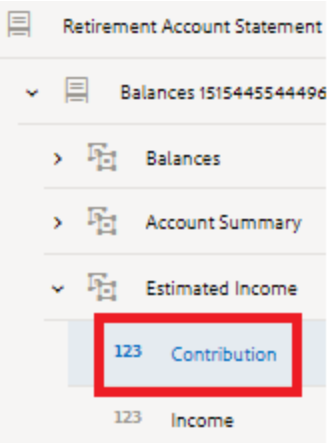


Configure the chart component

Select the newly added chart component and click on the configure icon to open the properties sheet for the chart.

Select “**Column”** as your chart type

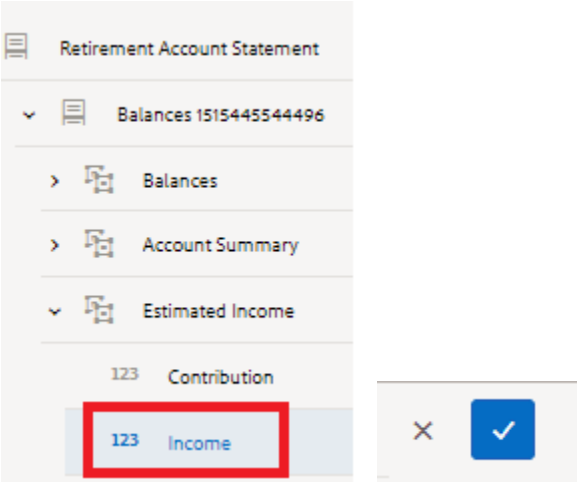
Specify “**Contribution**” as the title for X axis Specify the data model object for the X axis as shown below. **Make sure you are selecting Contribution under Row1 of Estimated Income.**



Click blue check mark to save your changes

Specify “Estimated Income” as the title for your Y axis

Specify the data model object for the Y axis as shown below. **Make sure you are selecting Income under Row1 of the Estimated Income**

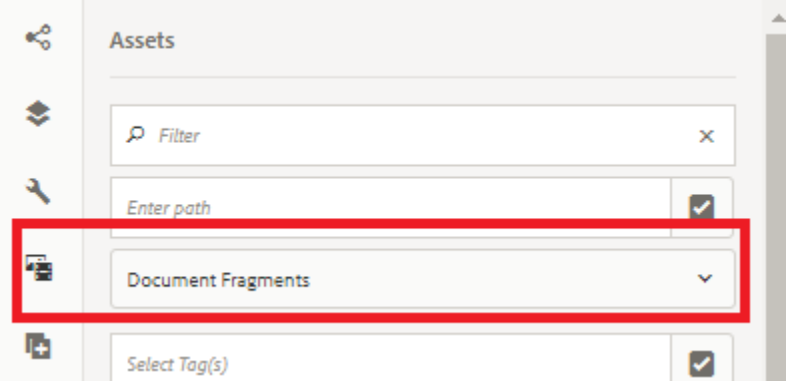


Click blue check mark to save your changes

Preview the Interactive Communication Document

Add Disclaimer Document Fragment

Select “Assets” icon from the left tool bar as shown



Filter Asset type by “Document Fragment”

Search for “Disclaimer” document fragment

Drag and drop onto the root panel below the InvestmentMixPanel

Preview the document.

Delivery of Web Channel Documents

Web Channel Documents are typically delivered as a secured ink via email. Once the user authenticates, we can fetch the account number of the logged in user. This account number can then be passed as request attribute parameter to the Form Data Modal’s invoke service method.

We need to change the Form Data Modal Read Service to accept the value for “id” passed in through Request Parameter. Currently It is set to a literal value` To change this, please follow the steps below:

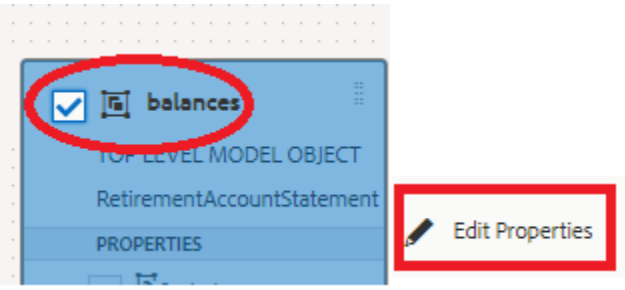
Point your [browser to]

http://localhost:4502/aem/forms.html/content/dam/formsanddocuments-fdm

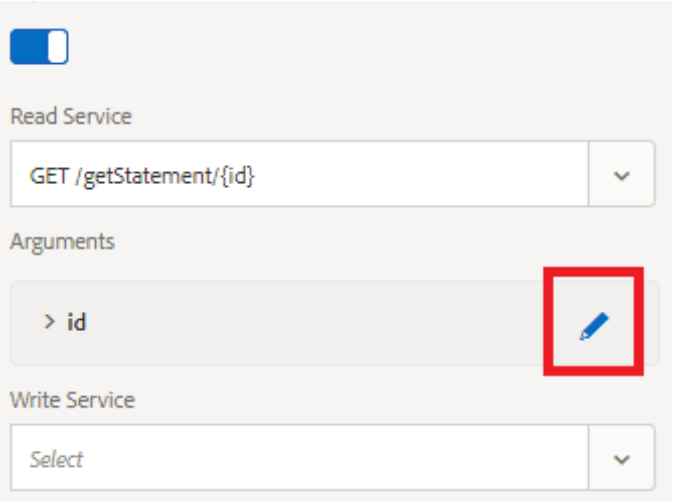
Open the Form Data Model you created in the earlier step in edit mode

This will open the Form Data Model in edit mode with all the entities and its associations listed on the righthand side of the screen

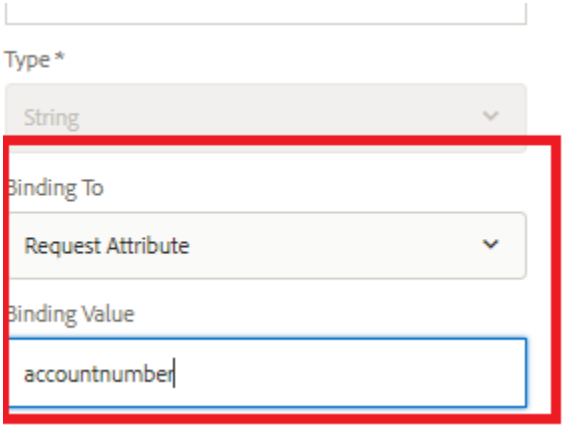
Select the balances object and click the “Edit Properties” as shown below



This will bring up the properties sheet of the model object. Click on the edit icon to edit the arguments



Set the Binding to Request Attribute and set the Binding Value to accountnumber



Save your changes. You will have to click Done, Done, save to save your changes

Point your browser to http://localhost:4502/crx/de/index.jsp#/apps/AEMForms/fetchad/GET.jsp

Make sure the variable webChannelDocument (Line 15 of the jsp)variable is accurately reflecting the path of your web channel document.

In this JSP we get the account number of the logged in user. We then set this in the request attribute and forward the request to resource identified by the web channel document. The response of this resource is then included in the GET.jsp

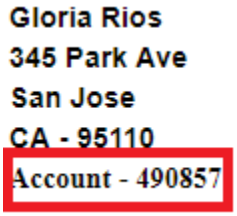
To test invoking this GET.jsp

Launch a new browser session

Click on this link (http://localhost:4502/content/getad.html) to access the Web Channel Document

Authenticate as admin/admin

The Retirement Account Statement will open and it will have accounted id in the recipient address as shown here. The Account number is taken from the logged in user's profile and passed in as input parameter to the FDM Service.



Bonus Section

Congratulations!!! You have successfully configured your Web Channel Interactive Communication document. If you have the time, you can add 2 pie charts one each in the CurrentAssetMix and RecommendedAssetMix.

Configure the pie charts to use AssetType and Percentage data elements of CurrentAssetMix and ModelAssetMix objects.