GUIDEWIRE

InsuranceSuite 10 Fundamentals: Essentials

Student Workbook

Labs and Tutorials

Document Published: 2020-08-18

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Introduction

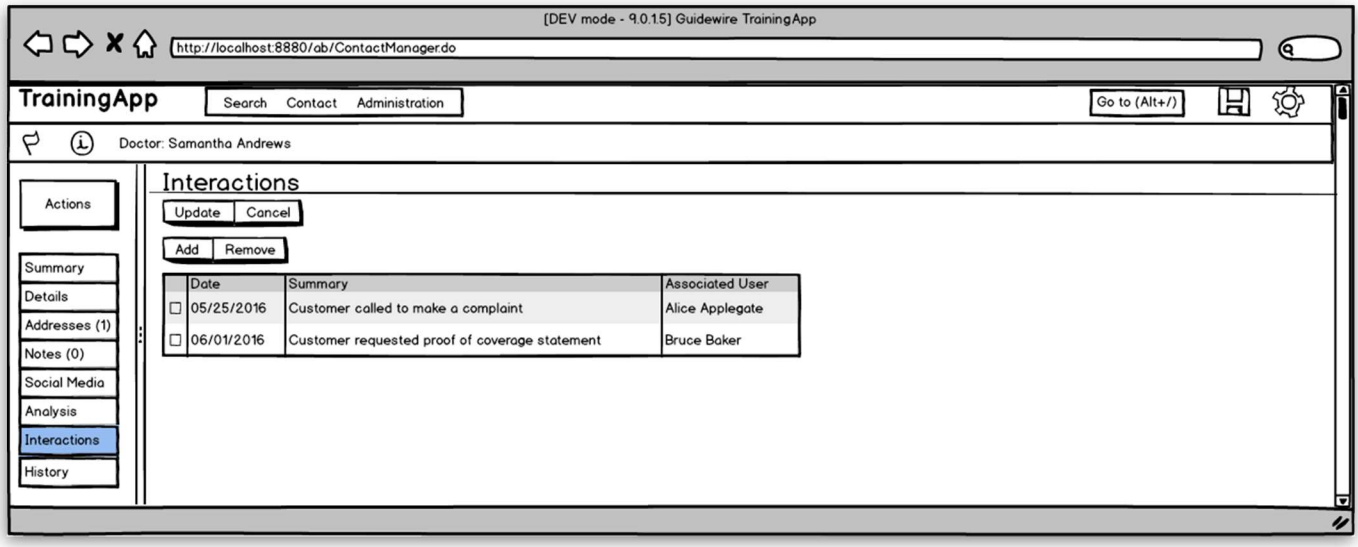
Welcome to the Guidewire InsuranceSuite 10.0 Configuration Fundamentals - Essentials course.

The Student Workbook will lead you through the course labs. The lesson numbers correspond to the lesson numbers in your training. Complete the assigned labs to the best of your ability.

Lesson 1

Creating New Entities

The business analysts want to capture specific information about each contact interaction such as a telephone call, email message, postal mail letter, or in-person office visit. Eventually, they want the information displayed in an Interactions section of TrainingApp.



"We want a CSR (Customer Service Representative) such as Alice Applegate to be able to create and edit details about contact interactions." – Insurance company business analysts

In this lab, your job is to make the necessary **data model changes** to meet customer requirements. As a configuration developer, you will use the Entity Editor in Guidewire Studio to modify the TrainingApp data model. You will implement the **user interface changes** in a later lesson.

1.1 Prerequisites

1.2 Lab: Create a new entity

As a configuration developer, you want to be able to create new entities. In this lab, you will use the Entity Editor to create an entity to capture contact interaction details.

1. **Create a new entity named Interaction_Ext and add the following fields:**

Field Name	Datatype	Null ok?
InteractionDate	date and time	true
InitiatedByContact	A boolean value	true
Summary	A string of up to 60 characters	true
AssociatedUser	A foreign key to User	true

1.2.1 Verification

1. **Use Studio's code generation feature to generate the Java class from the entity and verify the generated Java class**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Open the generated Java class

Important!

Read carefully.

2. **For each new entity element, remember to set the nullok attribute to true if not specifically defined to be false.**
3. **When required, add an element description and specify column parameters**

Best Practices

Use _Ext in the entity name

Notice that the name of the entity has an _Ext suffix. For new entities, Guidewire recommends that the name of the entity should end with _Ext (or start with Ext_). This is to prevent potential conflicts during the upgrade to the next version of the Guidewire application.

1.3 Lab: Define an array relationship between two entities

As a configuration developer, you want to be able to define different types of relationships between entities. In this lab, you will define an array relationship between ABContact and Interaction_Ext:

"An ABContact entity can have zero or many Interactions associated with it." – Insurance company business analysts

1. **Add an array key field to ABContact**
   a) Extend the ABContact entity to define a new array. The array key field should point to Interaction_Ext. The array name should be descriptive and should follow the recommended naming conventions.
2. **Use Studio's code generation feature to generate the Java class from the entity and verify the generated Java class**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Open the generated Java classes and verify that you can see the new fields
   d) Remember, for every data model array the framework automatically generates `addTo<ArrayName>(element)` and `removeFrom<ArrayName>(element)` functions. Verify that you can find those methods in the generated Java class.

Best Practices

Use _Ext in entity field name when extending base application entities

For fields that are added to a base application entity, Guidewire recommends that the field name should end with _Ext (or start with Ext_). This is to prevent potential conflicts during the upgrade to the next version of the Guidewire application.

1.3.1 Verification

Activity

Verify the work you have done

As a configuration developer, you want to be able to properly deploy new and changed data model resources.

1. **Restart the server to deploy the changes**

a) During server restart Studio first runs the code generators, then compiles the project and finally deploys the resources

2. **Regenerate the Data Dictionary**

   a) Follow the steps to regenerate the Data Dictionary

3. **Open the Data Dictionary**

   a) In Windows Explorer, navigate to the data dictionary.

   b) Open the data dictionary using your preferred browser.

4. **View the Interaction_Ext entity**

   a) Verify each new field and associated datatype.

5. **View the ABContact entity**

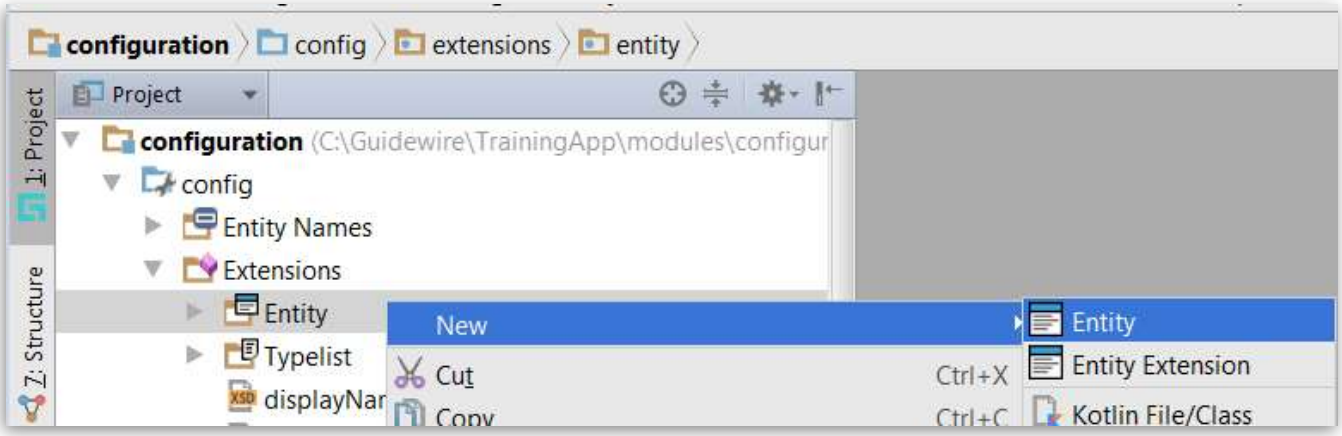
   a) Verify you can see the new array

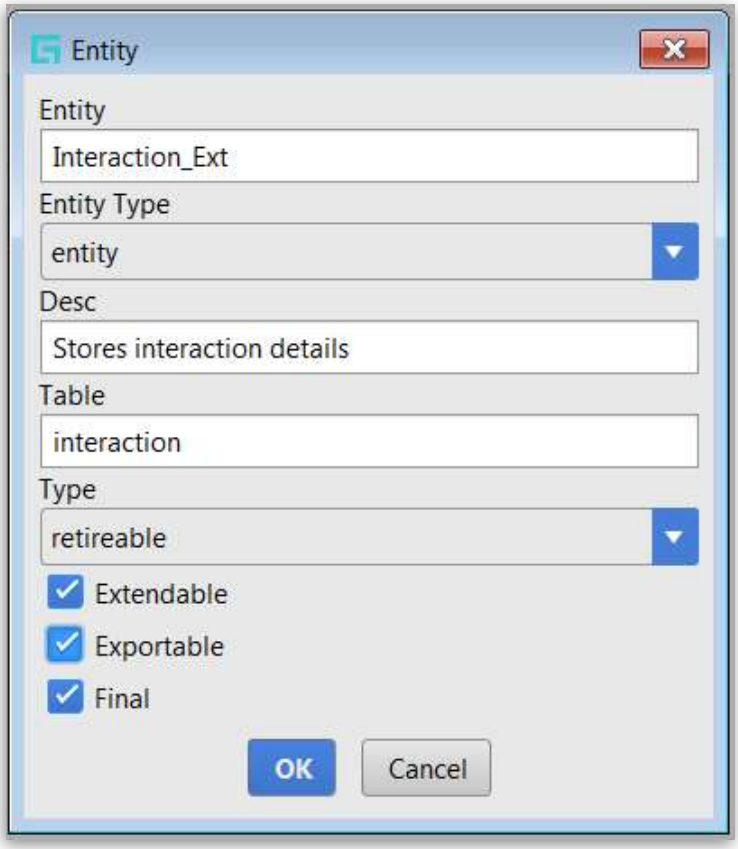
1.4 Lab Solution: Create a new entity

Solution

Exact details on how to complete the lab.

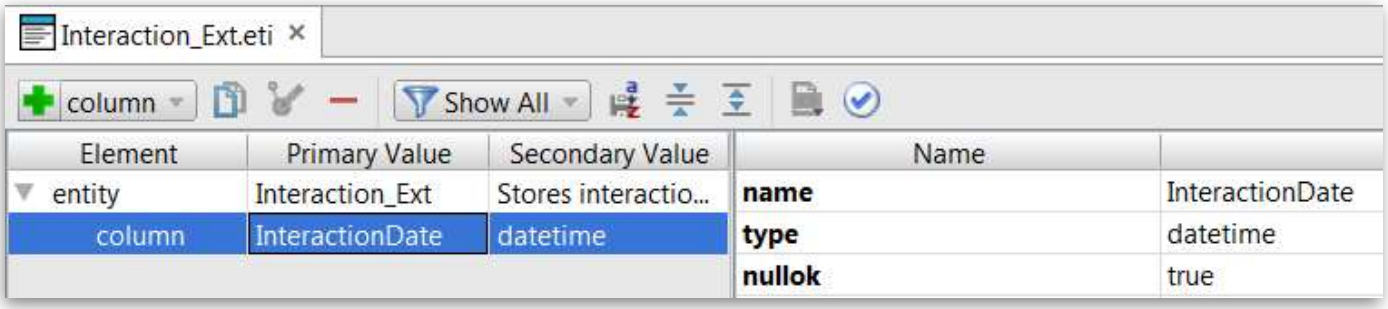
1. **Create the Interaction_Ext entity**



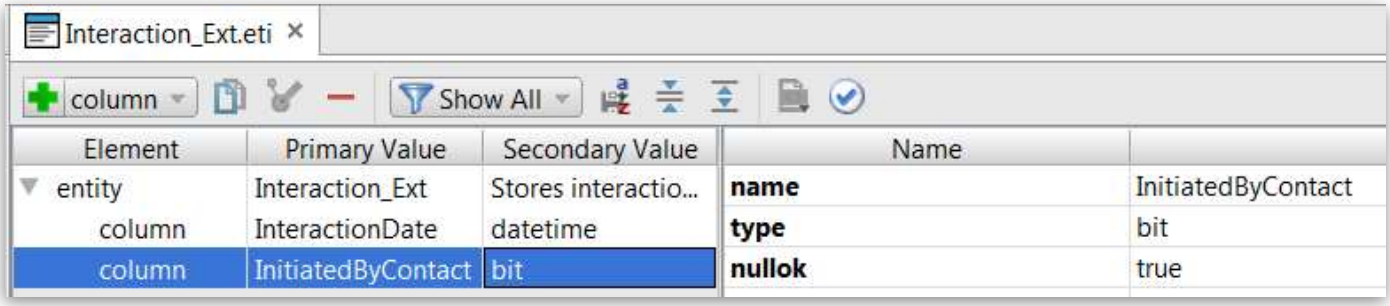


2. Add new elements to Interaction_Ext.eti

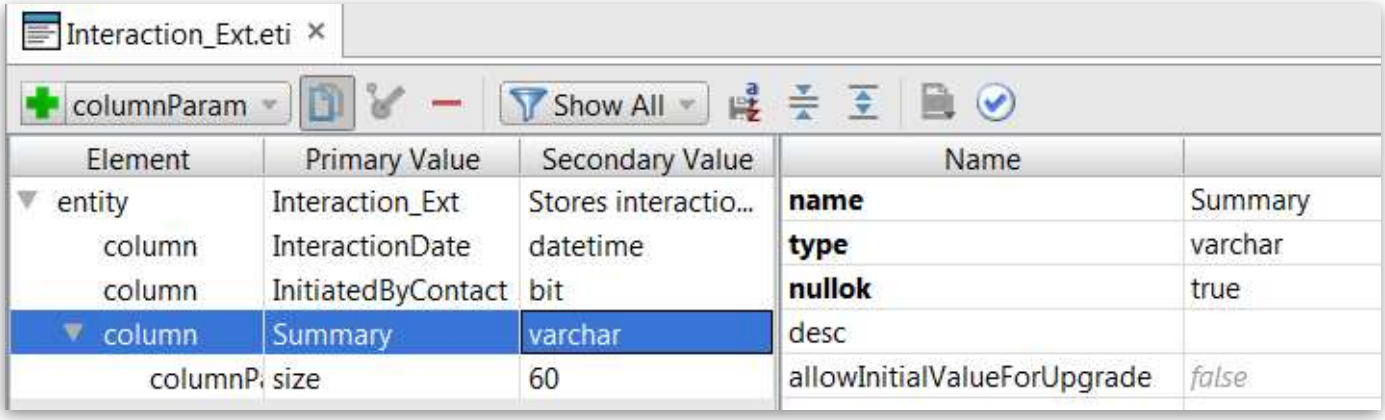
a) Add the InteractionDate field



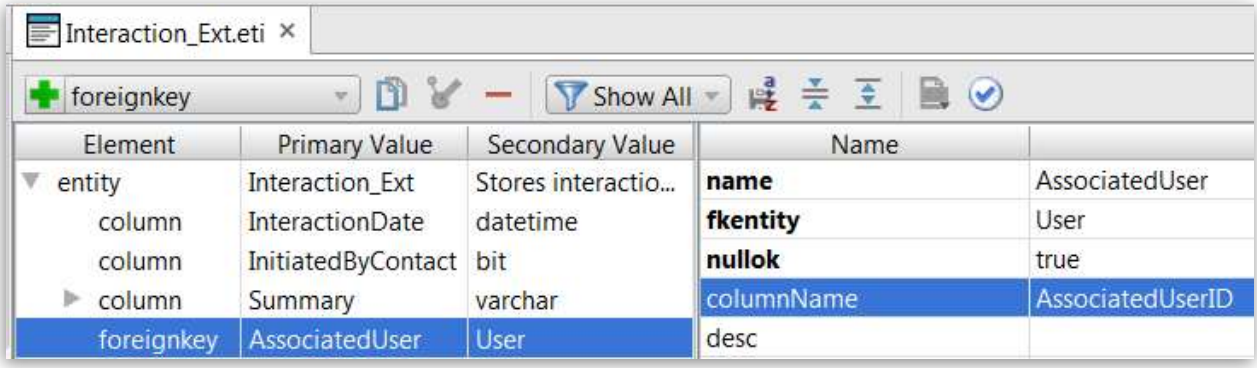
b) Add the InitiatedByContact field



c) Add the Summary field and its columnParam



d) Add the AssociatedUser field



3. **Entities support incremental code generation. You can click on the validate icon or use the CTRL + S keystroke to kick off incremental code generation. You can open the generated Java class once the code generation is completed.**

   Note: The code generation was successful if the Codegen tool window has nothing to show.

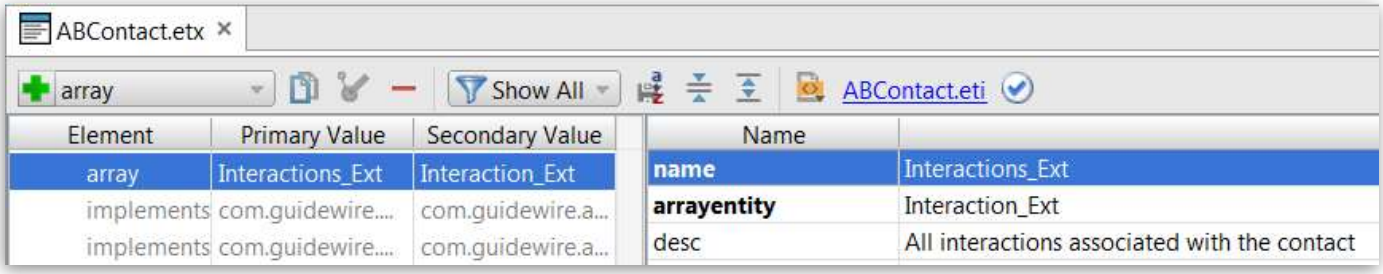
Screenshot of some of the Java code generated by the Codegen tool.

1.5 Lab Solution: Define an array relationship between two entities

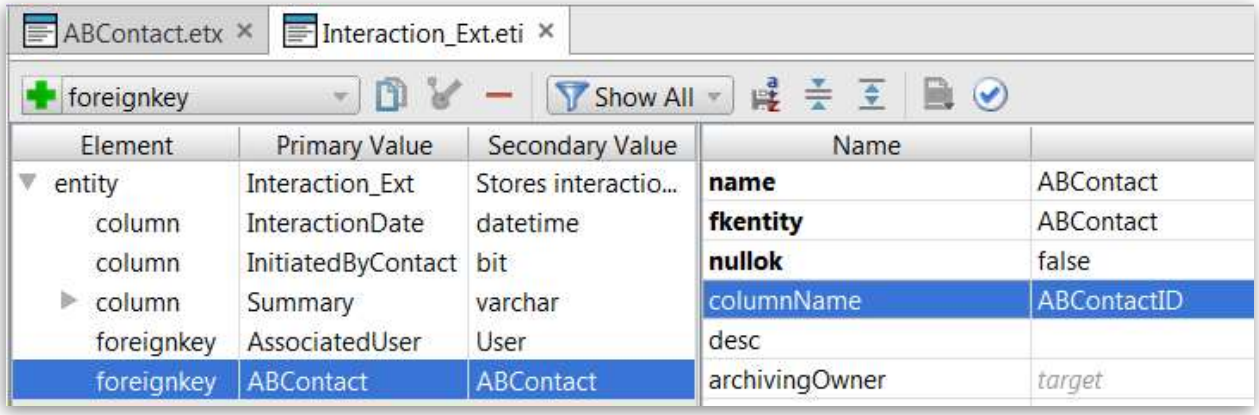
Solution

Exact details on how to complete the lab.

1. **Add the array key to the ABContact.etx**



2. **You must also add a foreign key to Interaction_Ext.eti since every array requires a reverse foreign key on the other side of the relationship.**



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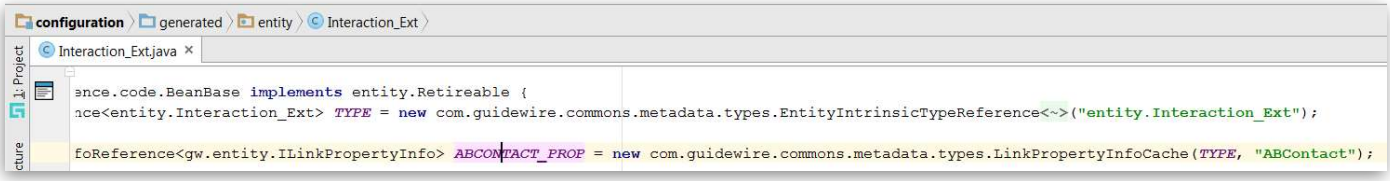
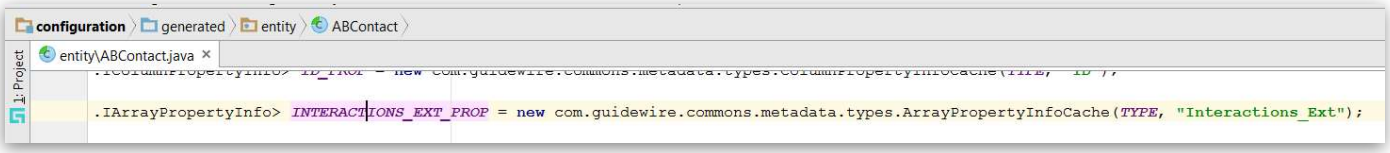
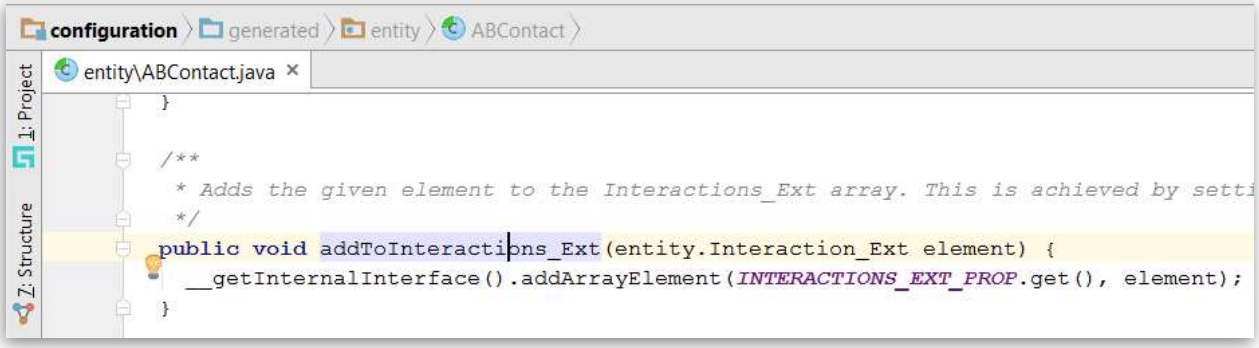
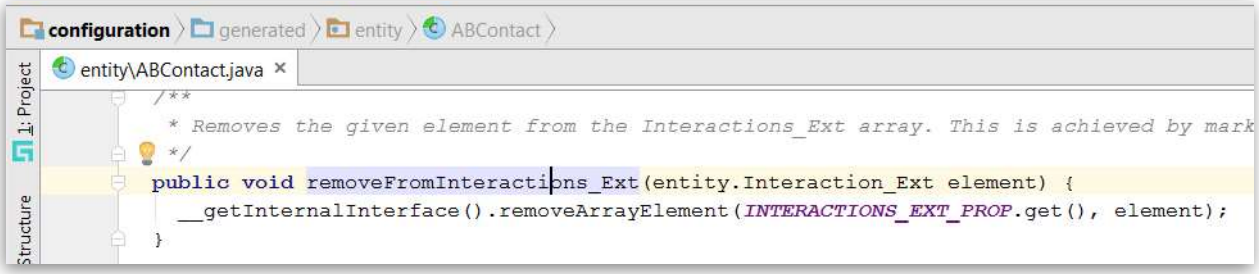
   Note: The code generation was successful if the Codegen tool window has nothing to show.





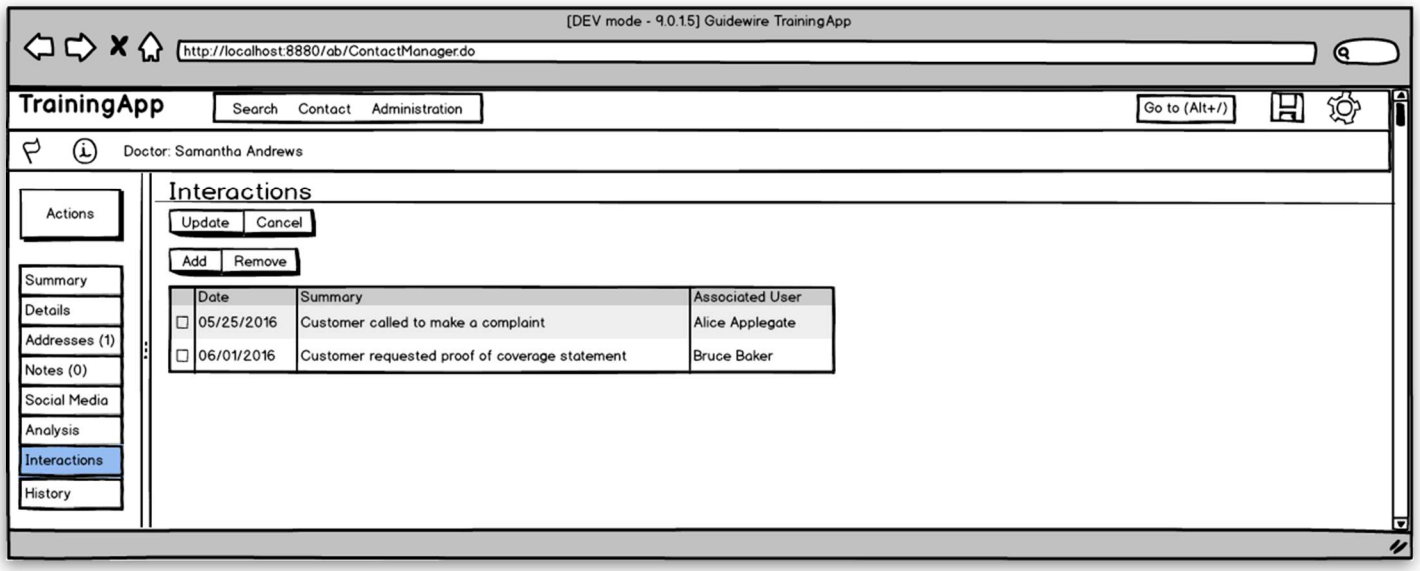



configuration
generated
entity
ABContact
entity\ABContact.java
1: Project
Structure
/**
* Removes the given element from the Interactions_Ext array. This is achieved by mark
*/
public void removeFromInteractions_Ext(entity.Interaction_Ext element) {
__getInternalInterface().removeArrayElement(INTERACTIONS_EXT_PROP.get(), element);
}

Lesson 2

List Views

The business analysts want to capture specific information about each contact interaction such as a telephone call, email message, postal mail letter, or in-person office visit. Eventually, they want the information displayed in an Interactions section of TrainingApp.



"We want a CSR (Customer Service Representative) such as Alice Applegate to be able to create and edit details about contact interactions." – Insurance company business analysts

In the previous lab, you created the Interaction_Ext entity and modified the ABContact entity to capture interactions. In this lab, you will implement the necessary **user interface changes** to display the interactions. You will also make the ListView editable in a later lab. As a configuration developer, you will use the PCF Editor in Guidewire Studio to modify the TrainingApp user interface.

2.1 Prerequisites

You must first complete the following previous lesson(s):

- Creating New Entities

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

2.2 Lab: Create a List View

As a configuration developer, you want to be able to create reusable list view panels to be able to display information about multiple entities. In this lab, you will use the PCF Editor to create a reusable List View.

1. **Create and configure the InteractionsLV PCF file:**
   a) Create a List View Panel in the `traininglabs` folder
   b) Specify a root object of the type ABContact
   c) Each row of the List View must display the following:
      - InteractionDate field labeled as Date
      - Summary field labeled as Summary
      - AssociatedUser field labeled as User (use the AltUserCell widget)
2. **Use Studio's code generation feature to process the PCF file and generate all the resources**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Verify that you can see generated resources (.gs, .pcfc, Expressions.gs)

Hint

Configuring cells

Remember, you can always use the Data Dictionary, the generated Java class, and the widget reference table to find out the name, database type and Gosu type of a field that needs to be displayed. Cells are atomic widgets and similar to input widgets.

Hint

Helpful hints that help you to completion.

The required variables tab defines the input parameters for a container, while the variables tab defines local variables to store values temporarily. (E.g. storing the result of an expensive function call to use it at multiple places in the PCF)

2.3 Lab: Reference the List View

As a configuration developer, you want to be able to reference reusable containers. In this lab, you will add the InteractionsLV to the ABContactInteractionsPage PCF file.

1. **Navigate to the ABContactInteractionsPage and replace the inline Detail View**
   a) Delete the Detail View
   b) Add a reference to the InteractionsLV
   c) Add a Toolbar to support paging

Hint

Toolbar

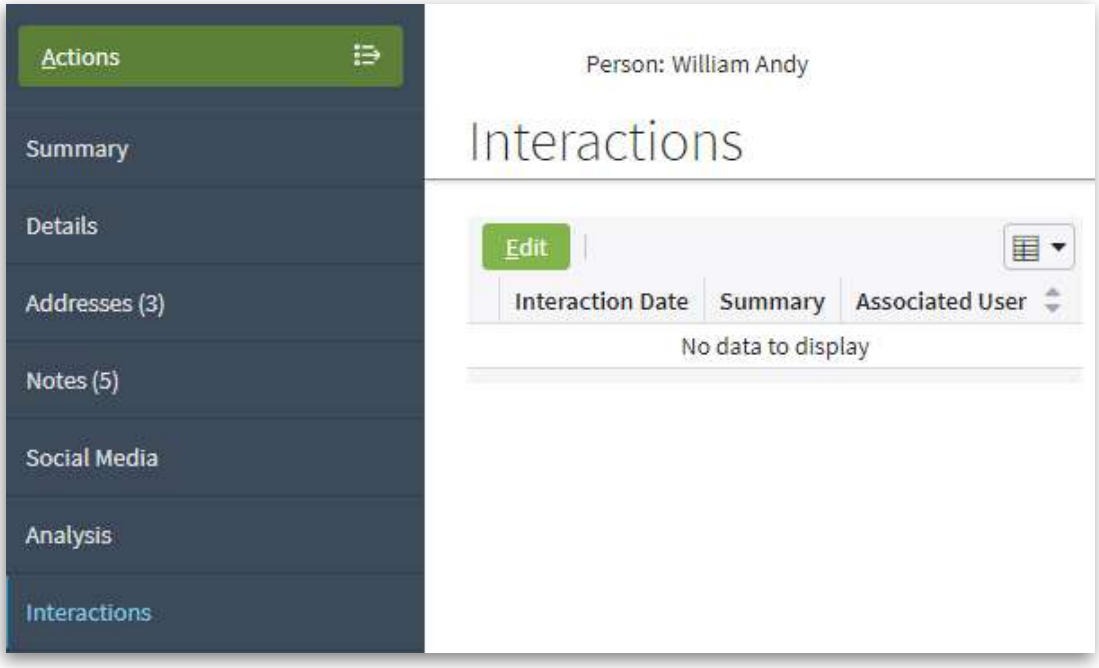
Every List View needs to have a Toolbar associated with it. Don't forget that List Views support pagination and the buttons will automatically appear when the number of elements exceeds the pageSize.

2.3.1 Verification

Activity

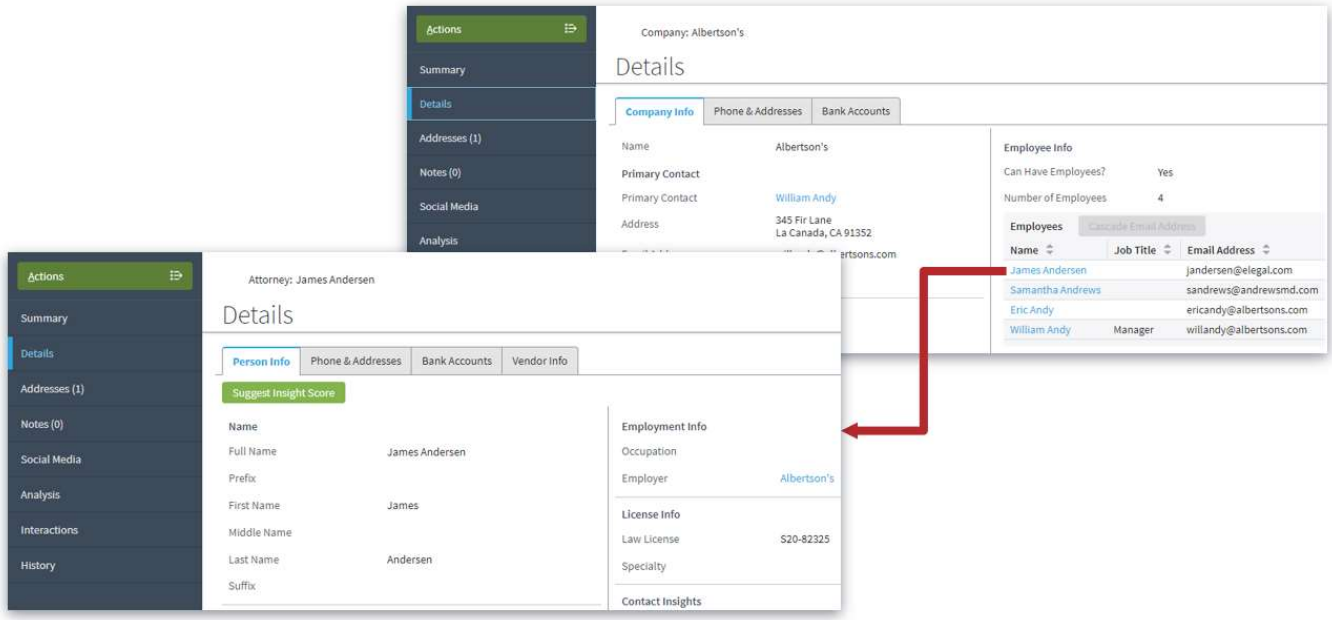
Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **View the Interactions page for William Andy**
   a) Navigate to William Andy
   b) In the sidebar menu, click Interactions
   c) Verify that you see the Interactions List View (Note: There will be no data in the List View for now. This is because there are no interactions in the database yet. You will be able to insert new interactions in the Editable List Views lesson.)



2.4 Bonus lab: List Views and navigation

"In the screenshot below, the list view panel shows all the employee contacts associated with the employer. Currently, there is no navigable link in the list view panel to the employee contact. A user would need to search for the specific employee contact to see more details. Modify the list view panel so that each employee name links to the contact details page. For example, clicking on William Andy in the table would take us to the Details page of William Andy." – Insurance company business analysts



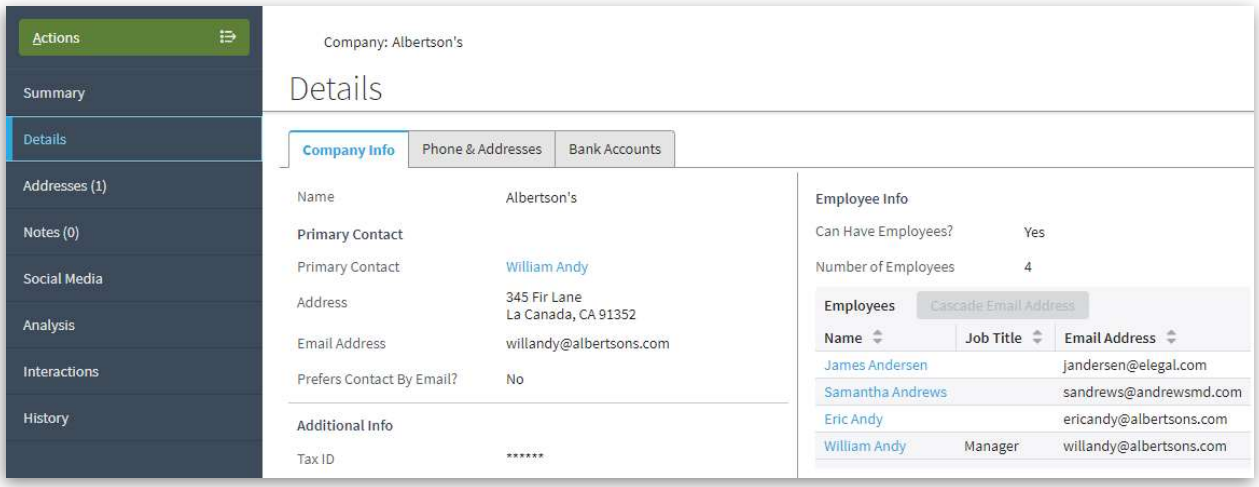
Hint

Navigation

If needed, review the **Introduction to Locations** lesson.

2.4.1 Verification

1. **Log in to TrainingApp as Alice Applegate**
2. **Reload the PCF changes**
3. **Go to the Details page for Albertson's**
   a) Confirm that you are able to click a navigable link for each employee contact

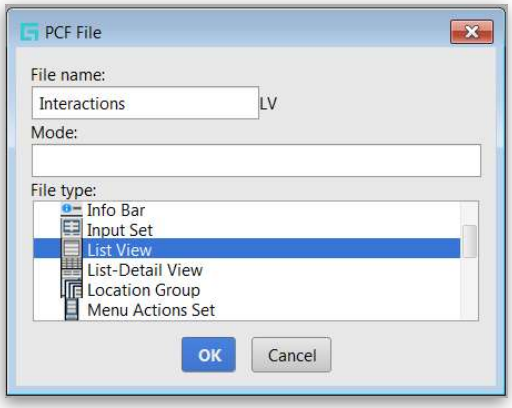


2.5 Lab Solution: Create a List View

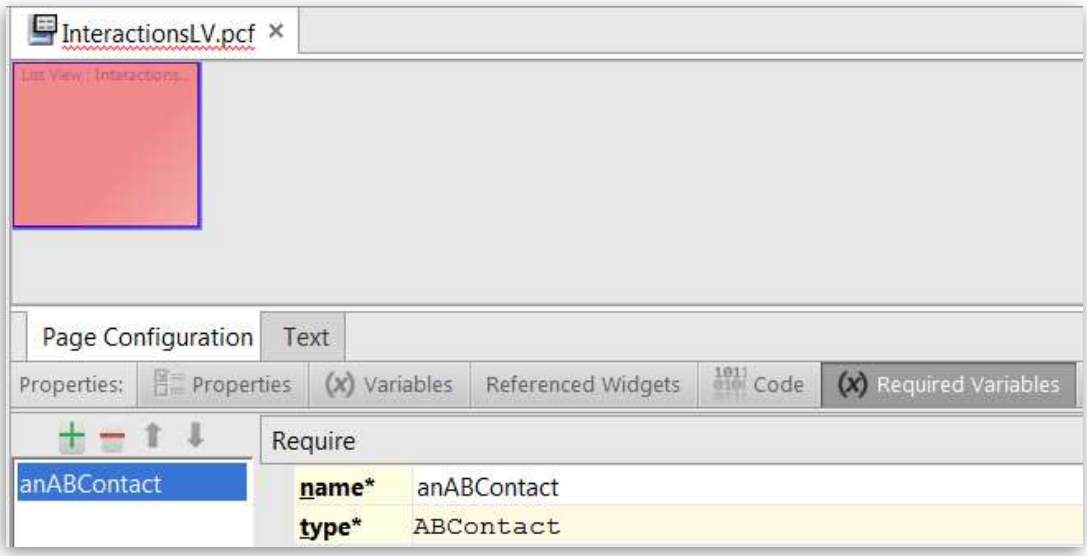
Solution

Exact details on how to complete the lab.

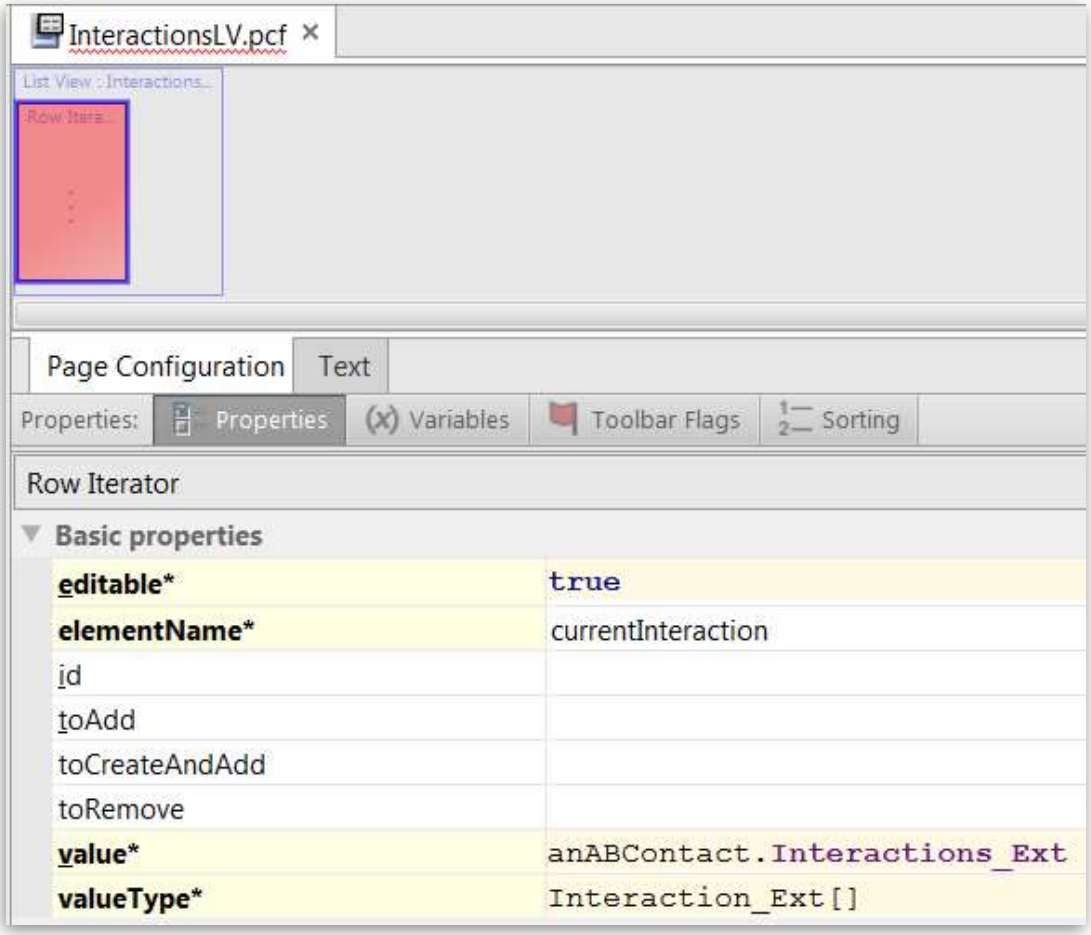
1. **Create traininglabs PCF folder if it doesn't exist.**
2. **Create the List View.**



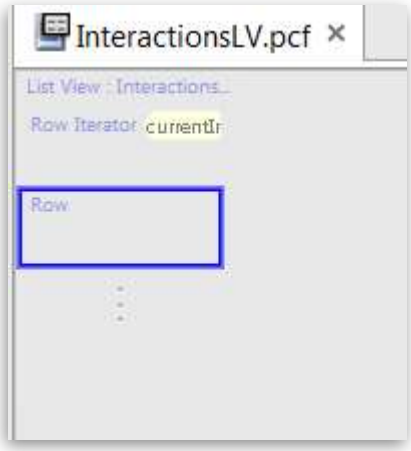
3. **Specify the root object.**



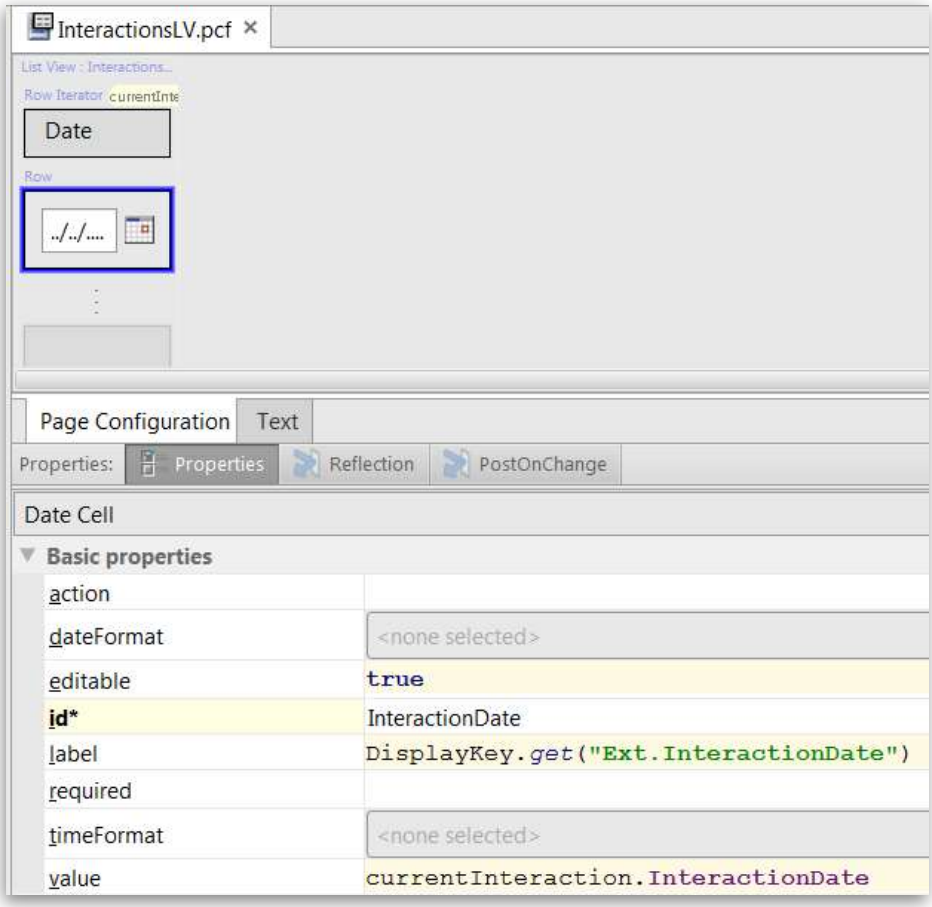
4. Add and configure the Row Iterator



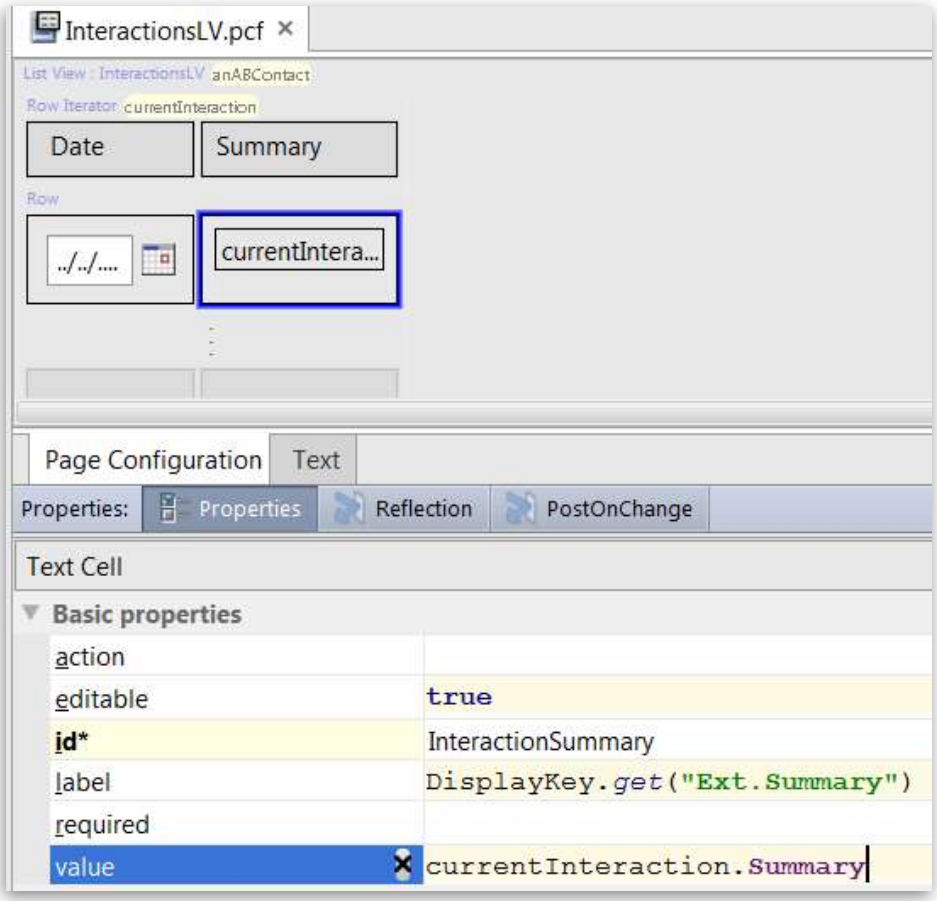
5. Add the Row



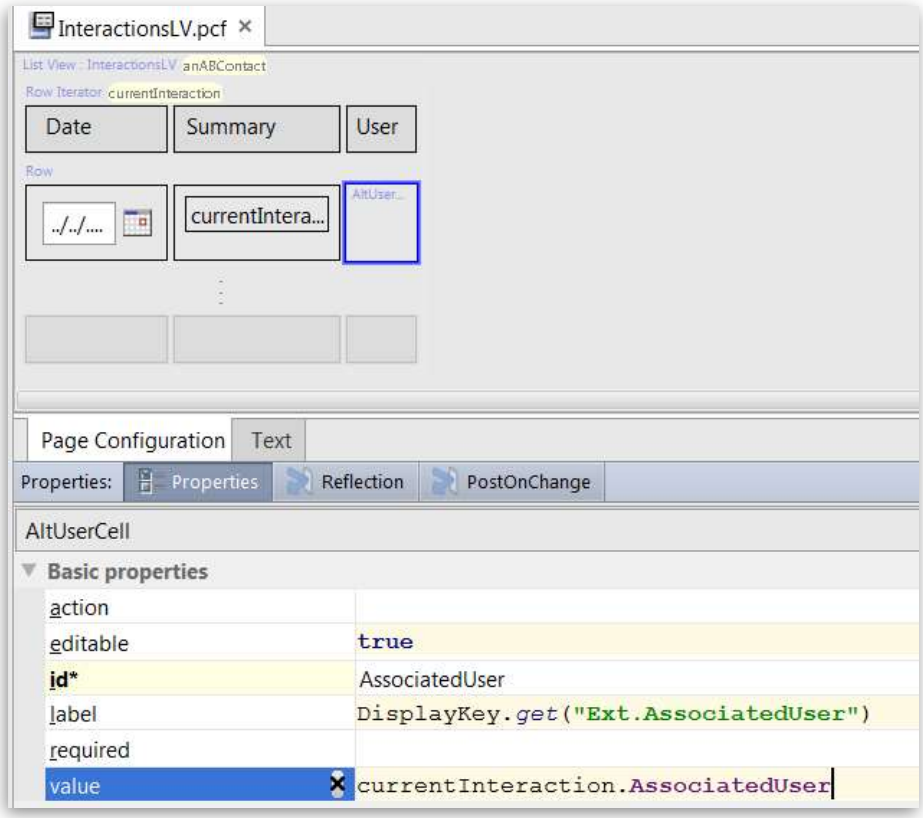
6. Add the Date Cell



7. Add the Text Cell



8. Add the AltUserCell

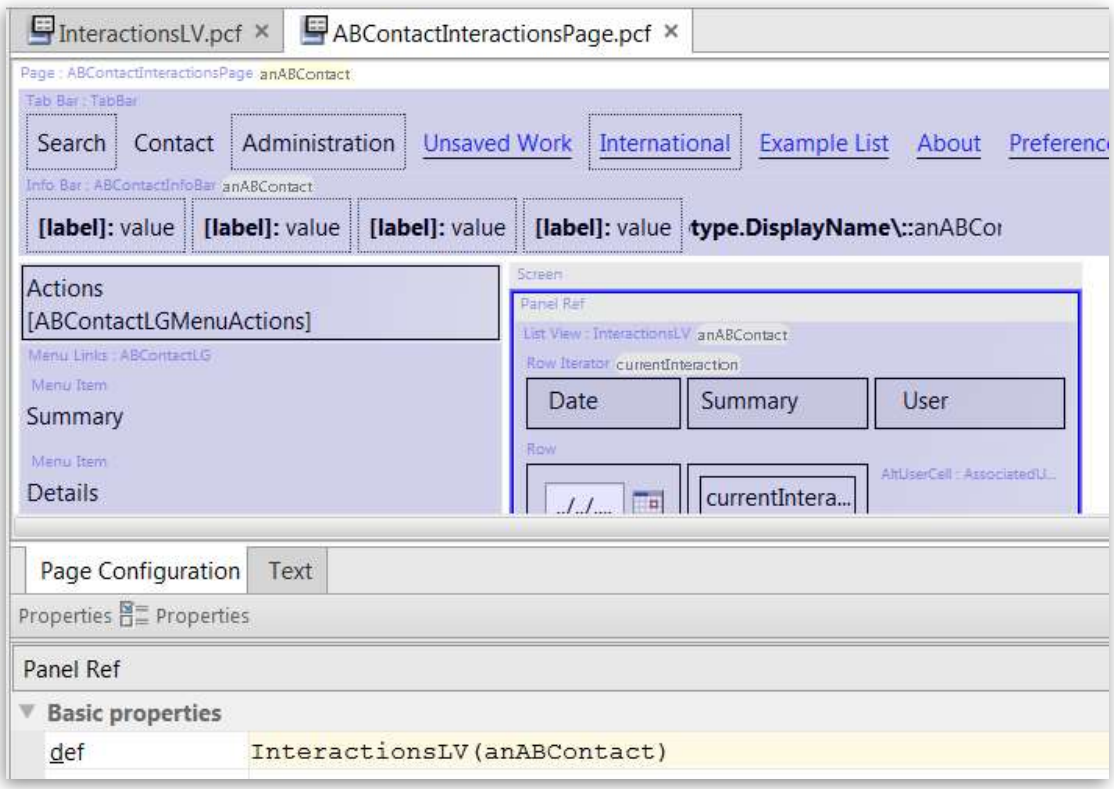


2.6 Lab Solution: Reference the List View

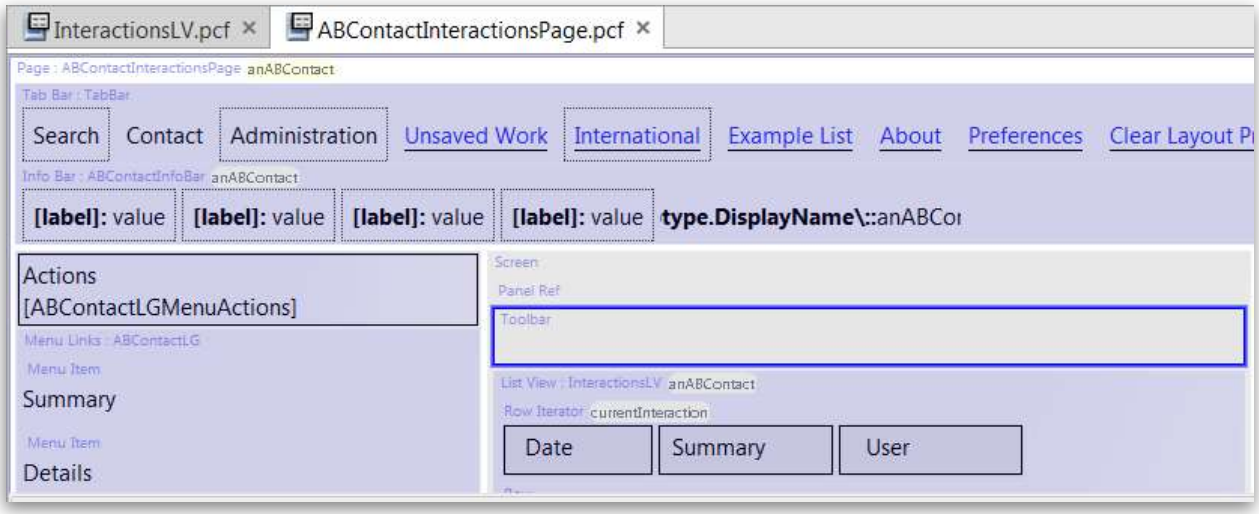
Solution

Exact details on how to complete the lab.

1. Open the ABContactInteractionsPage and replace the DetailView with a PanelRef.



2. Add a Toolbar into the PanelRef

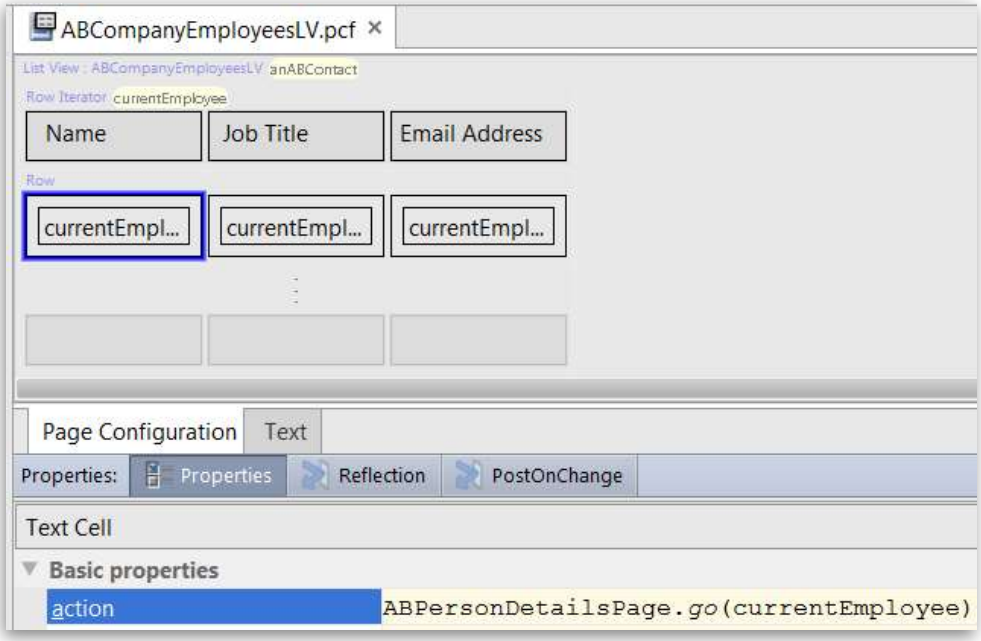


2.7 Bonus Lab Solution: List Views and navigation

Solution

Exact details on how to complete the lab.

3. Define the `action` property of the TextCell in `ABCompanyEmployeesLV`



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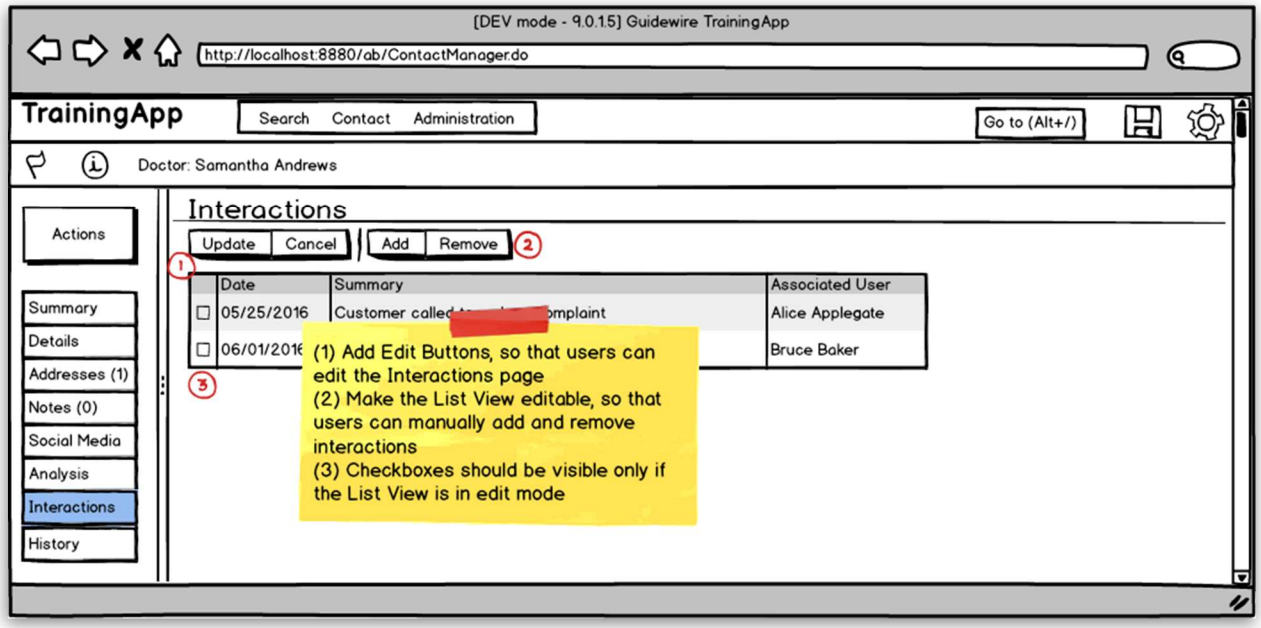
Lesson 3

Editable List Views



"We want a CSR (Customer Service Representative) such as Alice Applegate to be able to create and edit details about contact interactions." – Insurance company business analysts

In the previous labs, you created the Interaction_Ext entity, modified the ABContact entity to capture interactions and created a reusable read-only List View to display Interactions. In this lab, you will add Add and Remove buttons to ABContactInteractionsPage to allow the user to add and remove interactions.

3.1 Prerequisites

You must first complete the following previous lesson(s):

1. **Creating New Entities**
2. **List Views**

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

3.2 Lab: Make the Interactions List View editable

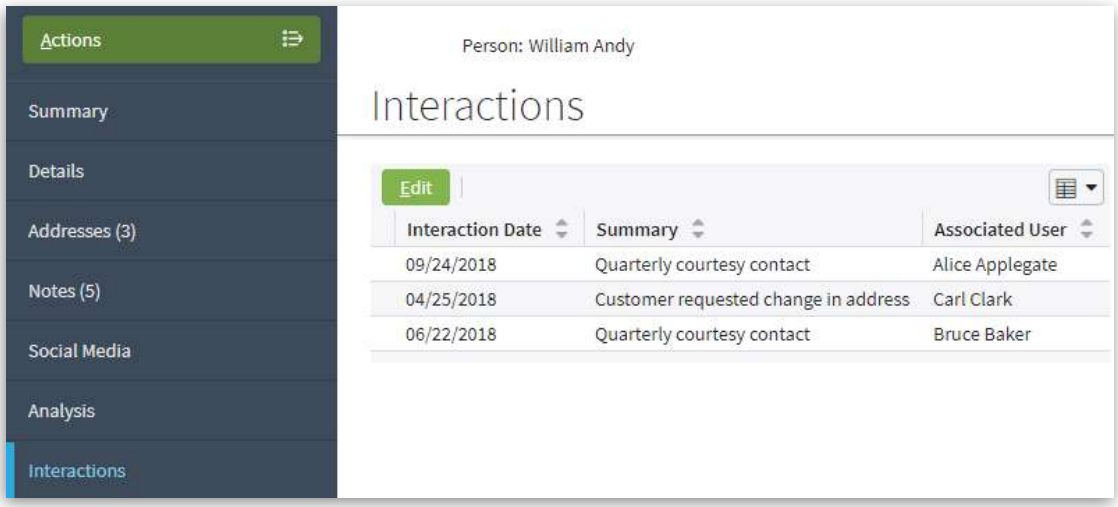
As a configuration developer, we want to be able to configure the Iterator Buttons widget to allow users to add and remove rows. In this lab, you will use the PCF Editor in Guidewire Studio to make the Interactions List View editable.

1. **Modify the Interactions page so that users can add and remove interactions**
   a) The page must have a toolbar with Edit/Update/Cancel buttons and with Add/Remove buttons
   b) Users must be able to add and remove rows upon selecting the appropriate buttons
   c) Ensure that data in all three columns are editable
   d) Show the checkboxes by each row only when in edit mode

3.2.1 Verification

Activity
Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **View the Interactions page for William Andy**
   a) Navigate to William Andy
   b) In the sidebar menu, click Interactions
   c) Click Edit and add at least three interactions
   d) Click Update

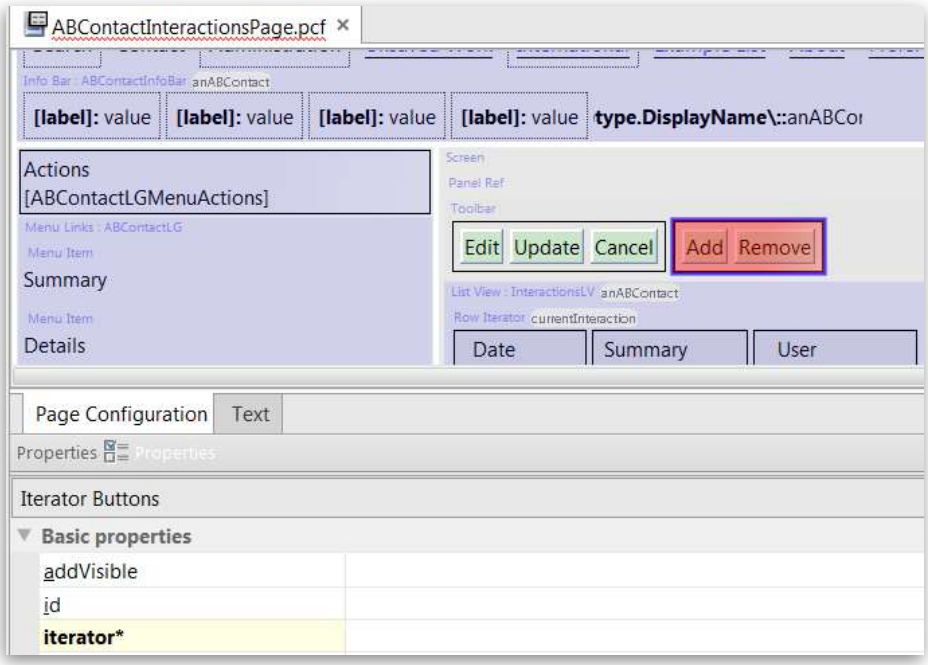


3.3 Lab Solution: Make the Interactions List View editable

Solution

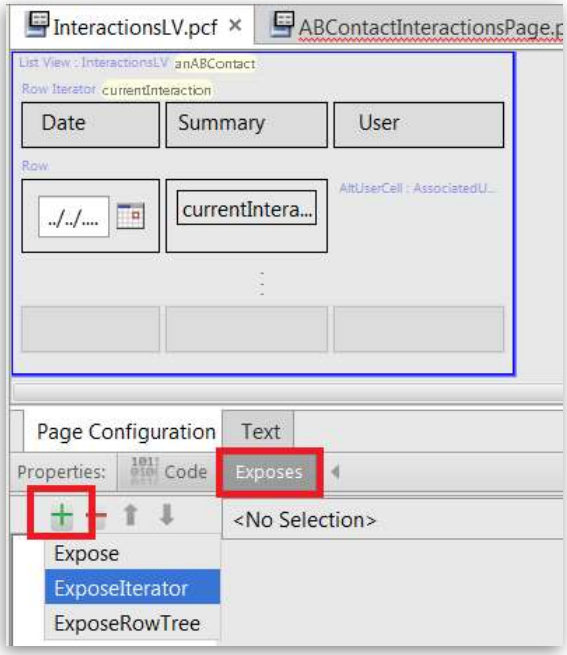
Exact details on how to complete the lab.

1. **Open ABContactInteractionsPage and add Edit Buttons and Iterator Buttons widgets. Note: The Iterator Buttons widget will be red because the `iterator*` property is required**



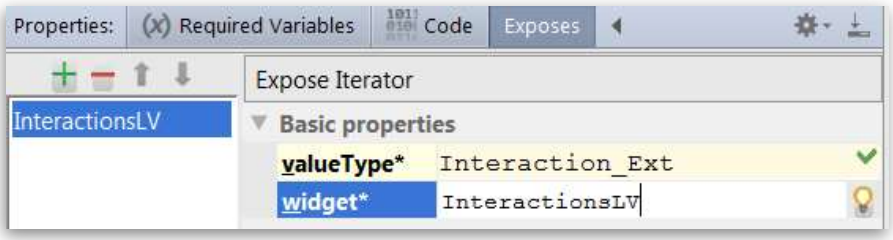
2. Expose the Row Iterator

a) Open the InteractionsLV, go to the Exposes tab and click on the green plus icon to expose the iterator

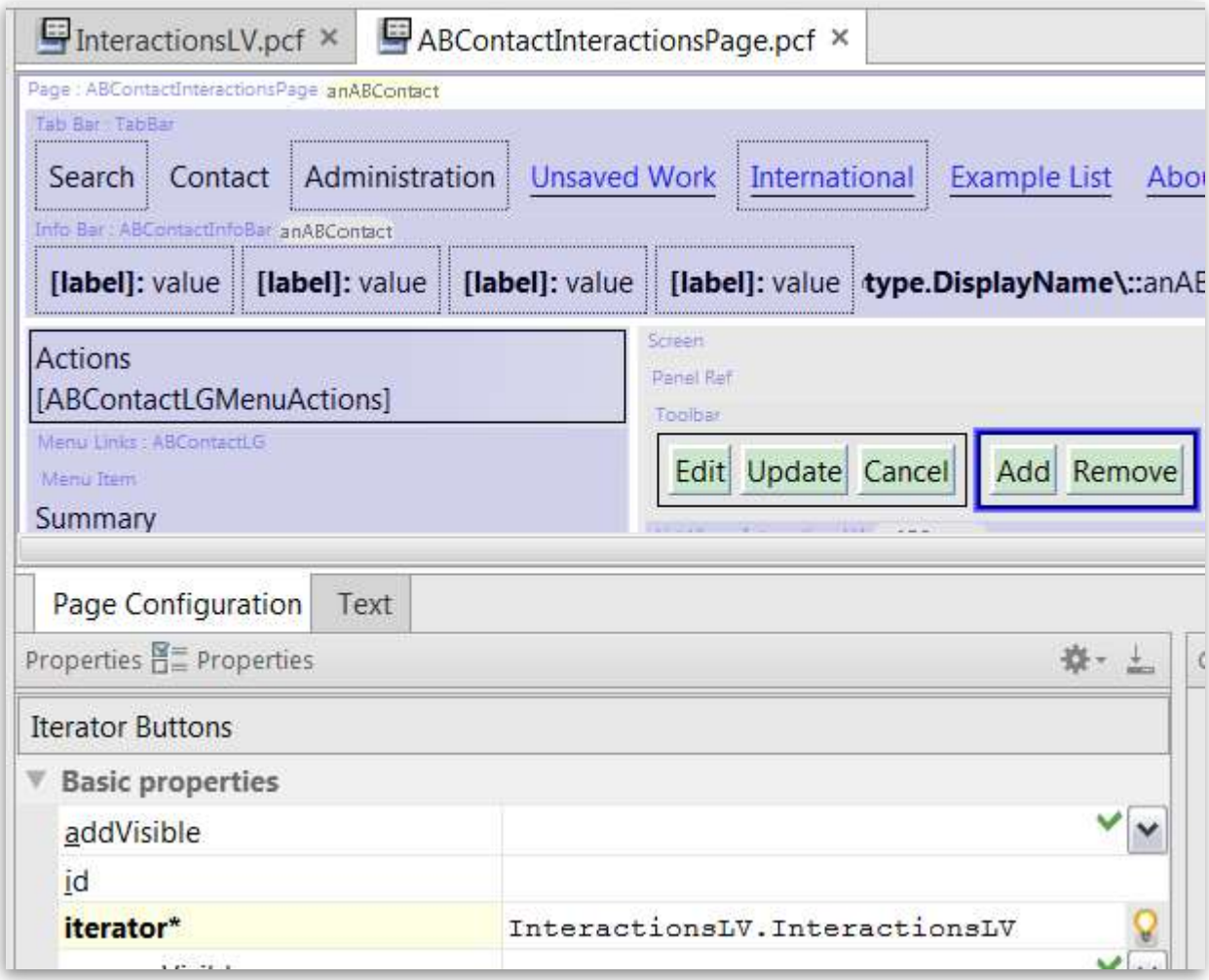


b) Configure the **valueType** and **widget** properties of the Expose Iterator

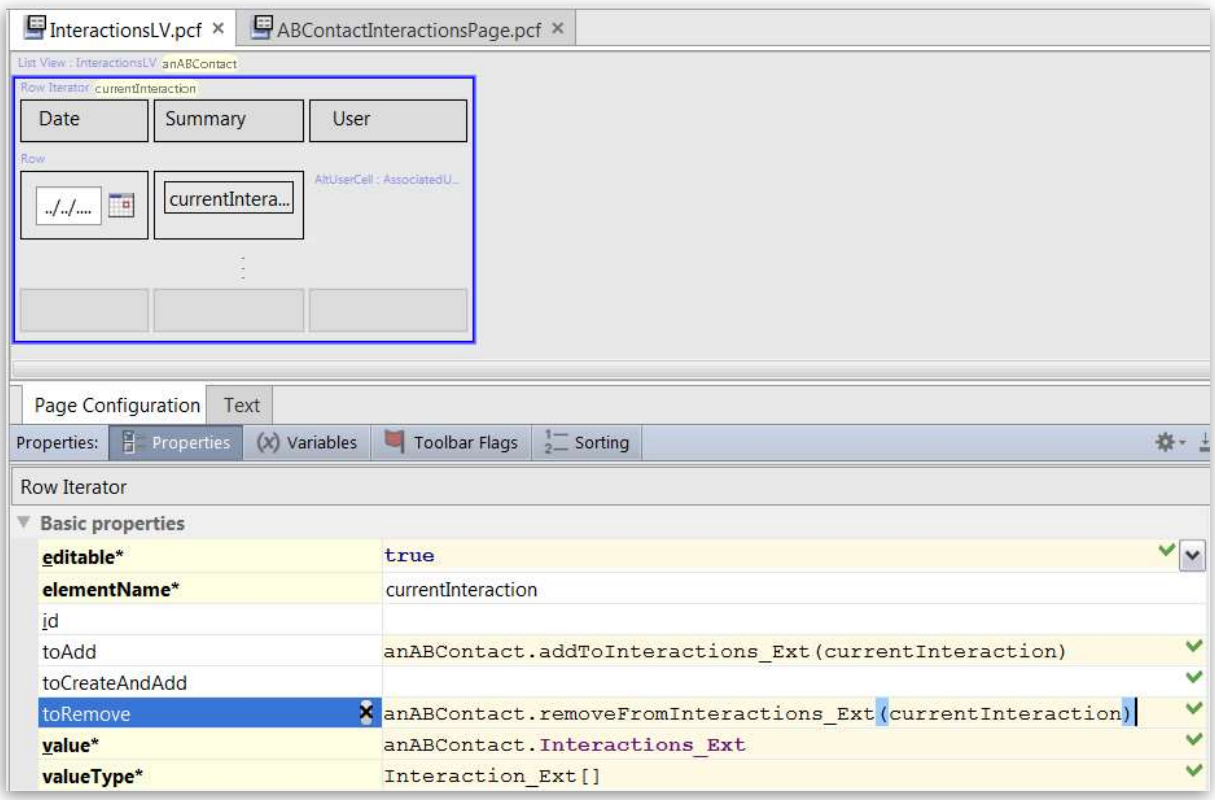
GUIDEWIRE



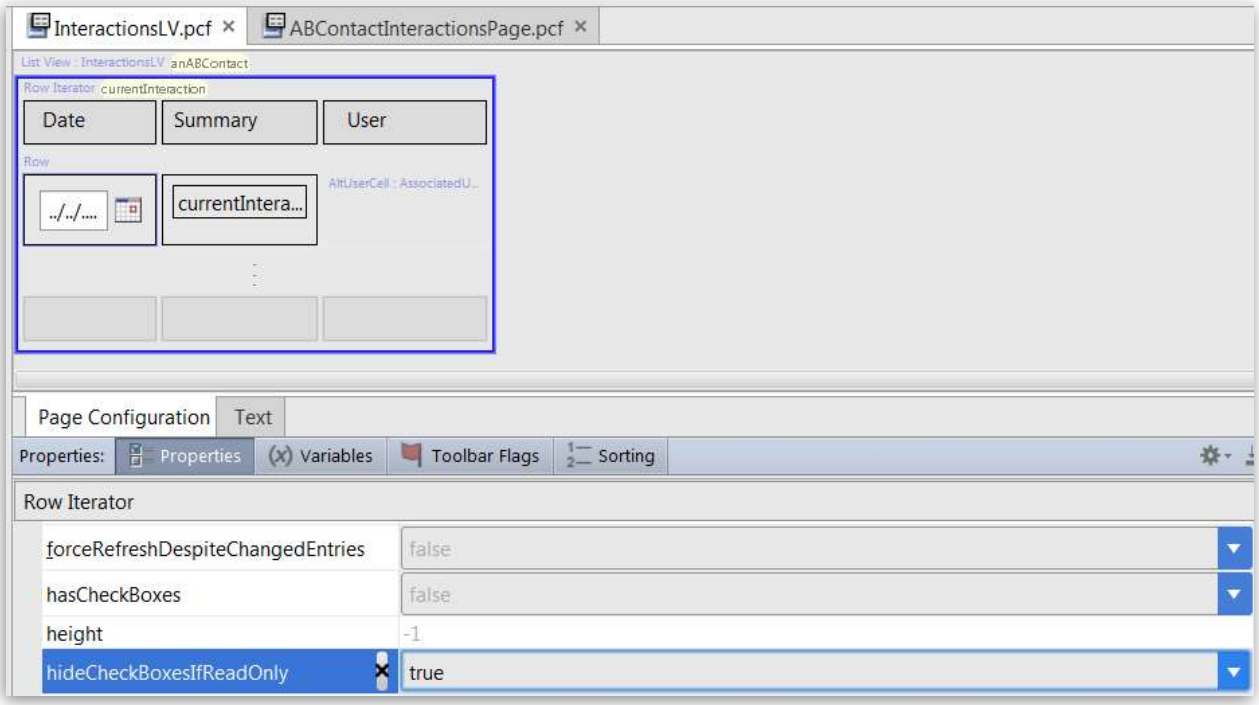
3. Reference the new Expose Iterator from the iterator property of the Iterator Buttons



4. Configure the toAdd and toRemove properties of the Row Iterator



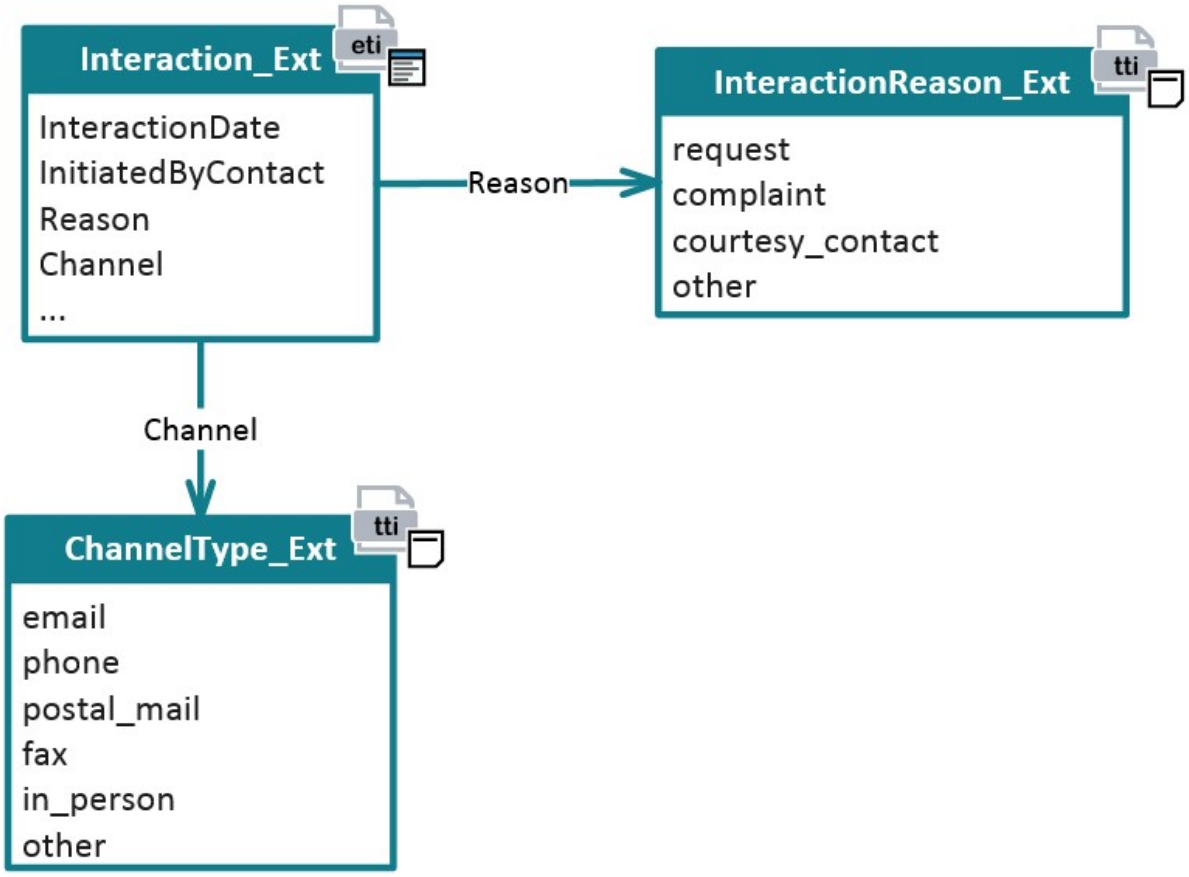
5. Set the hideCheckBoxesIfReadOnly property to true



Lesson 4

Typelists

"After further analysis, we decided that we want to store more information about each contact interaction. Please see the diagrams below and configure the Data Model to meet the requirements." – Insurance company business analysts



In this lab, you will use the Typelist Editor and the Entity Editor in Guidewire Studio to modify the TrainingApp data model. First, you will create two new typelists. Then, you will edit existing entities and associate the new typelists with each respective entity.

4.1 Prerequisites

You must first complete the following previous lesson(s):

6. Creating New Entities

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

4.2 Configuration

4.3 Lab: Create new typelists

As a configuration developer, you want to be able to create new typelists from scratch. In this lab, you will create and define two typelists in Guidewire Studio using the Typelist Editor. The InteractionReason_Ext typelist will describe the reasons for contact interactions. The ChannelType_Ext typelist will describe the various channels of communications for interactions.

1. Create the InteractionReason_Ext typelist

a) Create the new TTI file

b) Add the following typecodes to display in the order listed using recommended naming conventions:

- Request
- Complaint
- Courtesy Contact
- Other

2. Use Studio's code generation feature to process the typelist and generate the Java class

a) If possible, use incremental code generation

b) Verify that there were no errors during code generation

c) Open the generated Java class and verify that you can see the newly added typecodes

3. Create the ChannelType_Ext typelist

a) Create the new TTI file

b) Add the following typecodes to display in the order listed using the recommended naming conventions:

- Email
- Phone
- Postal Mail
- Fax
- In Person
- Other

4. **Use Studio's code generation feature to process the typelist and generate the Java class**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Open the generated Java class and verify that you can see the newly added typecodes

Best Practices

Use `_Ext` in the typelist name

Notice that the name of the typelist has an `_Ext` suffix. For new typelists, Guidewire recommends that the name of the typelist should end with `_Ext` (or start with `Ext_`). This is to prevent potential conflicts during the upgrade to the next version of the Guidewire application.

4.4 Lab: Add typekey fields to the entity

As a configuration developer, you want to be able to add typekey entity fields that reference typelists. In this lab, you will edit the related entities and add new typekey elements for the newly created typelists.

1. **Edit the Interaction_Ext entity**
   a) Add a typekey field for the InteractionReason_Ext typelist using the recommended naming convention
   b) Add a typekey field for the ChannelType_Ext using the recommended naming convention
2. **Use Studio's code generation feature to generate the Java class from the entity**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Open the generated Java class and verify that you can see the two new typekey fields

Important!

Read carefully.

For each new entity element, remember to set the `nullok` attribute to true, otherwise, the database upgrade may fail.

Best Practices

Use `_Ext` in the entity field name

Notice that the name of the typelist has an _Ext suffix. For new typelists, Guidewire recommends that the name of the typelist should end with _Ext (or start with Ext_). This is to prevent potential conflicts during the upgrade to the next version of the Guidewire application.

4.4.1 Verification

Activity

Verify the work you have done

As a configuration developer, you want to be able to properly deploy new and changed data model resources.

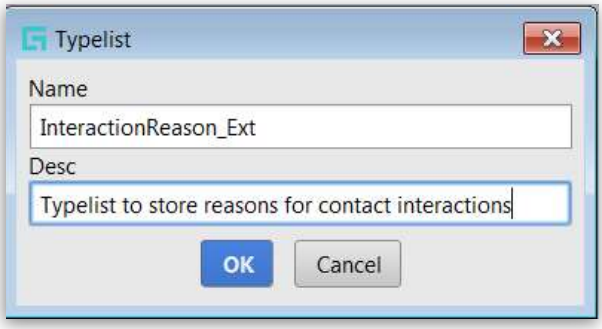
1. **Restart the server to deploy the changes**
   a) During server restart Studio first runs the code generators, then compiles the project and finally deploys the resources
2. **Regenerate the Data Dictionary**
   a) Follow the steps to regenerate the Data Dictionary
3. **Open the Data Dictionary**
   a) In Windows Explorer, navigate to the data dictionary.
   b) Open the data dictionary using your preferred browser.
4. **Verify the InteractionReason_Ext and ChannelType_Ext typelists**
5. **Verify the new typelist reference in the Interaction_Ext entity**

4.5 Lab Solution: Create new typelists

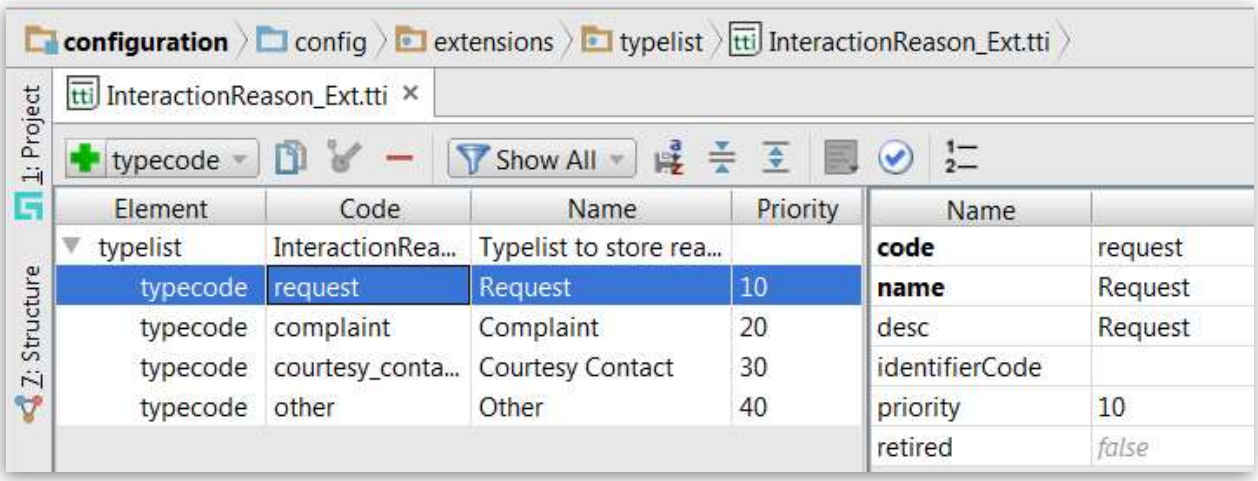
Solution

Exact details on how to complete the lab.

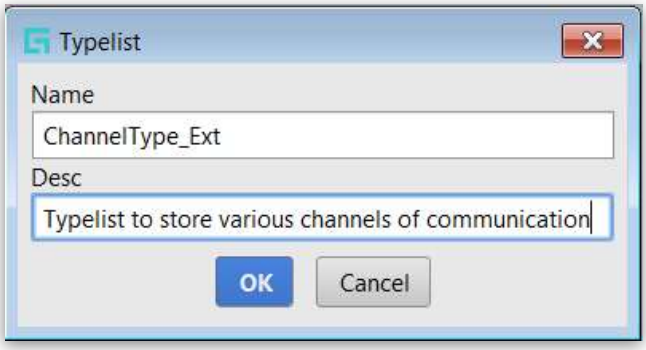
1. Create the new InteractionReason_Ext typelist



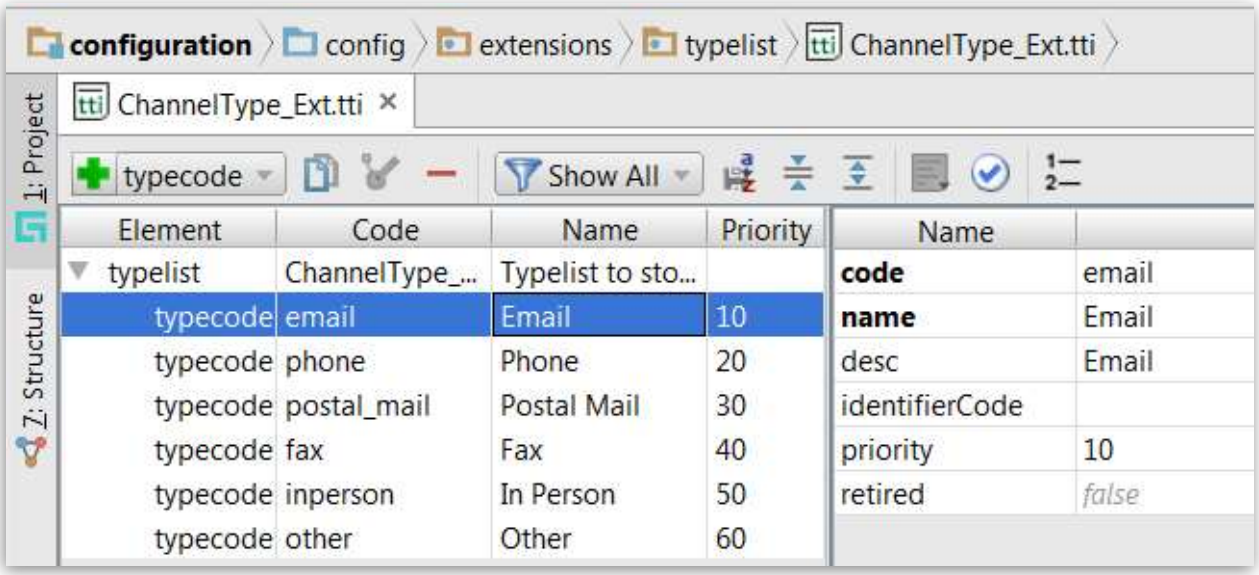
2. Add the typecodes



3. Create the new ChannelType_Ext typelist



4. **Add typecodes**

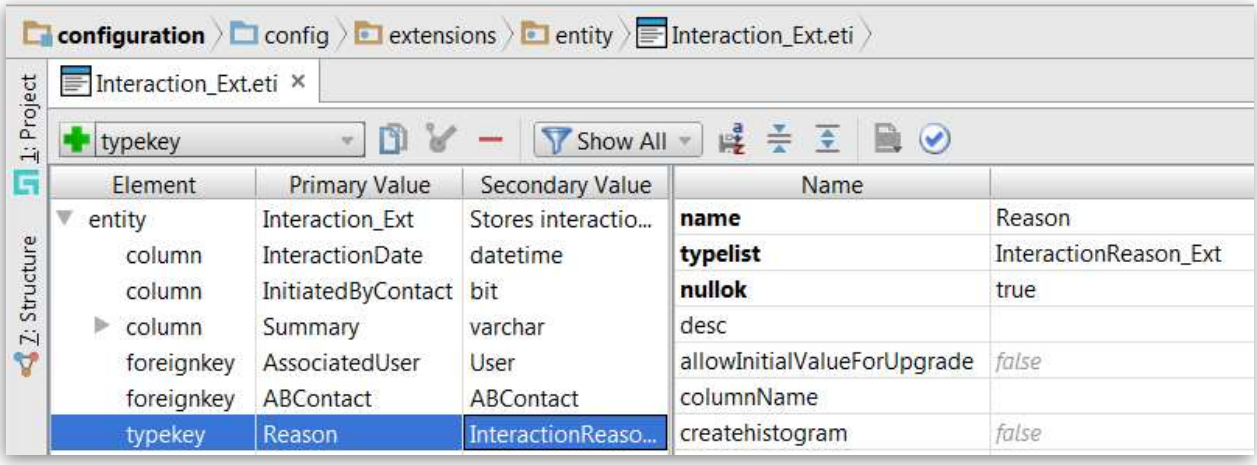


4.6 Lab Solution: Add typekey fields to an entity

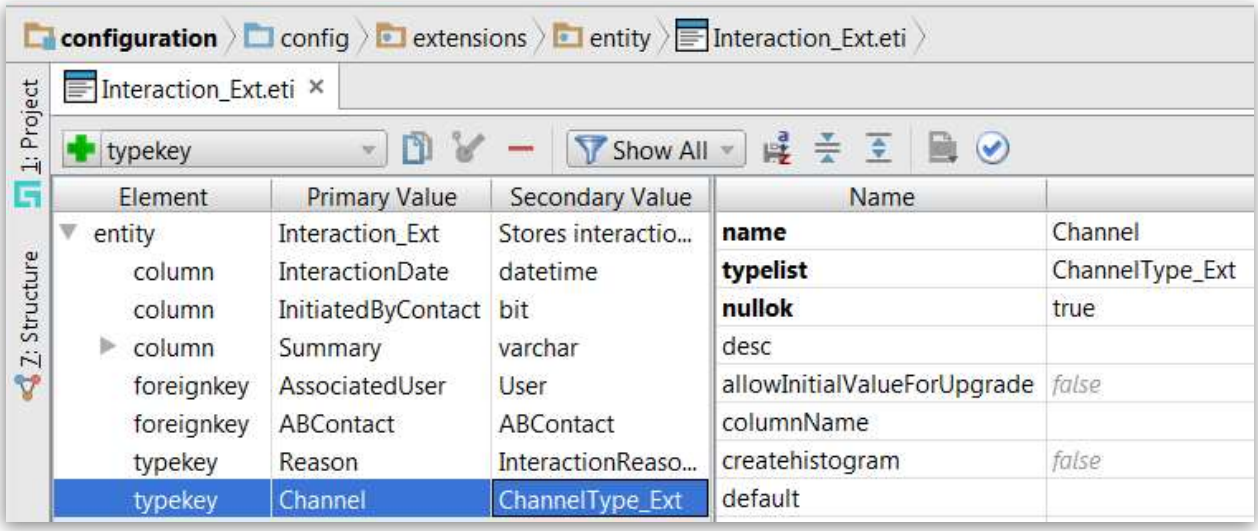
Solution

Exact details on how to complete the lab.

1. **Open Interaction_Ext.eti**
2. **Add a typekey field that uses the new InteractionReason_Ext typelist**



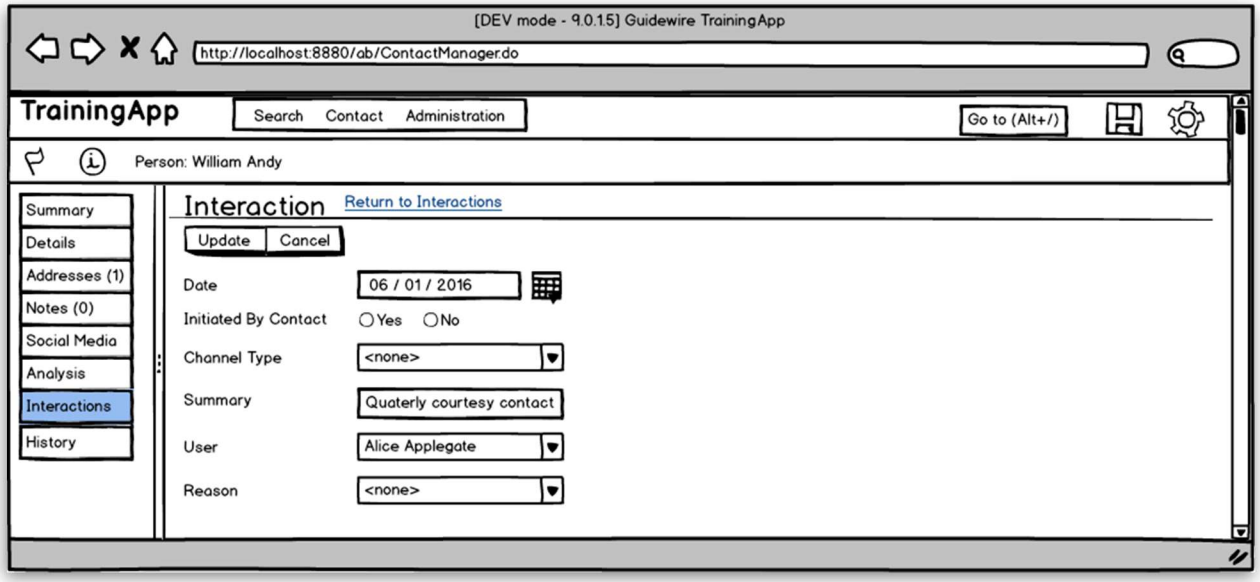
3. Add a typekey field that uses the new ChannelType_Ext typelist



Lesson 5

Popups: View and Edit

"Currently, users can add, remove, and edit contact interactions on the Interactions page in the Interactions list view panel. However, the editable list view panel on the page only exposes some of the Interaction entity fields. Configure a popup that will allow users to view and edit all the fields of a contact interaction." – Insurance company business analysts



As a configuration developer, you want to be able to create, configure and open popup locations so that the users can see and/or edit more information about an object. In this lab, you will first create the Interaction Popup. The popup will allow users to edit and view an interaction. Next, you will modify the InteractionsLV. You will configure a cell widget in the list view panel to navigate to the popup.

5.1 Prerequisites

You must first complete the following previous lesson(s):

1. **Creating New Entities**
2. **List Views**
3. **Editable List Views**
4. **Typelists**

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

5.2 Lab: Popup locations

1. **In Project View, create the InteractionPopup in the traininglabs PCF folder**
   a) Create the traininglabs PCF folder if it doesn't exist
   b) For the Popup, set the startInEditMode and canEdit properties to true
   c) To the Popup, add an inline Screen and an inline Detail View
   d) To the inline Detail View, add editable atomic widgets for the following Interaction_Ext fields:
      - Interaction Date
      - Initiated By Contact
      - Channel Type
      - Summary
      - Associated User
      - Interaction Reason
2. **Modify the InteractionsLV.pcf**
   a) Modify the cell widget for the Summary field to be a navigable link to the editable Interaction Popup. The Popup should display the entity from the row that the user clicked on.

Note: Use your best judgment for field ordering, display keys, and input widget selection. Review the Atomic Widgets lesson for more details if needed.

Guidewire API

The `startInEditMode` property

If this property is set to true then the location will open in edit mode allowing the user to modify the data immediately. If the property is set to false then the location will open in read-only mode and the user will need to click on the edit button to edit the details. This property could be also set dynamically, e.g. based on an expression, result of a function call or a parameter received from the parent location in case of Popups.

Guidewire API

The `canEdit` property

This property determines if the location (and any containers inside it) can or cannot be in edit mode. If the startInEditMode property is set to true or the location has a Toolbar and Edit Buttons widget then the canEdit property must be set to true. The default value is false.

Hint

Referencing the object associated with a row

When you click on a cell in a row, you want to open the popup and pass in the object that is associated with that specific row. Remember, the variable defined in the elementName attribute of the Row Iterator is always the variable that will store that associated object. As a configuration developer, you don't have to worry about indexes. You can just simply reference the variable and the PCF framework will determine which object from the array is associated with that row the user clicked on.

Review

Navigating to a location

Review the Introduction to Locations lesson if you need tips on how to define navigation in Guidewire applications.

5.2.1 Verification

Activity

Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
   a) Use the appropriate shortcut to reload the PCF changes
   b) Edit the Interactions page for William Andy

c) Open the William Andy contact

d) In the sidebar menu, click Interactions

e) If you previously did not create an interaction, create at least one interaction now in the list view panel

f) Click **Edit** then click **Add**

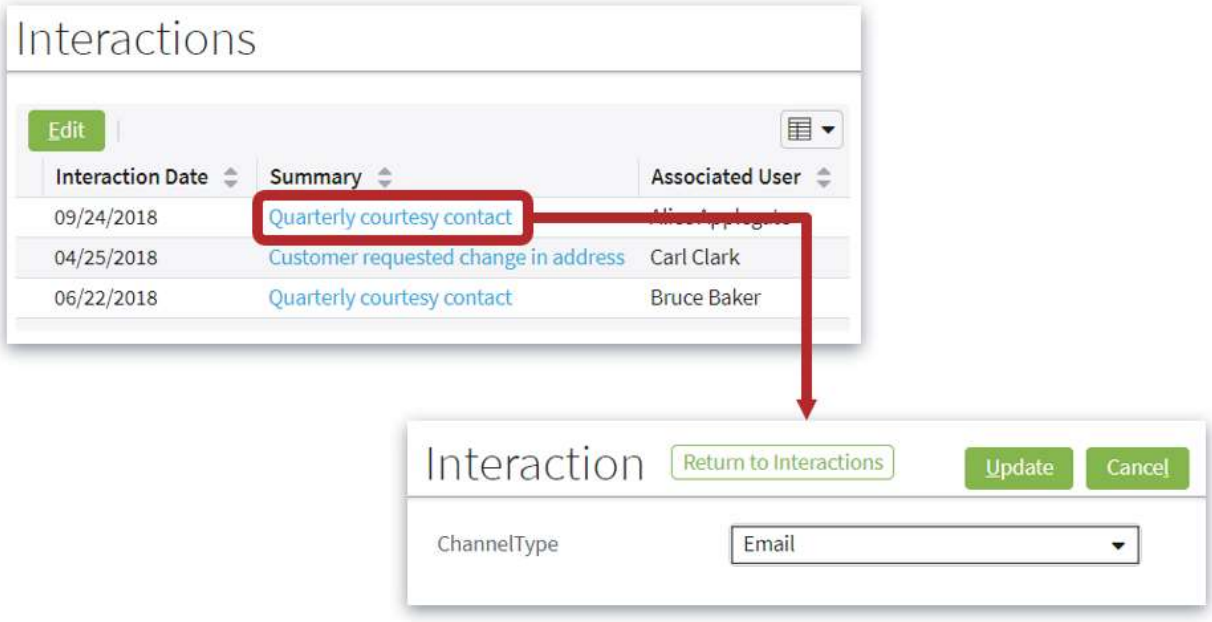
g) Enter a date, a reason, and select a user

h) Click **Update**

i) For an interaction row, click an interaction reason link

j) Edit all editable fields in the Interaction Popup

k) Click **Update**

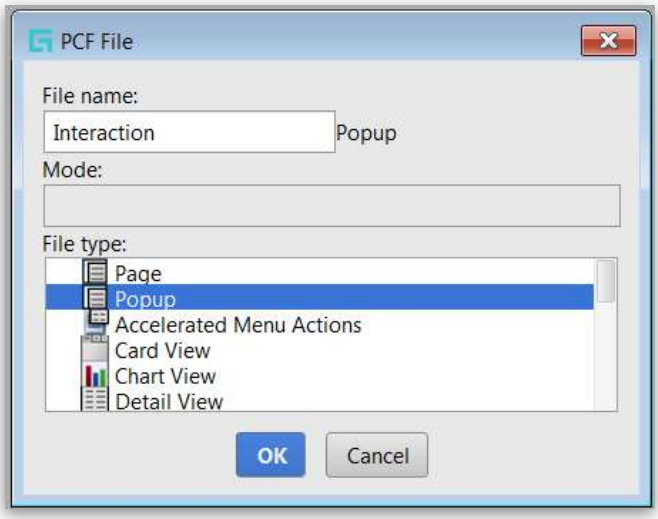


5.3 Lab Solution: Popup locations

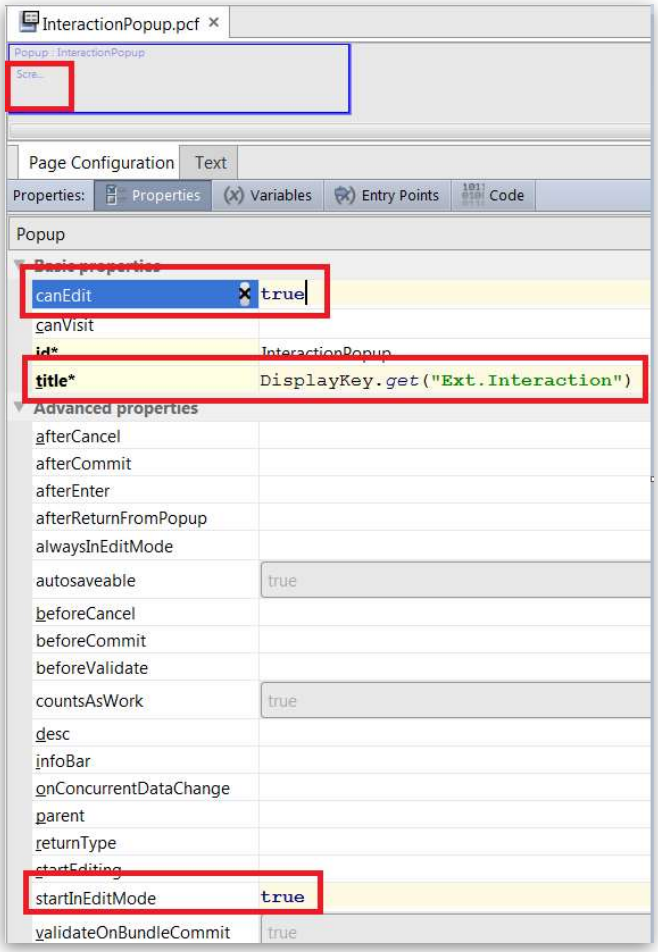
Solution

Exact details on how to complete the lab.

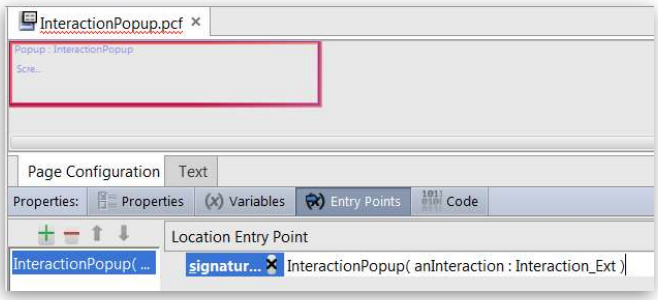
1. **Create the traininglabs PCF folder if it doesn't exist**
2. **Create the InteractionPopup**



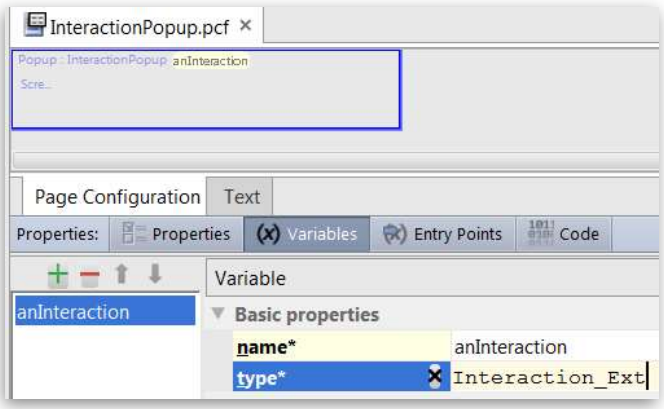
3. **Add an inline Screen container and set the following properties: `startInEditMode`, `canEdit`, `title`**



4. Specify an entry point with a single Interaction_Ext parameter



5. Specify a variable for the parameter (same name and same type)



6. **Add a toolbar and edit buttons**

   a) From the toolbox, drag and drop a **Toolbar** into the screen you just added.

   b) Drag and drop an **Edit Buttons** widget into the toolbar.

7. **Add a detail view**

   a) Drag and drop a **Detail View** below the **Toolbar** widget

   b) The widget is colored red because the Detail View must contain an Input Column or a Table Layout. You'll fix this in the next step.

8. **Add an Input Column**

   a) Drag and drop an **Input Column** widget into the **Detail View**.

   b) Notice that the Detail View is no longer red.

9. **Add an input for the Interaction Date field**

   a) Drag and drop a **Date Input** into the **Input Column**.

   b) Set the editable property to **true**.

   c) Set the id property to **InteractionDate**.

   d) Set the label property to **DisplayKey.get("Ext.InteractionDate")**. This display key was created an earlier lab lab. If it does not exist, create it at this point.

   e) Set the value property to **anInteraction.InteractionDate**.

10. **Add an input for the Initiated by Contact field**

    a) Drag and drop a **Boolean Radio Button** Input into the **Input Column** below the Interaction Date input.

    b) Set the editable property to **true**.

    c) Set the id property to **InitiatedByContact**.

d) Set the label property to **DisplayKey.get("Ext. InitiatedByContact ")**. This is a new display key, so create it using Studio.

e) Set the value property to **anInteraction.InitiatedByContact**.

11. Add an input for the Channel Type field

a) Drag and drop a **TypeKey Input** into the **Input Column** below the Initiated By Contact input.

b) Set the editable property to **true**.

c) Set the id property to **ChannelType**.

d) Set the label property to **DisplayKey.get("Ext. ChannelType")**.

e) Set the value property to **anInteraction.Channel**.

f) Notice that the valueRange and valueType fields were automatically entered.

12. Add an input for the Summary field

a) Drag and drop a **Text Input** into the **Input Column** below the Channel Type input.

b) Set the editable property to **true**.

c) Set the id property to **Summary**.

d) Set the label property to **DisplayKey.get("Ext. Summary")**.

e) Set the value property to **anInteraction.Summary**.

13. Add an input for the Associated User field

a) Drag and drop an **Alt User Input** into the **Input Column** below the Summary input.

b) Set the editable property to **true**.

c) Set the id property to **AssociatedUser**.

d) Set the label property to **DisplayKey.get("Ext.AssociatedUser")**.

e) Set the value property to **anInteraction.AssociatedUser**.

14. Add an input for the Interaction Reason field

a) Drag and drop a **Range Input** into the **Input Column** below the Associated User input.

b) Set the editable property to **true**.

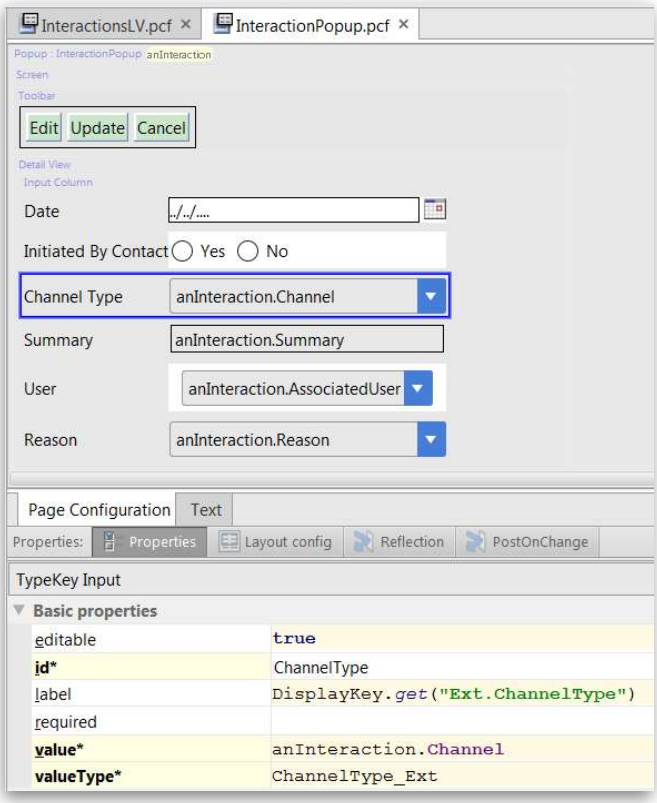
c) Set the id property to **ReasonType**.

d) Set the label property to DisplayKey.get("Ext.ReasonType").

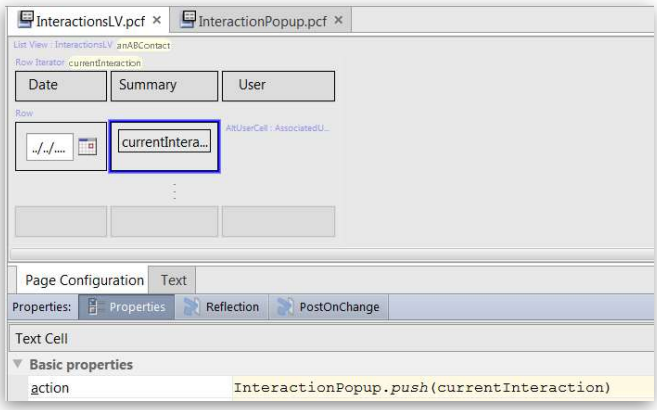
e) Set the value property to **anInteraction.Reason**.

f) Notice that the valueRange and valueType fields were automatically entered.

15. The completed popup should look like this screenshot:



16. Configure the action property of the Summary cell to open the InteractionPopup



Lesson 6

Validation

As a configuration developer, you want to be able to verify the data entered by the user. If the data is incorrect (wrong format, missing information, inconsistencies between fields) then you want to prevent the save. You also want to be able to highlight widgets and show warning/error messages as needed. In this lab, you will make several configuration changes to improve the validation in TrainingApp.

6.1 Prerequisites

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

Activity

6.2 Lab: Field-level validation in the UI

"Every Auto Repair Shop has a license field that can be specified on the Company Info card. Currently, TrainingApp doesn't validate this field and allows saving license numbers in any format. Configure TrainingApp to meet the following requirements:

- Auto Repair Shop licenses must be in the following format: the first character must be a lower-case "a" character, followed by any lower-case alphabet character, then 5 digits. Example: aw-36292
- TrainingApp should display a watermark and tooltip to guide the user
- License numbers cannot contain the string '777'. If the license number contains '777' then the save shouldn't be allowed, and the user should be notified that the license number is invalid.

  - Insurance company business analysts

6.2.1 Investigation

1. **View the current widget behavior**

a) Log in as Alice Applegate

b) Search for Burlingame Saab

c) In the sidebar menu, select Details

d) Click Edit

e) Enter any alphanumeric value in the License field

f) Click Update

2. Open the PCF file in Studio

a) To open the PCF, use `ALT + SHIFT + E`

6.2.2 Configuration

In this part of the lab, you will configure the License Text Input field to show the user a watermark.

1. Modify the License widget to show a watermark

a) Modify ABContactDetailsCompanyDV.pcf so that the ABAutoRepairShopLicense (ID: ABAutoRepairShopLicense) field shows the following watermark:

```
a#-#####
```

In this part of the lab, you will configure the AutoRepairLicense field to match the pattern of the field watermark.

2. Modify the License widget to validate the input so that it matches the watermark

a) Modify ABContactDetailsCompanyDV.pcf so that the ABAutoRepairShopLicense field matches the pattern of the watermark:

- The first character must be a lower case “a” alphabet character
- The second character must be any lower case alphabet character
- The third character is a dash
- The fourth, through eighth characters must be numbers

In this part of the lab, you will configure the AutoRepairLicense field to validate the value before it is committed. If the license number contains the string "777", then the user should be notified that license number is invalid.

1. Modify the License widget to validate the input based on business logic

a) If the license number contains the string “777”, then the user should be notified that license number is invalid

6.2.3 Verification

Activity

Verify the work you have done

1. Verify the watermark and pattern

a) In TrainingApp, deploy your changes to the PCF file

b) Edit the Details for Burlingame Saab

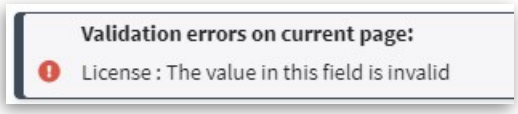
c) For the License field, enter **ab-12345** and verify that there is no field format warning

d) Click Update

e) Click Edit

f) Enter **a1-12345** and click Update

g) Verify that there is a validate error message:

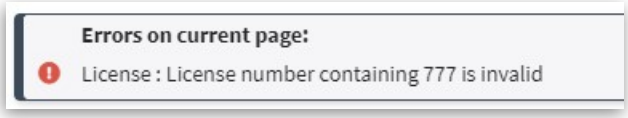


2. Verify the validation expression

a) Change the license field value to ab-12777

b) Click Update

c) Verify the info bar error message:



d) Enter ab-12345 as a valid license field value

e) Click Update

f) Verify that you were able to commit the changes

Hint

An overview of the syntax for validator patterns is shown in the following table. **Note:** this is only a high-level overview. For a complete listing of syntax for validator patterns, consult the Configuration Guide for your product.

`.`	Any character
`?`	Indicates zero or one occurrence of the preceding element
`+`	Indicates one or more occurrences of the preceding element
`*`	Indicates zero or more occurrences of the preceding element
`{X}`	Preceding item is matched exactly X times
`{X, Y}`	Preceding item is matched at least X times, but not more than Y times. (technically X is minimum, Y is maximum)
`.+`	Any non-empty string (at least one or more characters)
`\`	Escape character
`[ ] ( ) { } . * + ?`	Characters that are not treated as literals and must be escaped
`[charRange]{X}`	Characters in character range, which can be any combination of 0-9, a-z, and A-Z. X means the exact number of characters we need from the charRange
`[charRange]{X, Y}`	From X to Y characters in charRange
`@ - $`	Most other characters are treated as literals such as a dash (-)
`\.`	A period, where the backslash is the escape character

Examples:

`.+@.+`	Validates an email address. All of these are valid values: a@b.com william@andy.com chris@SUCCEED.com
`[0-9a-zA-Z]{3}-[0-9]{3}`	This validates the following format: 3 alphanumeric characters, a dash and 3 digits. All of these are valid values: 999-999, AB9-333, A7C-444
`[0-9]{3}-[0-9]{2}-[0-9]{4}`	This validates the following format: 3 digits, dash, 2 digits, dash and 4 digits. E.g.: 444-55-6666

6.3 Lab: Field-level validation in the Data Model

"The insurance company requires that all bank account numbers follow the pattern XX-XXXX, where X is a digit from 0 through 9. The compliance with the pattern must be enforced in the UI as well as through APIs. Without needing to modify existing widget properties in the application, we also require that there

is a watermark identifying the pattern. The validation error message for an invalid bank account value must be localizable." – Insurance company business analysts

6.3.1 Configuration

1. **Create a validator display key error message**
   a) Create a display key in display.properties that reads:

   "A bank account number must be two numbers, a hyphen, and then four numbers. For example, 12-3456."
2. **Create a field validator**
   a) Create new ValidatorDef in fieldvalidators.xml
   b) Specify the attributes to meet the lab requirements
3. **Associate the field validator with an entity element**
   a) Add an entity field validator for the AccountNumber field in the BankAccount entity
4. **Make the necessary changes to the AccountNumber Text Cell**
   a) Make the necessary changes to the AccountNumber Text Cell in BankAccountsLV.pcf to display the correct watermark.
5. **Deploy your changes**
   a) In Guidewire Studio, restart (stop then debug) the server

Hint

For an overview of the syntax for validator patterns, see the Hint located in the *Configure the pattern* section previously in this module on Validation. For a complete listing of syntax for validator patterns, consult the Configuration Guide for your product.

6.3.2 Verification

Activity

Verify the work you have done.

1. **Verify the entity field validator behavior**
   a) In TrainingApp, add a new bank account for the Burlingame Saab contact
   b) Verify the ##-#### watermark displays for the Account Number Text Cell
   c) For the account number, try to enter A1-B234

d) Verify that validator error shows with the message you created

e) Enter 12-3456 as the account number

f) Click Update

g) Confirm that a new bank account was added for Burlingame Saab without an error message

6.4 Lab: Validation rules

"We have to make sure that the 'Married filing jointly' and 'Married filing separately' tax filing statuses are only allowed when the Marital Status of the person is Married. We want the following behavior to be enforced: if the Tax Filing Status is set to Married filing jointly/Married filing separately and the Marital Status is NOT married then the save must be rejected with an error message and the Tax Filing Status field must be highlighted. The error message must be the following: 'Married filing jointly/Married filing separately is only allowed when contact is married.'. The error message must be localizable." – Insurance company business analysts

6.4.1 Configuration

1. Create a new Validation Rule

a) To implement this user story, use the existing `ABContactValidationRules` Rule Set

b) Reject the save using the `loadsave` validation level

2. Deploy your changes

a) To deploy the new rule, select `Run menu` → `Reload changed classes` in Studio

b) To deploy the new display key, use `ALT + SHIFT + L` in the browser

Review

Working with Gosu Rules

If needed, review how to work with Gosu Rules, Rule Set Categories, and Rule Sets. Refer to the Gosu Rules lesson in the InsuranceSuite 10.0 Fundamentals – Kickstart course.

6.4.2 Verification

Activity

Verify the work you have done

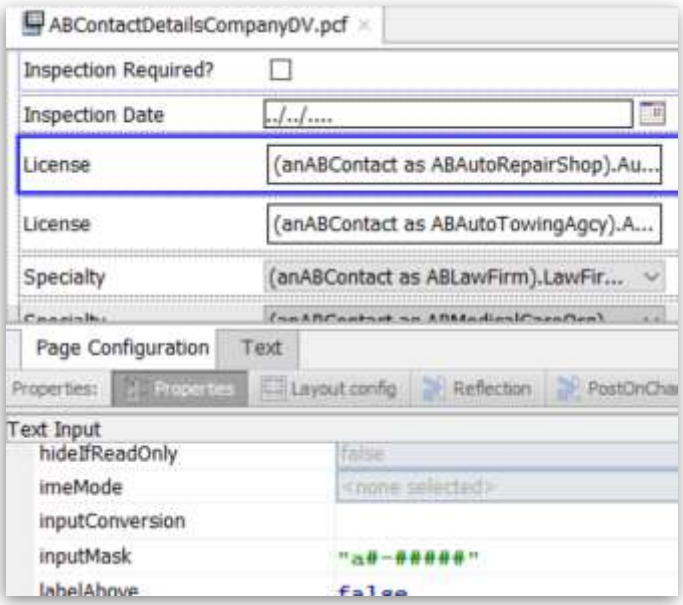
1. **Verify the entity field validator behavior**
   a) In TrainingApp, search for Eric Andy
   b) Go to the Details page
   c) Click Edit
   d) Set the Tax Filing Status to Married filing jointly
   e) Set the Marital Status to Single
   f) Click Update
   g) Verify that you see the error message and the field is highlighted
   h) Set the Marital Status to Married
   i) Click Update
   j) Verify that the data was successfully saved

6.5 Lab Solution: Field-level validation in the UI

Solution

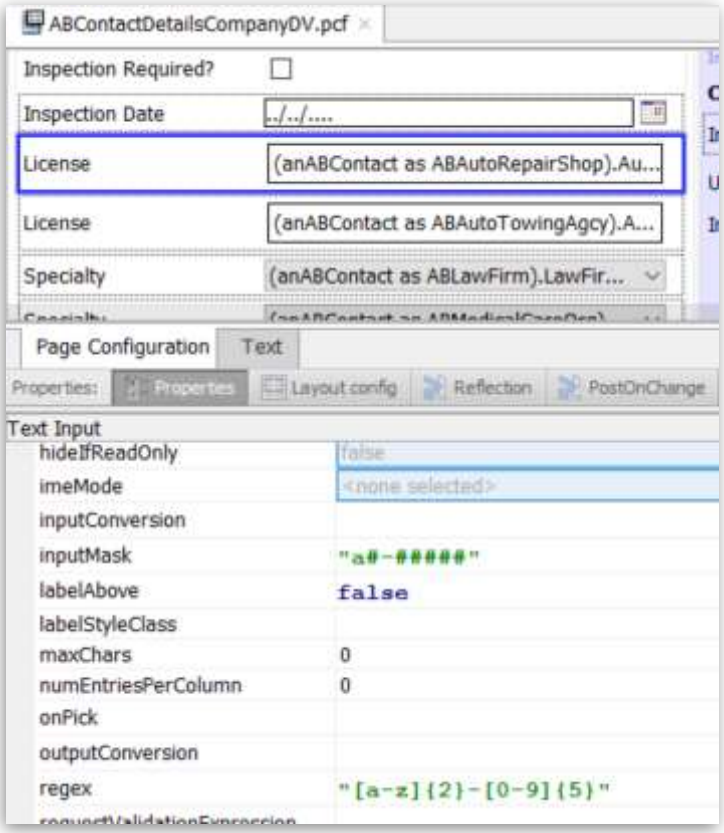
Exact details on how to complete the lab.

1. **Configure the inputMask property of the widget.**
   a) Type “a#-#####” in the inputMask field.



2. Configure the pattern

a) Configure the regex property of the widget.



```
"[a-z]{2}-[0-9]{5}"
```

3. Configure the validationExpression property of the widget.

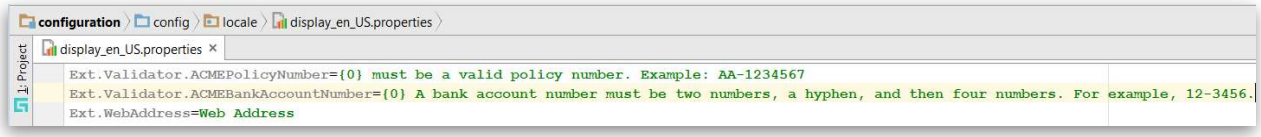

```
(anABContact as ABAutoRepairShop).AutoRepairLicense.contains("777") ?
DisplayKey.get("Ext.License777Invalid"):null
```

6.6 Lab Solution: Field-level validation in the Data Model

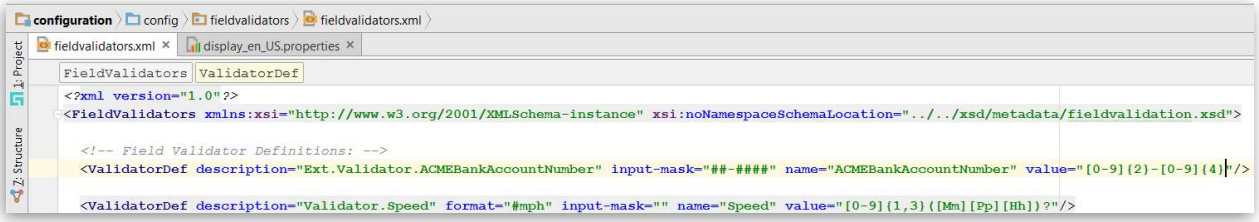
Solution

Exact details on how to complete the lab.

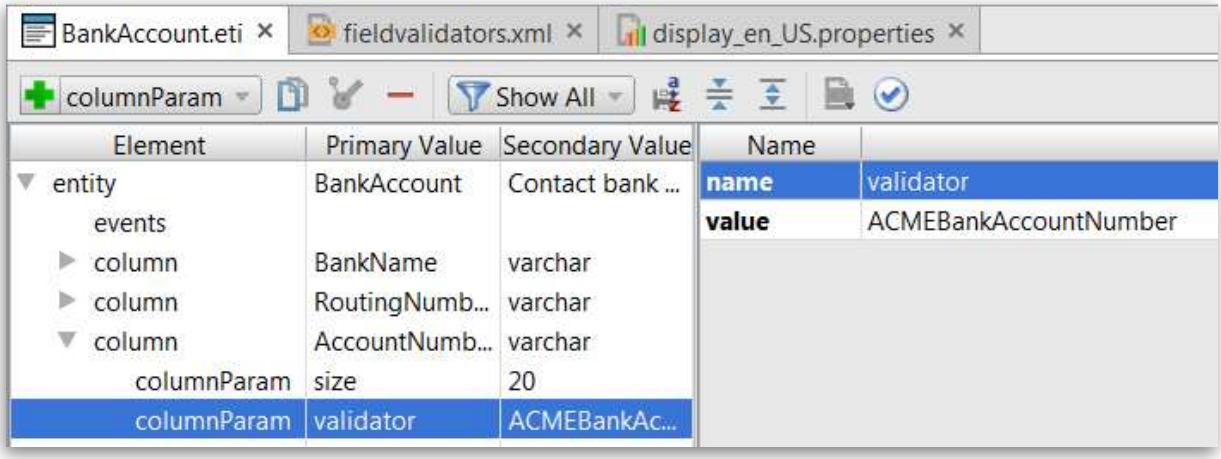
1. Create the display key



2. Create a field validator



3. Associate the field validator with the AccountNumber field of the BankAccount entity



6.7 Lab Solution: Validation rules

Solution

Exact details on how to complete the lab.

1. Create a new Rule in ABContactValidationRules.

a) You also have the option to copy and paste it from below. However, it is recommended that you type the code based on the screenshot. **Important**: please make sure that you copy and paste the sections individually without the parts highlighted in a darker gray.

```
USES:
uses gw.api.locale.DisplayKey

CONDITION (aBContact : entity.ABContact):
return aBContact typeis ABPerson
    and
    (aBContact.TaxFilingStatus == TaxFilingStatusType.TC_MARRIED_JOINT
     or aBContact.TaxFilingStatus == TaxFilingStatusType.TC_MARRIED_SEPARATE
    )
    and
    aBContact.MaritalStatus != MaritalStatus.TC_MARRIED

ACTION (aBContact : entity.ABContact, actions : gw.rules.Action):
    aBContact.rejectField("TaxFilingStatus",
        ValidationLevel.TC_LOADSAVE,
DisplayKey.get("Ext.Validation.MarriedTaxFilingStatus"),
        null, null)
END
```

2. Add the display key

a) Open the display.properties file

b) Add a new entry as listed below:

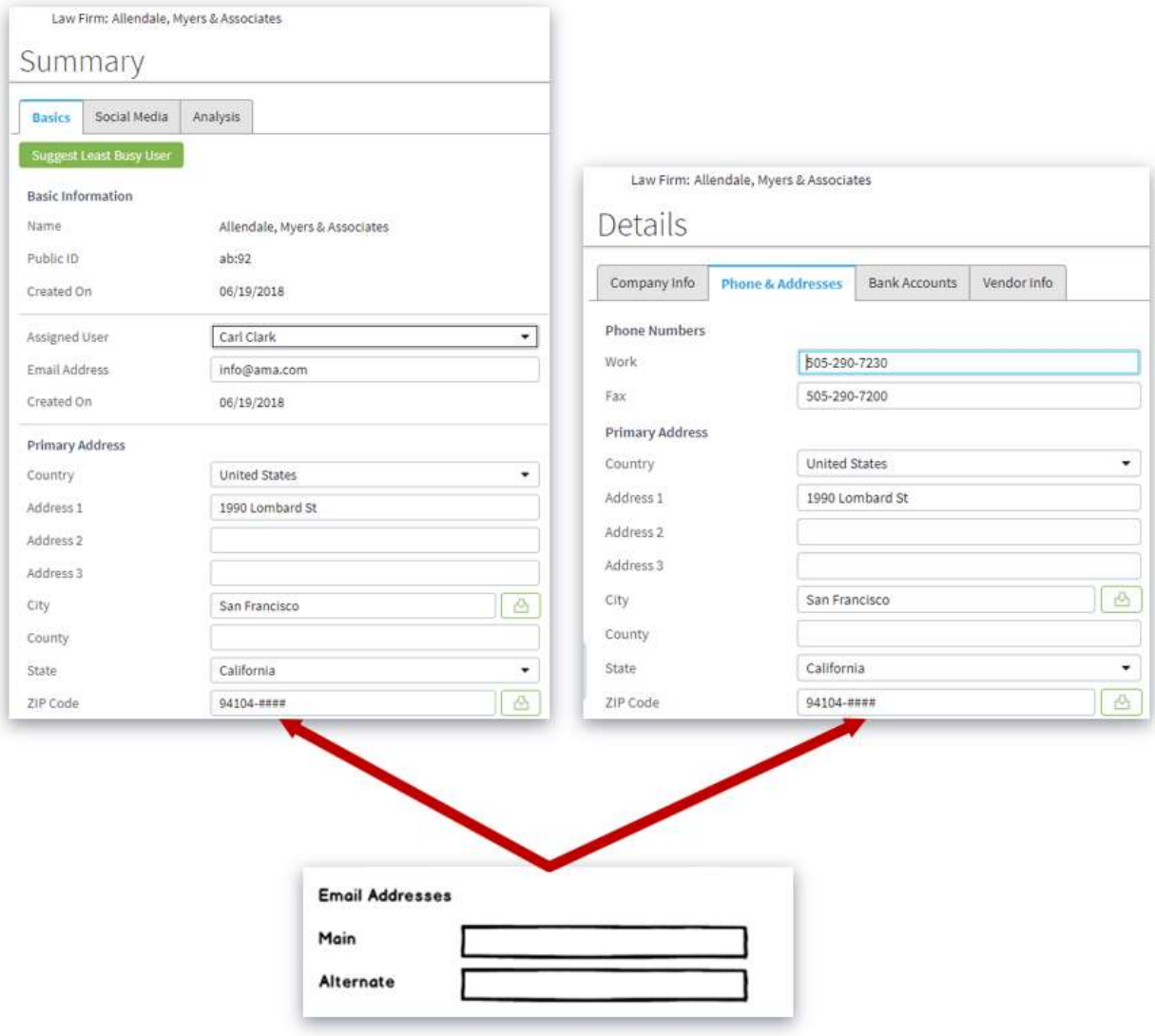
```
Ext.Validation.MarriedTaxFilingStatus= Married filing jointly/Married filing separately is only
allowed when contact is married.
```

Lesson 7

Input Sets

"In the data model, the ABContact entity has two fields to store email addresses. However, currently, the UI only displays one email address for companies and none for persons. We want to be able to see and edit both the primary and secondary email addresses. Both email addresses should be displayed on the Summary page and Phone & Addresses card of the contacts." – Insurance company business analysts

In this lab, you will create an Input Set. Next, you will add widgets for a contact's main and alternate email addresses to the Input Set. Then, you will add your Input Set to various PCF files.



GUIDEWIRE

7.1 Prerequisites

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

7.2 Lab: Create an Input Set

As a configuration developer, you want to be able to create Input Sets so that you can reuse a set of widgets together and/or control the visibility/editability of the set widgets. In this part of the lab, you will create the reusable EmailAddressInputSet.pcf.

1. **Create and configure the EmailAddressInputSet PCF file:**
   a) Create the Input Set in the `traininglabs` folder
   b) Specify a root object of the type ABContact
   c) Add the following widgets:
      - Add a label widget that displays "Email Addresses"
      - Add an editable input widget labeled "Main" that displays ABContact's EmailAddress1 field
      - Add an editable input widget labeled "Alternate" that displays ABContact's EmailAddress2 field
2. **Use Studio's code generation feature to process the PCF file and generate all the resources**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
      - Verify that you can see generated resources (.gs, .pcfc, Expressions.gs)

Hint

Configuring input widgets

Remember, you will have to select a specific input widget based on the data type of the field. You can always use the Data Dictionary, the generated Java class, and the widget reference table to find out the name, database type and Gosu type of the field that needs to be displayed.

Hint

Required variables vs variables

The required variables tab defines the input parameters for a container, while the variables tab defines local variables to store values temporarily. (E.g. storing the result of an expensive function call to use it at multiple places in the PCF)

7.3 Lab: Reference the Input Set

In this lab, you will add the EmailAddressInputSet to various PCF files.

1. **Add the EmailAddressInputSet to ABContactSummaryDV**
   a) Navigate to ABContactSummaryDV
   b) Add an Input Divider below the Primary Address section in the same Input Column
   c) Reference the EmailAddressInputSet directly below the Input Divider
2. **Add the EmailAddressInputSet to ABPersonDetailsPage**
   a) Navigate to ABPersonDetailsPage and select the Phone & Addresses card
   b) Reference the EmailAddressInputSet directly below the Primary Address section
   c) Note: Add additional parent containers as needed.
3. **Add the EmailAddressInputSet to ABCompanyDetailsPage**
   a) Navigate to ABCompanyDetailsPage and select the Phone & Addresses card
   b) Reference the EmailAddressInputSet directly below the Primary Address section
   c) Note: add additional parent containers as needed.

Hint

Add additional parent containers as needed

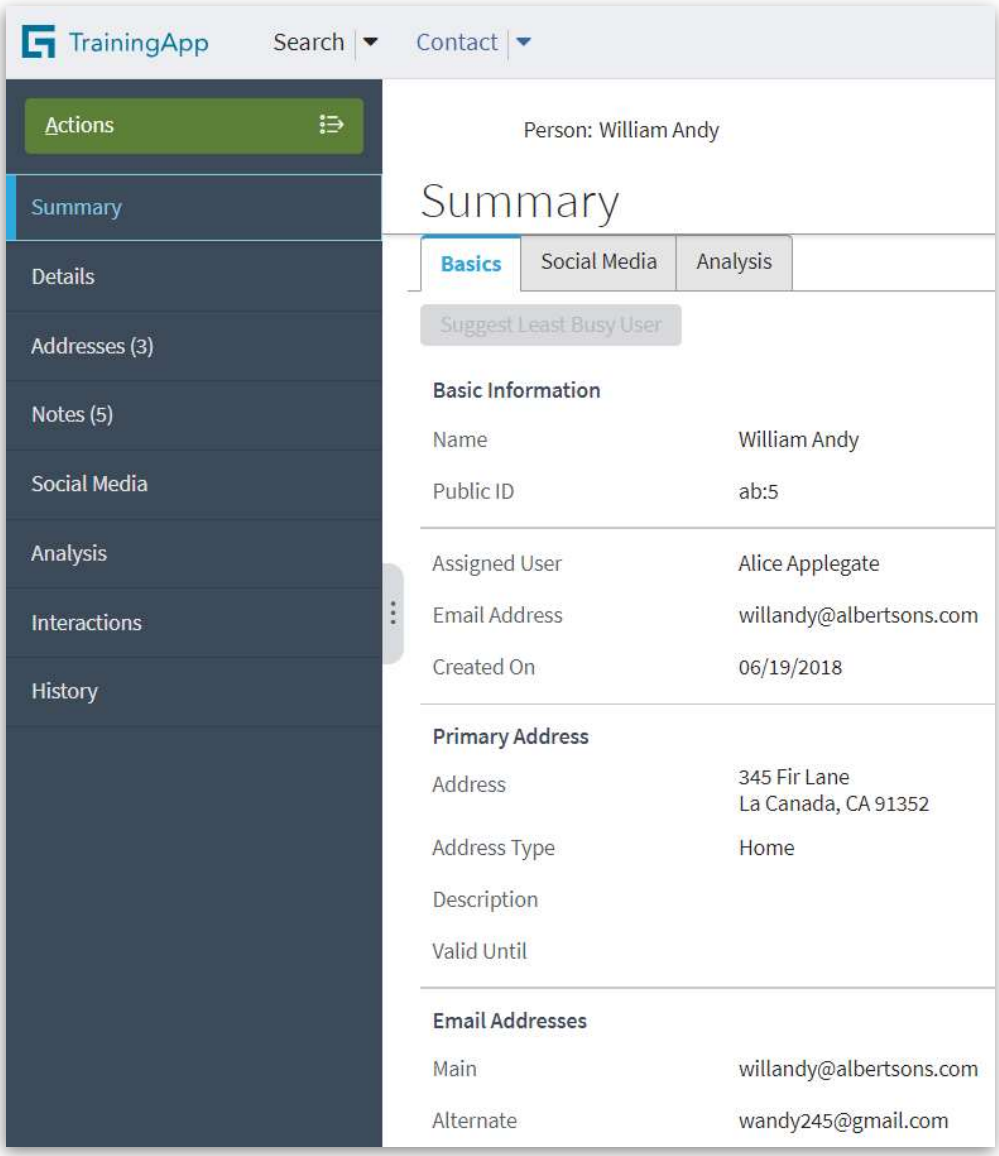
An Input Set or Input Set Ref cannot be directly added to a secondary container (e.g. Card View). The only container that can contain an Input Set is the Detail View.

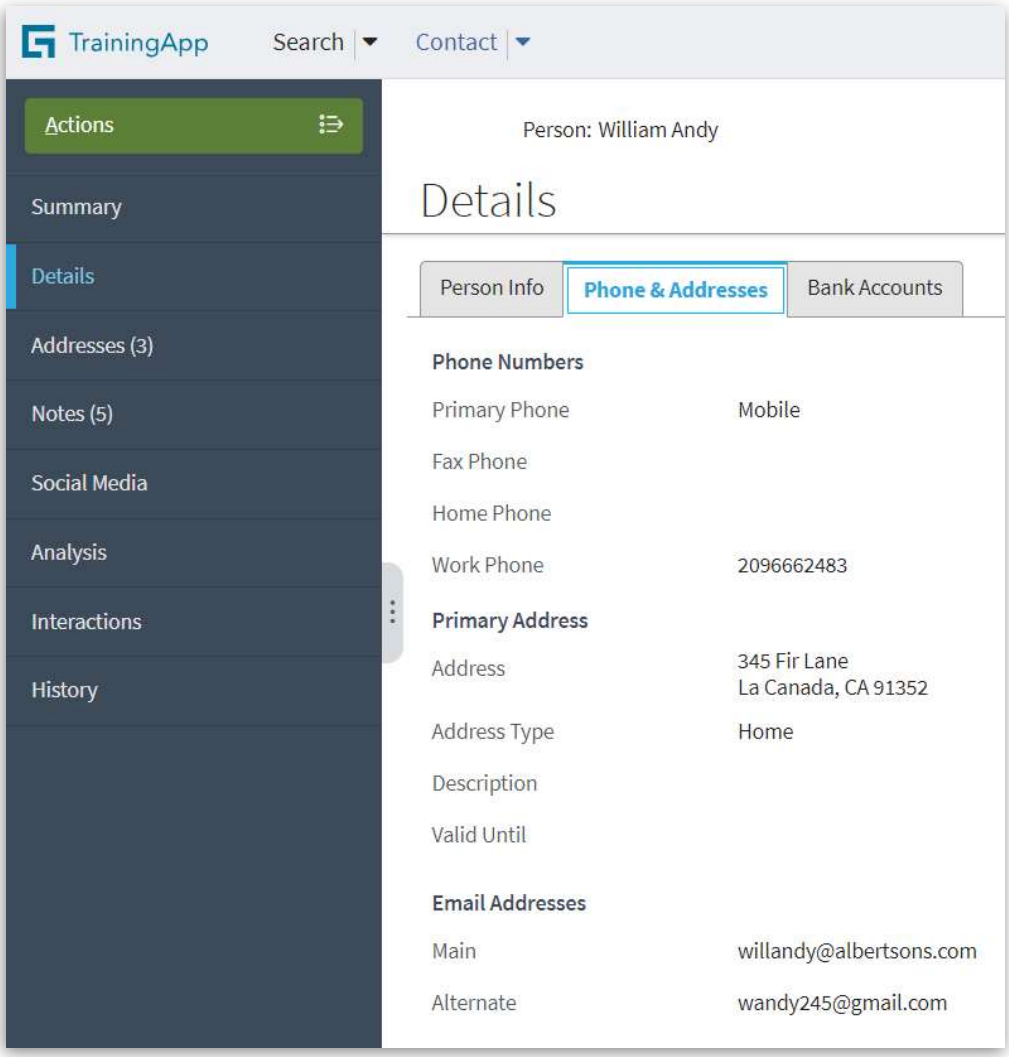
7.3.1 Verification

Activity

Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **Edit the William Andy contact**
   a) Navigate to William Andy
   b) In the Summary, edit the contact
   c) Enter the Main email for William Andy, e.g., william@guidewire.com
   d) Enter an Alternate email for William Andy, e.g., william-andy@gudewire.com
   e) Click update
4. **View the William Andy contact details**
   a) In the sidebar menu, click Details
   b) In Details, click Phone & Addresses
   c) Verify that you see the email addresses that you entered


TrainingApp
Search
Contact
Actions
Summary
Details
Addresses (3)
Notes (5)
Social Media
Analysis
Interactions
History
Person: William Andy
Summary
Basics
Social Media
Analysis
Suggest Least Busy User
Basic Information
Name
William Andy
Public ID
ab:5
Assigned User
Alice Applegate
Email Address
willandy@albertsons.com
Created On
06/19/2018
Primary Address
Address
345 Fir Lane
La Canada, CA 91352
Address Type
Home
Description
Valid Until
Email Addresses
Main
willandy@albertsons.com
Alternate
wandy245@gmail.com



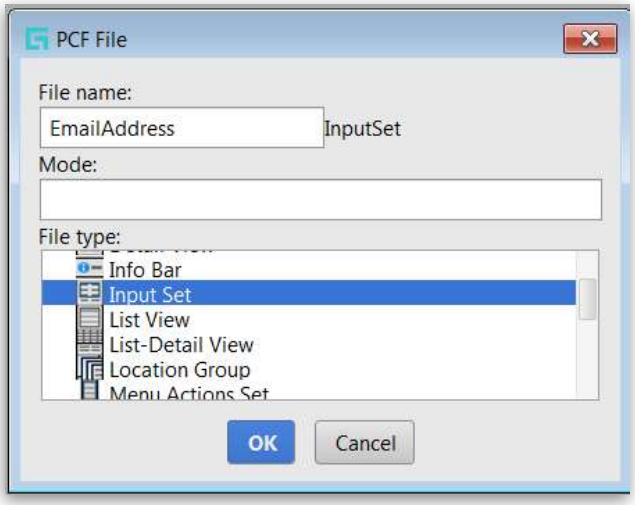
7.4 Lab Solution: Create an Input Set

Solution

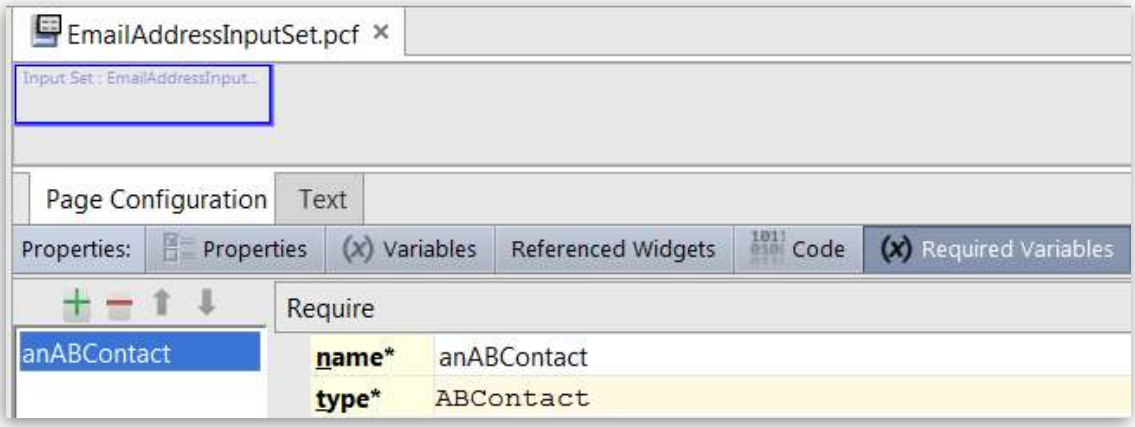
Exact details on how to complete the lab.

1. Create traininglabs PCF folder if it doesn't exist

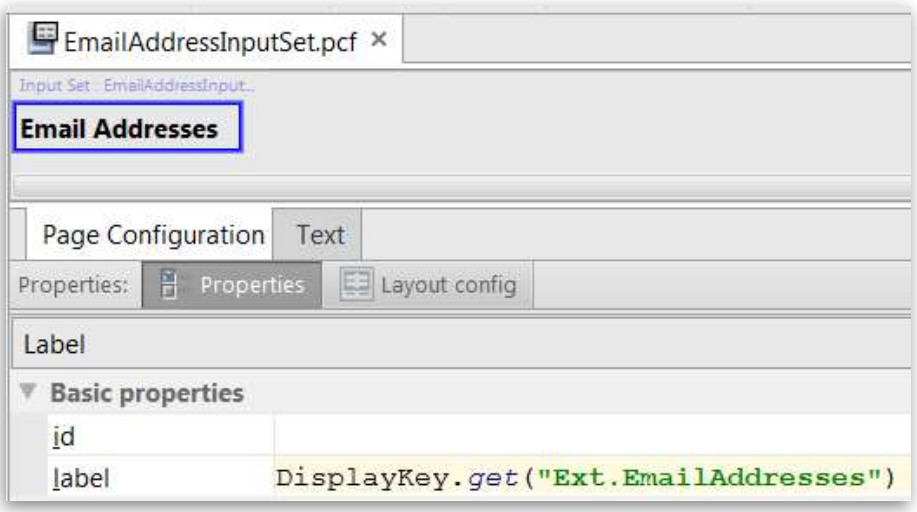
2. Create the Input Set



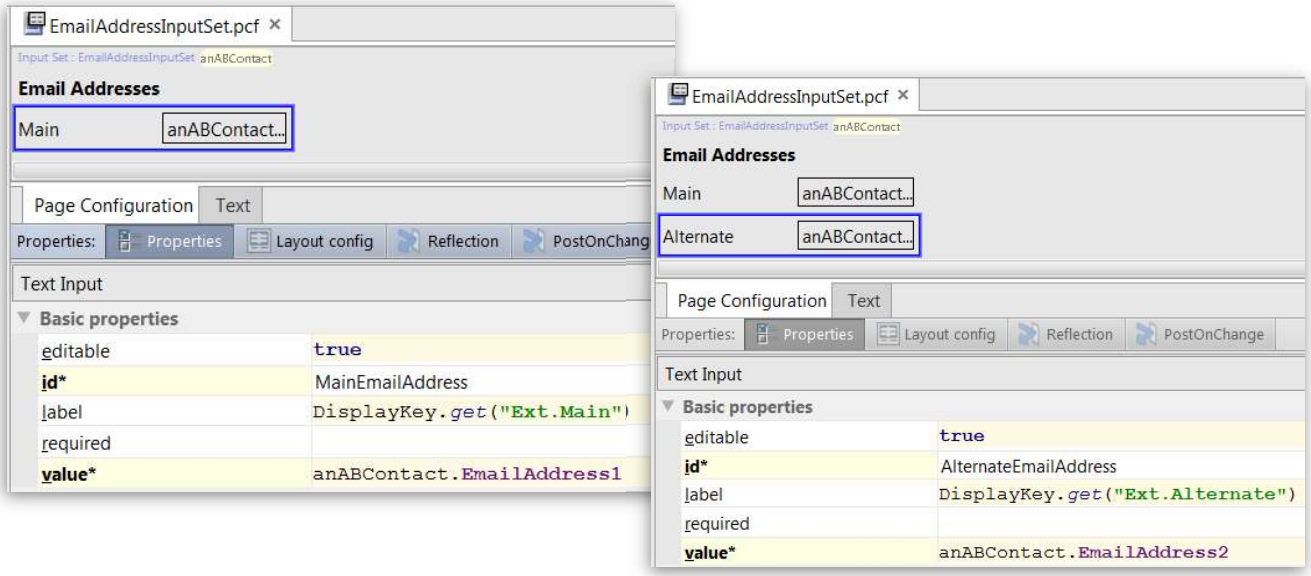
3. Specify the root object



4. Add and configure the label



5. Add and configure the Text Input widgets



7.5 Lab Solution: Reference the Input Set

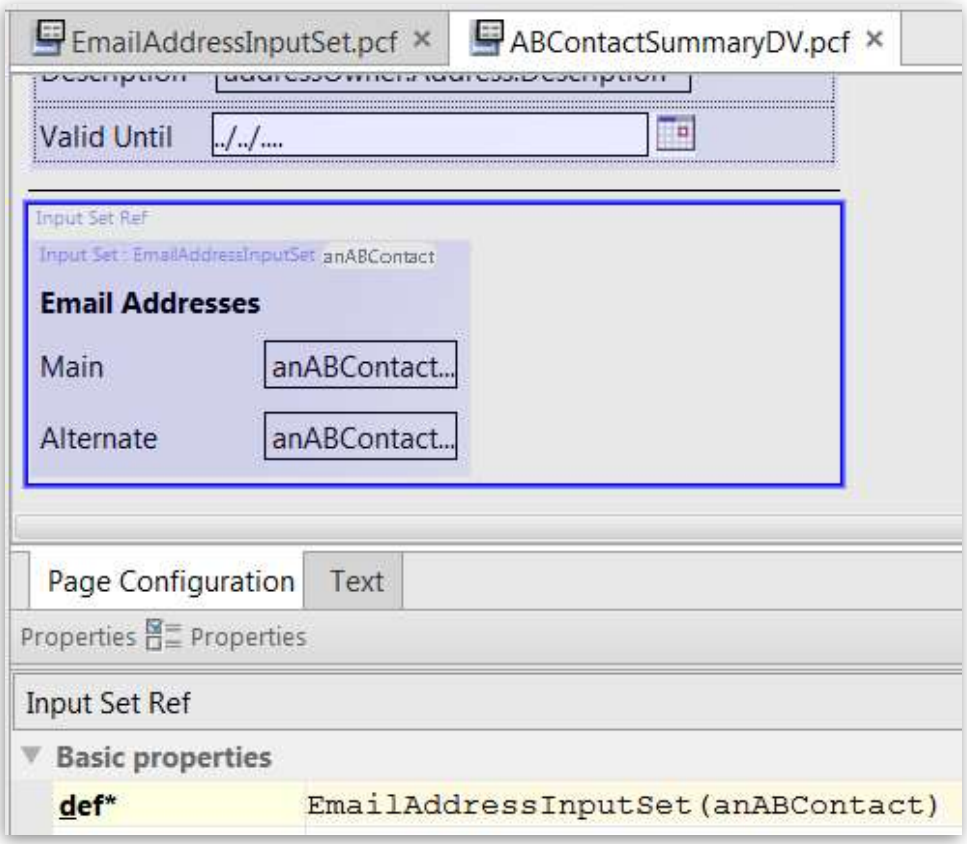
Solution

Exact details on how to complete the lab.

1. **Open the ABContactSummaryDV**

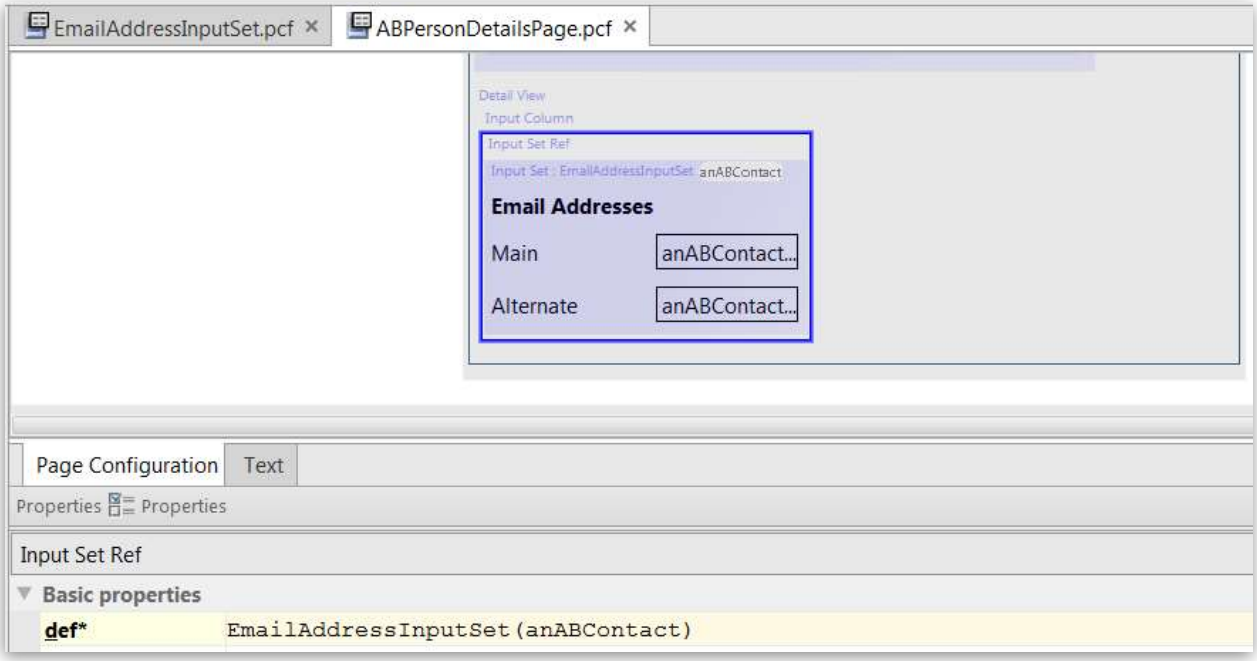
   a) Add an Input Divider

   b) Add and configure the Input Set Ref widget

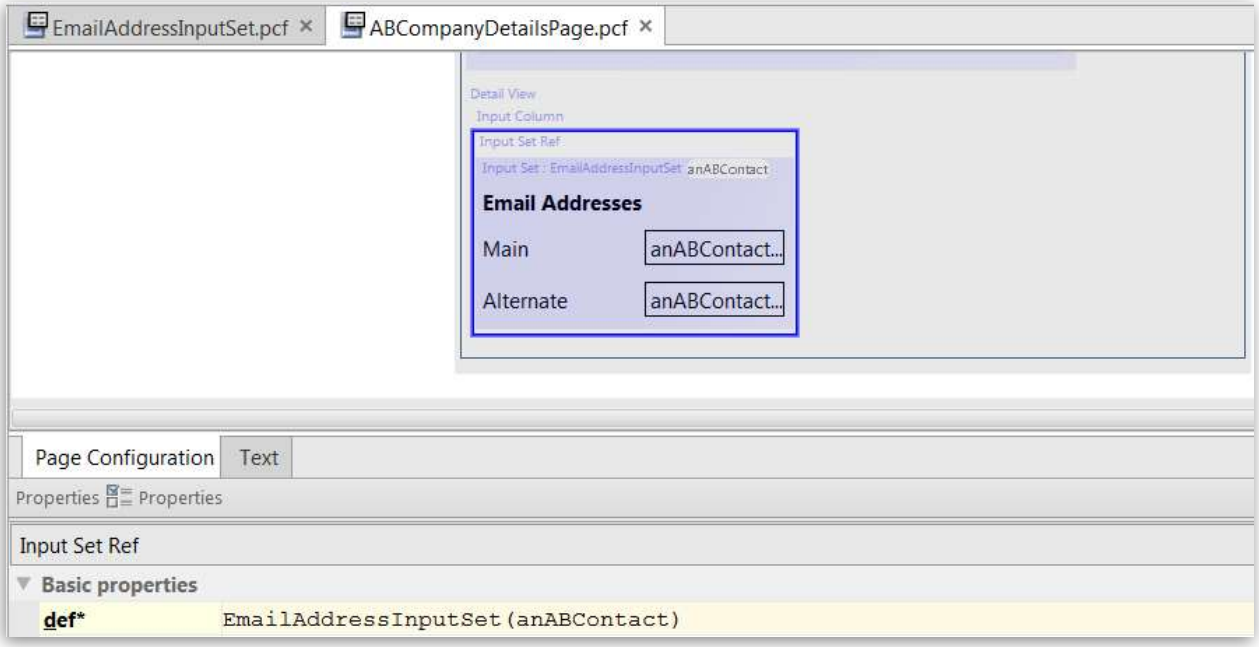


2. **Navigate to the Phone & Addresses card of the ABPersonDetailsPage. Then add and configure the InputSetRef widget.**

   Note: Ensure you add an InputSetRef from the InputLayout category and not an Input Set Ref from the Detail View Tile category. You can check you've used the correct PCF element by highlighting the element and looking in the text tab to ensure it shows as `<InputSetRef/>` and not `<TileInputSetRef/>`.



3. Navigate to the Phone & Addresses card of the ABCompanyDetailsPage. Then add and configure the InputSetRef widget.



GUIDEWIRE

Lesson 8

Partial Page Update

As a configuration developer, you want to be able to configure the Post On Change behavior of widgets, so that you can improve data entry efficiency and reduce page refresh.

In this lab, you will make several basic and advanced configuration changes in order to improve both application performance and usability by configuring targeted Post On Change for various widgets in TrainingApp.

8.1 Prerequisites

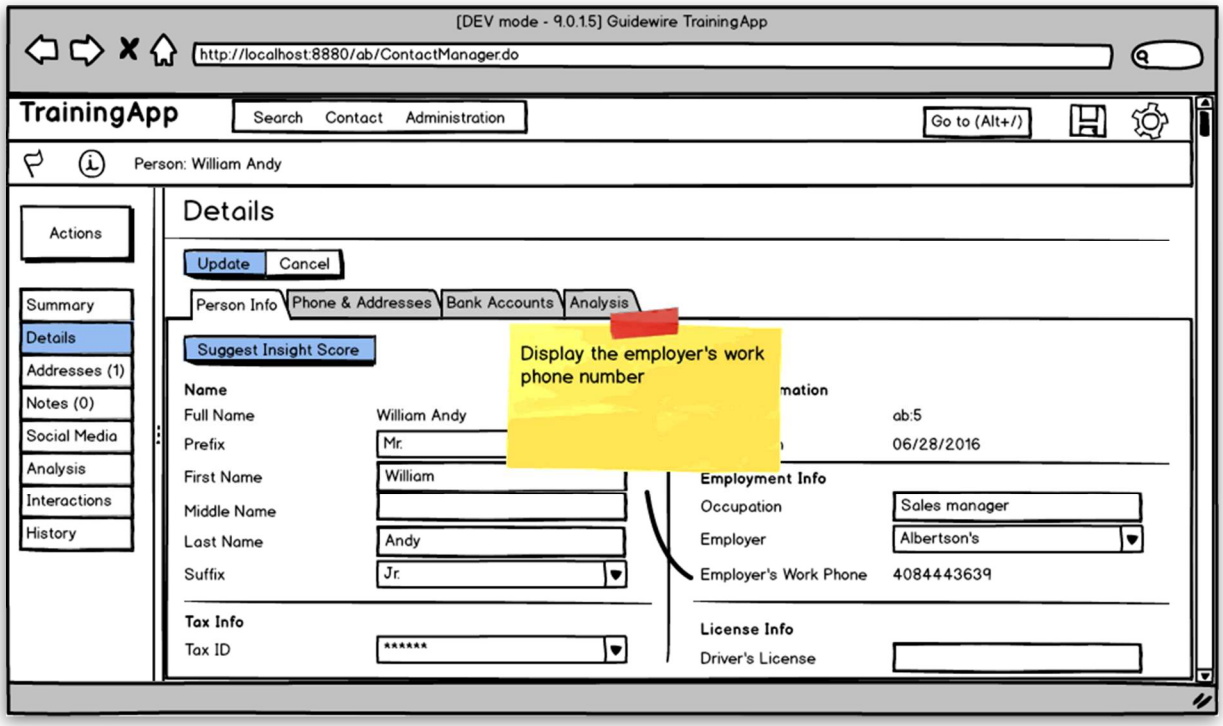
You must first complete the following previous lesson(s):

- Creating New Entities
- List Views
- Editable List Views
- Typelists
- Popups

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

8.2 Lab: Targeted Post On Change – DATA_ONLY

"On the Person Info card, we want to see the employer's work phone number below the employer field. We want the employer's work phone widget to be read-only and always visible. The users must see the correct employer's work phone number as soon as the value of the employer field is changed. When configuring the dynamic widget behavior, keep in mind to transfer only data to achieve the best UI performance." – Insurance company business analysts



In this lab, you will add a read-only input widget to the ABContactDetailsPersonDV. First, you will configure the widget to display the employer's work phone number for a given person. Next, you will make the necessary configurations so that when the value of the Employer widget changes, the read-only input widget immediately shows the new employer work phone number.

8.2.1 Configuration

1. **Add a new input widget**

   a) In the ABContactDetailsPersonDV, in the Employment Info section, add a read-only input widget labeled “Employer’s Work Phone” that displays the employer’s work phone number for a given person

2. **Configure targeted Post On Change**

   a) Configure the Employer widget’s targeted Post On Change properties so that only data is refreshed for the page

8.2.2 Verification

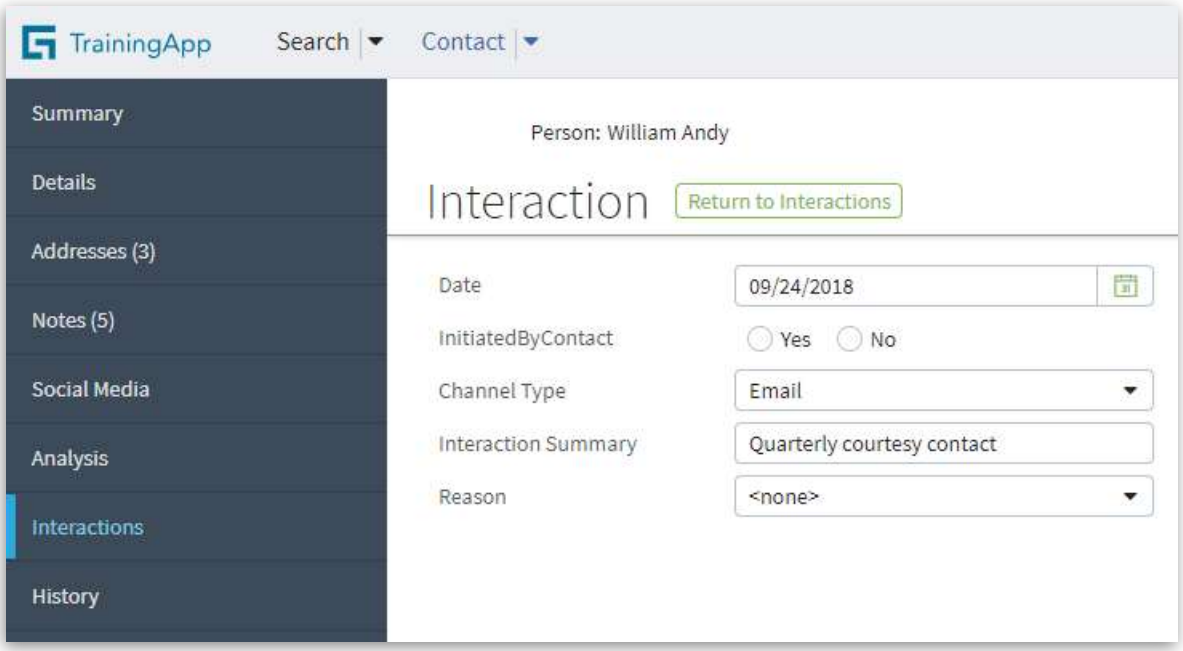
Activity

Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **Navigate to William Andy's Details screen**
4. **Click Edit and change the selection in the Employer field**
5. **Verify that Employer's Work Phone field changes**
6. **Click Cancel**

8.3 Lab: Advanced targeted Post On Change – layout re-render

"In the interaction popup, the Initiated By Contact, Channel Type, Summary and User fields should be visible only if the Date is set. If the date is not set or the user deletes the date then only the Date and Reason fields should be visible. The four fields should become visible/hidden as soon as the user makes a change to the Date field. Keep in mind performance when implementing this change. " – Insurance company business analysts



In this lab, you will modify the InteractionPopup. First, you will add an input set as a container for several of the existing widgets. Next, you will write an expression for an input set property that shows the widget when there is an InteractionDate value. Then, you will configure targeted Post On Change to re-render the layout and show the widgets in the input set when there is an InteractionDate value.

8.3.1 Investigation

1. View the current widget behavior

a) Navigate to William Andy

b) In the sidebar menu, select Interactions

c) Click Edit and then click Add

d) Complete the cells for an interaction

e) Click Update

f) Click the Summary of the new interaction to open the popup

g) Complete the blank fields of the interaction

2. Open the PCF to configure in Guidewire Studio

a) To open a PCF, use `ALT + SHIFT + E`

8.3.2 Configuration

1. Add a new Input Set widget

a) In the InteractionPopup, add an Input Set widget below the Interaction Date input widget

b) Specify the `id` property for the Input Set widget, e.g., InteractionInputSetID

2. Move widgets into the Input Set

a) Move the following widgets into the Input Set:

- Initiated By Contact
- Channel Type
- Summary
- User

3. Modify an Input Set widget property

a) Write an expression for the `visible` property to show the Input Set only when there is a value for the Interaction Date field

4. Configure targeted Post On Change

a) Configure the required targeted Post On Change properties for a widget so that when a date is entered, the Input Set widget immediately becomes visible

8.3.3 Verification

Activity

Add a title and replace icon if needed.

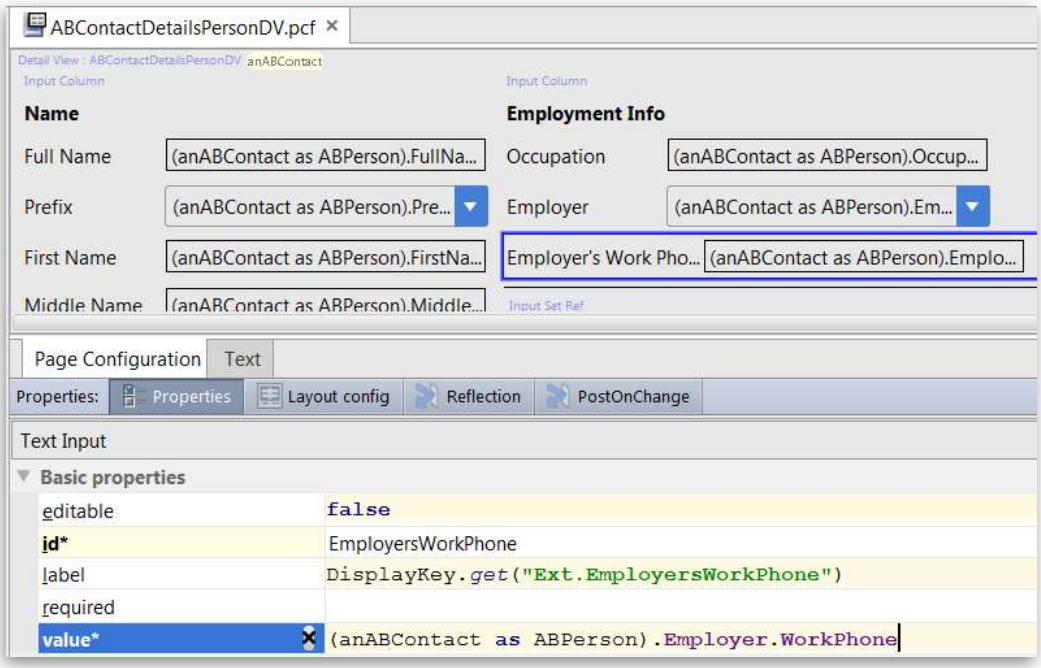
1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **Create an Interaction for William Andy**
4. **Navigate to William Andy's Details screen**
5. **In the sidebar menu, select Interactions**
6. **Click Edit and then click Add**
7. **Complete the cells for an interaction**
8. **Click Update**
9. **Click the Summary of the new interaction to open the popup and verify that all fields are visible**
10. **Complete the blank fields of the interaction**
11. **Delete the Interaction Date and click outside of the date field**
12. **Verify that the once visible fields are now hidden**

8.4 Lab Solution: Configure targeted Post On Change – DATA_ONLY

Solution

Exact details on how to complete the lab.

1. **In ABContactDetailsPersonDV.pcf, add a new input widget to display the Employer's Work Phone**

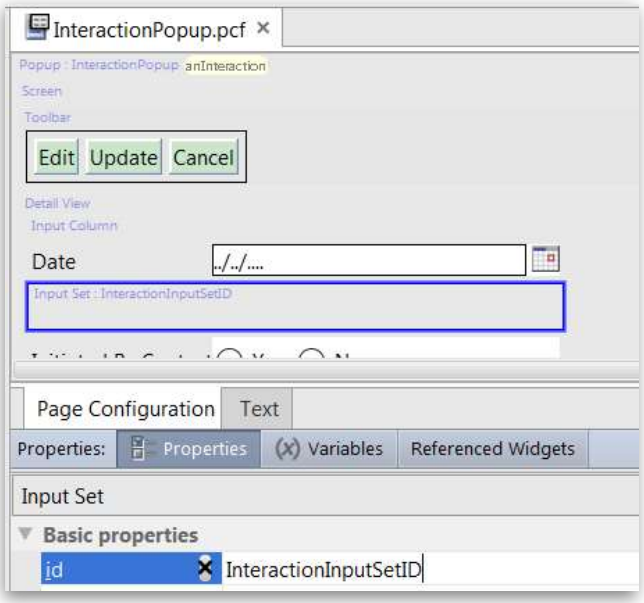


8.5 Lab Solution: Advanced targeted Post On Change – layout re-render

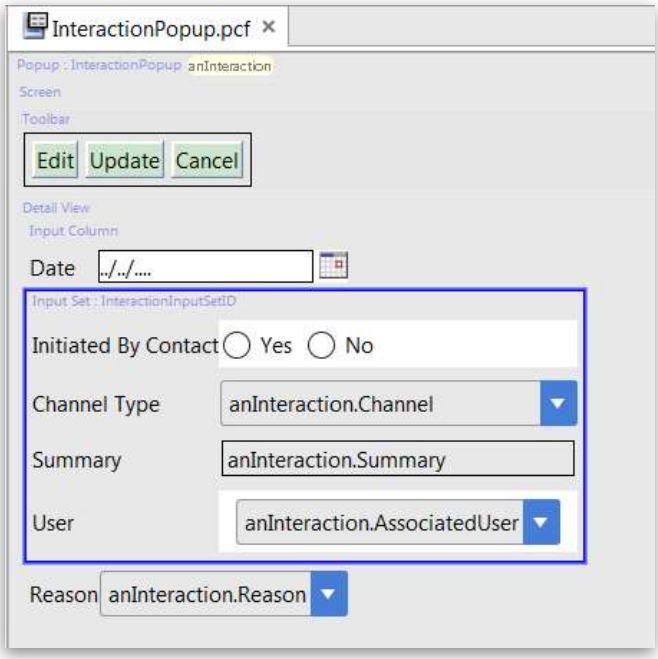
Solution

Exact details on how to complete the lab.

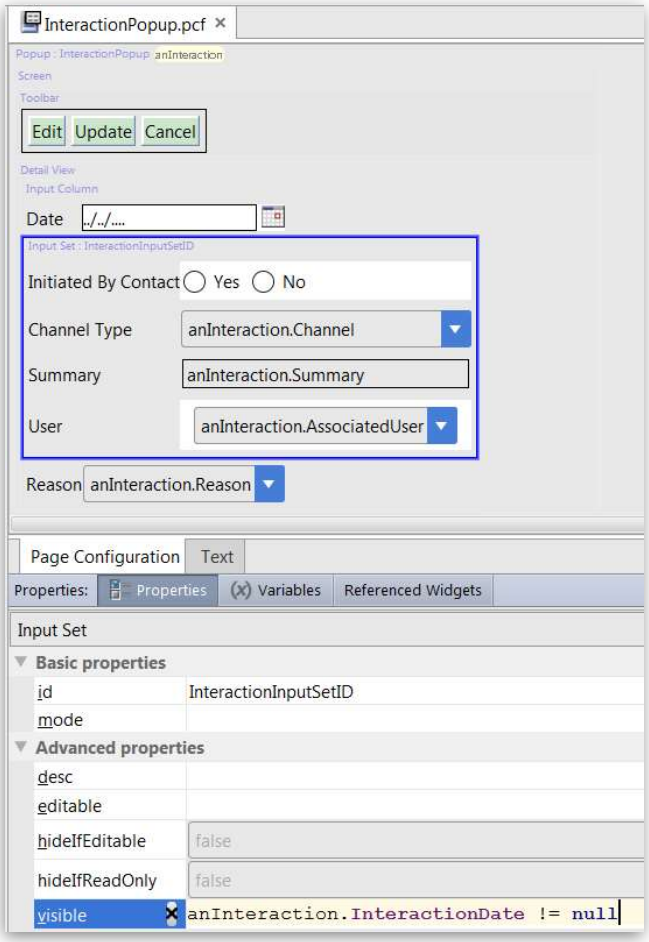
1. **Add a new Input Set widget into InteractionPopup under the Interaction Date field and then specify the id property**



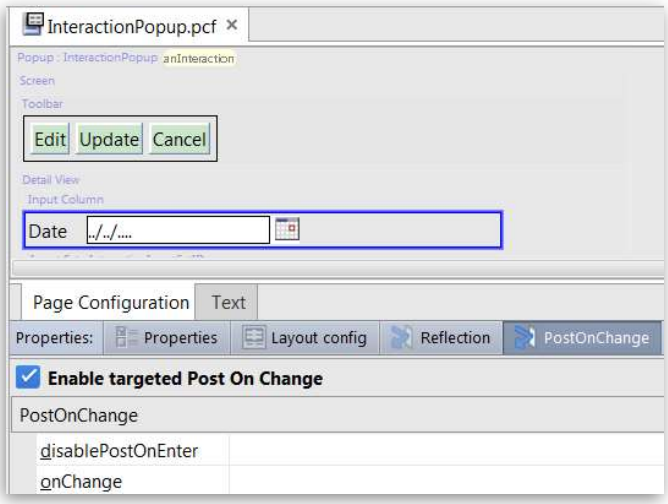
2. Move input widgets into the Input Set



3. Write an expression for the `visible` property to show the Input Set only when there is a value for the Interaction Date field



4. Configure targeted Post On Change so that when a date is entered, the Input Set widget immediately becomes visible



GUIDEWIRE

Lesson 9

Subtypes

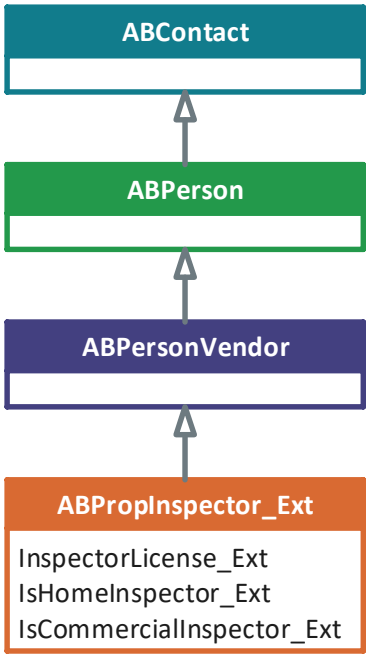
In this lab, you will use the Entity Editor in Guidewire Studio to modify the TrainingApp data model. You will create a new custom subtype entity. Then, you will extend an existing base application subtype entity.

9.1 Prerequisites

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

9.2 Lab: Create a new custom subtype entity

"*We need to store information about Property Inspectors. After reviewing the data model, we found that there is currently no entity available to do this. Configure the data model and create the new a subtype entity as specified in the diagram and table below.*" – Insurance company business analysts



In this lab, you will create a subtype entity for Property Inspectors using ABPersonVendor as the supertype entity. For each new entity element, remember to set the nullok attribute to true if not

specifically defined to be false. When required, add an element description and specify column parameters.

1. Create the ABPropInspector_Ext subtype entity

a) Create a new ETI file. Specify the following values in the new entity dialog:

- Entity: **ABPropInspector_Ext**
- Entity Type: **subtype**
- Supertype: **ABPersonVendor**

2. In the Entity Editor, add the following fields:

Field Name	Datatype	Null ok?
InspectorLicense_Ext	a string of up to 40 characters	true
IsHomeInspector_Ext	a boolean value	true
IsCommercialInspector_Ext	a boolean value	true

1. Use Studio's code generation feature to process the entity and generate the Java class

a) If possible, use incremental code generation

b) Verify that there were no errors during code generation

Open the generated Java class and verify that the class extends the ABPersonVendor and you can see the three new properties

Best Practices

Use _Ext in subtypes name and field names

Guidewire recommends the use of the _Ext suffix (or any unique suffix) in the entity name when creating new (subtype) entities.

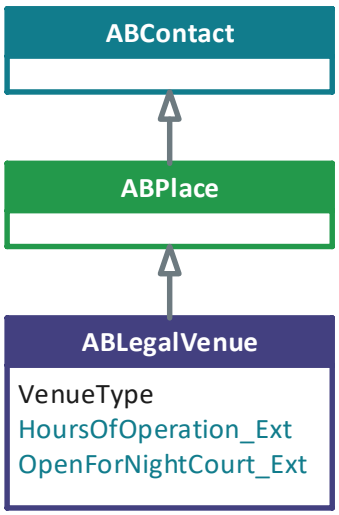
As for fields, it depends on whether the new subtype entity is part of a base application subtype hierarchy or a custom subtype hierarchy.

- The _Ext suffix is recommended if the subtype is part of a base application subtype hierarchy
- The _Ext suffix is not needed if the subtype is part of a custom subtype hierarchy
- In this lab, ABPersonVendor is the Supertype of ABPropInspector_Ext. ABPersonVendor is a base application subtype; thus it is part of a base application subtype hierarchy. Guidewire can add new fields to base application subtypes in future releases. These new fields would be inherited and could

cause conflict in ABPropInspector_Ext if the _Ext (or any unique suffix) is not used in the field names.

9.3 Lab: Extend an existing base application subtype entity

We are going to use the ABLegalVenue OOTB subtype entity to store information about legal venues. However, during our initial analysis, we identified a gap and found that we cannot store the following two pieces of information: (1) the hours of operation and (2) if the legal venue is open for night court or not. Configure the data model and create the new a subtype entity as specified in the diagram and table below." - Insurance company business analysts



In this lab, you will create an entity extension of ABLegalVenue, an existing subtype entity. You will create new entity elements to capture specific information for legal venues. For each new entity element, remember to set the nullok attribute to true if not specifically defined to be false. When required, add an element description and specify column parameters.

2. Create the ABLegalVenue entity extension

a) Create ABLegalVenue.etx

3. In the Entity Editor, add the following fields:

Field Name	Datatype	Null ok?
HoursOfOperation_Ext	a string of up to 40 characters	true
OpenForNightCourt_Ext	a boolean value	true

4. **Use Studio's code generation feature to process the entity and generate the Java class**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Open the generated Java class and verify that you can see the newly added properties

Best Practices

Use _Ext in entity field name when extending base application (subtype) entities

For fields that are added to a base application entity, Guidewire recommends that the field name should end with _Ext (or start with Ext_). This is to prevent potential conflicts during the upgrade to the next version of the Guidewire application.

9.3.1 Verification

Activity

Verify the work you have done

As a configuration developer, you want to be able to properly deploy new and changed data model resources.

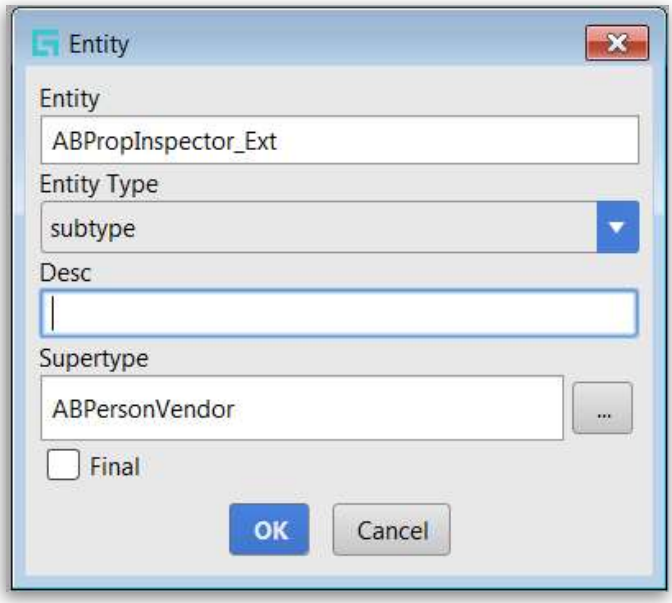
1. **Restart the server to deploy the changes**
   a) During server restart Studio first runs the code generators, then compiles the project and finally deploys the resources
2. **Regenerate the Data Dictionary**
3. **Open the Data Dictionary**
4. **In Windows Explorer, navigate to the data dictionary.**
5. **Open the data dictionary using your preferred browser.**
6. **Verify your changes to the ABPropInspector_Ext entity**
7. **Verify your changes to the ABLegalVenue entity**

9.4 Lab Solution: Create a new custom subtype entity

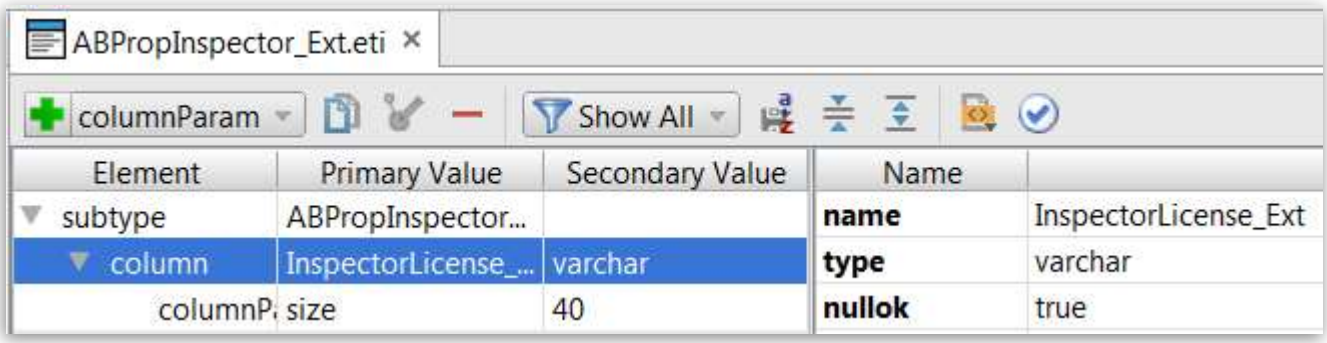
Solution

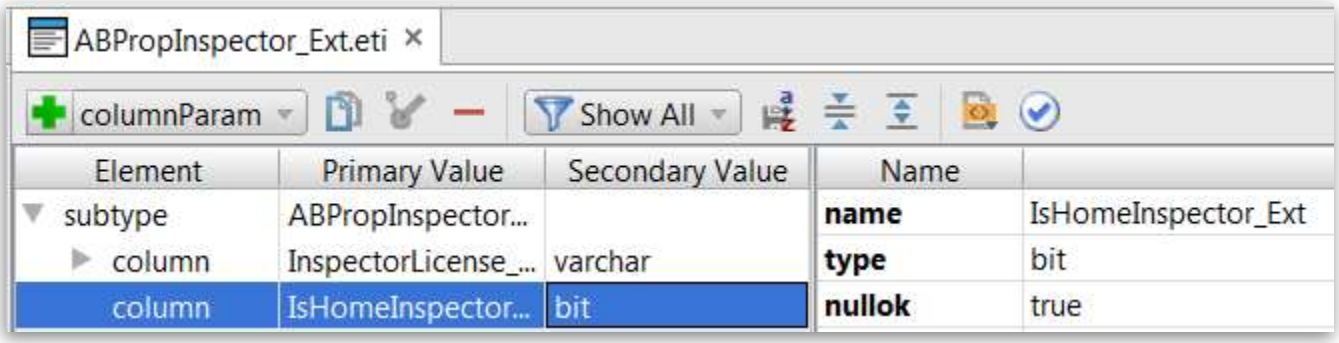
Exact details on how to complete the lab.

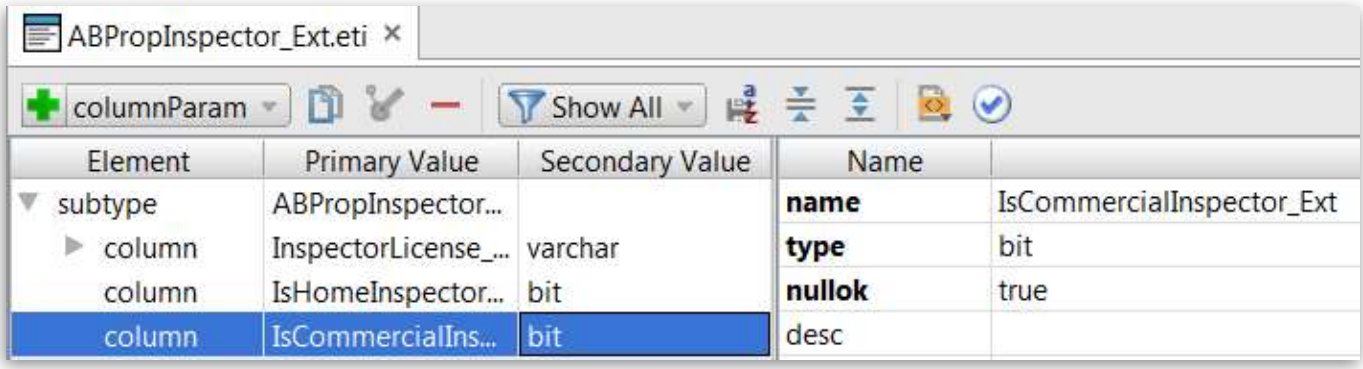
1. Create the ABPropInspector_Ext.eti file in the …\configuration\config\Extensions\Entity folder



2. Add the fields





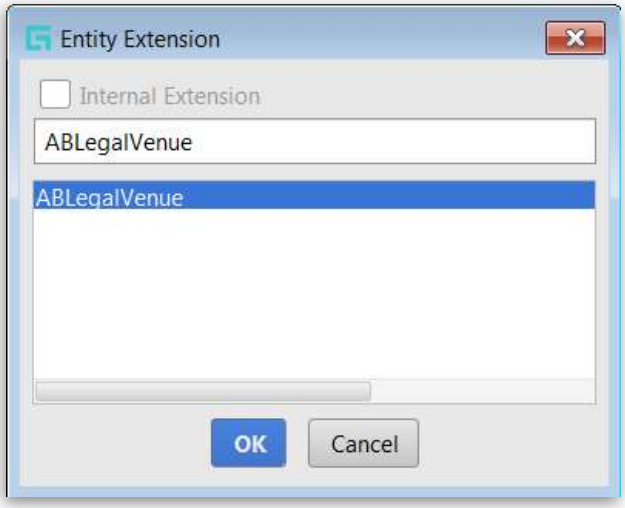


9.5 Lab Solution: Extend an existing base application subtype entity

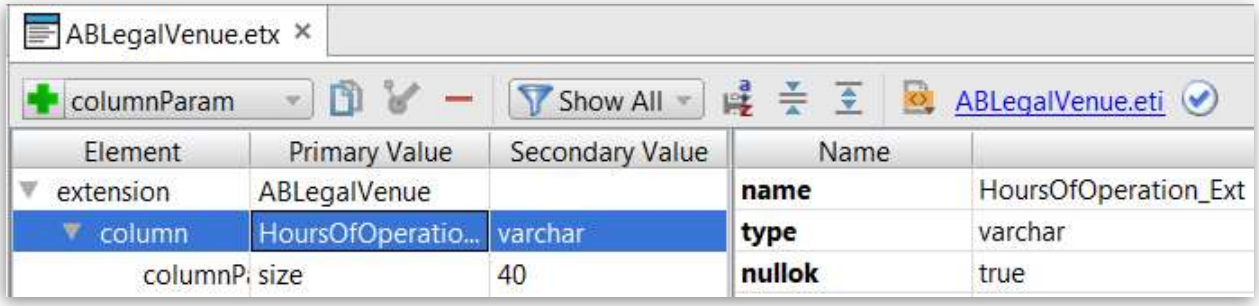
Solution

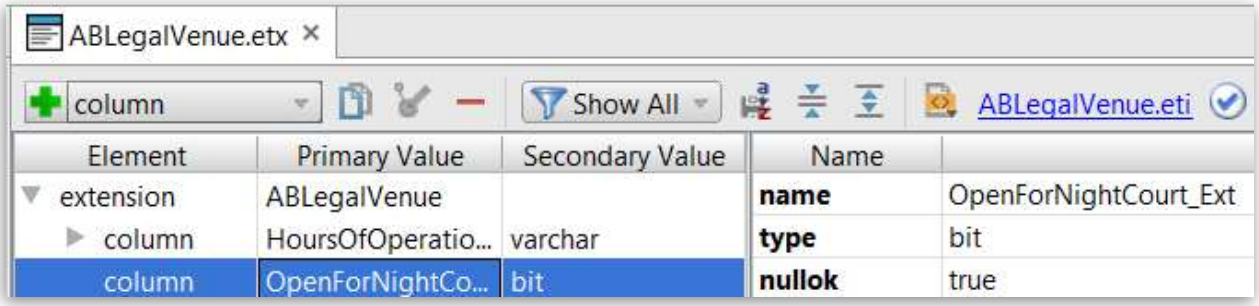
Exact details on how to complete the lab.

1. **Create the ABLegalVenue.etx file in** …`\configuration\config\Extensions\Entity` **folder**



2. Add the fields

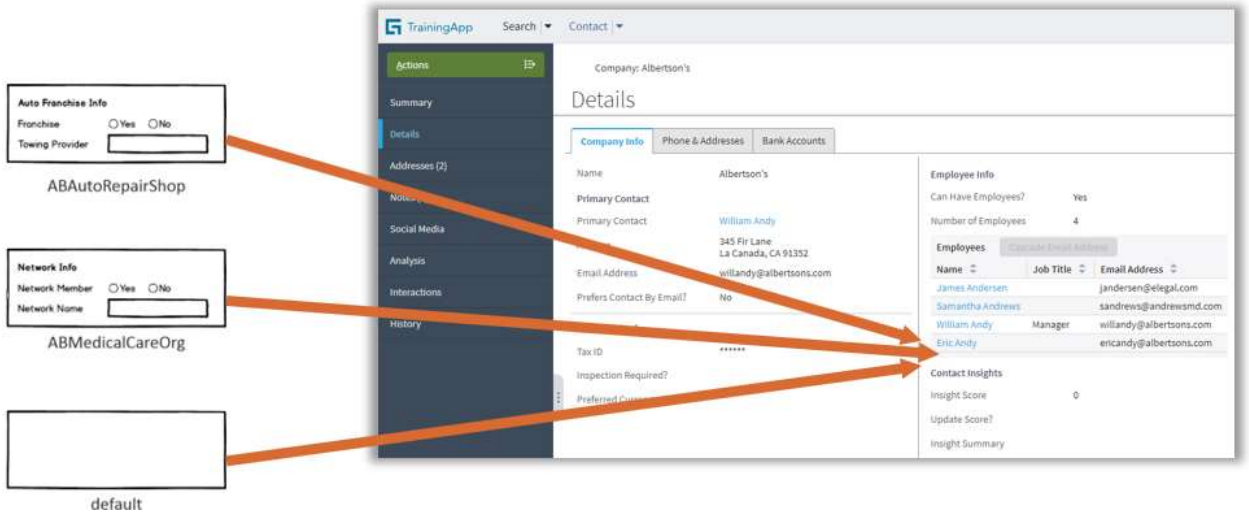




Lesson 10

Modes

"An insurance company has additional "Specialty Info" details for ABAutoRepairShop contacts and ABMedicalCareOrg contacts that the current user interface does not display. In each case, the Company Info card should display these fields below Employees list. See the wireframe for more details." – Insurance company business analysts



As a configuration developer, you want to be able to create and reference modal container sets, so you can design different variations for a small part of a screen. In this lab, you will create several modal Input Sets.

10.1 Prerequisites

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

10.2 Lab: Create a set of modal Input Sets

In this part of the lab, you will create a set of modal Input Sets, each of which has an ABContact root object, in the traininglabs PCF Folder. Remember, every PCF file in the set must have the same name, same type and same required variable list.

1. **Create SpecialtyInfoInputSet.default.pcf :**
   a) Create Input Set in the `traininglabs` folder and specify the mode "default"
   b) Specify a root object of the type ABContact
   c) This input set needs no widgets and should be empty
2. **Create the SpecialtyInfoInputSet.ABAutoRepairShop.pcf for ABAutoRepairShop contacts :**
   a) Create Input Set in the `traininglabs` folder and specify the mode "ABAutoRepairShop"
   b) Specify a root object of the type ABContact
   c) Add the following widgets:
   d) A label widget that displays "Auto Franchise Info"
   e) An editable input widget labeled "Franchise" that displays ABAutoRepairShop's IsFranchise field
   f) An editable input widget labeled "Towing Provider" that displays ABAutoRepairShop's TowingProvider field
3. **Create the SpecialtyInfoInputSet.ABMedicalCareOrg.pcf for ABMedicalCareOrg contacts :**
   a) Create Input Set in the `traininglabs` folder and specify the mode "ABMedicalCareOrg"
   b) Specify a root object of the type ABContact
   c) Add the following widgets:
      - A label widget that displays "Network Info"
      - An editable input widget labeled "Network Member" that displays ABMedicalCareOrg's IsMemberOfNetwork field
      - An editable input widget labeled "Network Name" that displays ABMedicalCareOrg's NetworkName field
4. **Use Studio's code generation feature to process the PCF file and generate all the resources**
   a) If possible, use incremental code generation
   b) Verify that there were no errors during code generation
   c) Verify that you can see generated resources (.gs, .pcfc, Expressions.gs)

Hint

Configuring input widgets

Remember, you will have to select a specific input widget based on the data type of the field. You can always use the Data Dictionary, the generated Java class, and the widget reference table to find out the name, database type and Gosu type of the field that needs to be displayed.

Hint

Required variables vs variables

The required variables tab defines the input parameters for a container, while the variables tab defines local variables to store values temporarily. (E.g. storing the result of an expensive function call to use it at multiple places in the PCF)

10.3 Lab: Reference the set of modal Input Sets

In this lab, you will reference the set of modal Input Sets.

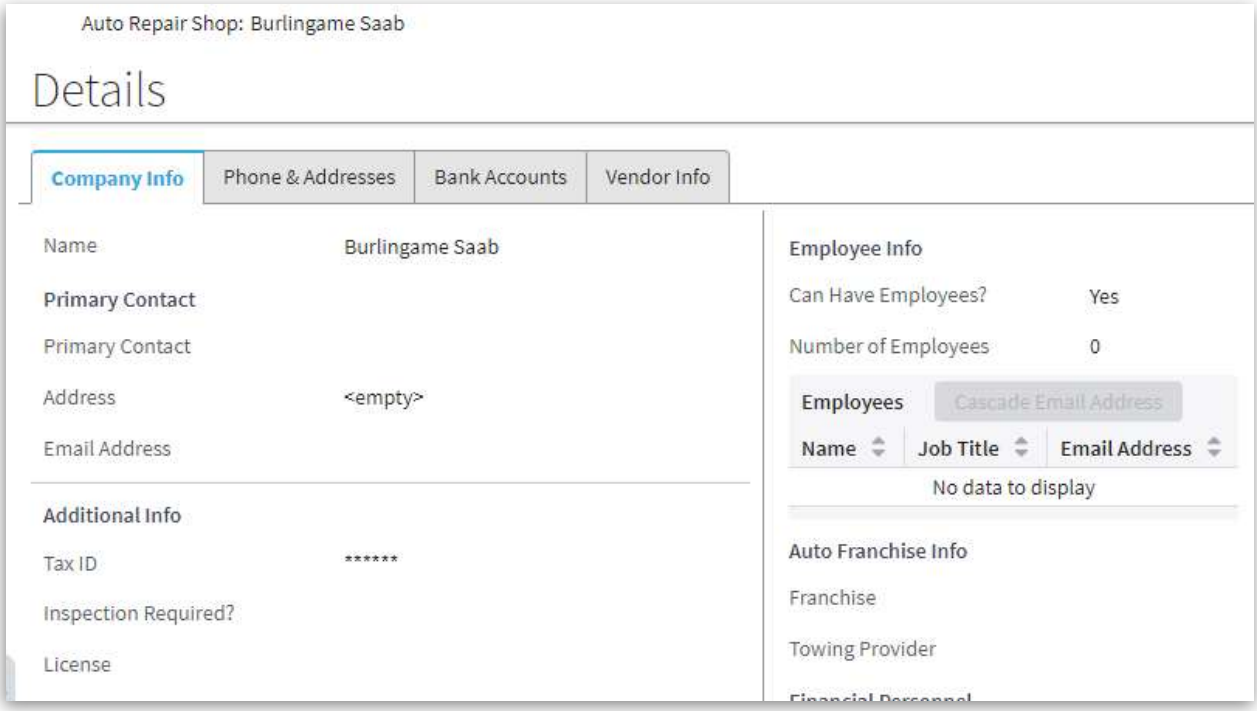
1. **Add a reference to the modal container set on the Details screen's Company Info card directly under the Employees list.**
   a) Navigate to a company contact's Details screen
   b) Open the PCF file in Studio
   c) Add the Input Set Ref widget below the Employees list in the correct PCF file

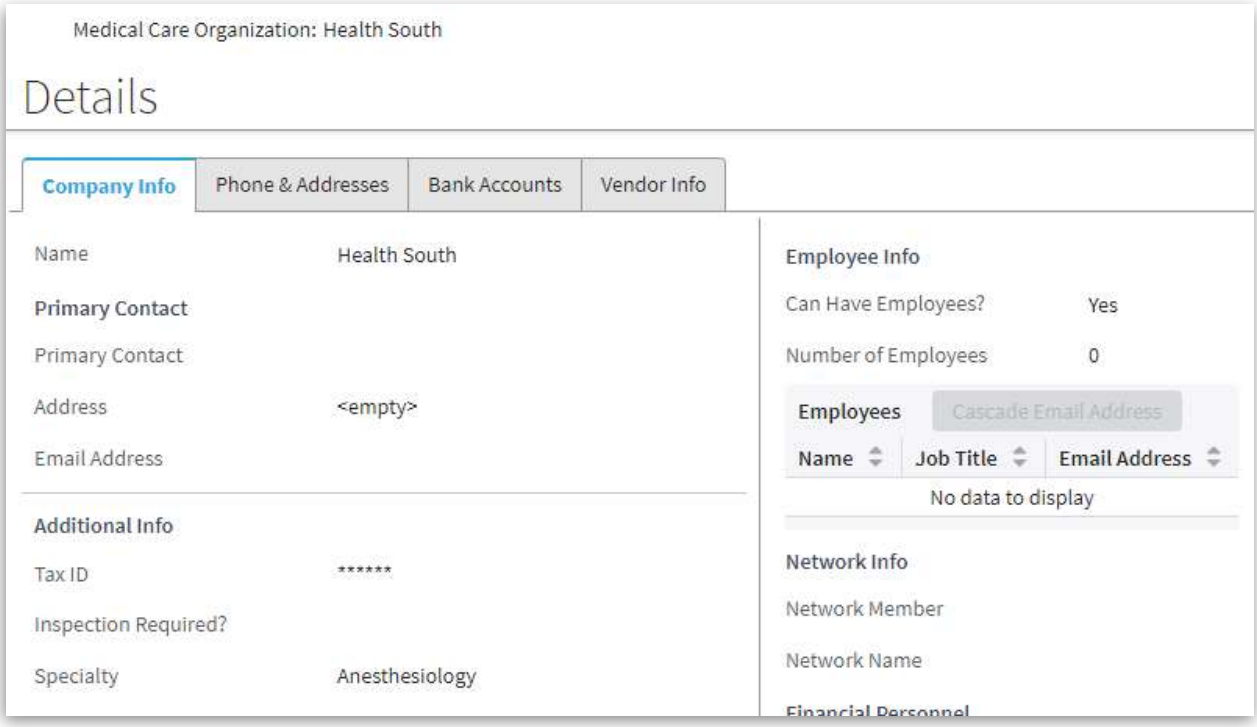
10.3.1 Verification

Activity

Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Use the appropriate shortcut to deploy the changes**
3. **Navigate to the Details screen of an ABAutoRepairShop (e.g. Burlingame Saab) contact and verify that the "Auto Franchise Info" is displayed**
4. **Navigate to the Details screen of an ABMedicalCareOrg (e.g. Health South) contact and verify that the "Network Info" is displayed**
5. **Navigate to the Details screen of a contact that is neither ABAutoRepairShop nor ABMedicalCareOrg (e.g. Alberson's). Verify that the default Input Set is displayed.**


Auto Repair Shop: Burlingame Saab
Details
Company Info
Phone & Addresses
Bank Accounts
Vendor Info
Name
Burlingame Saab
Primary Contact
Primary Contact
Address
<empty>
Email Address
Additional Info
Tax ID
******
Inspection Required?
License
Employee Info
Can Have Employees?
Yes
Number of Employees
0
Employees
Cascade Email Address
Name
Job Title
Email Address
No data to display
Auto Franchise Info
Franchise
Towing Provider


Medical Care Organization: Health South
Details
Company Info
Phone & Addresses
Bank Accounts
Vendor Info
Name
Health South
Primary Contact
Primary Contact
Address
<empty>
Email Address
Additional Info
Tax ID
******
Inspection Required?
Specialty
Anesthesiology
Employee Info
Can Have Employees?
Yes
Number of Employees
0
Employees
Cascade Email Address
Name
Job Title
Email Address
No data to display
Network Info
Network Member
Network Name

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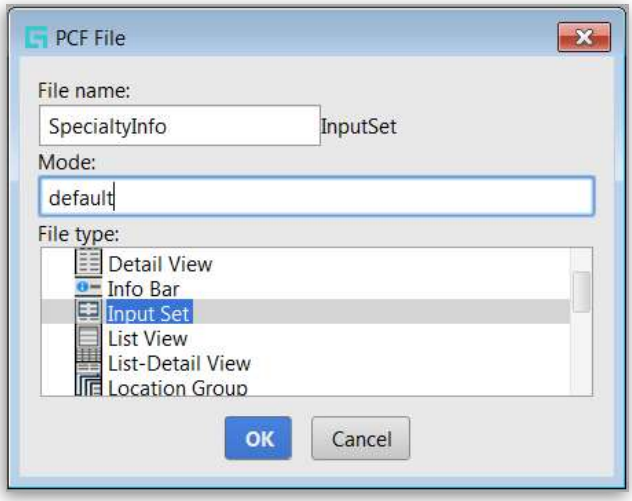
10.4 Lab Solution: Create a set of modal Input Sets

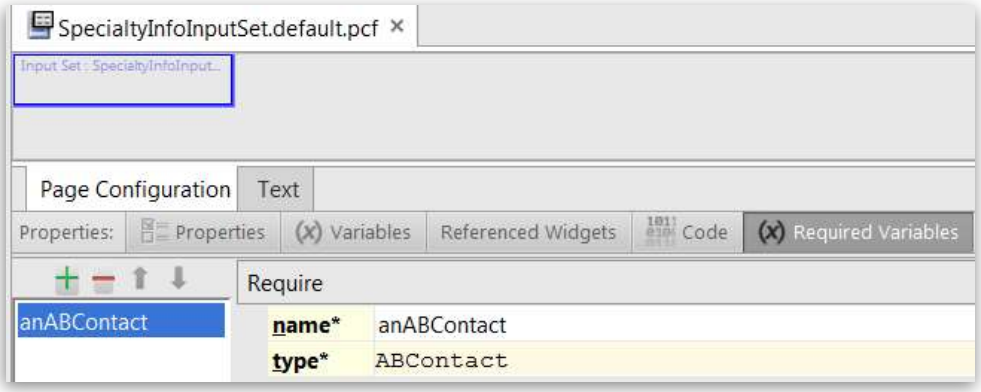
Solution

Exact details on how to complete the lab.

1. **Create `traininglabs` PCF folder if it doesn't exist**
2. **Create the default Input Set**
3. **Create the PCF file**



a) Specify the root object



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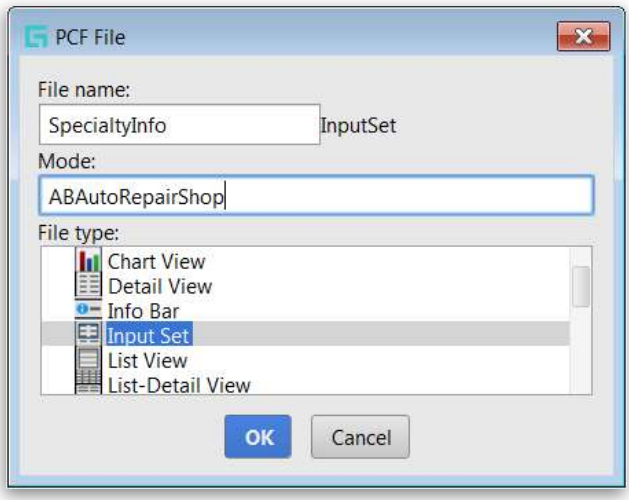
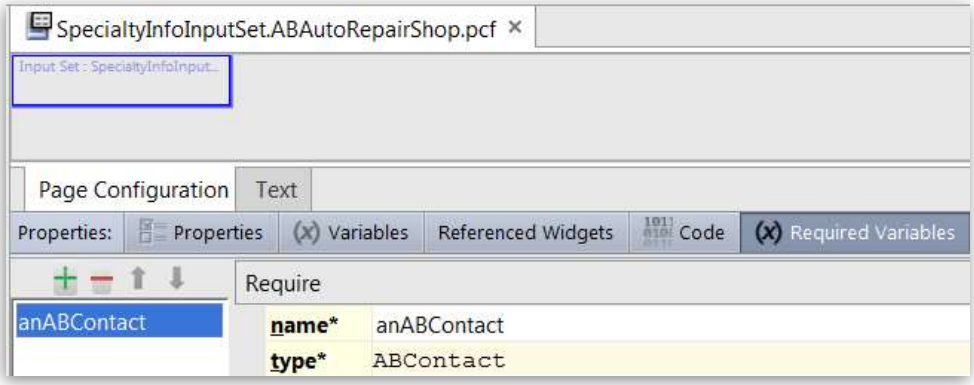
4. Create the Input Set for ABAutoRepairShop contacts

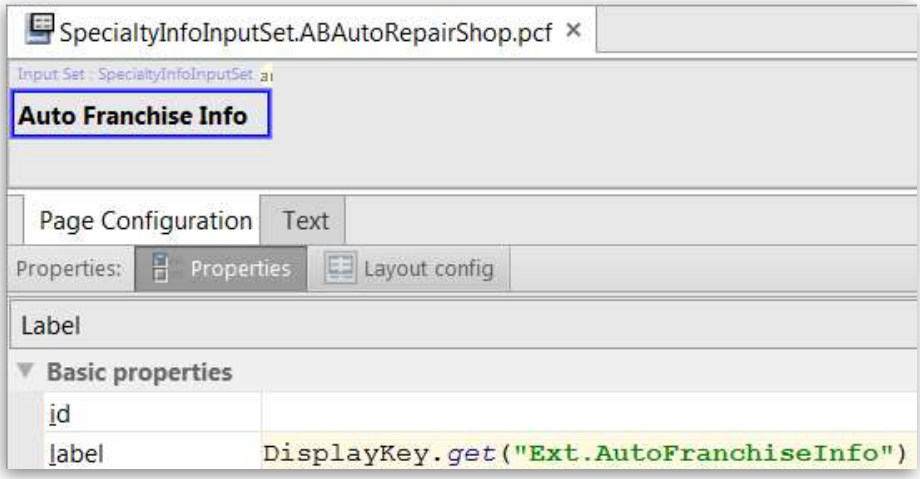
a) Create the PCF file

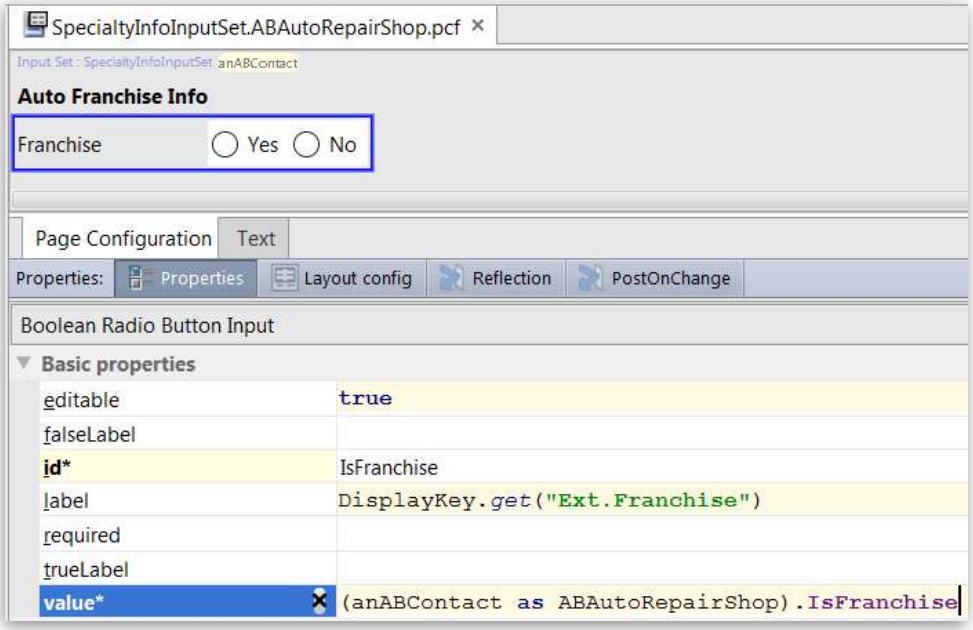


b) Specify the root object

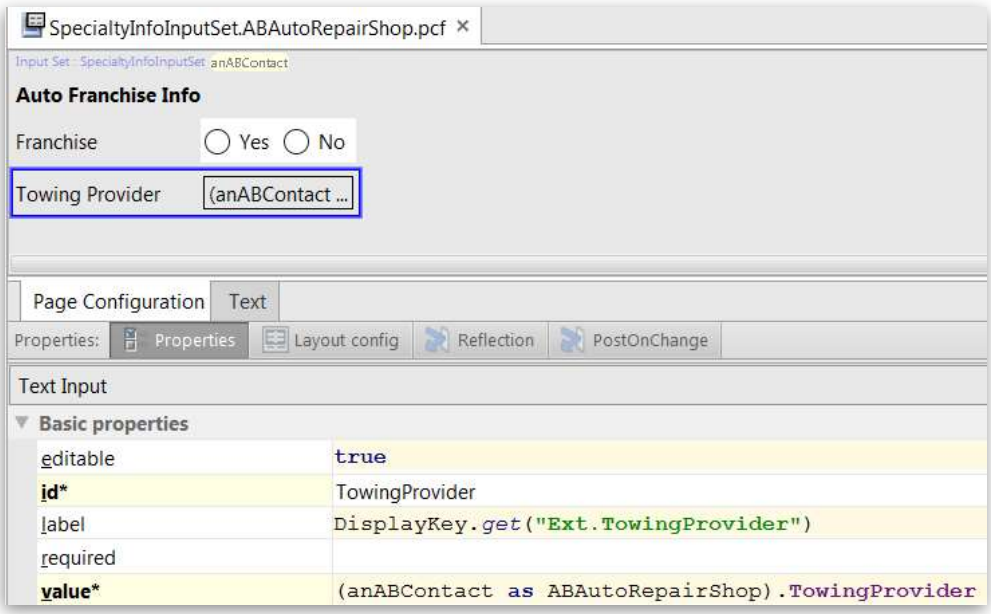


c) Add the widgets


SpecialtyInfoInputSet.ABAutoRepairShop.pcf
Input Set : SpecialtyInfoInputSet a
Auto Franchise Info
Page Configuration
Text
Properties:
Properties
Layout config
Label
Basic properties
id
label
DisplayKey.get("Ext.AutoFranchiseInfo")

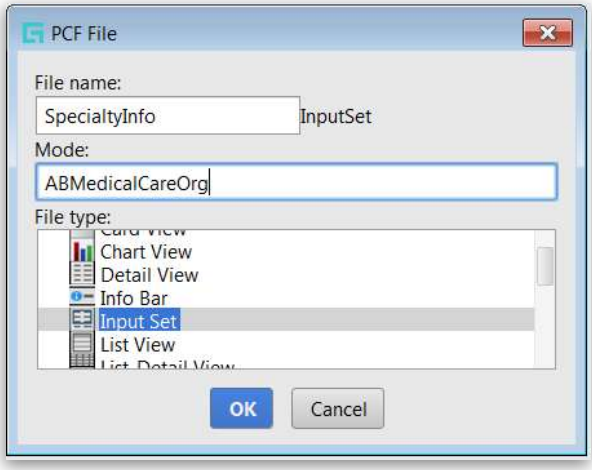

SpecialtyInfoInputSet.ABAutoRepairShop.pcf
Input Set : SpecialtyInfoInputSet anABContact
Auto Franchise Info
Franchise
Yes
No
Page Configuration
Text
Properties:
Properties
Layout config
Reflection
PostOnChange
Boolean Radio Button Input
Basic properties
editable
true
falseLabel
id*
IsFranchise
label
DisplayKey.get("Ext.Franchise")
required
trueLabel
value*
(anABContact as ABAutoRepairShop).IsFranchise

GUIDEWIRE

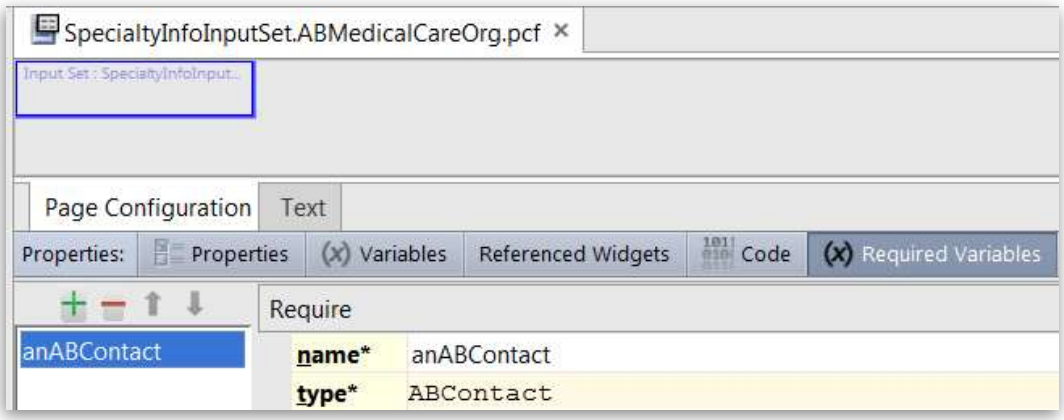


5. Create the Input Set for ABMedicalCareOrg contacts

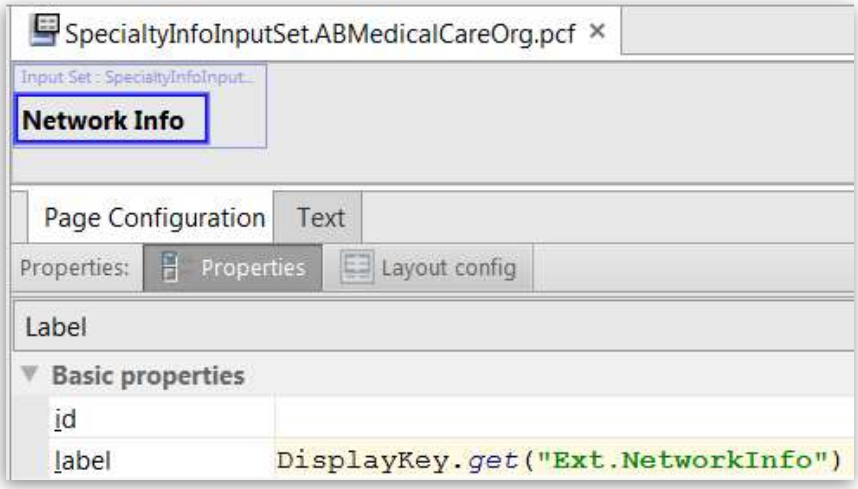
a) Create the PCF file



b) Specify the root object



c) Add the widgets



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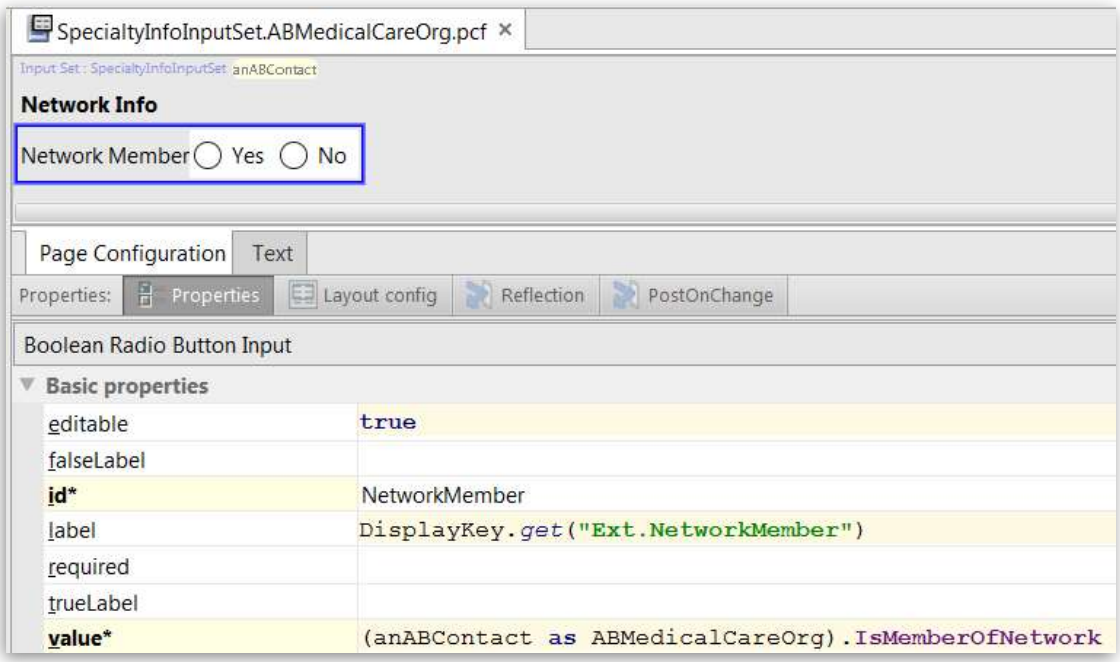
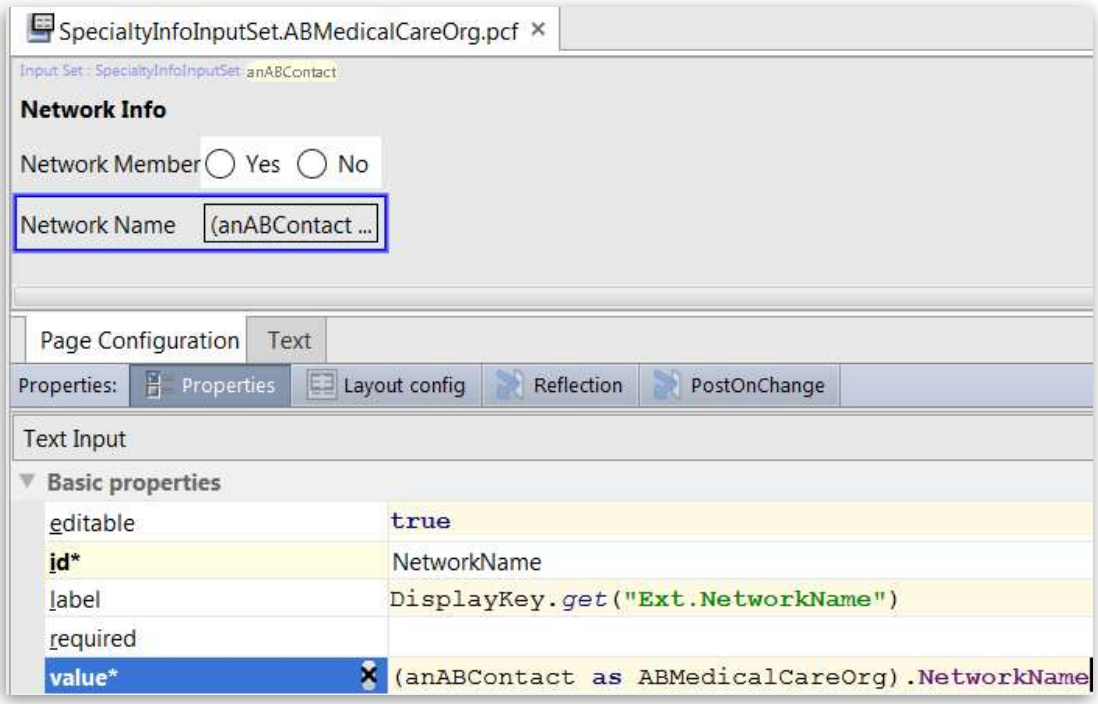


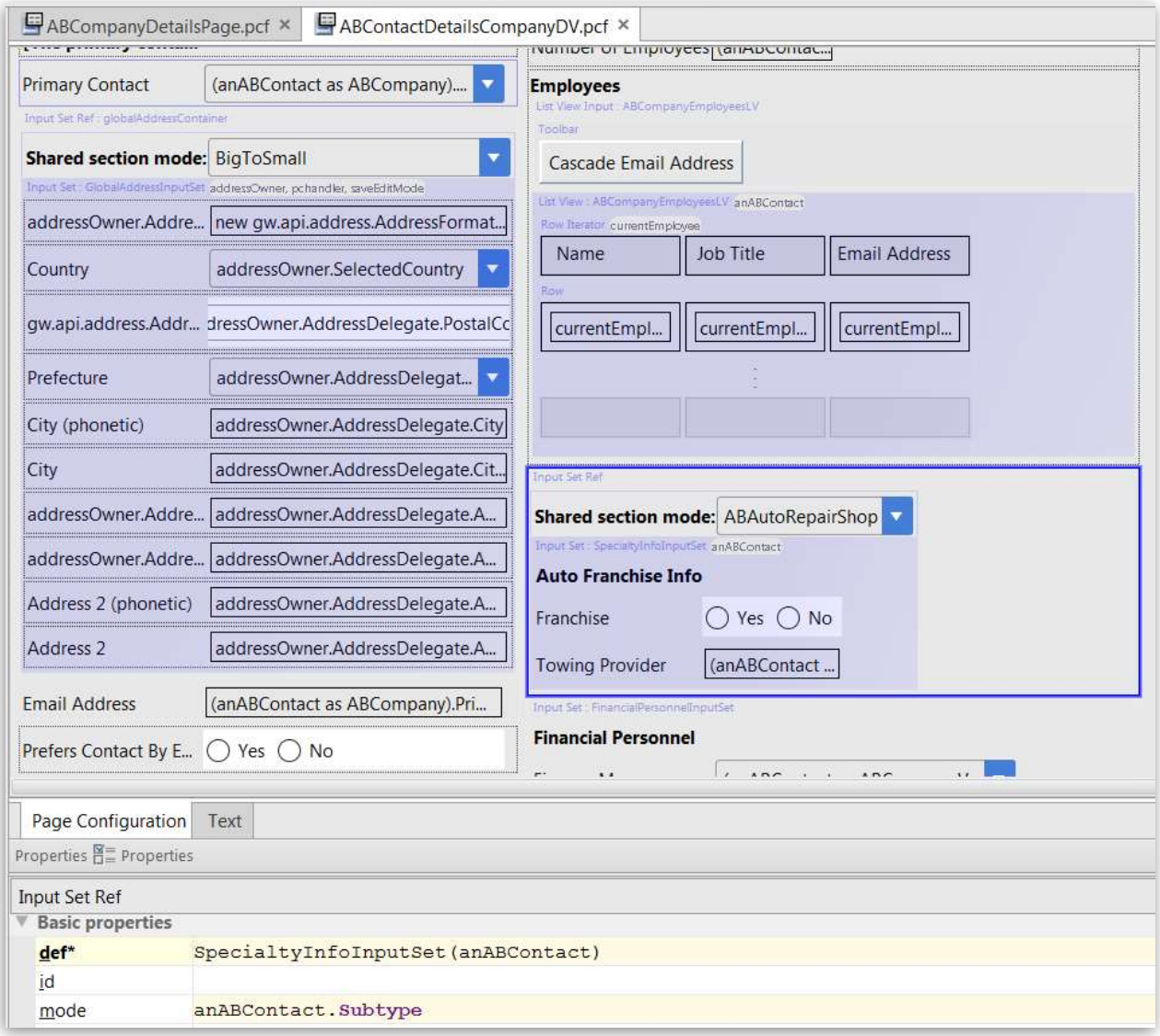


10.5 Lab Solution: Reference the set of modal Input Sets

Solution

Exact details on how to complete the lab.

1. Open the ABContactDetailsCompanyDV
2. Add Input Set Ref widget below the Employees List View
3. Configure the def property
4. Specify a dynamic value for the mode property



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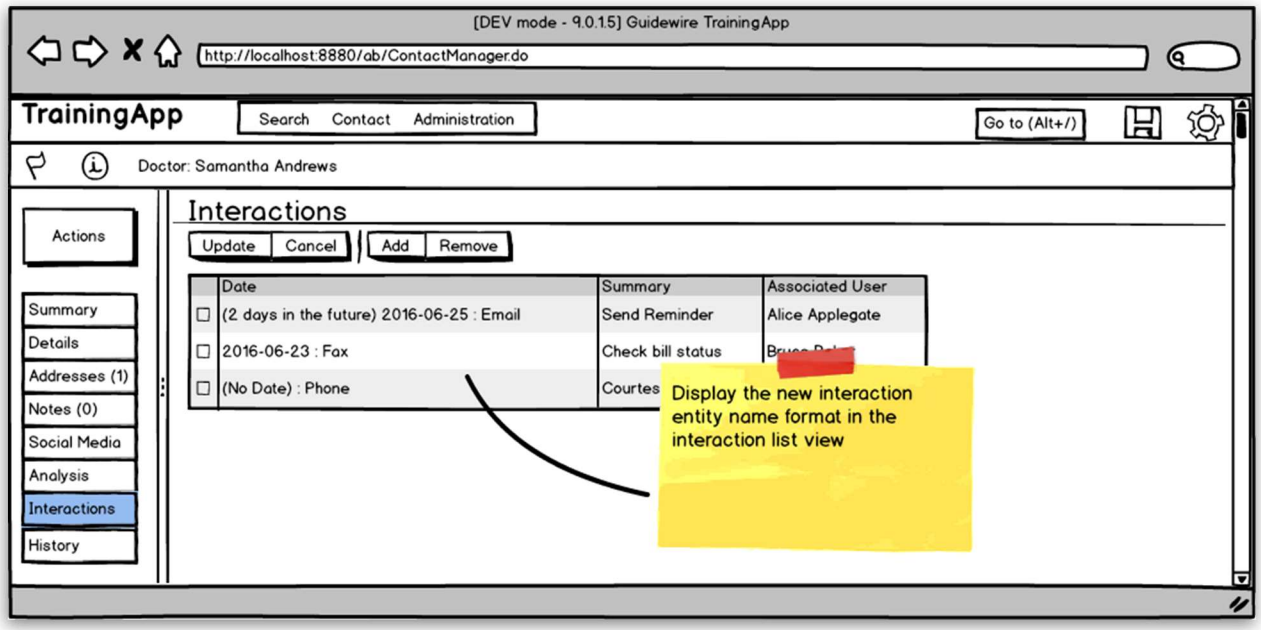
Lesson 11

Entity Names

"We defined a new format to display interactions in the UI. This will help users to easily identify additional information about each interaction. The same format may be needed at multiple places later, so it needs to be easily reusable." – Insurance company business analysts



As a configuration developer, you want to be able to create entity names, so that you can define reusable, UI friendly names for entity instances. In this lab, you will use the Entity Name editor to create an entity name for interaction entities. Then, you will modify the UI configuration to display the entity name.

11.1 Prerequisites

You must first complete the following previous lesson(s):

- Creating New Entities
- List Views
- Editable List Views
- Typelists

- Popups

For this lab, use TrainingApp 10.0, Guidewire Studio 10.0, and a supported web browser. `http://localhost:8880/ab/ContactManager.do` is the default URL for TrainingApp. To view, edit, and delete various contacts, log in to TrainingApp as Alice Applegate. The login/password for Alice Applegate is `aapplegate/gw`.

11.2 Lab: Create and reference an entity name

In this lab, you will first create the entity name for the Interaction_Ext entity. Then, you will modify the InteractionsLV.pcf file to display the entity name.

1. **Create an Interaction_Ext entity name**
2. **Create the following variables in the variable table**
   a) Add the `interactionDate` variable with the entity path `Interaction_Ext.InteractionDate`
   b) Add the `channel` variable with the entity path `Interaction_Ext.Channel`
3. **Define the Default name that returns one of the following three formats using the interactionDate and channel variables**
   a) If the date is null, then return the following:

      (No Date): ChannelType

   b) If the date is more than one (1) day in the future, then return the following:

      (# days in the future) YYYY-MM-DD: ChannelType

   c) Otherwise, return the following:

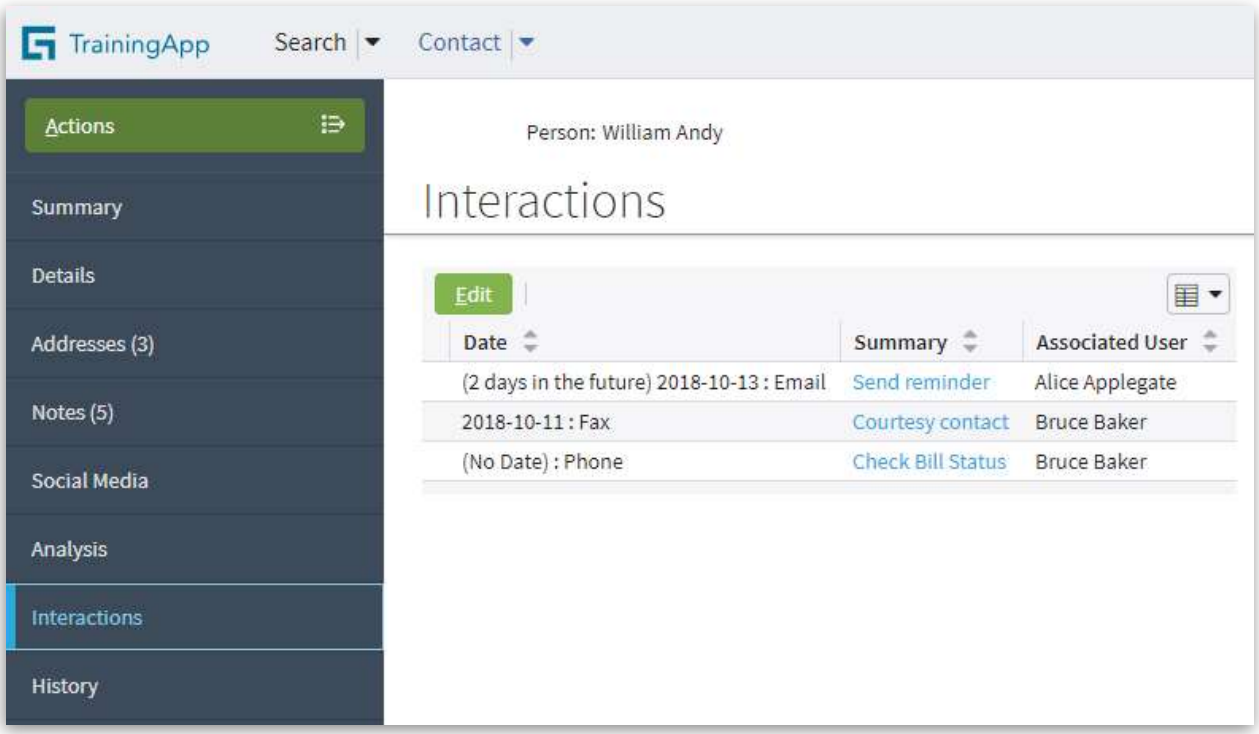
      YYYY-MM-DD: ChannelType
4. **Modify the InteractionsLV.pcf**
   a) Open the InteractionsLV.pcf
   b) Change the Date Cell widget to a Text Cell widget
   c) Configure the Text Cell widget to…
      - be read-only
      - show the new Interaction_Ext entity name for the currentInteraction object
5. **Restart the server to deploy all the changes**

11.2.1 Verification

Activity

Verify the work you have done

1. **Log in to TrainingApp as Alice Applegate**
2. **Edit the Interactions page for William Andy**
   a) Navigate to William Andy
   b) In the sidebar menu, click Interactions
   c) Create an interaction in the future: enter a date that is more than one (1) day in the future; also specify Channel Type, Interaction, and Reason fields
   d) Create an interaction with no interaction date: leave the Date field blank; also specify Channel Type, Interaction, and Reason fields
   e) Create an interaction with today's date: enter today's date for the Date field; specify Channel Type, Interaction, and Reason fields

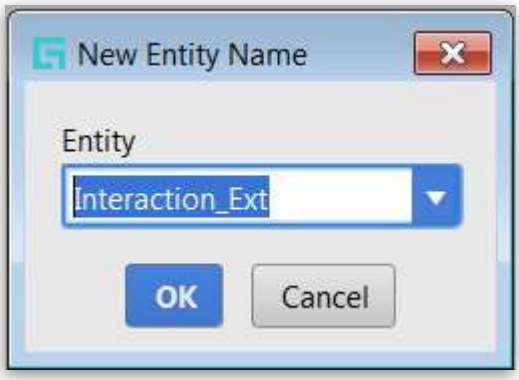


11.3 Lab Solution: Create and reference an Entity Name

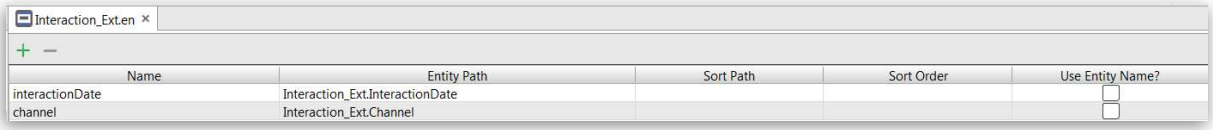
Solution

Exact details on how to complete the lab.

1. **Create the new Interaction_Ext entity name in the …\configuration\config\Entity Names folder**



2. **Create the variables in the variable table**



3. **Create the Default name**

```
        uses gw.api.util.DateUtil

        var name = ""

        if (interactionDate == null) {
          name = "(No Date) : " + channel.DisplayName
        } else {
          var numberDays = DateUtil.currentDate().differenceInDays(interactionDate)
          if (numberDays > 1) {
            name =  "(" + numberDays + " days in the future) " + interactionDate  + " : " +
channel.DisplayName
          } else {
            name = interactionDate + " : " + channel.DisplayName
```

```
        }
      }

      return name
```

4. Modify the InteractionsLV.pcf