Acumatica
The Cloud ERP

Data Retrieval and Analysis

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Software Developer

Timing and Agenda

Aug 3, 2021 -10 AM -12 PM

Day 1

Lesson 1.1: Discovering DACs

Lesson 1.2: Copying a Predefined Inquiry

Lesson 1.3: Modifying Inquiry Results

Lesson 1.4: Applying Sorting And Grouping

Lesson 1.5: Using Conditions and Parameters

Lesson 1.6: Using Formulas

Aug 4, 2021 -10 AM -12 PM

Day 2

Lesson 1.7: Enabling Navigation

Lesson 1.8: Making a Generic Inquiry a Substitute Form

Lesson 1.9: Transferring an Inquiry

Lesson 1.10: Creating a Generic Inquiry

Lesson 1.11: Getting Data from Multiple DACs

Lesson 1.12: Exposing an Inquiry by Using OData

Timing and Agenda

Aug 5, 2021 -10 AM -12 PM

Day 3

Lesson 1.13: Accessing the Exposed Inquiry Through Odata

Lesson 1.14: Managing Access Rights to Generic Inquires

Lesson 2.1: Managing Advanced Filters

Lesson 2.2: Managing Pivot Tables

Lesson 2.3: Managing Dashboards

Day 1

Part 1: Managing Generic Inquiries

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Lesson 1.1: Discovering DACs

Learning Objectives

In this lesson, you will learn how to inspect UI elements to find the underlying data fields.

Figure: Data access workflow

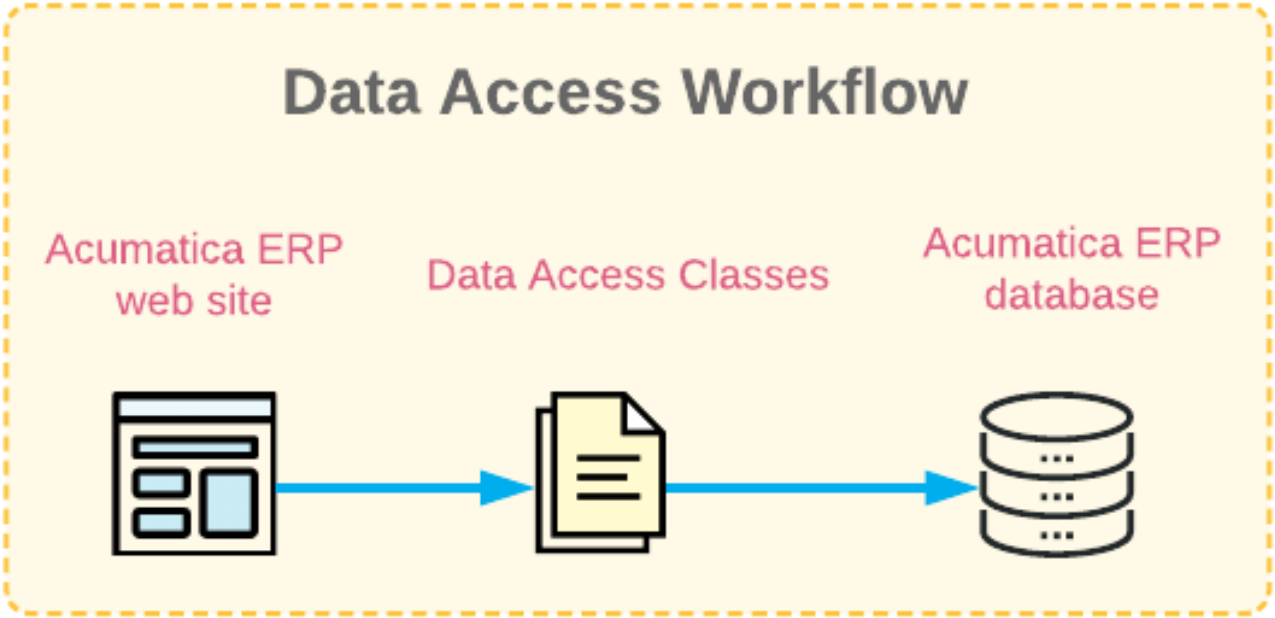


Figure: Form element inspection

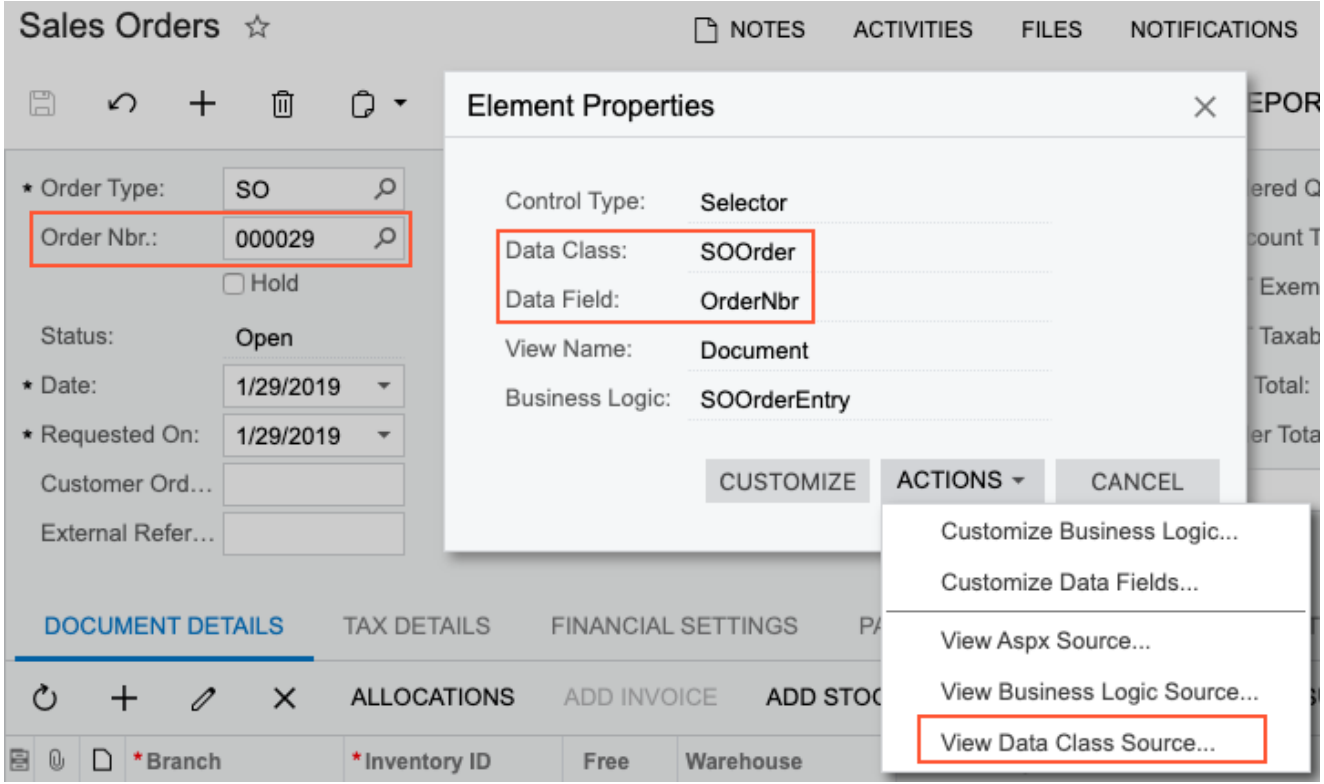


Figure: Inspection of a form element with a drop-down control

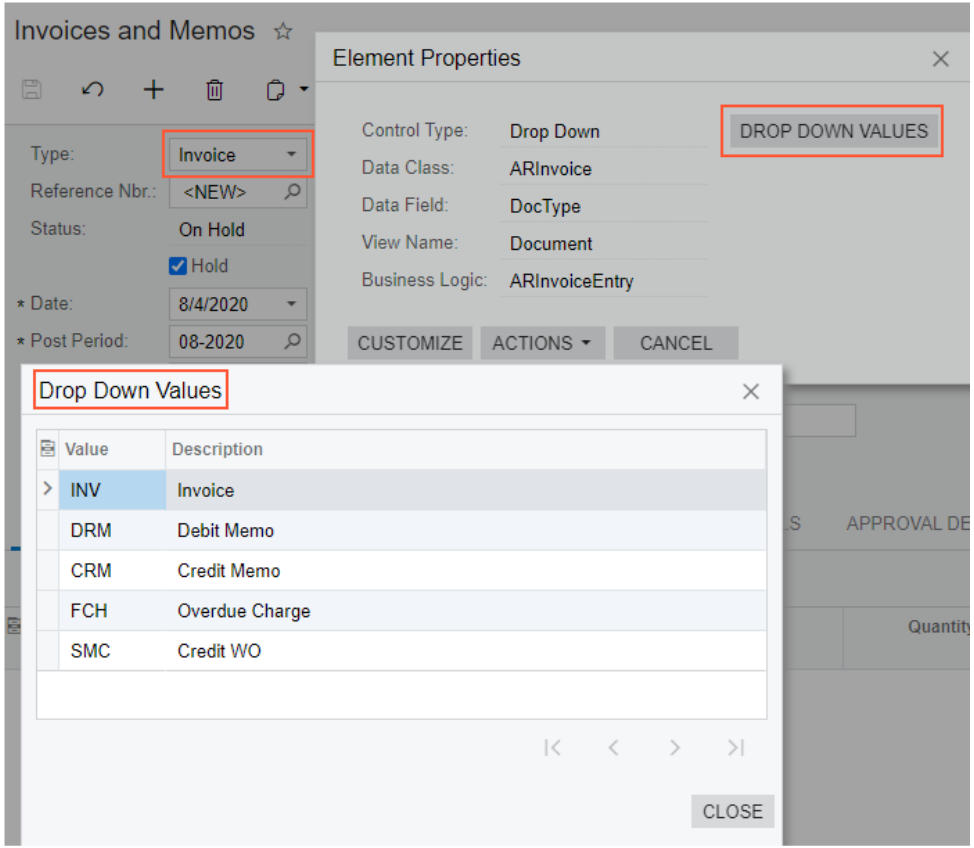
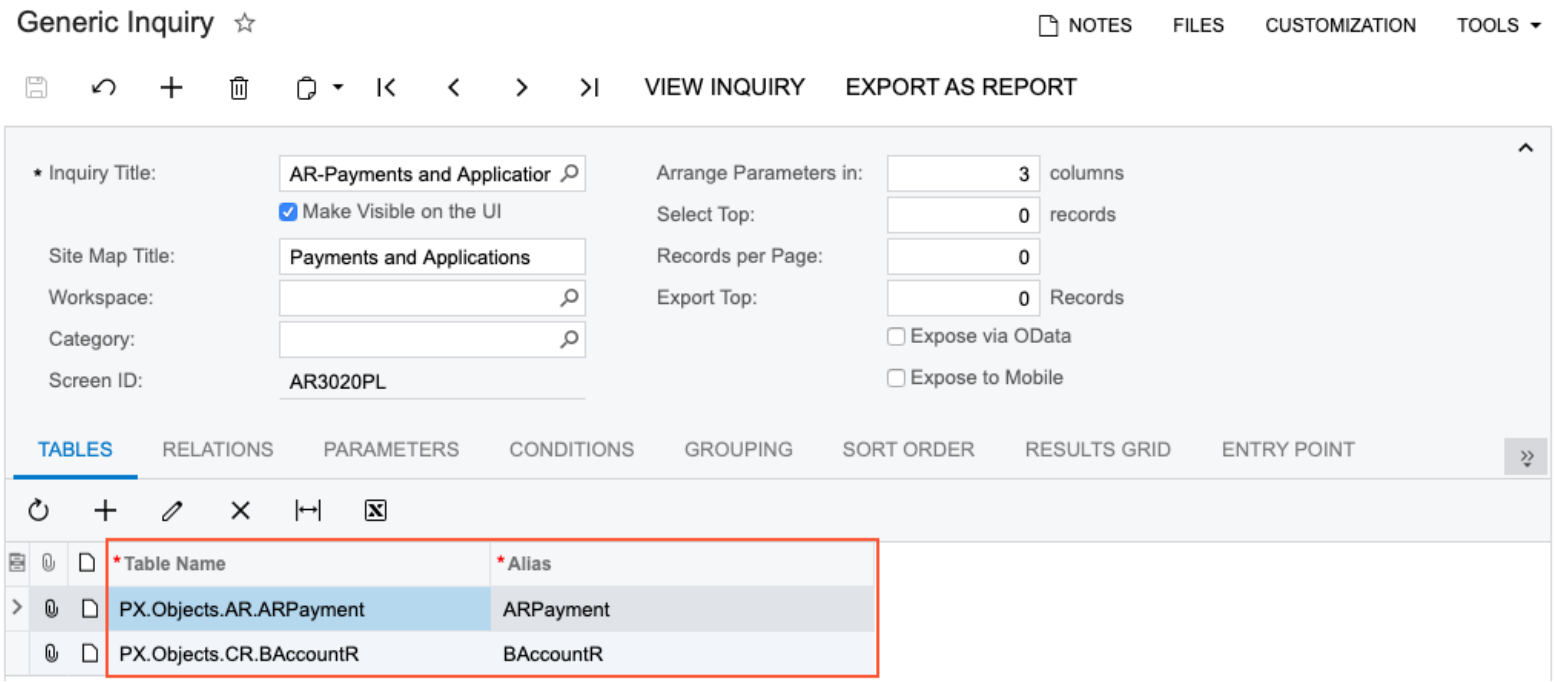


Figure: The list of data access classes and their aliases



Discovering DACs: To Inspect UI Elements

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. A sales representative has requested that you create a generic inquiry that lists sales orders. The inquiry should include the following data for each listed sales order: the sales order number, the order type, the status, the date, and the customer name.

Lesson 1.2: Copying a Predefined Inquiry

Learning Objectives

In this lesson, you will learn how to make a copy of an existing generic inquiry.

Copying a Predefined Inquiry: To Copy an Existing Generic Inquiry

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. An accountant of your company has requested an inquiry that collects data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the AR-Invoices and Memos inquiry title and the Invoices and Memos site map title specified on the Generic Inquiry (SM208000) form, but the accountant has requested some additions to the inquiry. In this activity, acting as the technical specialist, you will copy the predefined generic inquiry to leave it intact, and then you will modify its copy as requested.

Lesson 1.3: Modifying Inquiry Results

Learning Objectives

In this lesson, you will learn how to do the following:

- Hiding or revealing columns
- Adding a data field to the results
- Changing the caption of a column
- Specifying the default navigation setting of a column in the inquiry results
- Adding a quick filter to the inquiry results
- Including deleted records in the inquiry results
- Selecting the table to which files and notes will be attached

Figure: Rows added to show deleted records in the Journal Transactions inquiry

Generic Inquiry

NOTES FILES CUSTOMIZATION TOOLS

VIEW INQUIRY ACTIONS

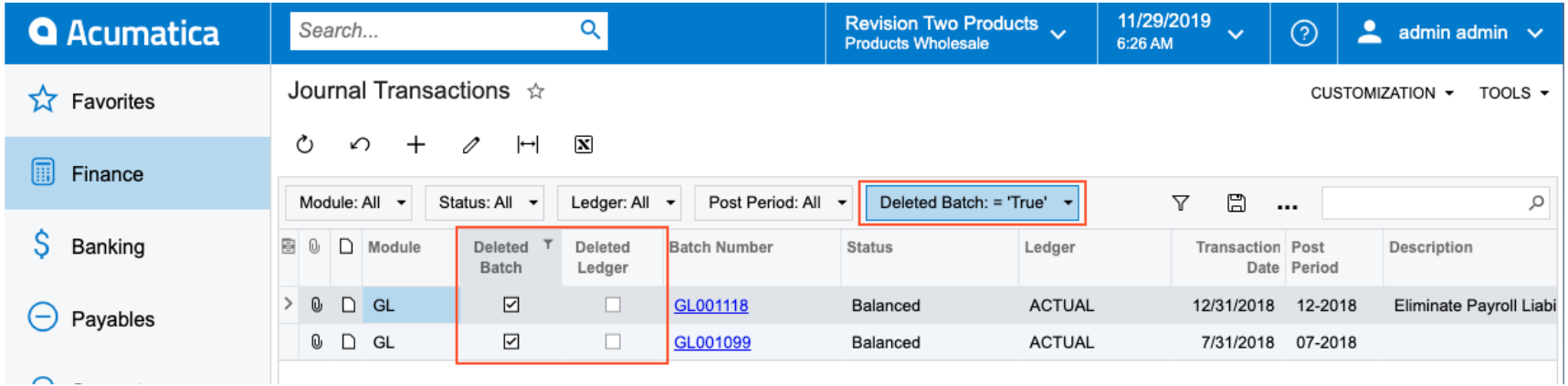
* Inquiry Title:	GL-Journal Transactions	☑ Make Visible on the UI	Arrange Parameters in:	3	columns
Site Map Title:	Journal Transactions	☑ Show Deleted Records	Select Top:	0	records
Workspace:		☐ Expose via OData	Records per Page:	0	
Category:		☐ Expose to the Mobile Application	Export Top:	0	Records
Screen ID:	GL3010PL		Attach Notes To:	Batch	

TABLES RELATIONS PARAMETERS CONDITIONS GROUPING SORT ORDER RESULTS GRID ENTRY POINT NAVIGATION

Row Style:

Active	Object	Data Field	Caption	Schema Field	Width (px)	Style	Visible	Default Navigatio	Navigate To
☑	Branch	BranchCD					☐	☐	
☑	Batch	Module					☑	☐	
☑	Batch	DeletedDatabaseRecord	Deleted Batch				☑	☑	
☑	Ledger	DeletedDatabaseRecord	Deleted Ledger				☑	☑	
☑	Batch	BatchNbr					☑	☐	GL301000 - Journal Tra
☑	Batch	Status					☑	☐	

Figure: Records of the Journal Transactions inquiry filtered by the deleted batches



Modifying Inquiry Results: To Include an Additional Output Field

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested an inquiry that displays data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant has requested the following changes to this generic inquiry:

- Add the identifier of the related project (that is, the project related to the listed invoice) to the inquiry results and name the column **Project ID**
- Add the ability to view the details of any project by clicking its identifier in the **Project ID** column
- Add the ability to filter the inquiry results by an identifier of a project
- Place the **Project ID** column after the column that holds the reference numbers of invoices and memos

Figure: The Invoices and Memos with Projects generic inquiry

Invoices and Memos with Projects

Type	Reference Nbr.	Project ID	Status	Date	Post Period	Customer
Invoice	000055	X	Closed	1/22/2021	01-2021	RETSALE
Invoice	000056	X	Closed	1/25/2021	01-2021	RETSALE
Invoice	000058	X	Closed	1/7/2021	01-2021	TOMYUM
Invoice	000089	TOMYUM12	Open	1/30/2021	01-2021	TOMYUM
Invoice	000090	TOMYUM12	Open	2/28/2021	02-2021	TOMYUM
Invoice	000075	TOMYUM11	Open	1/28/2021	01-2021	TOMYUM
Credit Memo	000081	X	Open	1/24/2021	01-2021	MORNINGCAF
Invoice	000084	X	Open	1/31/2021	01-2021	MORNINGCAF
Invoice	000085	X	Open	1/2/2021	01-2021	MORNINGCAF
Invoice	000086	X	Open	1/14/2021	01-2021	MORNINGCAF
Invoice	000079	X	Open	1/9/2021	01-2021	MORNINGCAF

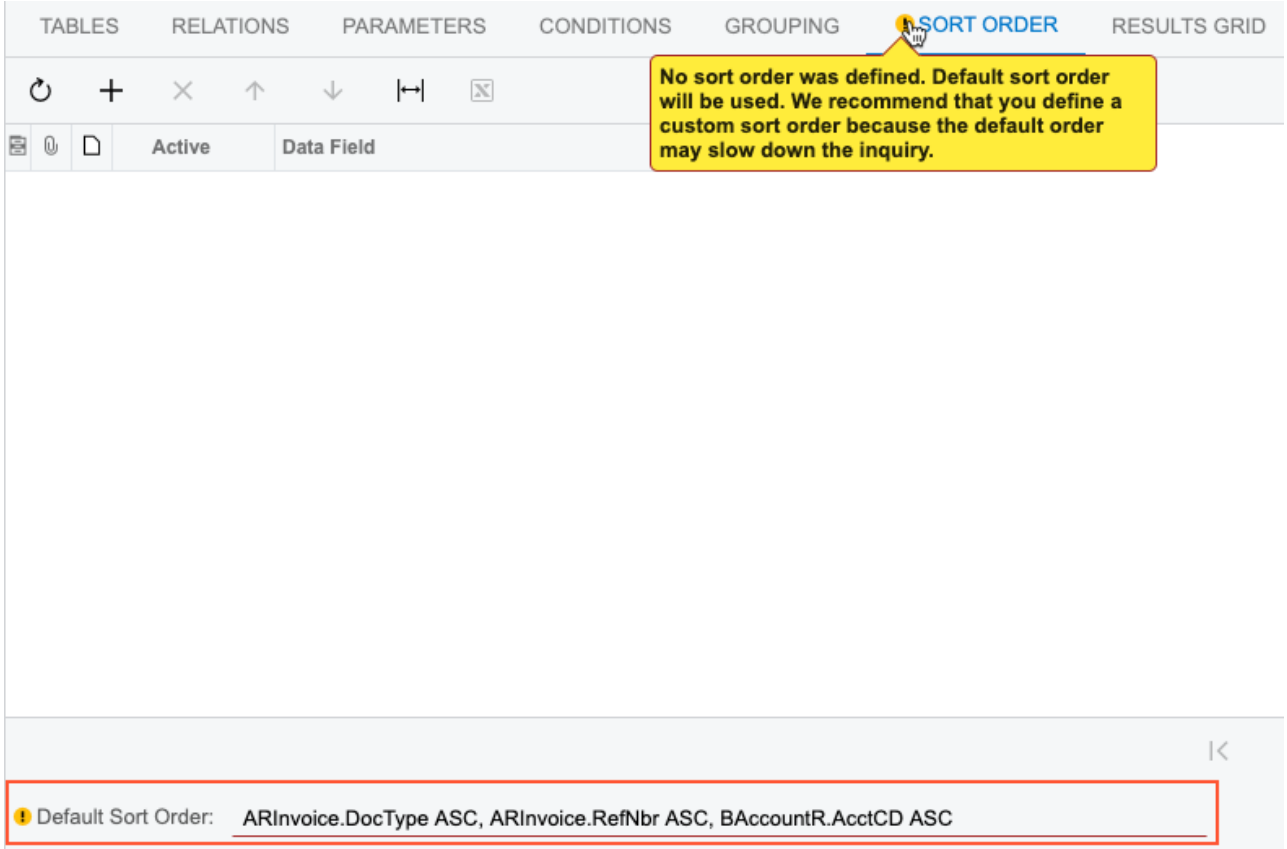
Lesson 1.4: Applying Sorting And Grouping

Learning Objectives

In this lesson, you will learn how to do the following:

- By grouping the inquiry output
- By aggregating the inquiry output
- By adding a default sort order for the inquiry output

Figure: Warning about the default sort order



Applying Sorting and Grouping: To Group and Sort Inquiry Data

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested a generic inquiry that collects data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the ARInvoices and Memos inquiry title and the Invoices and Memos site map title specified on the Generic Inquiry (SM208000) form, but the accountant would like the results to list not individual invoices but instead the average invoice amount of each customer, with these rows sorted in descending order by the average invoice amount.

Figure: Generic inquiry with the average invoice amount grouped by customer name

Average Invoice Amount by Customer

Customer Name	Average Amount
The Equity Group Investors	7,948,661.81
Thai Food Restaurant	1,800.00
Morning Cafe	707.61
FourStar Coffee&Sweets Shop	382.68
HM's Bakery & Cafe	354.23
Candyy Cafe	167.87
GoodFood One Restaurant	34.82
Individual Retail Customer	0.00

Lesson 1.5: Using Conditions and Parameters

Learning Objectives

In this lesson, you will learn how to do the following:

- Add a Selection area with parameters so that users of the generic inquiry form can view the most relevant data for their current information needs

- Specify conditions to limit the listed data by default

Figure: Condition to display only open sales orders

Data Field	Condition	From Schema	Value 1
SOOrder.Status	Equals	☑	Open

Figure: Condition that uses predefined values in the database

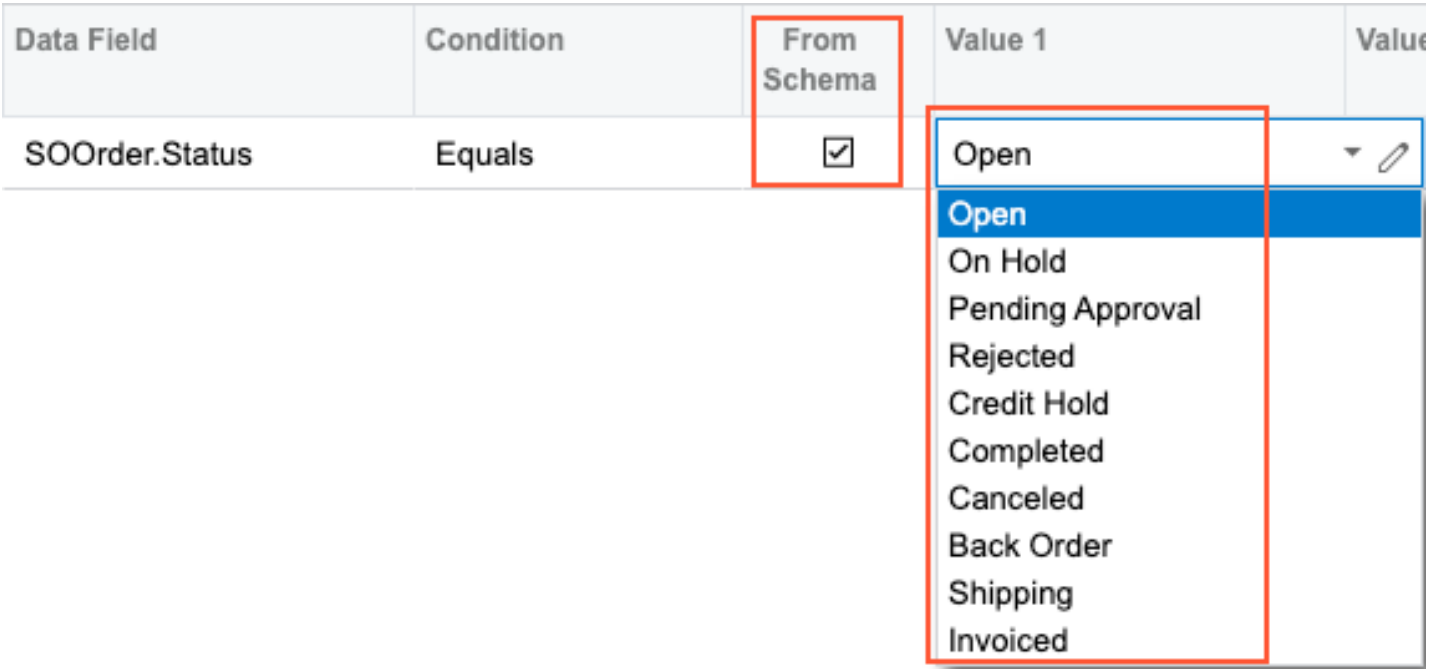


Figure: Condition that uses a value specified by a user

Data Field	Condition	From Schema	Value 1
SOOrder.CuryOrderT...	Is Greater Than or Equal To	☐	2000

Figure: Two conditions joined with the And operator

			Active	Brackets	Data Field	Condition	From Schem	Value 1	Value 2	Brackets	Operator
>			☑		SOOrder.Status	Equals	☑	Open			And
			☑		SOOrder.CuryOrderTotal	Is Greater Than or Equal To	☐	2000			And

Figure: Selection of the control type of the parameter

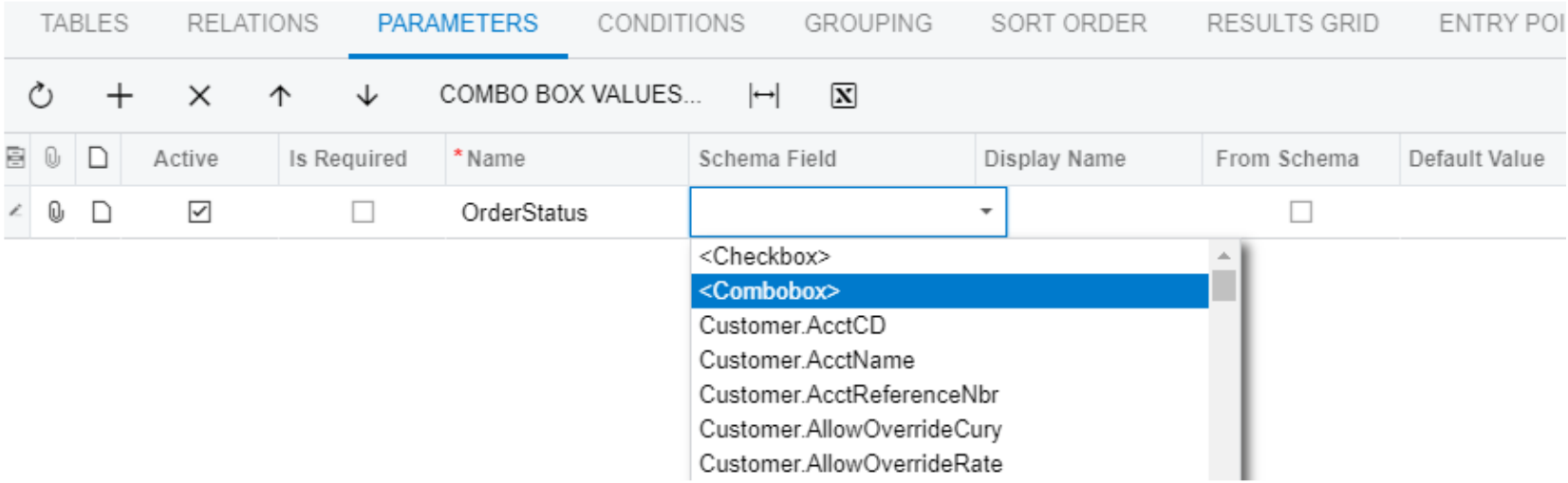


Figure: The OrderStatus parameter defined as a check box

Active	Is Required	*Name	Schema Field	Display Name	From Schema	Default Value	Column Span	Contro Size
☑	☐	OrderStatus	<Checkbox>	Open Only	☑	☐	1	

Figure: A complex condition corresponding to the OrderStatus parameter

Active	Brackets	Data Field	Condition	From Schema	Value 1	Value 2	Brackets	Operator
☑	((	[OrderStatus]	Equals	☑	☑	☐		And
☑		SOOrder.Status	Equals	☑	Open		)	Or
☑		[OrderStatus]	Equals	☑	☐	☐	)	And

Figure: Complex conditions to display results if a user clears either parameter value

TABLES | RELATIONS | PARAMETERS | CONDITIONS | GROUPING | SORT ORDER | RESULTS GRID

Activ	Brackets	Data Field	Condition	From Schen	Value 1	Value 2	Brackets	Operator
☑	(	SOOrder.OrderDate	Is Greater Than…	☐	[DateFrom]			Or
☑		[DateFrom]	Is Empty	☐			)	And
☑	(	SOOrder.OrderDate	Is Greater Than…	☐	[DateTo]			Or
☑		[DateTo]	Is Empty	☐			)	And
☑	(	Customer.AcctCD	Equals	☐	[Customer]			Or
☑		[Customer]	Is Empty	☐			)	And
☑	(	SOOrder.Status	Equals	☐	[OrderStatus]			Or
☑		[OrderStatus]	Is Empty	☐			)	And

Figure: Elements arranged in one column in the Selection area of the generic inquiry form

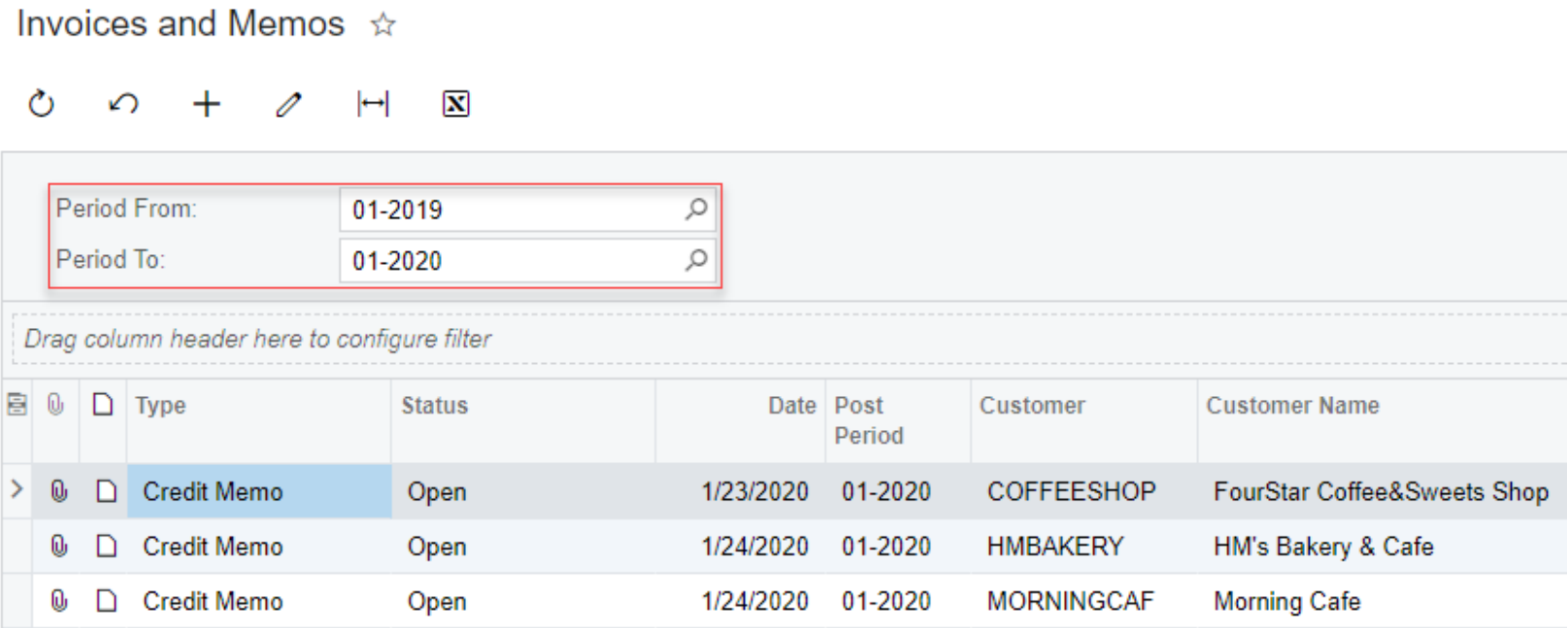


Figure: Elements arranged in two columns in the Selection area of the generic inquiry form

Invoices and Memos

Period From: 01-2019 Period To: 01-2020

Drag column header here to configure filter

Type	Status	Date	Post Period	Customer	Customer Name
Credit Memo	Open	1/23/2020	01-2020	COFFEESHOP	FourStar Coffee&Sweets Shop
Credit Memo	Open	1/24/2020	01-2020	HMBAKERY	HM's Bakery & Cafe
Credit Memo	Open	1/24/2020	01-2020	MORNINGCAF	Morning Cafe

Using Conditions and Parameters: To Add a Date Condition

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested an inquiry form that displays data about invoices. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant wants the inquiry form to show results limited to a range of financial periods that the accountant wants to analyze. Specifically, the inquiry form should display only invoices (that is, no other document types) posted from the *12-2020* financial period through the *01-2021* financial period (including the starting and ending periods).

Figure: Generic inquiry with date condition

S130 Invoices and Memos

Type	Reference Nbr.	Status	Date	Post Period	Customer
Invoice	000002	Open	12/5/2020	12-2020	GOODFOOD
Invoice	000065	Closed	1/21/2021	01-2021	COFFEESHOP
Invoice	000066	Open	1/8/2021	01-2021	COFFEESHOP
Invoice	000067	Open	1/15/2021	01-2021	COFFEESHOP
Invoice	000069	Closed	1/5/2021	01-2021	GOODFOOD
Invoice	000070	Closed	1/10/2021	01-2021	HMBAKERY
Invoice	000072	Closed	1/15/2021	01-2021	GOODFOOD
Invoice	000073	Closed	1/23/2021	01-2021	COFFEESHOP
Invoice	000074	Open	1/17/2021	01-2021	HMBAKERY
Invoice	000075	Open	1/28/2021	01-2021	TOMYUM
Invoice	000076	Open	1/16/2021	01-2021	GOODFOOD
Invoice	000077	Open	1/10/2021	01-2021	COFFEESHOP

Using Conditions and Parameters: To Add Period-Range Parameters to the Selection Area

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested an inquiry form that displays data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant has asked you to design the inquiry form to give users the ability to limit the results to a user-defined range of financial periods—that is, it should be possible for a user to specify the needed range of periods.

Figure: Generic inquiry with parameters that define a range

S130 Invoices and Memos

Period From: 01-2020 Period To: 02-2021

Type	Reference Nbr.	Status	Date	Post Period	Customer
Credit Memo	000068	Open	1/23/2021	01-2021	COFFEESHOP
Credit Memo	000071	Open	1/24/2021	01-2021	HMBAKERY
Credit Memo	000081	Open	1/24/2021	01-2021	MORNINGCAF
Invoice	000001	Open	11/28/2020	11-2020	COFFEESHOP
Invoice	000002	Open	12/5/2020	12-2020	GOODFOOD
Invoice	000003	Closed	1/28/2021	01-2021	COFFEESHOP
Invoice	000004	Open	1/29/2021	01-2021	COFFEESHOP
Invoice	000005	Open	1/25/2021	01-2021	GOODFOOD
Invoice	000006	Closed	1/29/2021	01-2021	HMBAKERY

Using Conditions and Parameters: To Add a Field Parameter to the Selection Area

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested an inquiry that displays data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant wants to give users the ability to filter the inquiry results by a particular customer—that is, users should be able to select a particular customer in the Selection area of the resulting generic inquiry form and review only that customer's invoices and memos.

Figure: Generic inquiry with a box that filters data by customer

S130 Invoices and Memos

Customer: COFFEESHOP - FourStar Co

Type	Reference Nbr.	Status	Date	Post Period	Customer
Credit Memo	000068	Open	1/23/2021	01-2021	COFFEESHOP
Invoice	000001	Open	11/28/2020	11-2020	COFFEESHOP
Invoice	000003	Closed	1/28/2021	01-2021	COFFEESHOP
Invoice	000004	Open	1/29/2021	01-2021	COFFEESHOP
Invoice	000064	Closed	1/18/2021	01-2021	COFFEESHOP
Invoice	000065	Closed	1/21/2021	01-2021	COFFEESHOP

Lesson 1.6: Using Formulas

Learning Objectives

In this lesson, you will learn how to modify an existing generic inquiry by using formulas.

Figure: The Formula Editor components

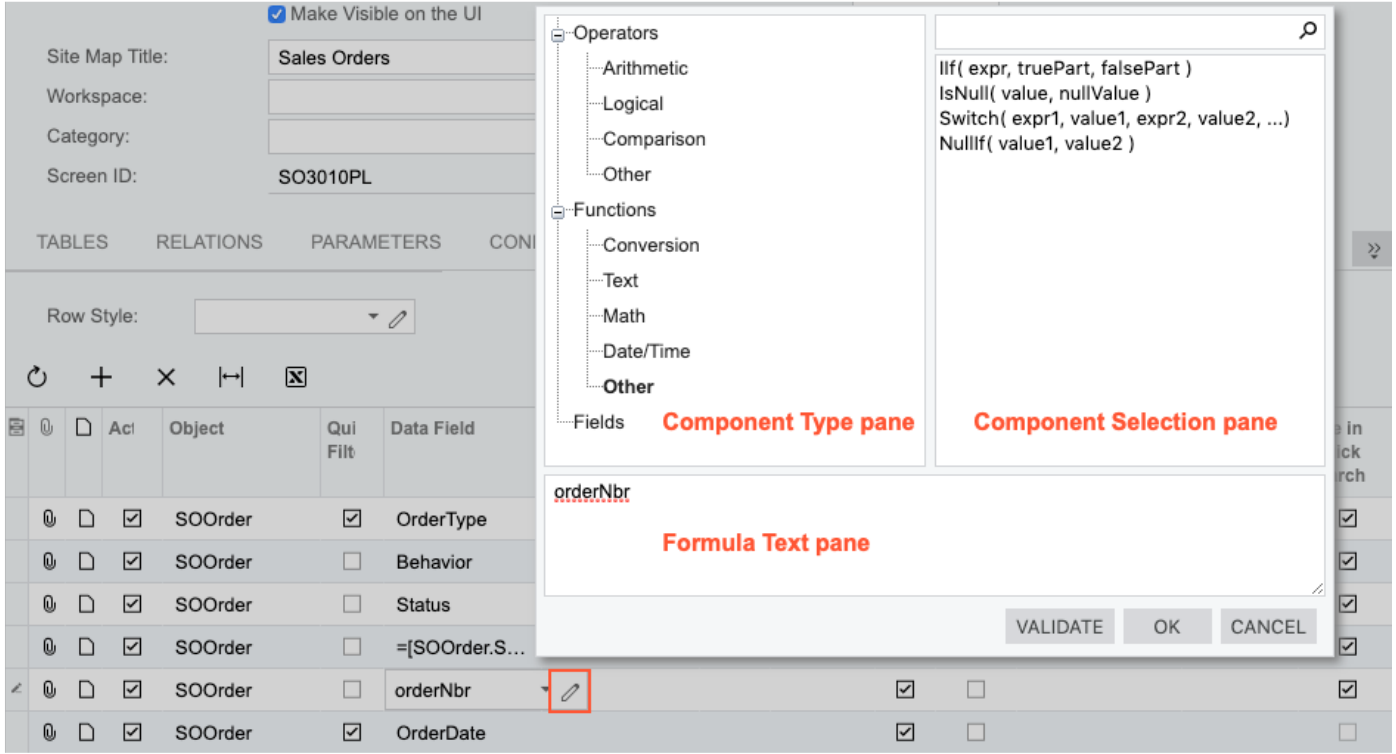
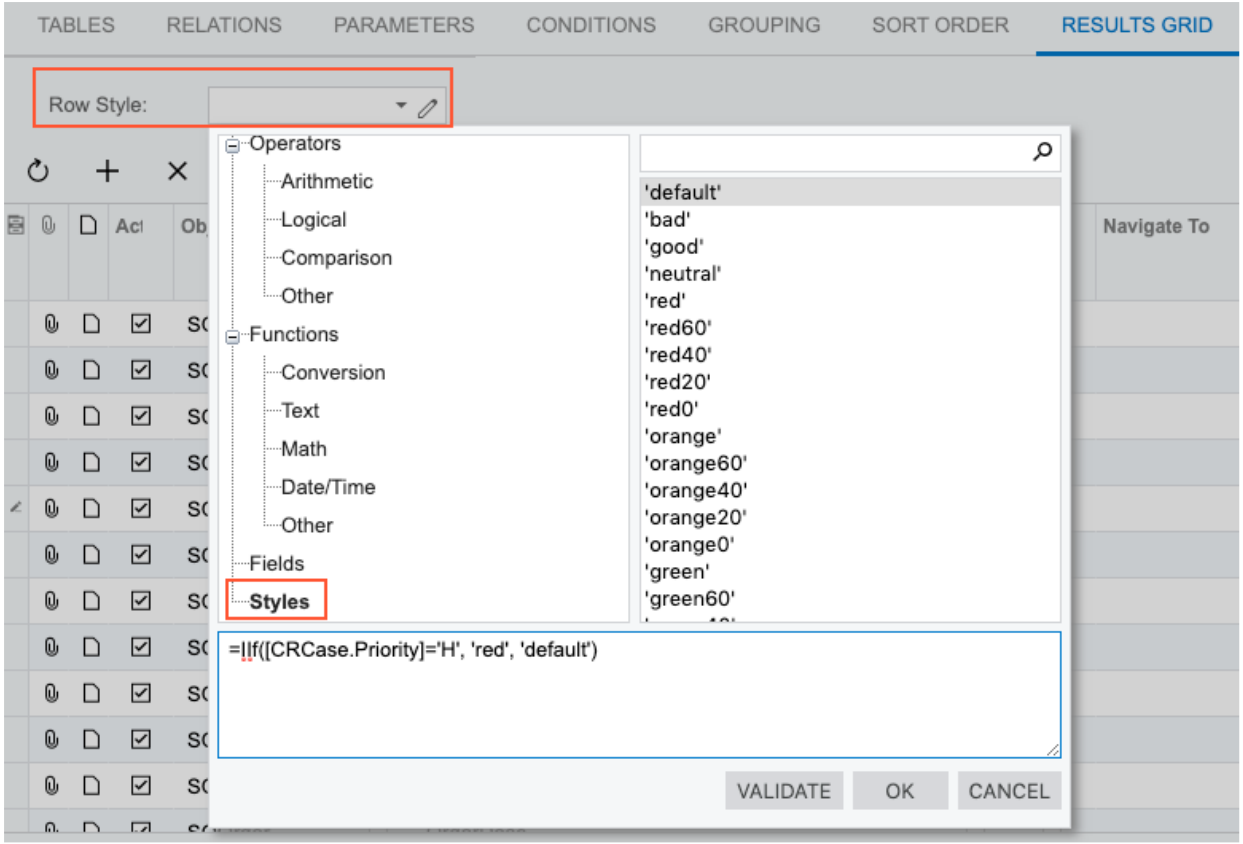


Figure: The Styles component type



Using Formulas: To Highlight Row with Color

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has requested an inquiry form that displays data about invoices and memos. You offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant has asked you to develop a similar generic inquiry form in which you highlight with yellow the rows of documents whose balance exceeds $1000.

Figure: The inquiry with the highlighted rows

Invoices and Memos

CUSTOMIZATION TOOLS

Type: All | Status: All | Date: All

Type	Reference Nbr.	Balance	Status	Date	Post Period	Customer Name
Invoice	000055	0.00	Closed	1/22/2020	01-2020	Individual Retail Customer
Invoice	000056	0.00	Closed	1/25/2020	01-2020	Individual Retail Customer
Invoice	000058	0.00	Closed	1/7/2020	01-2020	Thai Food Restaurant
Invoice	000075	400.00	Open	1/28/2020	01-2020	Thai Food Restaurant
Invoice	**000089**	**1,700.00**	**Open**	**1/30/2020**	**01-2020**	**Thai Food Restaurant**
Invoice	**000090**	**5,100.00**	**Open**	**2/28/2020**	**02-2020**	**Thai Food Restaurant**
Invoice	000079	760.00	Open	1/9/2020	01-2020	Morning Cafe
Invoice	**000080**	**1,050.00**	**Open**	**1/16/2020**	**01-2020**	**Morning Cafe**
Invoice	000082	653.25	Open	1/30/2020	01-2020	Morning Cafe
Credit Memo	000081	110.00	Open	1/24/2020	01-2020	Morning Cafe
Invoice	**000084**	**2,300.00**	**Open**	**1/31/2020**	**01-2020**	**Morning Cafe**
Invoice	000085	46.00	Open	1/2/2020	01-2020	Morning Cafe

Using Formulas: To Concatenate Strings

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. The sales team of your company has requested that on the Sales Orders (SO3010PL) generic inquiry form, which has the *SO-SalesOrder* inquiry title and the *Sales Orders* site map title specified on the *Generic Inquiry* (SM208000) form, you add each sales order's description after its number in the **Order Nbr.** column, whose name (caption) should be changed to **Order Number and Description**. The column should contain this information in the following format: <order number>—<order description>.

Figure: Inquiry results with the concatenated strings

Sales Orders

CUSTOMIZATION TOOLS

Order Type: All | Status: All | Date: All | Customer: All

Order Type	Order number and description	Status	Date	Sched. Shipment	Customer	Customer Name	Ordered Qty.
IN	000057--Installation of equipment at the custo...	Invoiced	1/7/2020	1/7/2020	TOMYUM	Thai Food Restaurant	1.00
IN	000059--Installation of equipment at the custo...	Invoiced	1/9/2020	1/9/2020	HMBAKERY	HM's Bakery & Cafe	1.00
IN	000061--Installation of equipment at the custo...	Invoiced	1/15/2020	1/15/2020	GOODFOOD	GoodFood One Restaurant	2.00
IN	000063--Installation of equipment at the custo...	Invoiced	1/18/2020	1/18/2020	COFFEESHOP	FourStar Coffee&Sweets Shop	1.00
SO	000001--Fresh fruits	Completed	1/29/2020	1/29/2020	COFFEESHOP	FourStar Coffee&Sweets Shop	40.00
SO	000002--Orange and apple jam, local delivery	Completed	1/25/2020	1/25/2020	GOODFOOD	GoodFood One Restaurant	50.00
SO	000003--25 large jars of jam	Completed	1/27/2020	1/27/2020	HMBAKERY	HM's Bakery & Cafe	25.00
SO	000004--Sale of 44 pounds of apples and 80 ...	Completed	11/2/2019	11/2/2019	HMBAKERY	HM's Bakery & Cafe	124.00
SO	000005--Sale of 52 pounds of apples and 40 ...	Completed	11/5/2019	11/5/2019	GOODFOOD	GoodFood One Restaurant	92.00
SO	000006--Sale of 63 pounds of apples	Completed	11/8/2019	11/8/2019	HMBAKERY	HM's Bakery & Cafe	63.00
SO	000007--Sale of 75 pounds of oranges	Completed	11/13/2019	11/13/2019	GOODFOOD	GoodFood One Restaurant	75.00
SO	000008--Sale of 42 pounds of apples and 78 ...	Completed	11/15/2019	11/15/2019	HMBAKERY	HM's Bakery & Cafe	120.00
SO	000009--Sale of 63 pounds of apples and 65 ...	Completed	11/19/2019	11/19/2019	GOODFOOD	GoodFood One Restaurant	128.00

Day 2

Lesson 1.7: Enabling Navigation

Learning Objectives

In this lesson, you will learn how to specify different navigation options from generic inquiries to make the user's work easier.

Figure: Navigation parameters provided for selection by the system

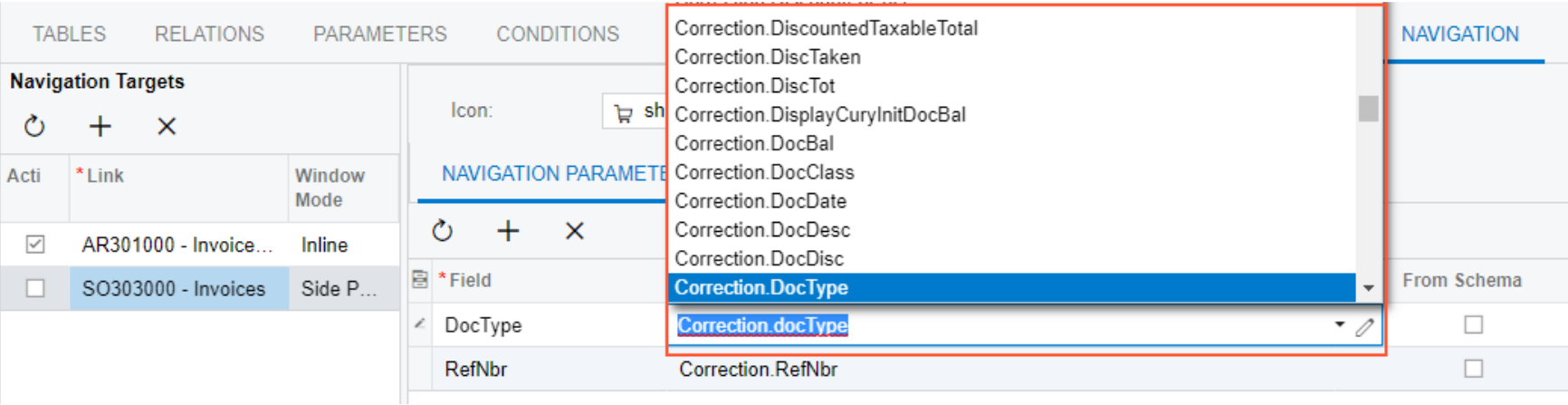
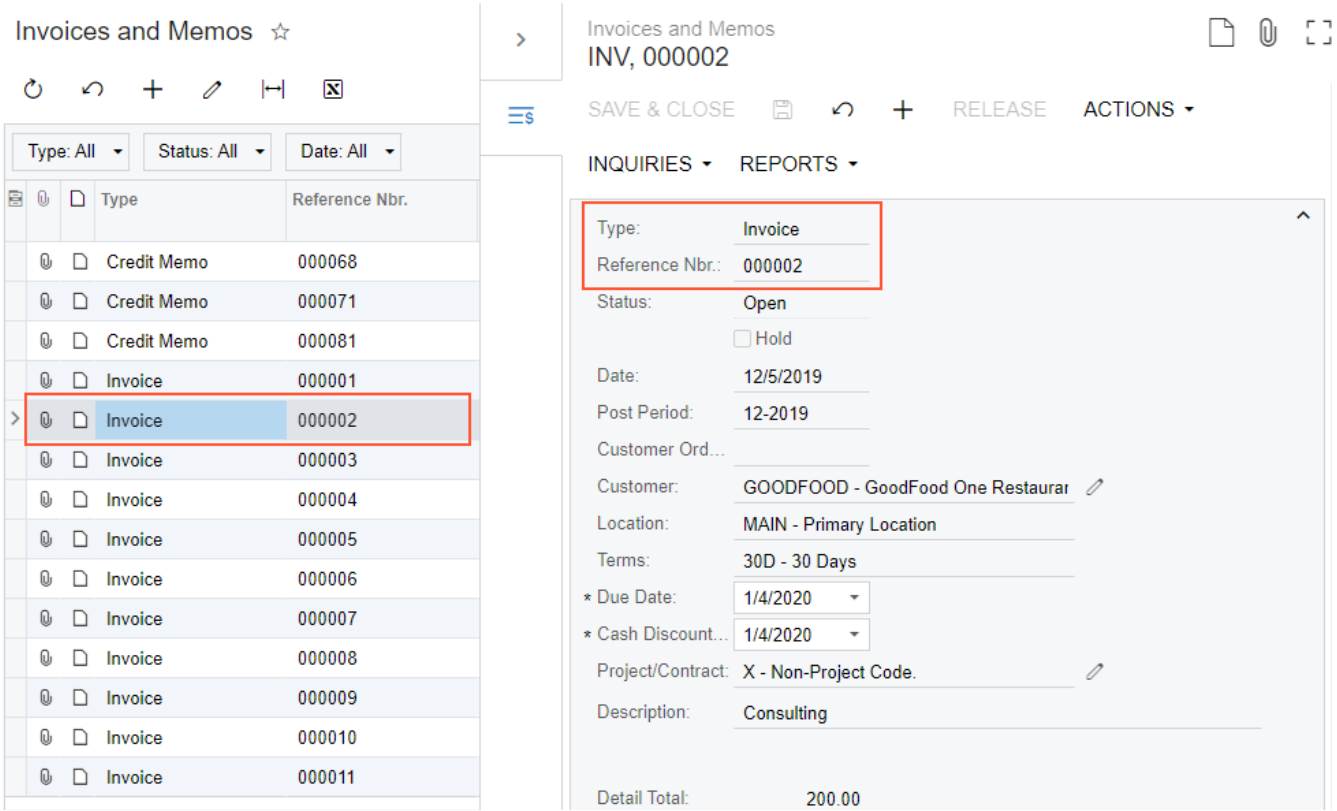


Figure: Generic inquiry with a side panel



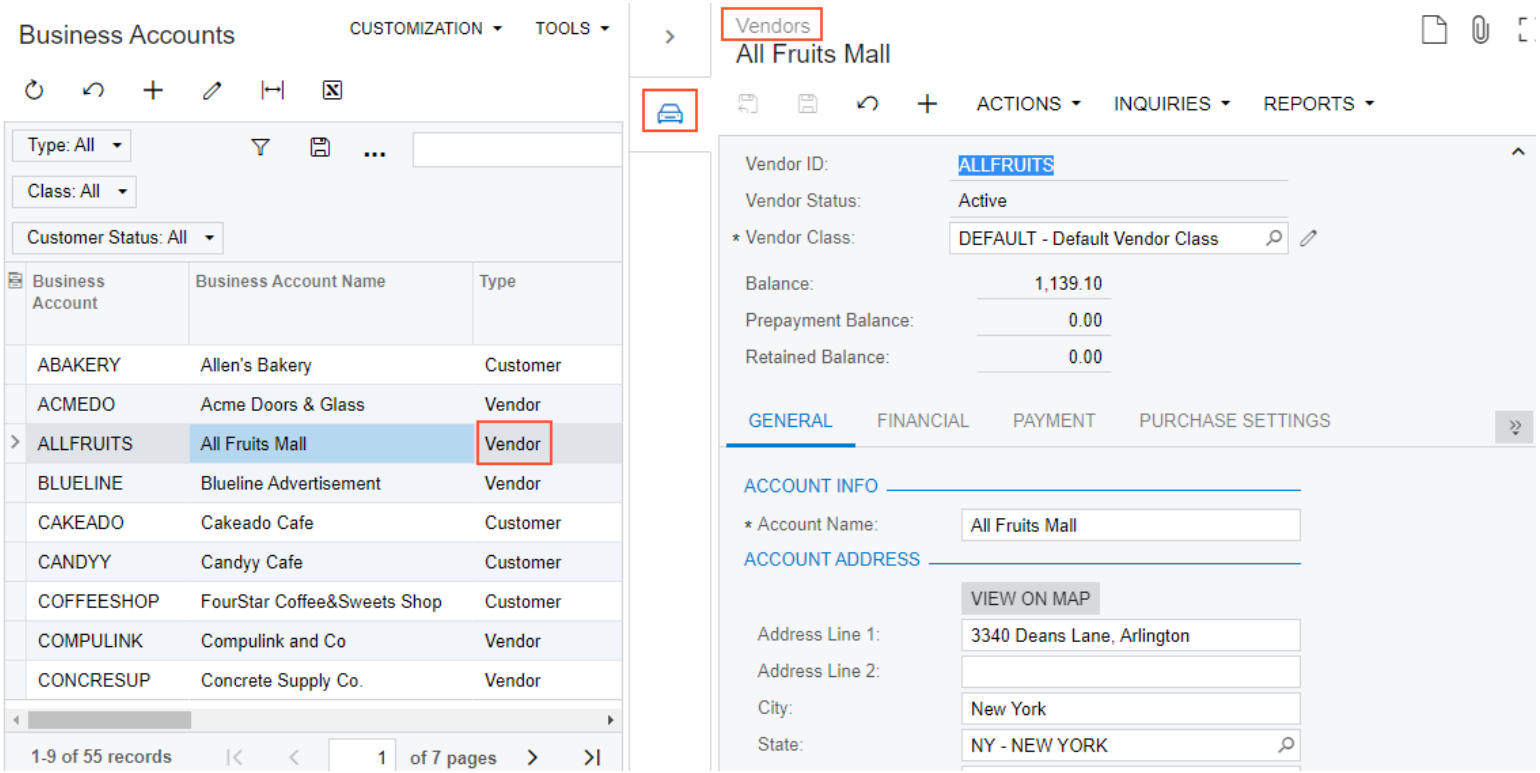
Enabling Navigation: To Specify Visibility Conditions for a Side Panel

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. A sales representative of your company has requested an inquiry form that displays data about business accounts. You have offered the predefined Business Accounts (CR3030PL) generic inquiry form, which has the *CRBusinessAccounts2018R1* inquiry title and the *Business Accounts* site map title specified on the *Generic Inquiry* (SM208000) form, but the sales representative has asked you to give users the capability to view the following detailed information on the side panel:

- For business accounts of vendor type: Vendor details on the *Vendors* (AP303000) form
- For business accounts of customer type: Customer details on the *Customers* (AR303000) form
- For business accounts of business account type: Business account details on the *Business Accounts* (CR303000) form

Figure: The list of business accounts on the left and the Vendors form in the side panel

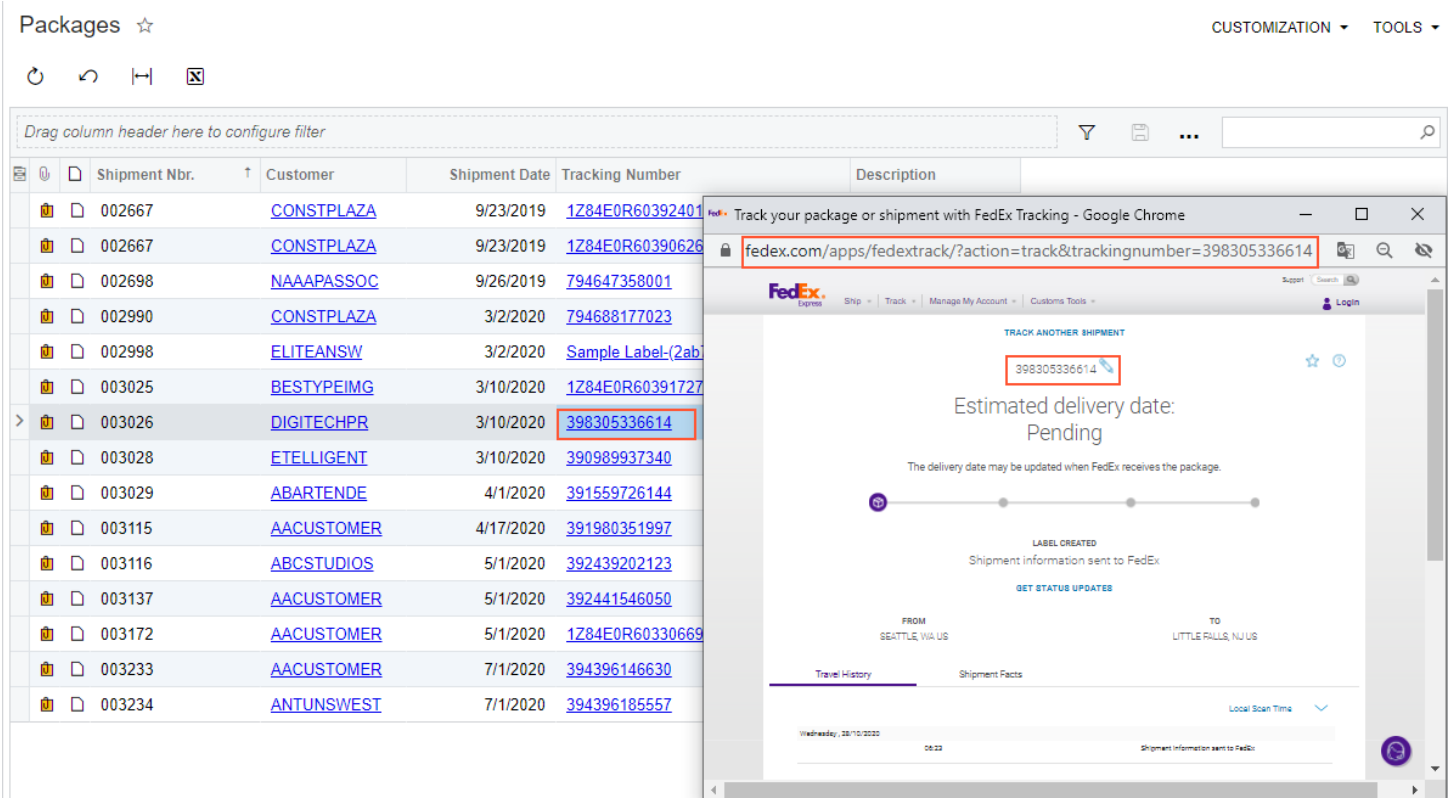


Enabling Navigation: To Configure Navigation to an External URI

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. A sales manager of your company has requested an inquiry form that displays a list of shipped packages. This generic inquiry should allow the manager to monitor delivery of the packages by FedEx delivery services company. The sales manager has asked you to make it possible to open a page on the FedEx site with details of the package, based on the tracking number.

Figure: The resulting generic inquiry form with the page associated with the external URI

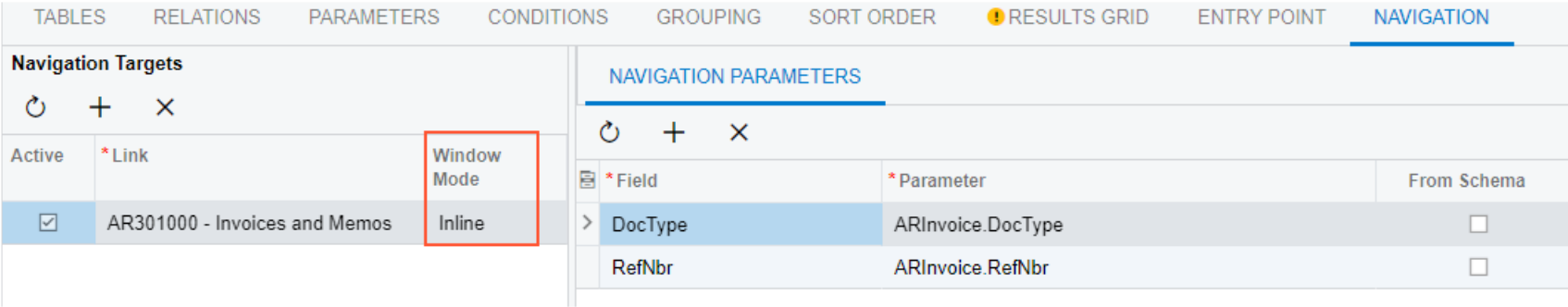


Lesson 1.8: Making a Generic Inquiry a Substitute Form

Learning Objectives

In this lesson, you will learn how to substitute an inquiry form for a data entry form.

Figure: The Window Mode setting of Inline



Making a Generic Inquiry a Substitute Form: To Configure an Inquiry as an Entry Point

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has asked you to replace the *Invoices and Memos* (AR301000) form with a generic inquiry. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *ARInvoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form; this form is the substitute form for the *Invoices and Memos* form by default. The accountant said that this inquiry form generally provides the needed functionality, but that the new form should also give users the abilities to view the total tax amount and to create a new document directly on the inquiry form.

In the system preparation for this activity, you will copy the predefined inquiry to leave the original inquiry intact; you will modify its copy as requested.

Making a Generic Inquiry a Substitute Form: To Suspend the Replacement of a Primary Form

Story

Suppose that you are a technical specialist in your company who is working on customizations. Earlier, you configured Acumatica ERP in your company so that the *Invoices and Memos* (AR301000) form is replaced with the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *ARInvoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form. Now an accountant of your company has asked you to make changes to the generic inquiry that is defined as a substitute form. Before you begin making these changes, you need to suspend the replacement of the primary form, so that the generic inquiry form is not opened while you are in the process of making changes to it.

Lesson 1.9: Transferring an Inquiry

Learning Objectives

In this lesson, you will learn how to export and import a generic inquiry form as an XML file, how to export a generic inquiry form as an RPX file, and how to export inquiry results to an XLS file.

Transferring an Inquiry: To Export and Import an Existing Inquiry as XML File

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. Further suppose that your company uses multitenant configuration, and that the predefined Invoices and Memos (AR3010PL) generic inquiry form was deleted from one tenant by mistake. The accounting department that uses the tenant has asked you to recover the inquiry form. You have decided to transfer the predefined generic inquiry form from one tenant of your company to another.

Lesson 1.10: Creating a Generic Inquiry

Learning Objectives

In this lesson, you will learn how to do the following:

- Prepare to create an inquiry
- Create a simple inquiry with one table
- Publish an inquiry

Creating a Generic Inquiry: To Create an Inquiry Based on One DAC

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms. An accountant of your company has requested an inquiry form that collects data about invoices and memos. You have offered the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, but the accountant instead wants a simpler inquiry that displays columns with the document type, reference number, and the balance of the invoice with that number. The accountant has asked you to leave the default access rights to the inquiry.

Lesson 1.11: Getting Data from Multiple DACs

Learning Objectives

In this lesson, you will learn how to retrieve data from multiple related data access classes.

Figure: Join types

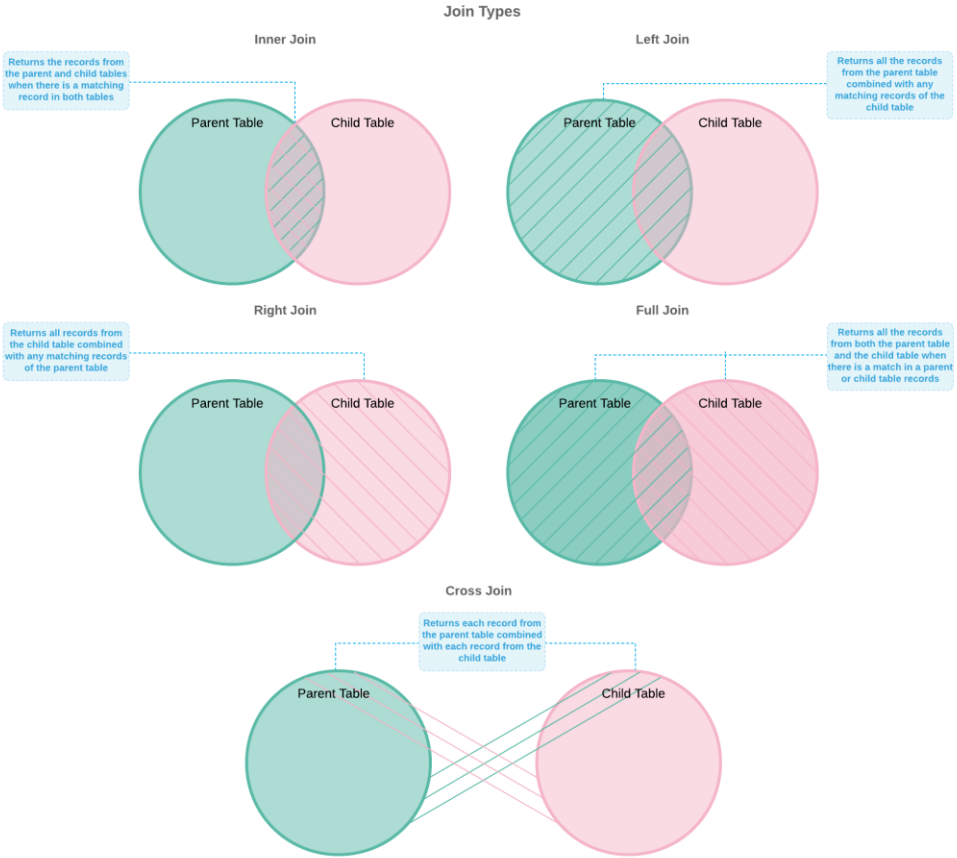


Figure: Exploration of a data access class on the Source Code form

Revision Two HQ Source Code

CUSTOMIZATION HELP

Screen Aspx | Business Logic | Data Access | Find in Files | Website Sources

Table Name: PX.Objects.SO.SOOrder

1

```
public partial class SOOrder : PX.Data.IBqlTable, PX.Data.EP.IAssign, IFreightBase, ICCAuthorizePayment, ICCCapturePay
ment, IInvoice
        {
                #region Selected

                #region OrderType

                #region Behavior

                #region ARDocType

                #region OrderNbr

                public abstract class orderNbr : PX.Data.IBqlField
                {
                }
                protected String  OrderNbr;
                [PXDBString(15, IsKey = true, IsUnicode = true, InputMask = ">CCCCCCCCCCCCCCC")]
                [PXDefault()]
                [PXUIField(DisplayName = "Order Nbr.", Visibility = PXUIVisibility.SelectorVisible)]
```

2 3

Figure: Exploration of the Customer class on the Source Code form

Revision Two HQ Source Code

CUSTOMIZATION HELP

Screen Aspx | Business Logic | Data Access | Find in Files | Website Sources

Table Name: PX.Objects.AR.Customer

1

```
public partial class Customer : BAccount, PX.SM.IIncludable
{
        #region BAccountID
        public new abstract class bAccountID : PX.Data.IBqlField
        {
        }
        #endregion
        #region AcctCD

        #region Type

        #region IsCustomerOrCombined

        #region ParentBAccountID

        #region ConsolidateToParent
```

2 3

Figure: Further exploration of the Customer class on the Source Code form

Revision Two HQ Source Code

CUSTOMIZATION HELP

Screen Aspx | Business Logic | Data Access | Find in Files | Website Sources

Table Name: PX.Objects.AR.Customer

```
//*************************************************
public partial class BAccount : IBqlTable, IAssign, IAttributeSupport, IPXSelectable
{
        #region Selected

        #region BAccountID

        public abstract class bAccountID : PX.Data.IBqlField
        {
        }
        protected Int32? _BAccountID;
        [PXDBIdentity()]
        [PXUIField(Visible = false, Visibility = PXUIVisibility.Invisible)]
        public virtual Int32? BAccountID
        {
                get
                {
                        return this._BAccountID;
```

1 2 3

Figure: Data combined from two tables

SOOrder DAC						
OrderType	OrderNbr	OrderDate	CustomerID	OrderQty	OrderTotal	Status

Customer DAC					
BAccountID	AcctCD	AcctName	Status	CustomerClassID	CreditLimit
19	COFFEESHOP	FourStar	Active	DEFAULT	0
17	GOODFOOD	GoodFood One	Active	DEFAULT	0
16	HMBAKERY	HM's Bakery &	Active	DEFAULT	0
18	LAKECAFE	Lake Cafe	Active	INTLCA	0
48	MORNINGCAF	Morning Cafe	Active	DEFAULT	0
20	RETSALE	Individual Client	Active	DEFAULT	0
21	TOMYUM	Thai Food	Active	DEFAULT	0

Combined Data From Both Tables												
OrderType	OrderNbr	OrderDate	CustomerID	OrderQty	OrderTotal	Status	BAccountID	AcctCD	AcctName	Status	CustomerClassID	CreditLimit
SO	000029	1/29/2019	20	20.00	56.45	Open	20	RETSALE	Individual Client	Active	DEFAULT	0
IN	000063	1/18/2019	19	1.00	4,100.00	Open	19	COFFEESHOP	FourStar	Active	DEFAULT	0
IN	000061	1/15/2019	17	2.00	6,700.00	Invoiced	17	GOODFOOD	GoodFood One	Active	DEFAULT	0
IN	000059	1/9/2019	16	1.00	2,600.00	Open	16	HMBAKERY	HM's Bakery &	Active	DEFAULT	0
IN	000057	1/7/2019	21	1.00	4,100.00	Open	21	TOMYUM	Thai Food	Active	DEFAULT	0
SO	000028	1/24/2019	16	135.00	327.01	Invoiced	16	HMBAKERY	HM's Bakery &	Active	DEFAULT	0
SO	000027	1/21/2019	17	92.00	210.66	Completed	17	GOODFOOD	GoodFood One	Active	DEFAULT	0
SO	000026	1/17/2019	16	57.00	151.76	Completed	16	HMBAKERY	HM's Bakery &	Active	DEFAULT	0
SO	000025	1/14/2019	17	157.00	382.23	Open	17	GOODFOOD	GoodFood One	Active	DEFAULT	0
SO	000024	1/10/2019	16	129.00	316.25	Invoiced	16	HMBAKERY	HM's Bakery &	Active	DEFAULT	0

Getting Data from Multiple DACs: To Create an Inquiry with Two Tables

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms. A salesperson of your company has requested an inquiry form that displays sales orders for the customer selected by the user. The salesperson would like the inquiry form to list the orders of customers defined in the system. The inquiry form should have a Selection area with the following elements:

- **Date From**
- **Date To**
- **Customer**
- **Order Status**

Getting Data from Multiple DACs: To Create an Inquiry with Two Tables

Story

By default, these boxes should be empty, so that the inquiry results initially include sales orders with any status for all customers and for all the dates that are in the database. If users select values in the boxes, the results are narrowed.

The results grid of the inquiry form will consist of columns that display the following information about each sales order: sales order number, type, status, date, and customer name.

Figure: Selection area with the parameters requested by the salesperson

DB-SOOpenByCustomer

Date From:

Date To:

Order Status:

Customer:

Drag column header here to configure filter

Order Nbr.	Order Type	Status	Date	Customer Name
000057	IN	Invoiced	1/7/2019	Thai Food Restaurant
000059	IN	Invoiced	1/9/2019	HM's Bakery & Cafe
000061	IN	Invoiced	1/15/2019	GoodFood One Restaurant
000063	IN	Invoiced	1/18/2019	FourStar Coffee&Sweets Shop

Lesson 1.12: Exposing an Inquiry by Using OData

Learning Objectives

In this lesson, you will learn how to expose a generic inquiry form by using OData.

Figure: Example of an advanced chart built with PowerBI

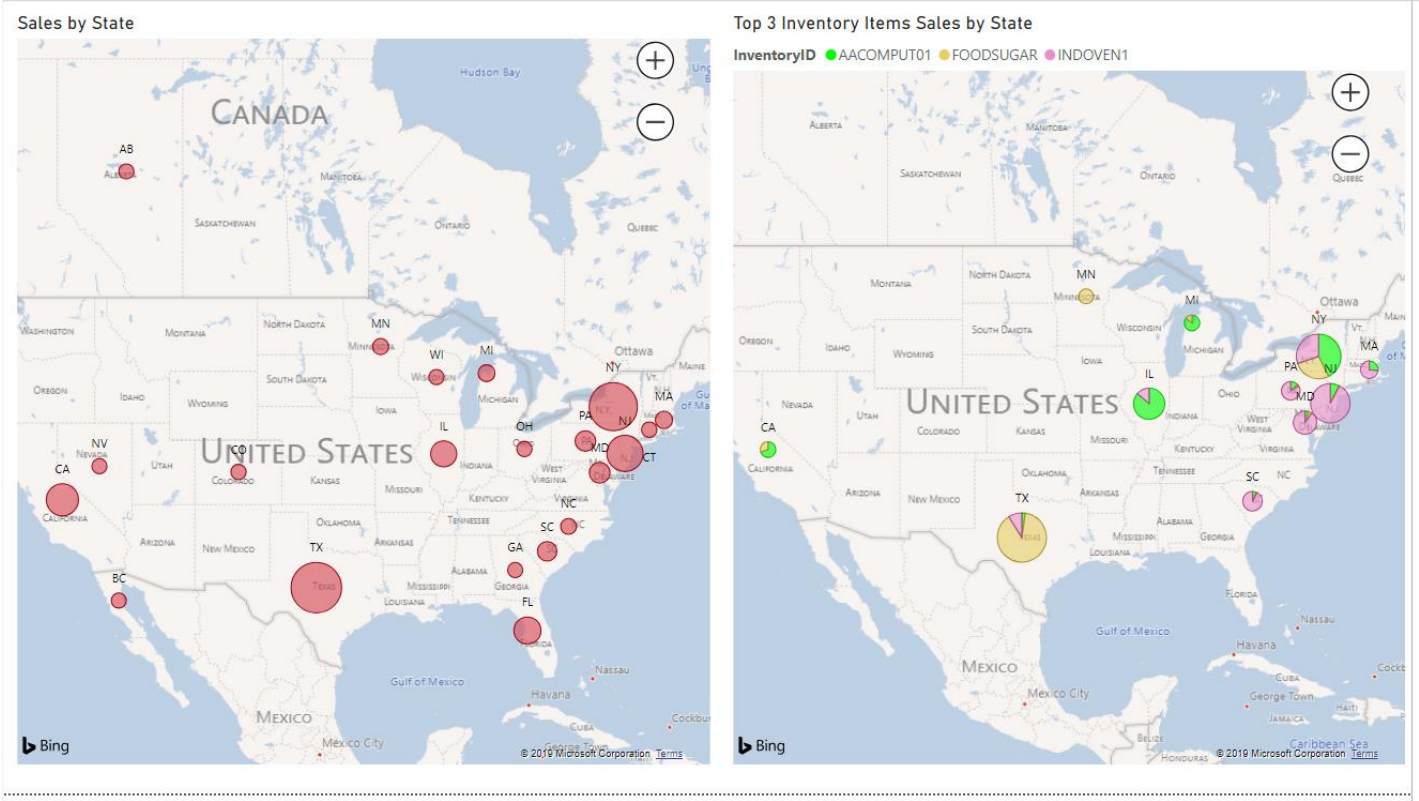
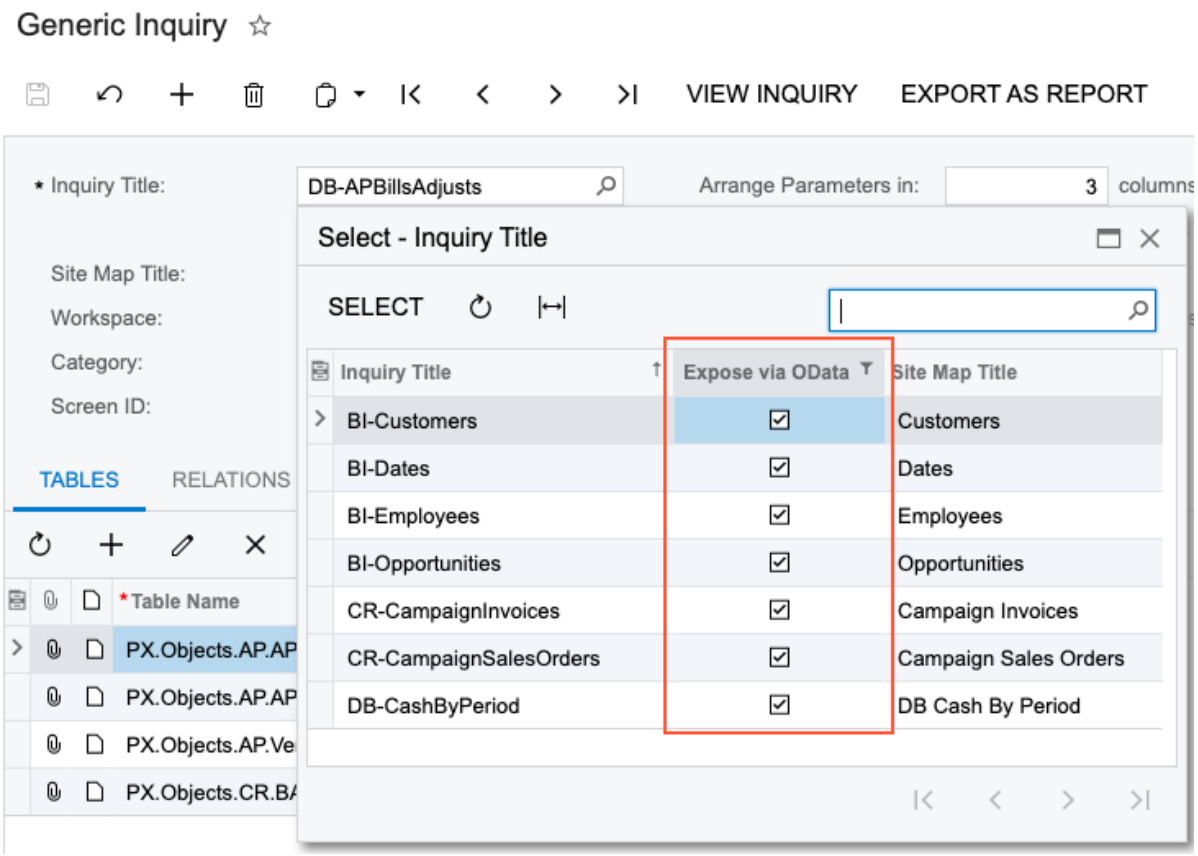


Figure: Inquiries that are exposed via OData

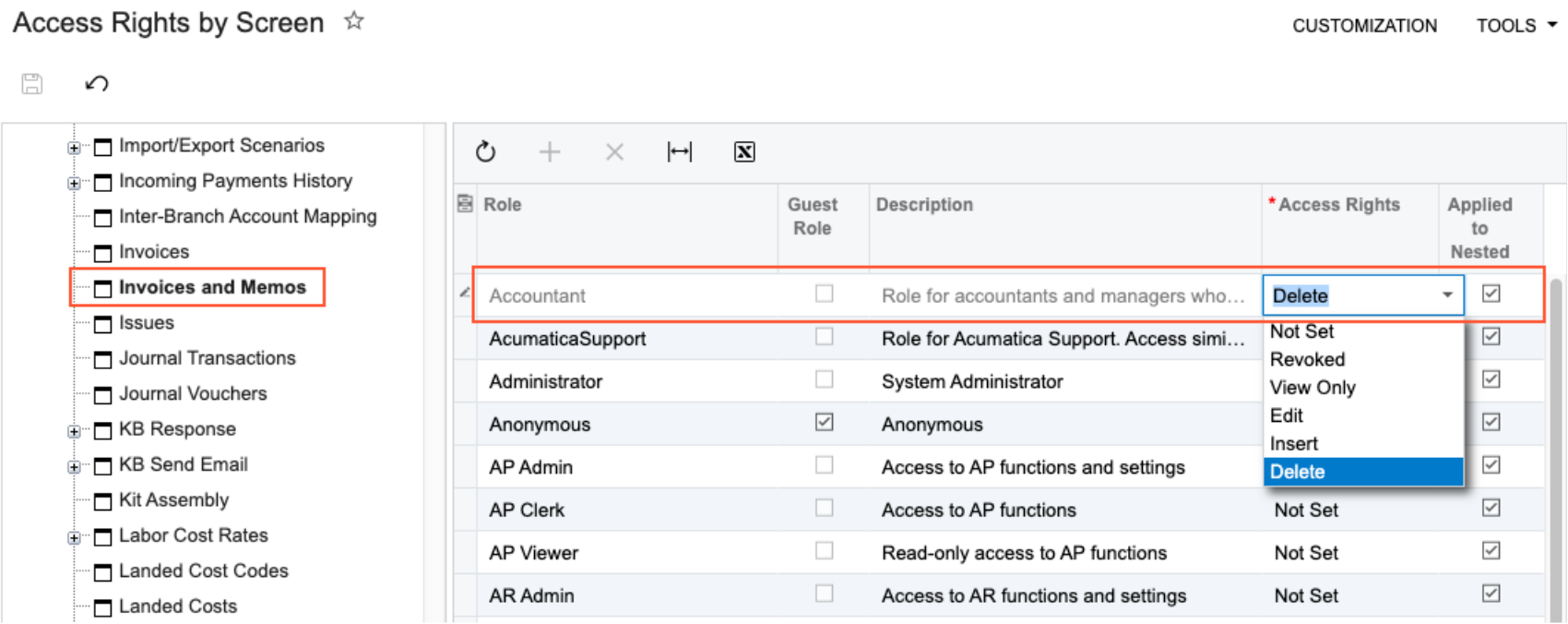


Exposing an Inquiry by Using OData: To Expose Inquiry Results Through OData

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms. An accountant of your company has asked you to provide access to the predefined Invoices and Memos (AR3010PL) inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form, through Microsoft Excel. The accountant uses Excel for building reports based on the data of this inquiry and would like for the data to always be up to date. Suppose that the access role of the accountant is *Accountant*.

Figure: The level of access rights of the Accountant role for the exposed inquiry



Day 3

Lesson 1.13: Accessing the Exposed Inquiry Through OData

Learning Objectives

In this lesson, you will learn how to access an exposed generic inquiry through Microsoft Excel and how to configure cross-origin resource sharing (CORS) to access an exposed inquiry through client-side web applications.

Figure: The list of exposed inquiries accessed through the browser

This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
▼<service xmlns="http://www.w3.org/2007/app" xmlns:atom="http://www.w3.org/2005/Atom"
 xml:base="[illegible]">
 ▼<workspace>
    <atom:title type="text">Default</atom:title>
   ▼<collection href="BI-Employees">
      <atom:title type="text">BI-Employees</atom:title>
    </collection>
   ▼<collection href="CR-CampaignSalesOrders">
      <atom:title type="text">CR-CampaignSalesOrders</atom:title>
    </collection>
   ▼<collection href="BI-Dates">
      <atom:title type="text">BI-Dates</atom:title>
    </collection>
   ▼<collection href="BI-Opportunities">
      <atom:title type="text">BI-Opportunities</atom:title>
    </collection>
   ▼<collection href="CR-CampaignInvoices">
      <atom:title type="text">CR-CampaignInvoices</atom:title>
    </collection>
   ▼<collection href="BI-Customers">
      <atom:title type="text">BI-Customers</atom:title>
    </collection>
   ▼<collection href="DB-CashByPeriod">
      <atom:title type="text">DB-CashByPeriod</atom:title>
    </collection>
   ▼<collection href="AR-Invoices%20and%20Memos">
      <atom:title type="text">AR-Invoices and Memos</atom:title>
    </collection>
  </workspace>
</service>
```

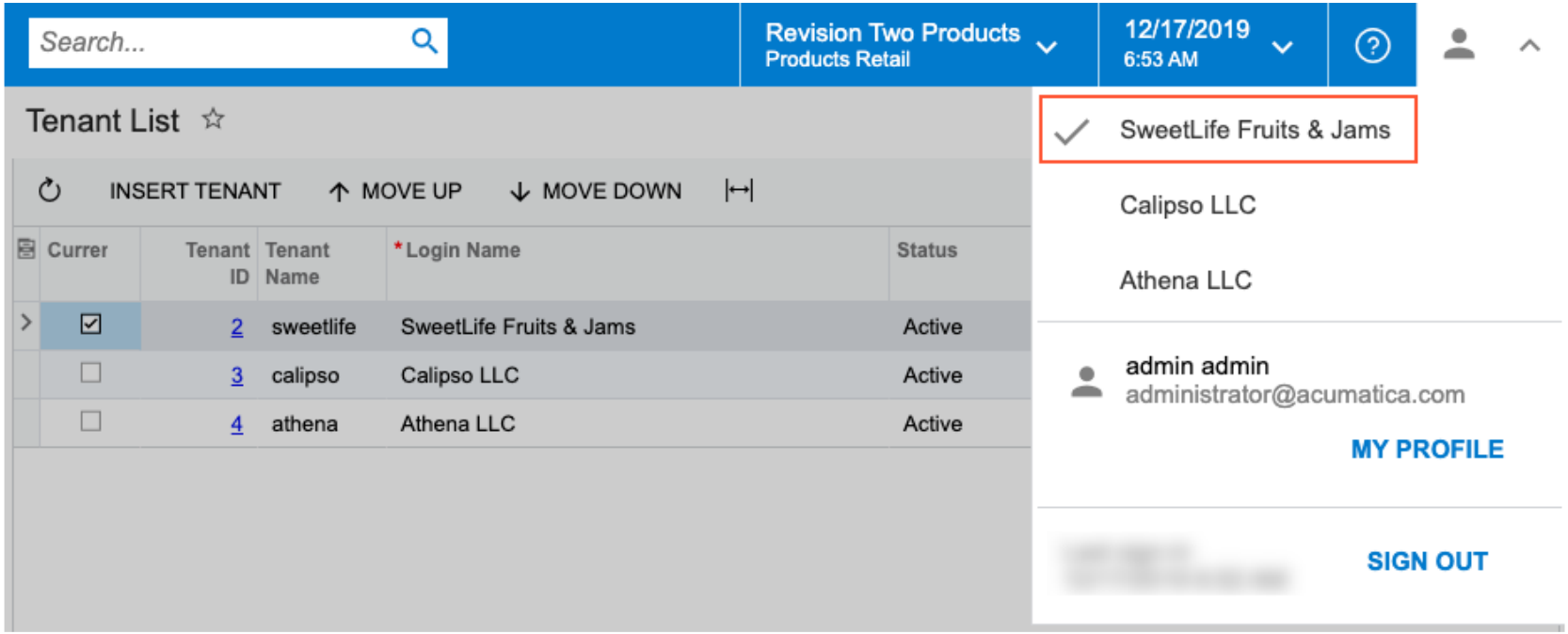
Figure: The login names of tenants

Tenant List ☆

INSERT TENANT MOVE UP MOVE DOWN

Currer	Tenant ID	Tenant Name	*Login Name	Status
☑	2	sweetlife	SweetLife Fruits & Jams	Active
☐	3	calipso	Calipso LLC	Active
☐	4	athena	Athena LLC	Active

Figure: User menu with the tenant login name



Accessing the Exposed Inquiry Through OData: To Access an Exposed Inquiry in Microsoft Excel

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including those involving the creation, modification, and use of generic inquiries. An accountant of your company has asked to have access in Excel to the predefined Invoices and Memos (AR3010PL) generic inquiry form, which has the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form. The accountant uses Excel for building reports based on the data of this generic inquiry and would like for the data to always be up to date.

You have exposed the requested generic inquiry, and now you need to verify that it can be accessed through Excel.

Lesson 1.14: Managing Access Rights to Generic Inquires

Learning Objectives

In this lesson, you will learn how to set up access rights to generic inquiries.

Managing Access Rights to Generic Inquiries: To Define Access Rights to a Generic Inquiry

Story

Suppose that you are a system administrator who manages user access to Acumatica ERP in your company. A financial supervisor of your company has requested that you allow users who are working with the *SweetLife Store* branch to view information on the Expected Receipts (GI000081) inquiry form, which is the predefined generic inquiry form with the *DB-ARexpectedReceipts* inquiry title and the *Expected Receipts* site map title specified on the *Generic Inquiry* (SM208000) form.

For the *DB-ARexpectedReceipts* generic inquiry, you have reviewed the inquiry settings on the **Entry Point** tab of the *Generic Inquiry* form and made sure that the inquiry is not configured as a substitute form for an entry form. This means that you need to specify the level of access rights directly for the form because the inquiry form does not inherit access rights from an entry form.

You have reviewed the roles that are assigned to the employees of the branch and determined that to give these employees the ability to view information on the form, you need to assign the *View Only* level of access rights to the *Branch Retail* role.

Part 2: Managing Advanced Filters, Pivot Tables, and Dashboards

Cherrylake, Inc.
Acumatica Customer Since 2013

Lesson 2.1: Managing Advanced Filters

Learning Objectives

In this lesson, you will learn how to do the following:

- Create advanced filters
- Share advanced filters
- Modify advanced filters
- Delete advanced filters
- Create personal filters based on shared filters

Figure: Button to access the Filter Settings dialog box

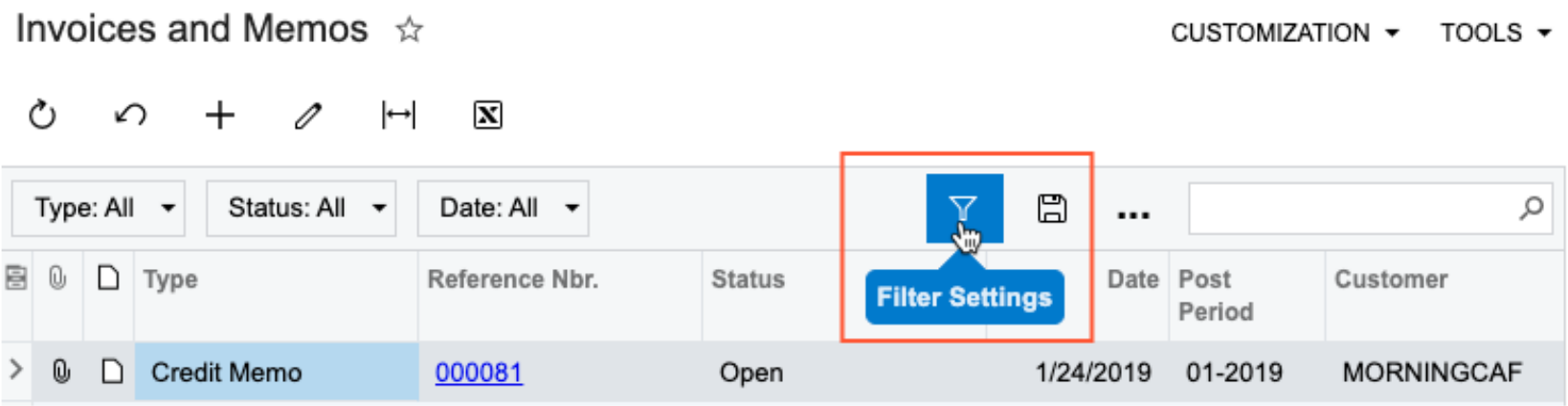
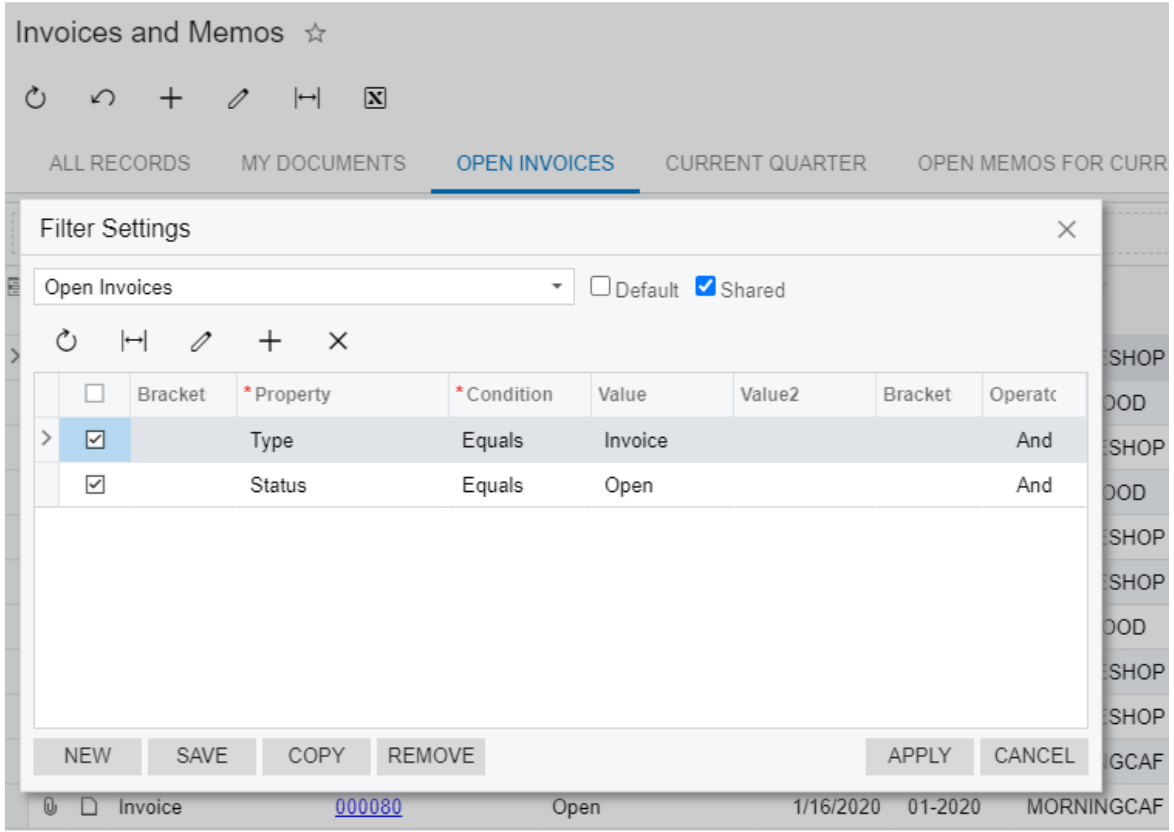


Figure: The clauses of the Open Invoices filter



Managing Advanced Filters: To Create Advanced Shared Filters

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. An accountant of your company has asked you to add multiple filters (that is, filter tabs) for the Invoices and Memos (AR3010PL) generic inquiry form, which is the predefined generic inquiry with the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form. These filters should be available to all users that have access to the inquiry.

The following filter tabs need to be added with the noted content:

- **Open Invoices**: Only invoices that have the *Open* status.
- **Current Quarter**: Documents for the current quarter.
- **Previous Quarter**: Documents for the previous quarter.

Figure: The settings of the Open Invoices filter

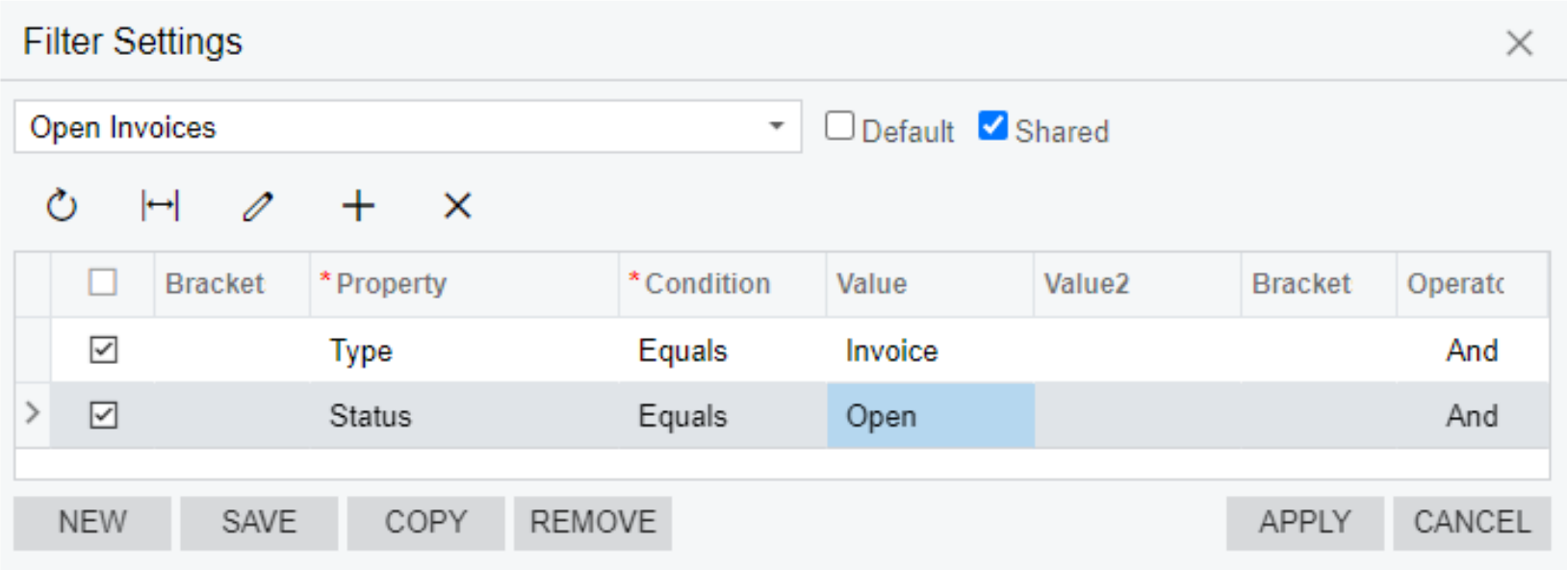


Figure: The settings of the Current Quarter filter

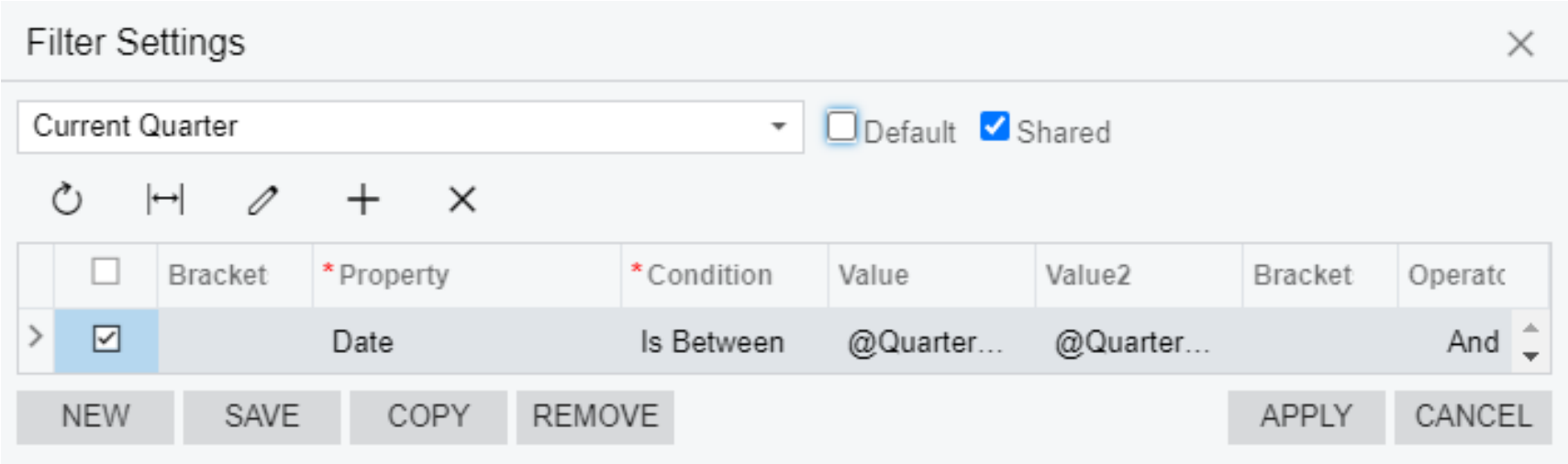
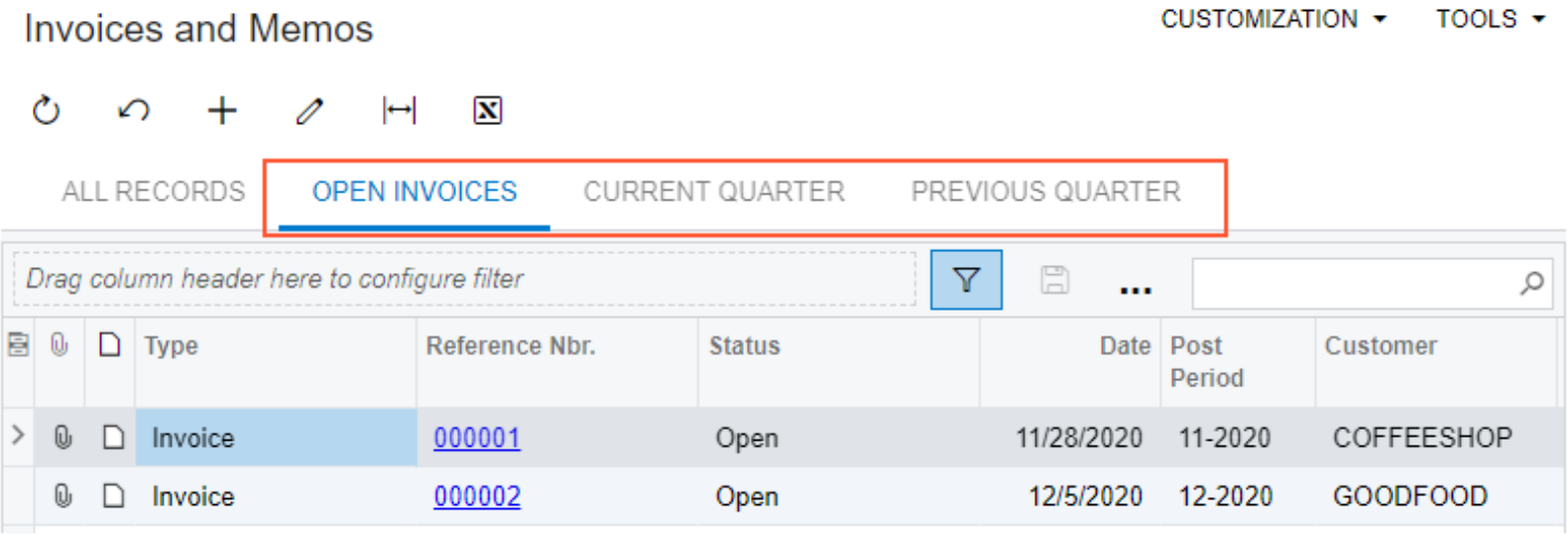


Figure: The added filter tabs



Managing Advanced Filters: To Remove an Advanced Filter

Story

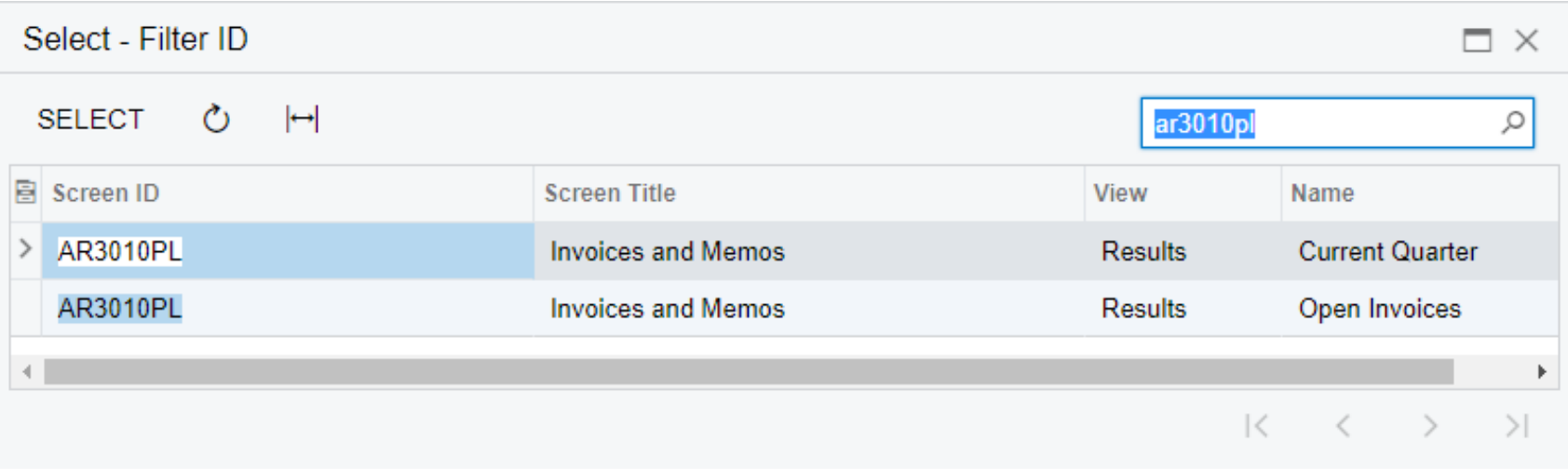
Suppose that you are a technical specialist in your company who is working on simple customizations. One year ago, you configured a set of shared filters for the Invoices and Memos (AR3010PL) generic inquiry form, which is the predefined generic inquiry with the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form. Further suppose that the accounting department has worked with the set of shared filters for some time and realized that the **Previous Quarter** tab is not needed, so you have been asked to remove the filter tab.

Managing Advanced Filters: To Modify an Advanced Shared Filter

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. A year ago, you configured a set of shared filters for the Invoices and Memos (AR3010PL) generic inquiry form, which is the predefined generic inquiry with the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form. The accounting department has worked with the set of filters for some time and decided that the **Open Invoices** tab needs to list all open documents, regardless of their type; accordingly, its name should be **Open Documents**.

Figure: Searching for an existing shared filter



Managing Advanced Filters: To Create an Advanced Personal Filter Based on an Advanced Shared Filter

Story

Suppose that you are an accountant in your company. Some time ago, a set of shared filters was configured for the Invoices and Memos (AR3010PL) generic inquiry form, which is the predefined generic inquiry with the *AR-Invoices and Memos* inquiry title and the *Invoices and Memos* site map title specified on the *Generic Inquiry* (SM208000) form.

Further suppose that you are responsible for tracking the open credit memos for the current year. The generic inquiry has no filter you can use to quickly view these documents, so you have decided to create a personal filter and define it as your default tab, to streamline your work.

Lesson 2.2: Managing Pivot Tables

Learning Objectives

In this lesson, you will learn how to do the following:

- Configure a pivot table as a separate form and make it available to other users
- Modify the generic inquiry that is used as the basis for a pivot table while you are configuring the table
- Configure a pivot table as a filter tab on an inquiry form and share it with other users

Figure: Configuration of the layout of a pivot table

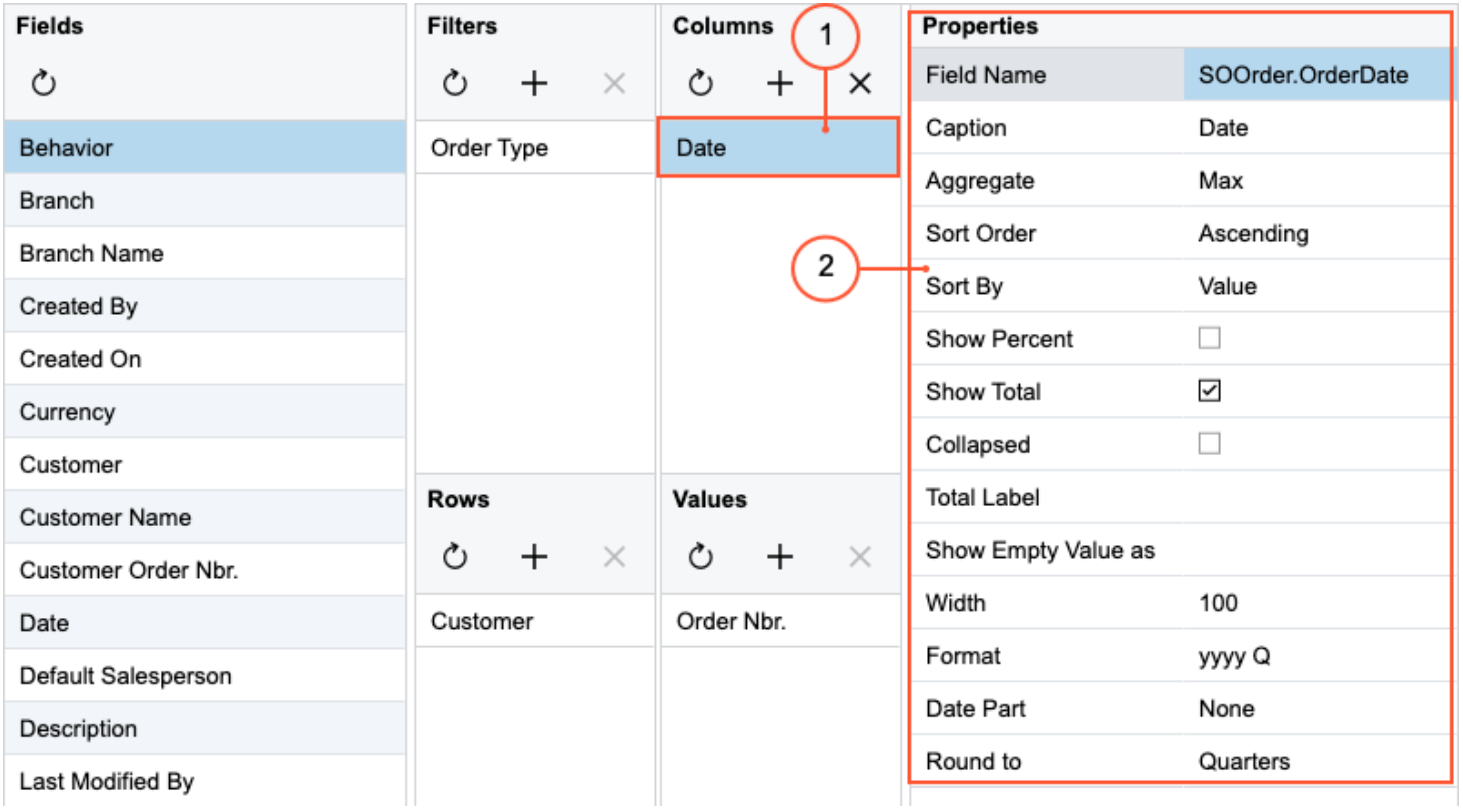


Figure: The Save as Pivot action on an inquiry form

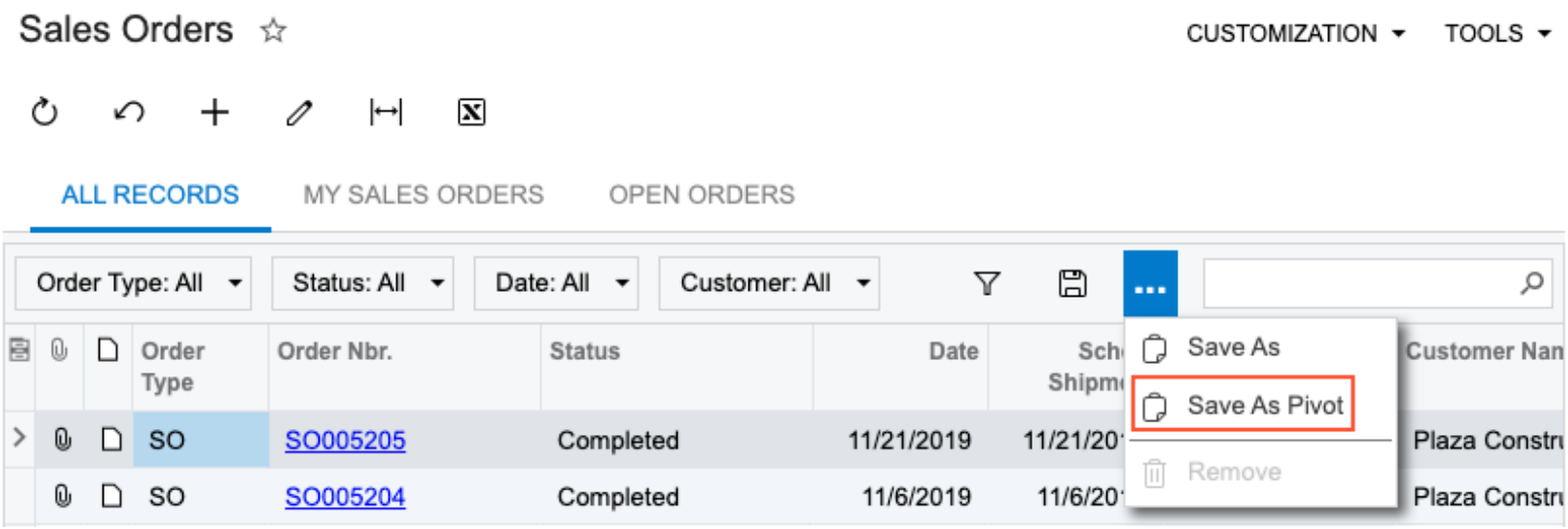


Figure: The levels of access rights for pivot tables as filter tabs

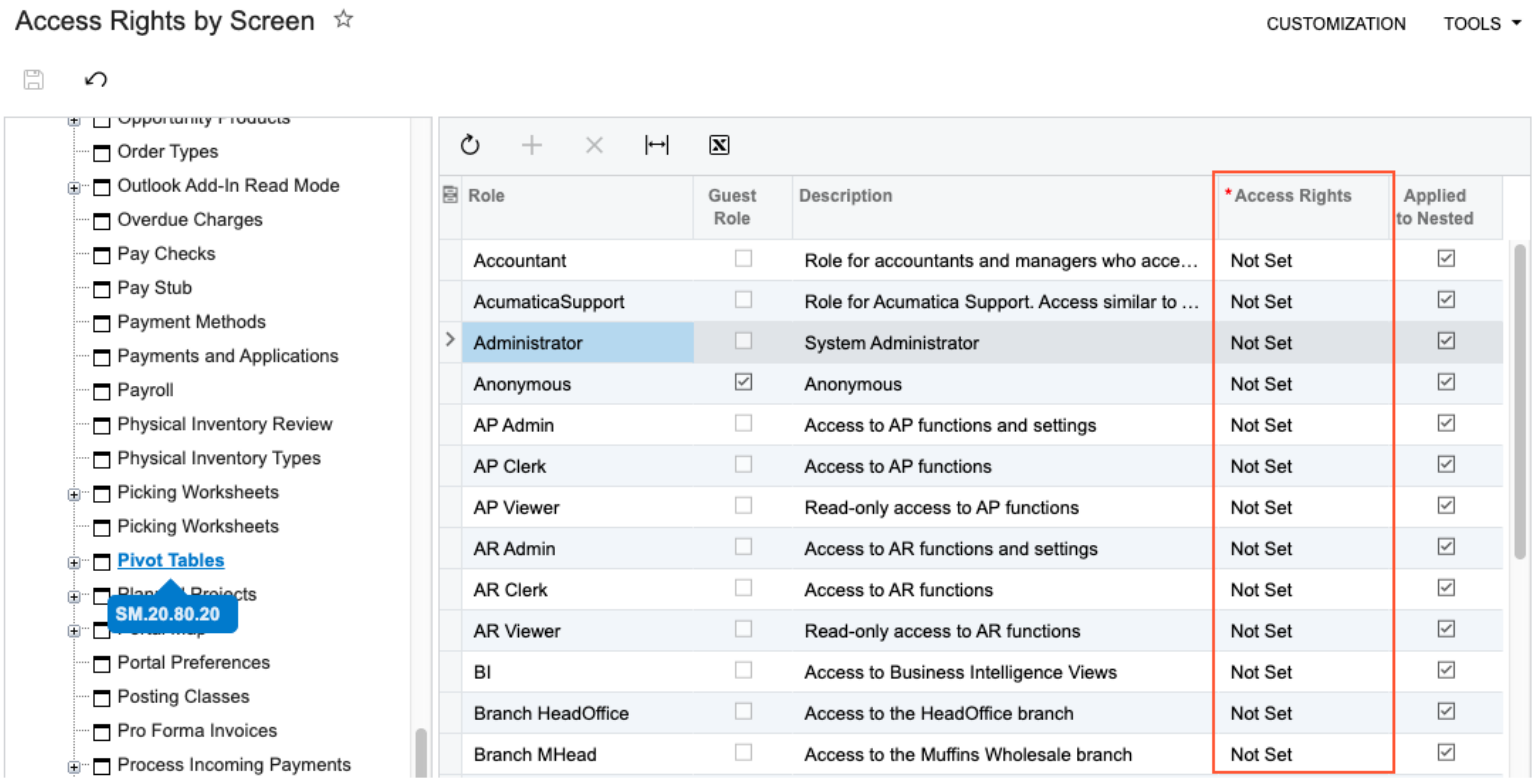


Figure: The Shared Configuration check box in the Filter Settings dialog box

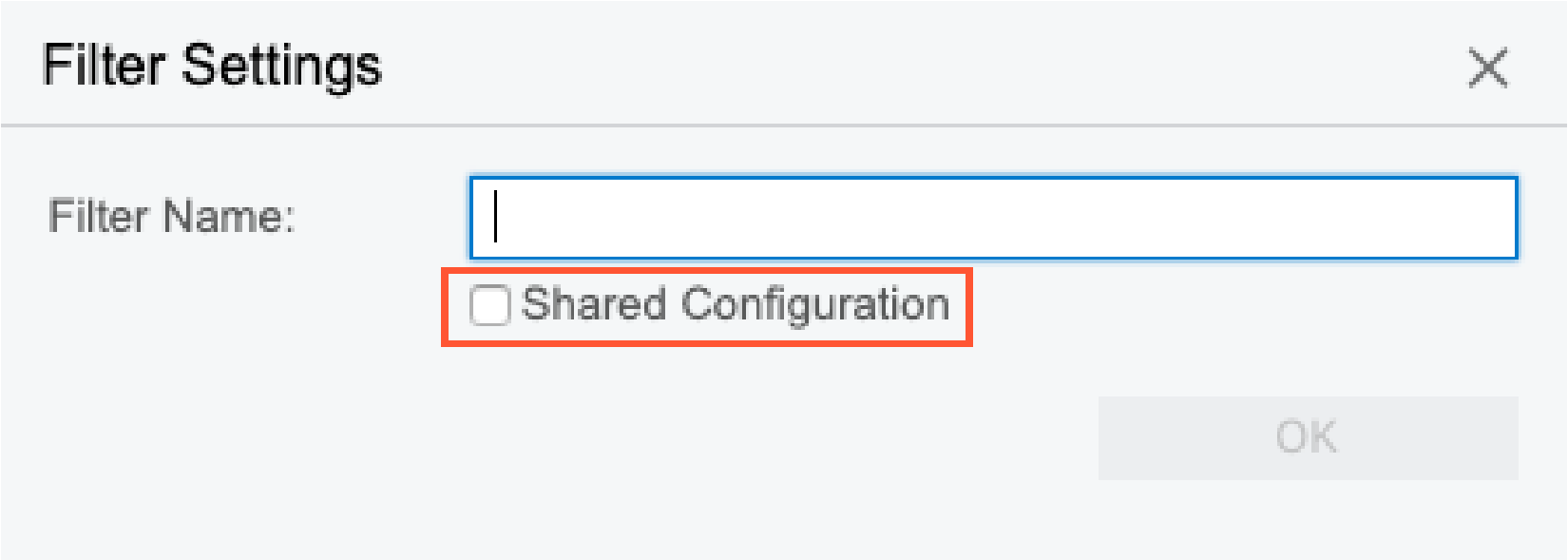


Figure: Edit mode of a pivot table as a filter tab

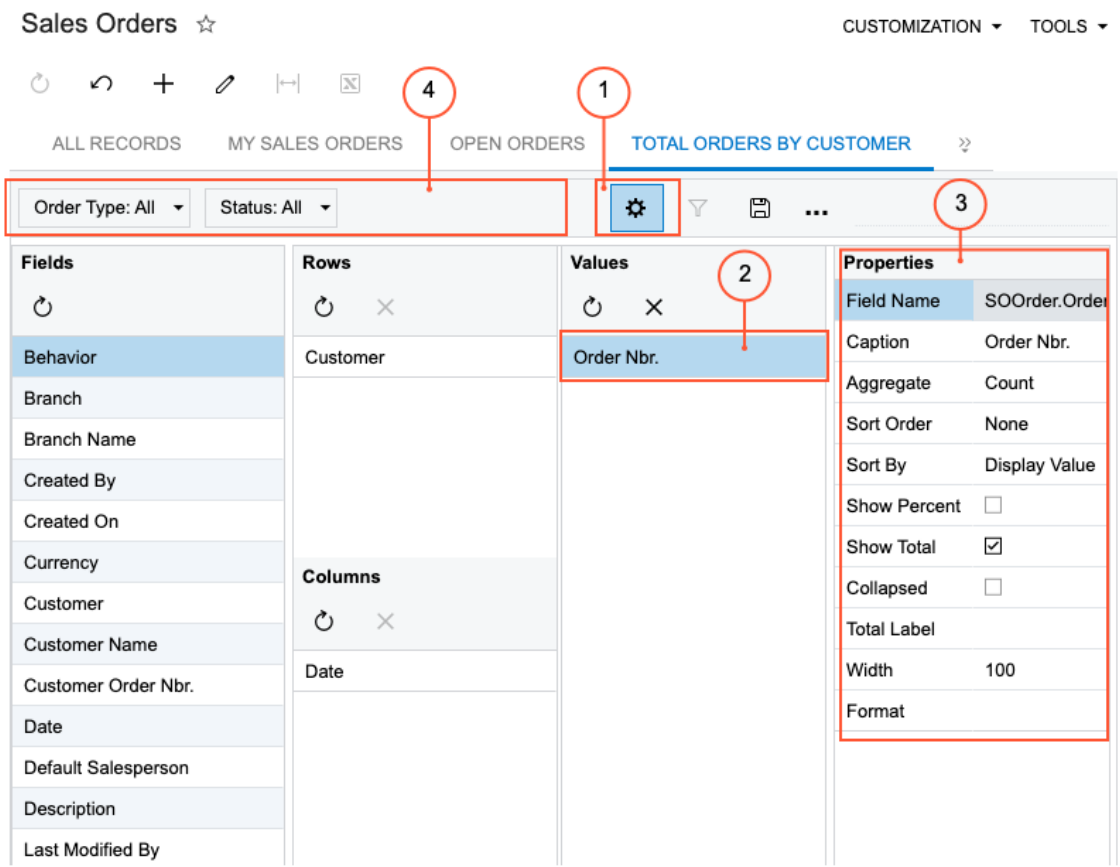


Table: User-Defined Format for Numbers

Format Definition	Output Example
0	8972
0.0	8972.2
0.00	8972.23
#,##0.00	8,972.23
$#,##0.00	$8,972.23

Managing Pivot Tables: To Create a Pivot Table as a Form

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms and pivot tables. An accountant of your company has asked you to create a pivot table that aggregates invoice totals by quarter for each customer and displays this customer's percentage of the grand total of all sales to customers in the quarter.

Figure: The Invoice Totals by Customer pivot table

INVOICE TOTALS BY CUSTOMER

Inactive Fields

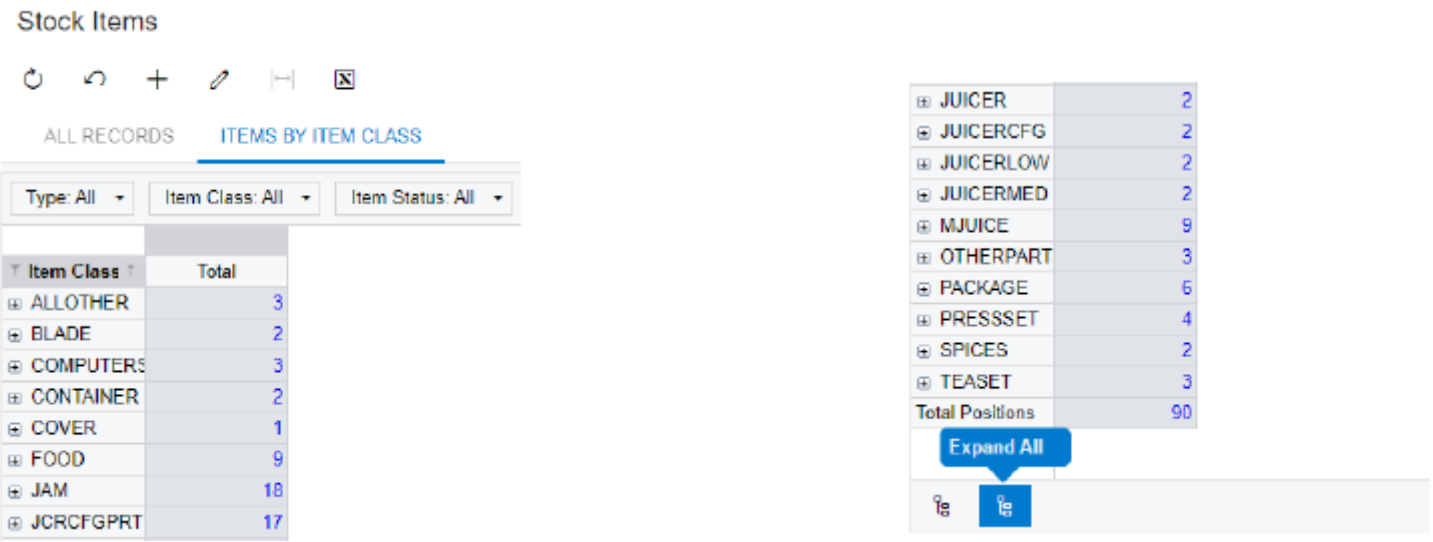
	Date							
	2020 Q4		2021 Q1		2021 Q2		Total	
Customer	Line Total	Line Total	Line Total	Line Total	Line Total	Line Total	Line Total	Line Total
CANDYY			$155.00	0.00%			$155.00	0.00%
COFFEESHOP	$30.00	0.00%	$10,653.07	0.03%			$10,683.07	0.03%
EQUGRP					$39,743,309.06	99.86%	$39,743,309.06	99.86%
GOODFOOD	$1,866.10	0.00%	$8,449.95	0.02%			$10,316.05	0.03%
HMBAKERY	$1,887.30	0.00%	$12,653.75	0.03%			$14,541.05	0.04%
MORNINGCAF			$4,900.00	0.01%			$4,900.00	0.01%
RETSALE	$1,350.80	0.00%	$1,300.40	0.00%			$2,651.20	0.01%
TOMYUM			$11,300.00	0.03%			$11,300.00	0.03%
Total	$5,134.20	0.01%	$49,412.17	0.12%	$39,743,309.06	99.86%	$39,797,855.43	100.00%

Managing Pivot Tables: To Create a Pivot Table on a Filter Tab

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms and pivot tables. A warehouse manager of your company has asked you to create a pivot table that groups stock items by item class and shows the total number of all items and the number of items in each class. Also, the pivot table should be viewed as a tab of the predefined Stock Items (IN2025PL) inquiry form, which has the *INStockItem* inquiry title and the *Stock Items* site map title specified on the *Generic Inquiry* (SM208000) form.

Figure: A pivot table with the groups collapsed



Managing Pivot Tables: To Delete a Pivot Table as a Form

Story

Suppose that you are a technical specialist in your company who is working on simple customizations, including the creation and modification of generic inquiry forms and pivot tables. An accountant of your company has asked you to delete the *Invoice Totals by Customer* pivot table, which you created as a result of performing the *Managing Pivot Tables: To Create a Pivot Table as a Form* activity.

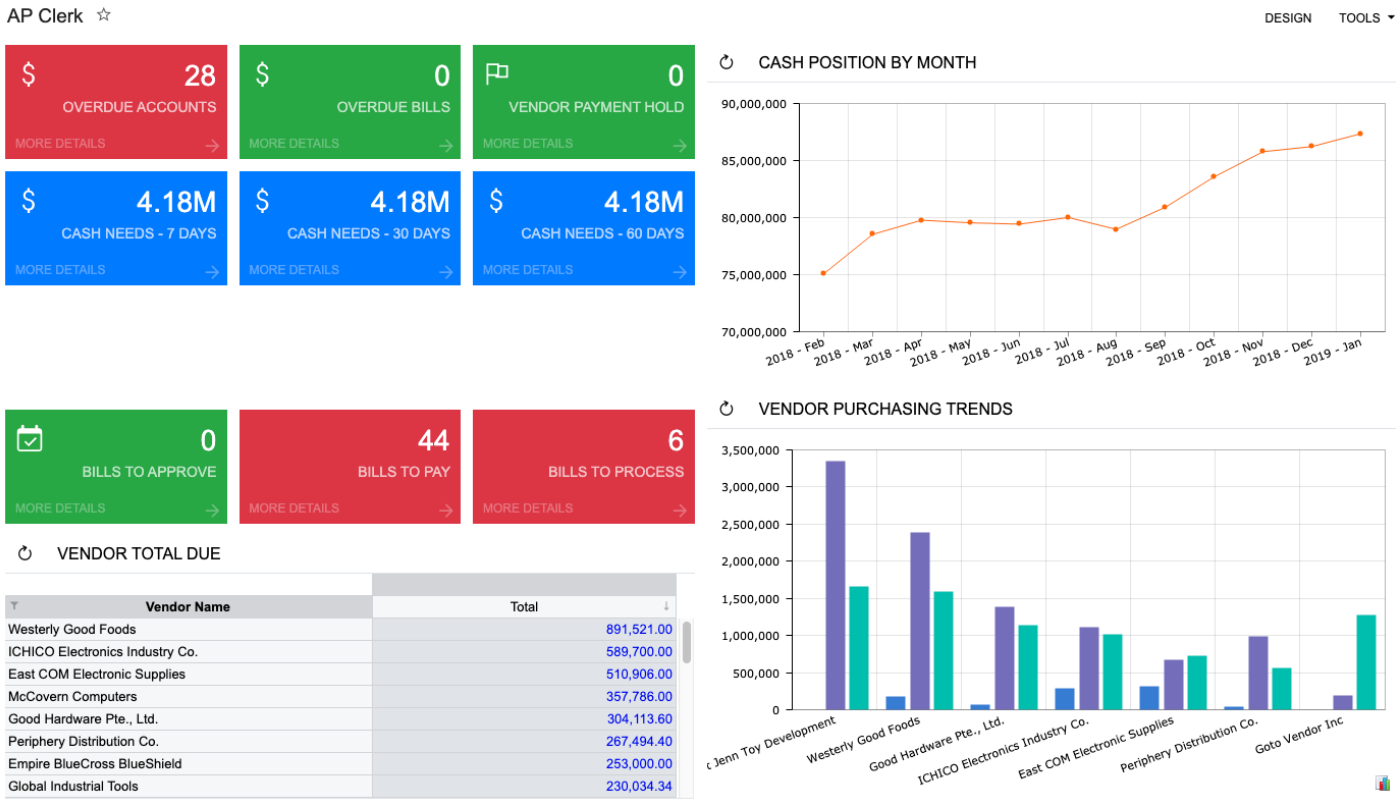
Lesson 2.3: Managing Dashboards

Learning Objectives

In this lesson, you will learn how to do the following:

- Design a dashboard
- Manage access rights for the viewing, configuration, and personalization of dashboards

Figure: The AP Clerk predefined dashboard



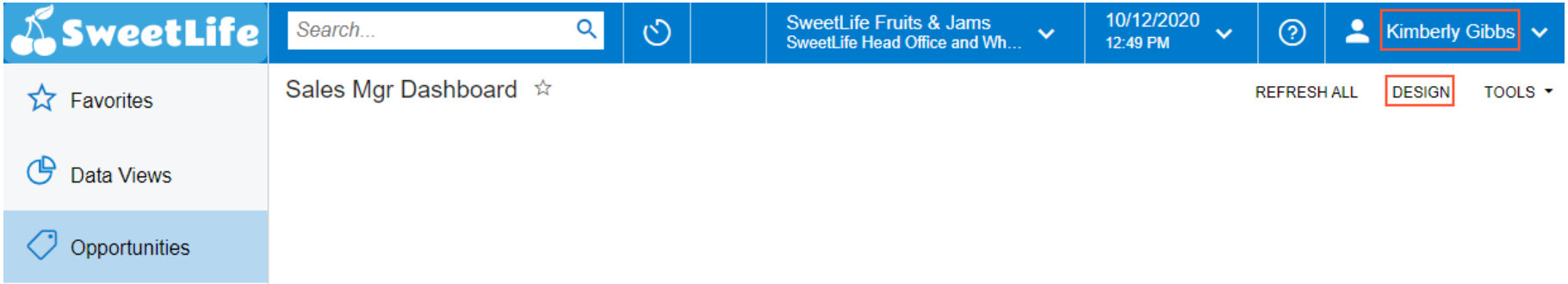
Managing Dashboards: To Add a Dashboard

Story

Suppose that you are a technical specialist in your company who is working on simple customizations. A sales manager of your company has requested a dashboard named *Sales Mgr Dashboard*. Every sales manager would like to have the capability to create a personal copy of the dashboard and populate it with widgets on their own. The dashboard should be visible to sales managers only and made available through a link in the **Opportunities** workspace under the **Dashboards** category.

Figure: Sales Mgr Dashboard viewed by a sales manager

Figure: Sales Mgr Dashboard viewed by the owner of the dashboard



Feedback

Your feedback is appreciated

https://www.surveymonkey.com/r/OnlineTraining2021

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Thank you

Cesar Betances

Benjamin Crisman