S130 Data Retrieval and Analysis

Instructor: Maja Talevska Milenkovska

May, 2018

Acumatica
THE CLOUD ERP

Class Syllabus

- Day 1, Monday, May 21, 2018, 09 AM- 11 AM PDT: Generic Inquiries
- Day 2, Tuesday, May 22, 2018, 09 AM -11 AM PDT: The Report Designer
- Day 3, Wednesday, May 23, 2018, 09 AM -11 AM PDT: The Report Designer (cont.)
- Day 4, Thursday, May 24, 2018, 09 AM -11 AM PDT:
  - Filters
  - Dashboards
  - Pivot Tables
  - Access Rights to Inquires, Reports, Dashboards, and Pivot Tables

Advanced preparations

- Acumatica ERP 2017 R2, version 2017.208.0034
- Report Designer application
- SalesDemo data preinstalled
- Downloaded training guide and files for training

Session rules

- All Attendees will be in Mute mode
- Polling questions will be asked at random moments without advance notice
- If you have a question, write your message in a chat and click Raise Hand
- Acumatica certification should be done through Acumatica University

Day 1: Generic Inquires

Overview of generic inquires

Acumatica
THE CLOUD ERP

Goals for the day

- Create and work with Generic Inquires
- Get the best use of created Generic Inquires
- Ways to troubleshoot Generic Inquires

Objectives

In this lesson you will learn how to...

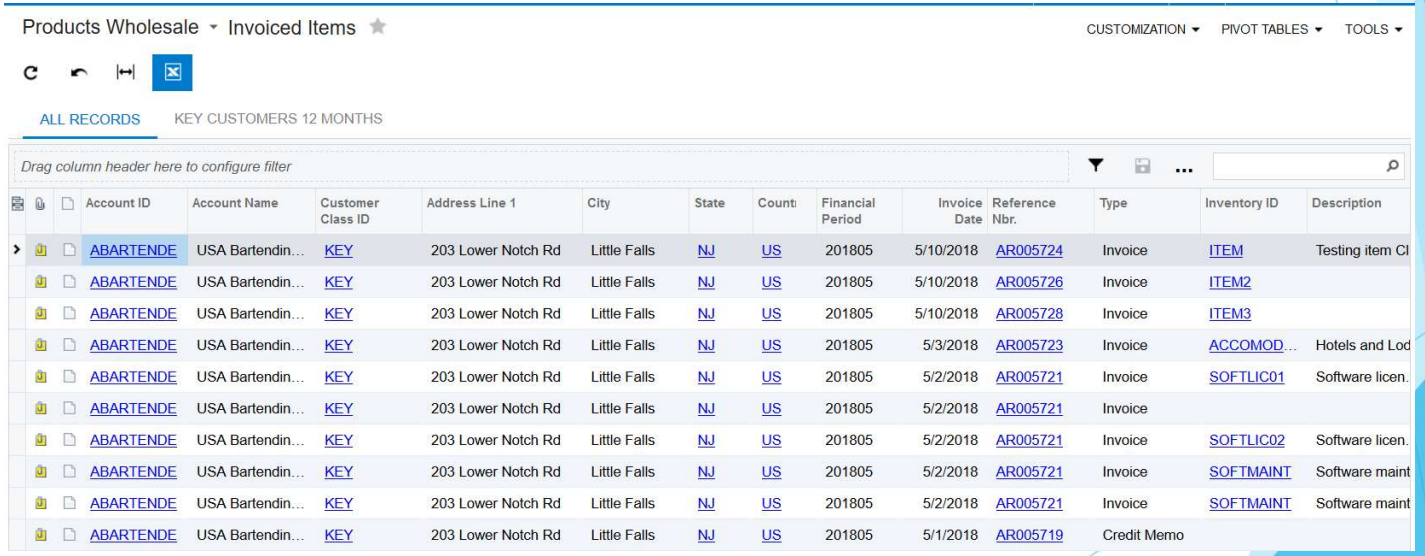
- Recognize Data Access Classes
- Understand joining tables
- Build custom Generic Inquires
- Create Odata feeds

Agenda

- Data Access Classes overview
- Generic Inquiry Basics
- Creating Generic Inquires
- Configuring Generic Inquiry as an Entry Point
- Exposing Generic Inquires to Odata
- Using Generic Inquires in Export Scenarios

What is a generic inquiry?

A tabular representation of data in the system used to display data belonging to same or different screens in one table



Account ID	Account Name	Customer Class ID	Address Line 1	City	State	Counti	Financial Period	Invoice Date	Reference Nbr.	Type	Inventory ID	Description
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/10/2018	AR005724	Invoice	ITEM	Testing item Cl
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/10/2018	AR005726	Invoice	ITEM2	
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/10/2018	AR005728	Invoice	ITEM3	
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/3/2018	AR005723	Invoice	ACCOMOD…	Hotels and Lod
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/2/2018	AR005721	Invoice	SOFTLIC01	Software licen.
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/2/2018	AR005721	Invoice		
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/2/2018	AR005721	Invoice	SOFTLIC02	Software licen.
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/2/2018	AR005721	Invoice	SOFTMAINT	Software maint
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/2/2018	AR005721	Invoice	SOFTMAINT	Software maint
ABARTENDE	USA Bartendin…	KEY	203 Lower Notch Rd	Little Falls	NJ	US	201805	5/1/2018	AR005719	Credit Memo		

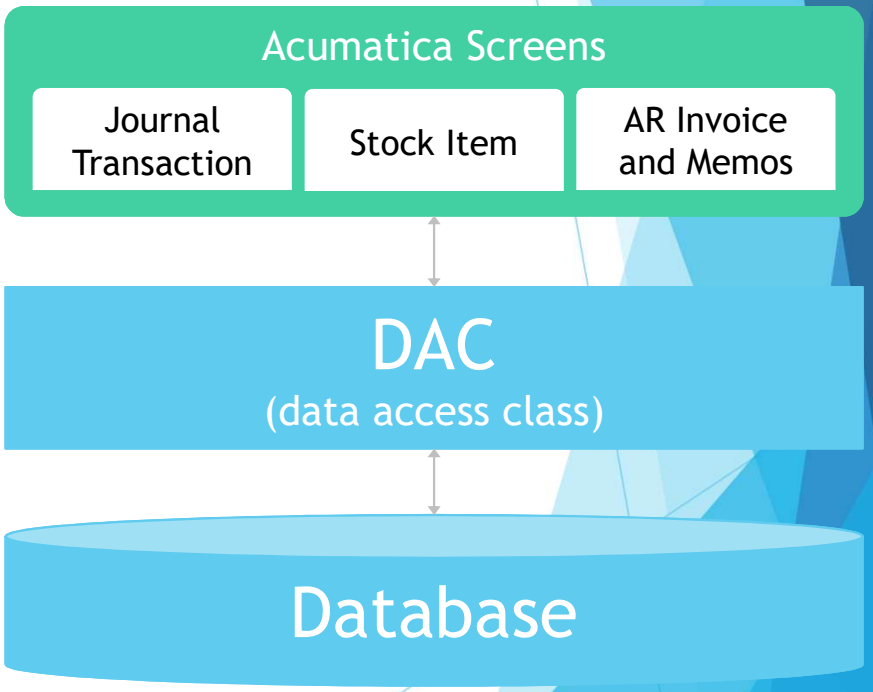
Acumatica
THE CLOUD ERP

How does it work?

- Data in the system stored in Data Base
- Data Access Classes (DACs) to retrieve data from the database
- Based on the same concepts of how SQL queries work
  - Relationships
  - Joins

Data Access Classes

- DAC: Similar to database, but not identical
- Other terms
  - BQL
  - Schema

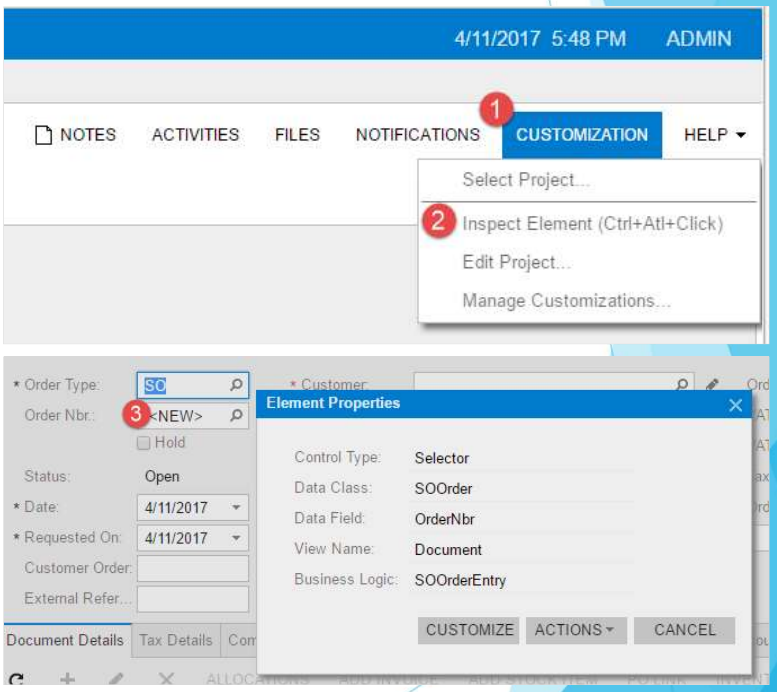


Generic inquires requirements

- Find in which Data Access Class (DAC) data is stored
- Find the key fields for these Data Access Classes to be joined

Finding Field Names

- Customizer role required
- Click “Inspect Element”
- Click field you want to learn about
  - Data Class (table)
  - Data Field (field name)
- Natural key (CD) versus surrogate/machine key (ID)

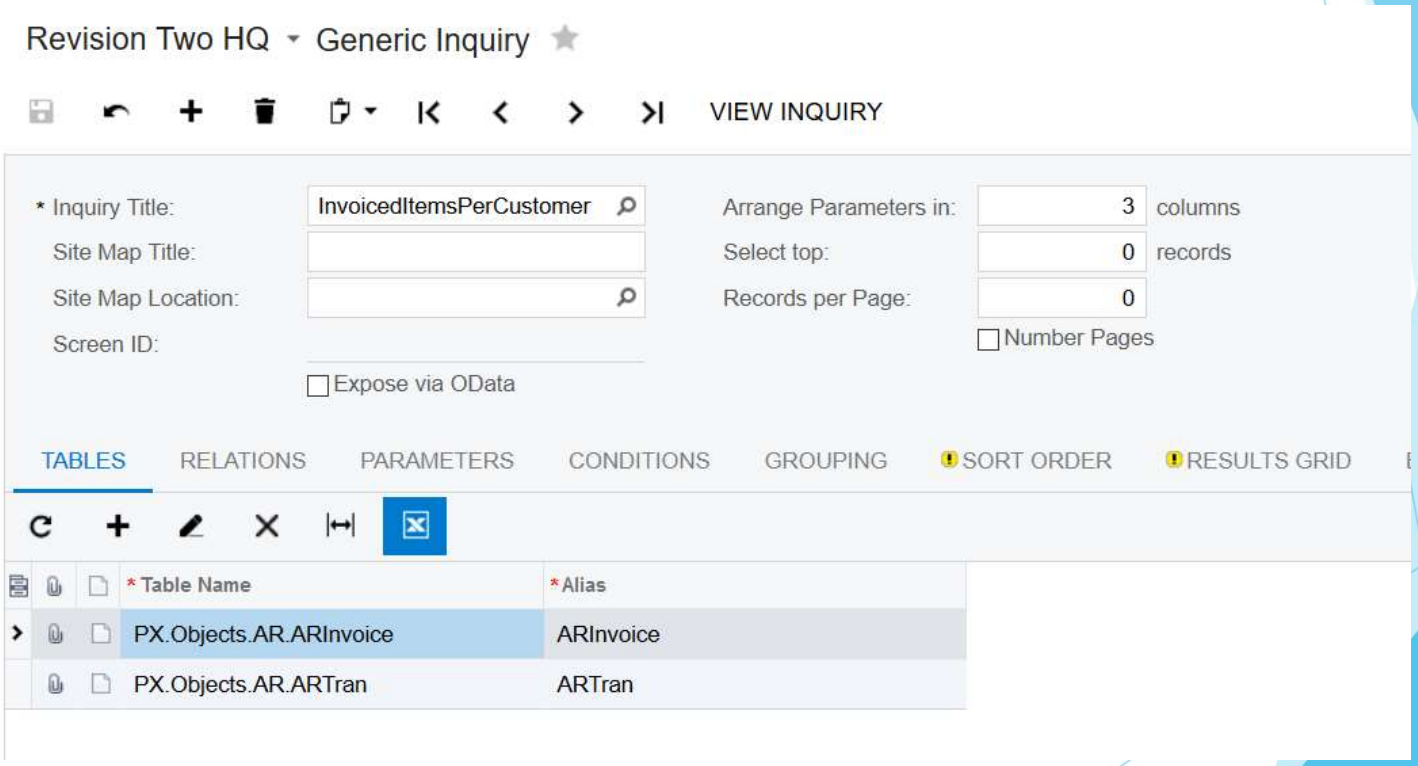


Acumatica
THE CLOUD ERP

Exercise 1: It’s as simple as that

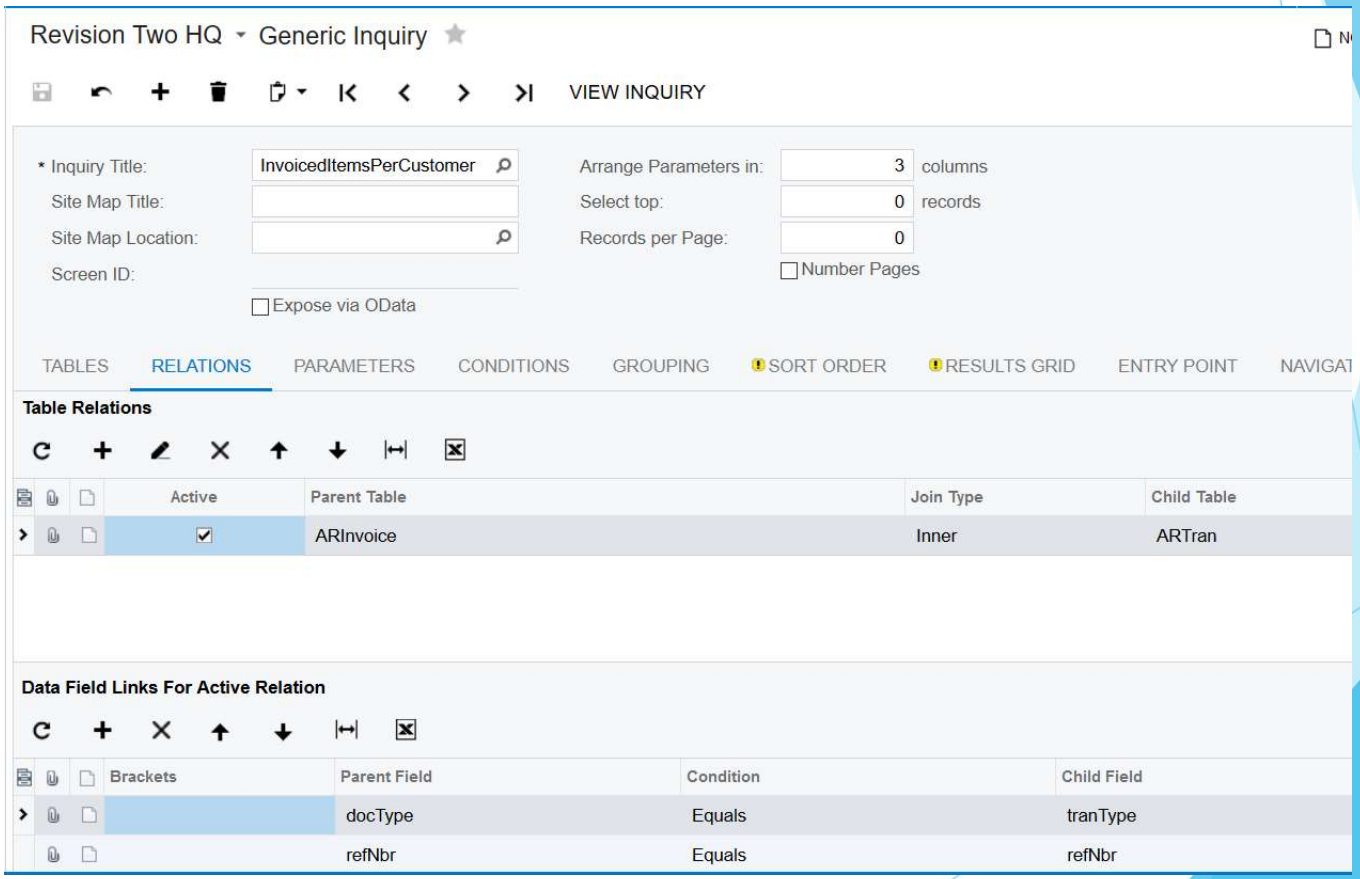
- Scenario: Customer wants to know which Customer buys which Products the most
- Create a new GI called Invoiced items per Customer
- Use Inspect element to find the DACs that store the data needed
- Find the key fields to join the tables

Generic Inquiry – Tables



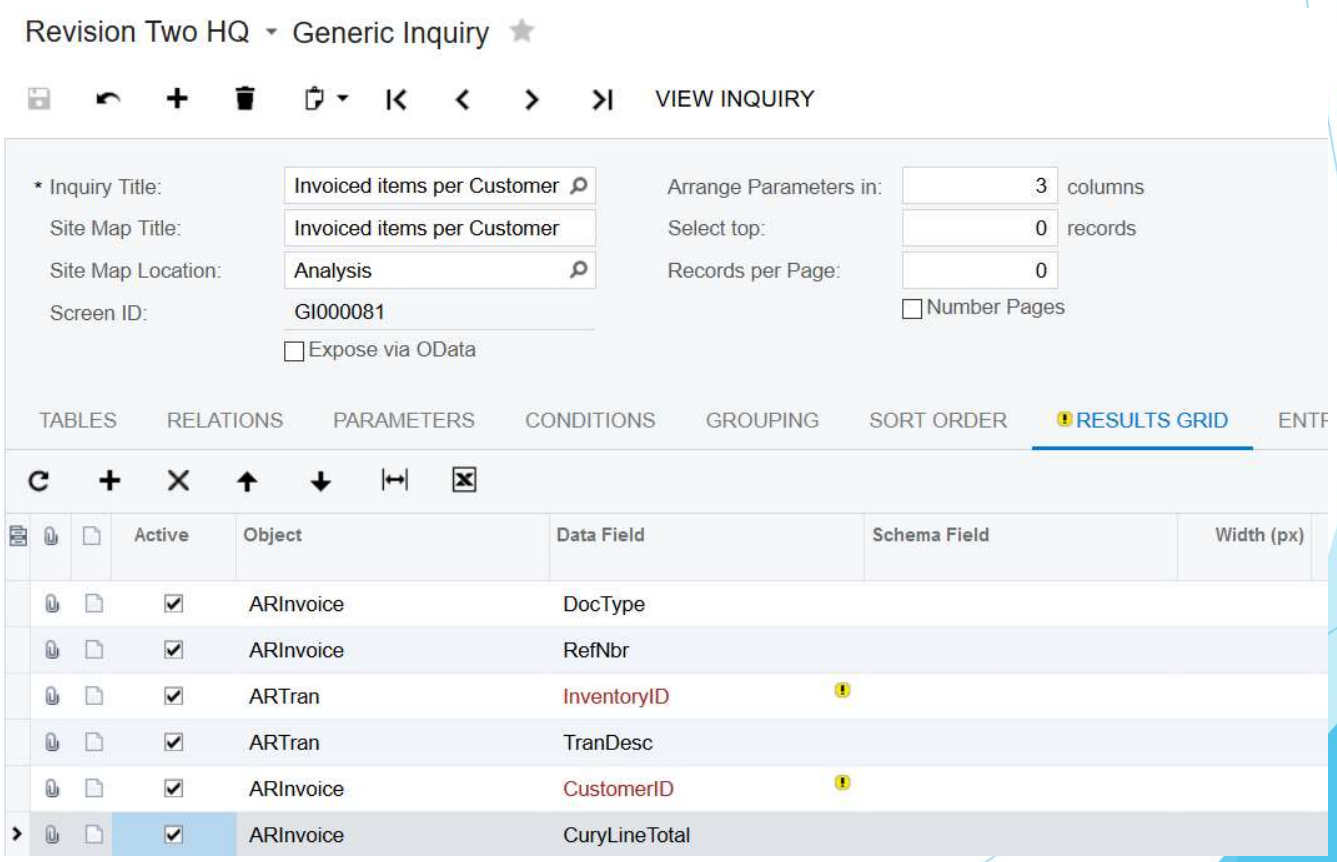
Acumatica
THE CLOUD ERP

Generic Inquiry – Relations



Acumatica
THE CLOUD ERP

Generic Inquiry – results grid



Acumatica
THE CLOUD ERP

Poll question1

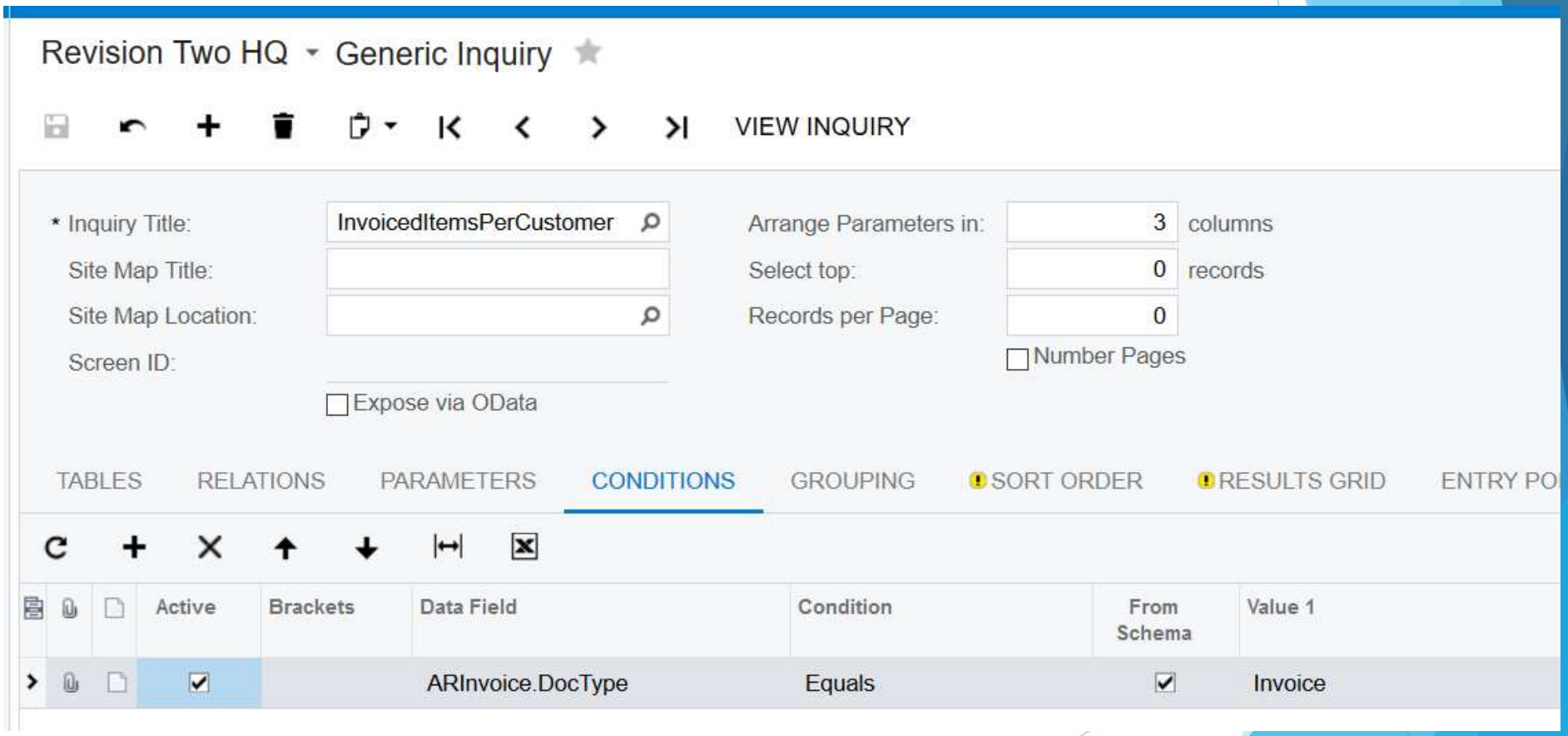
What does DAC stand for in Acumatica ERP?

Acumatica
THE CLOUD ERP

Exercise 2: Build your GI gradually

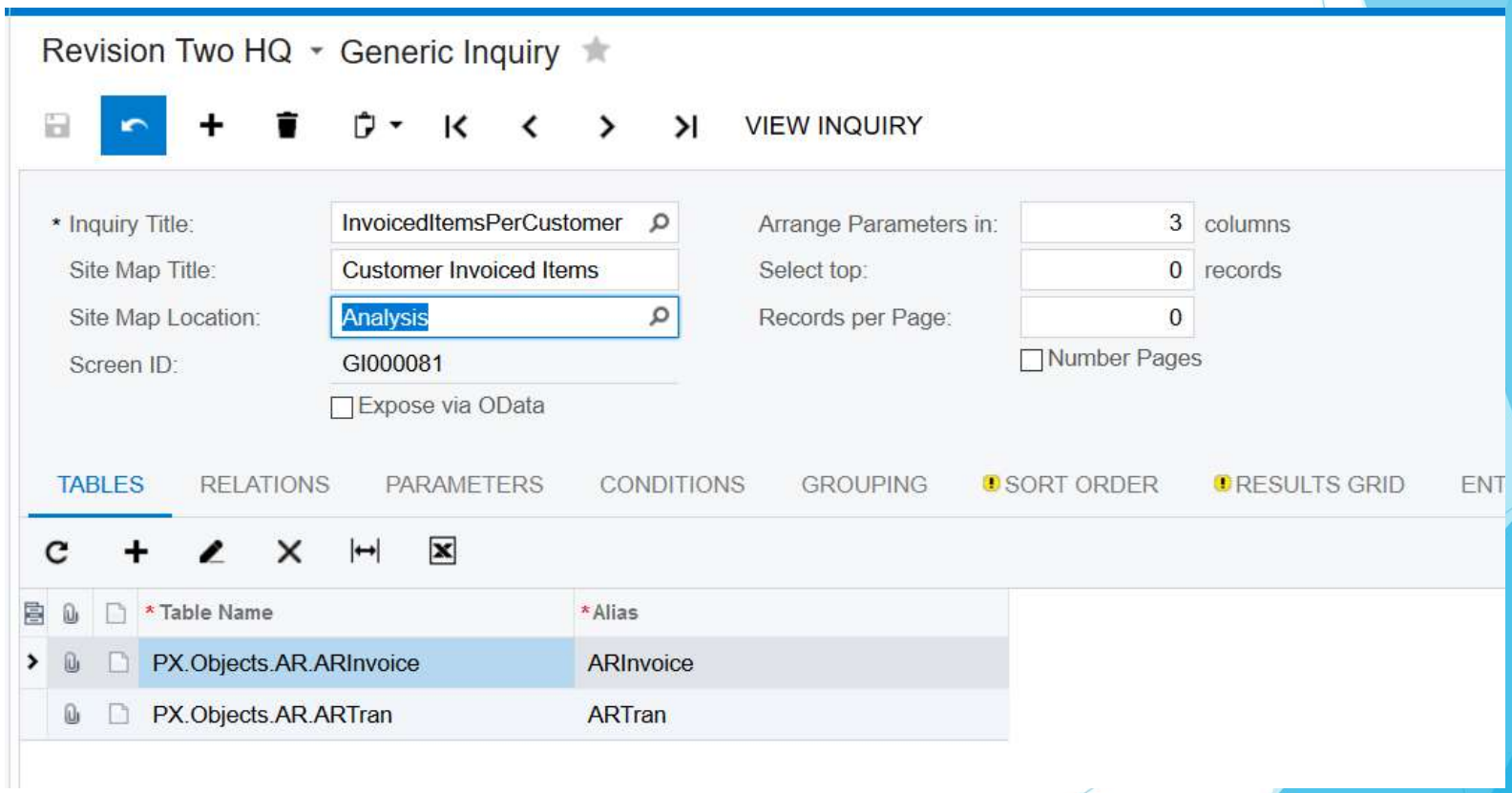
- Show documents of type Invoice only
- Add the GI to a Site Map location
- Add sorting order to the GI
- Group records

Generic Inquiry – Conditions



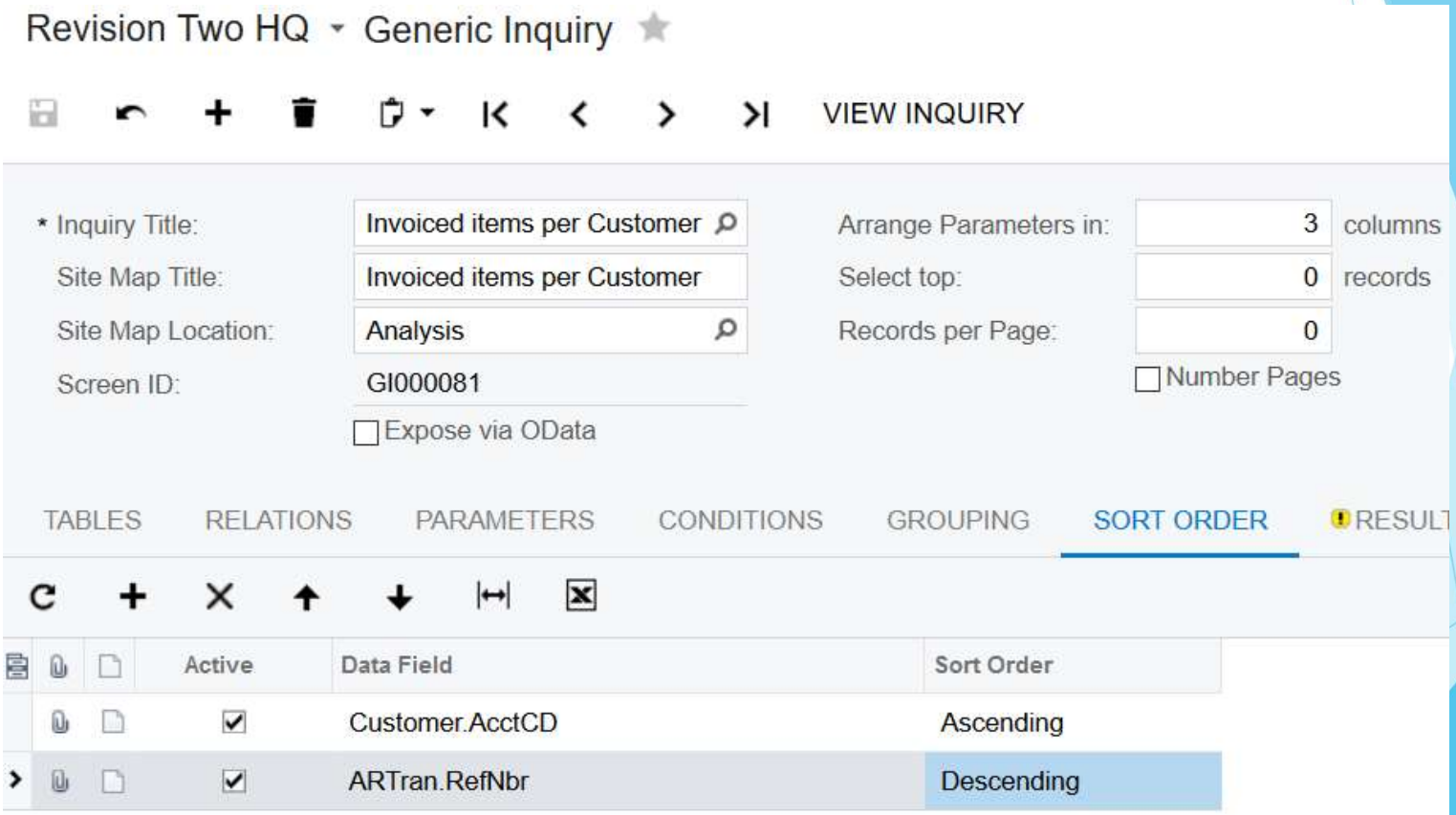
Acumatica
THE CLOUD ERP

Generic Inquiry – location



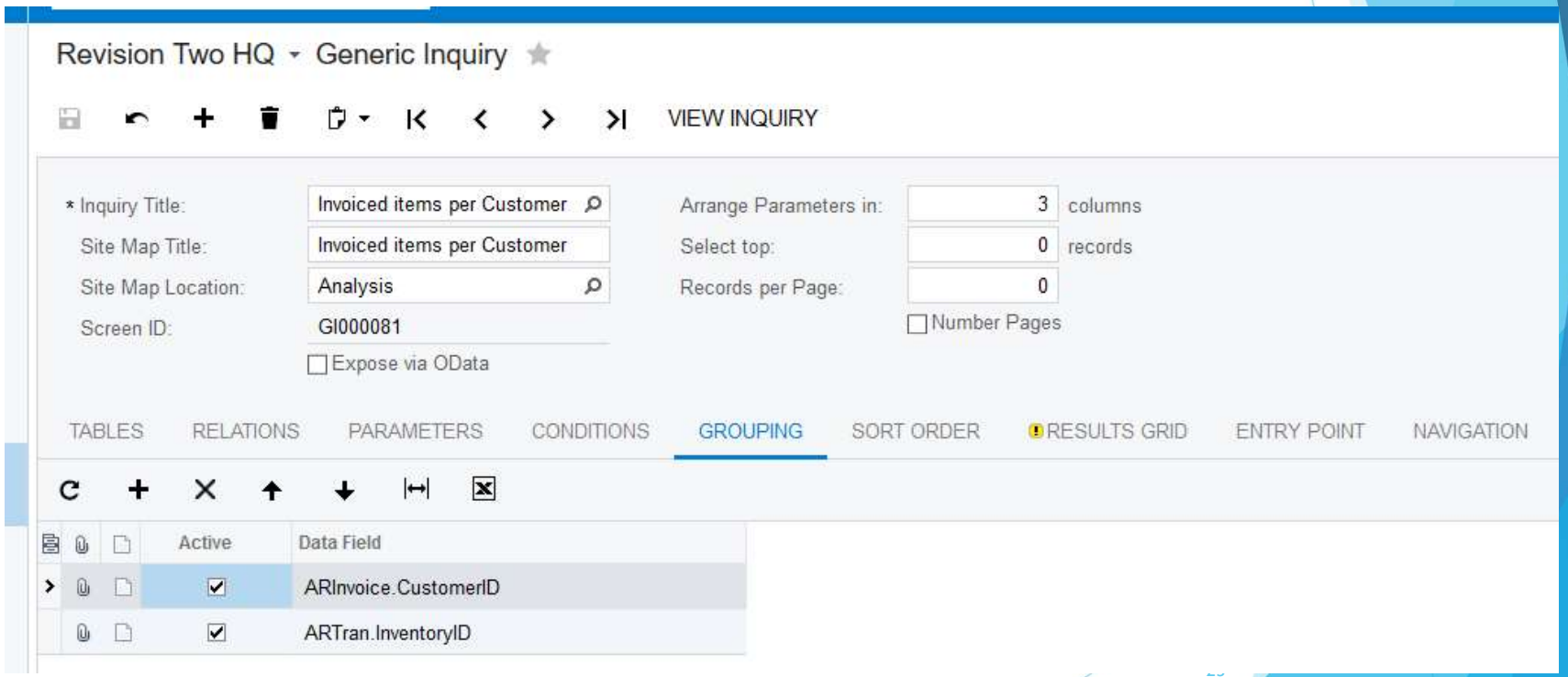
Acumatica
THE CLOUD ERP

Generic Inquiry – sort order



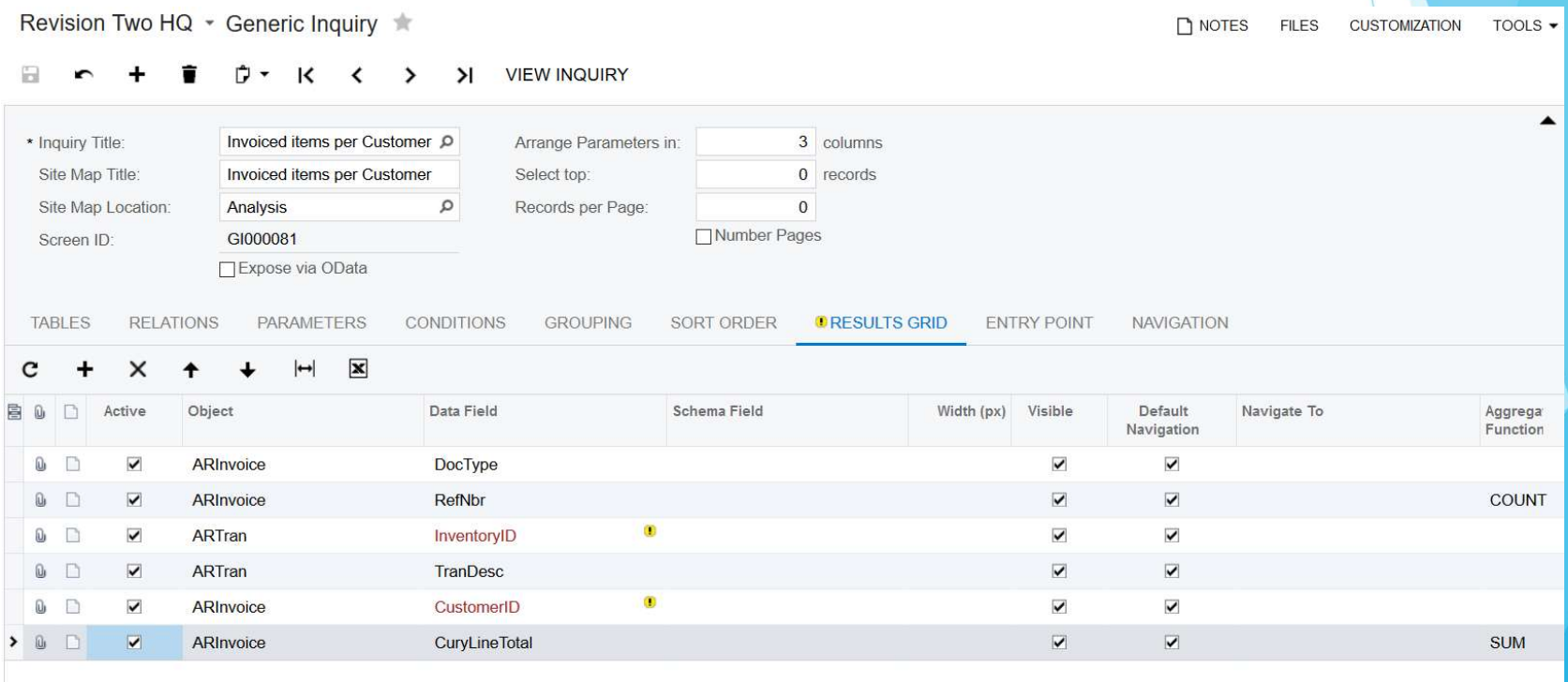
Acumatica
THE CLOUD ERP

Generic Inquiry – Grouping



Acumatica
THE CLOUD ERP

Generic Inquiry – aggregate function



Acumatica
THE CLOUD ERP

Poll question 2

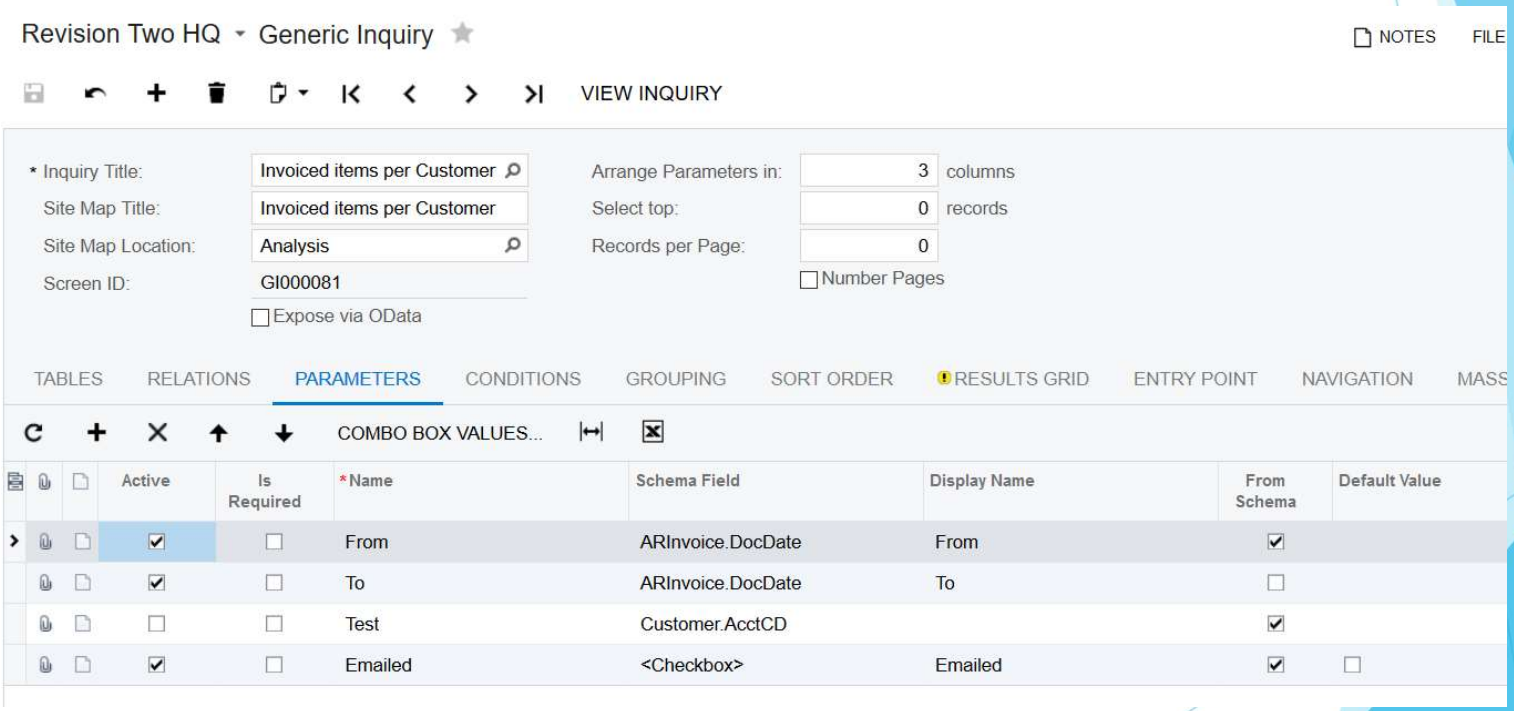
What feature can be used to find underlying Data Access Classes for data fields

Acumatica
THE CLOUD ERP

Exercise 3: close to a pro

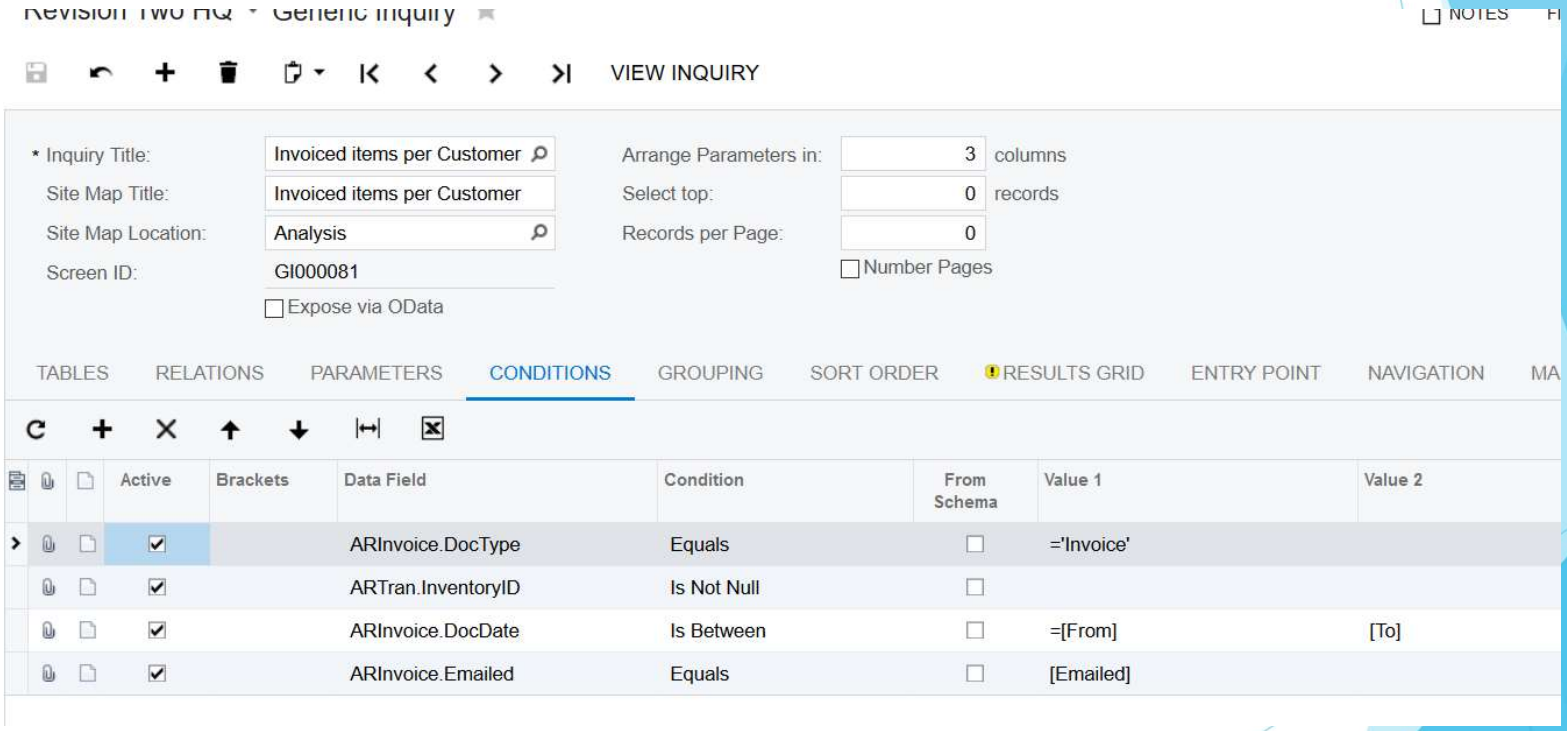
- Add parameters
- Add appropriate conditions for parameters

Generic Inquiry – parameters



Acumatica
THE CLOUD ERP

Generic Inquiry – conditions with parameters



Acumatica
THE CLOUD ERP

Poll question 3

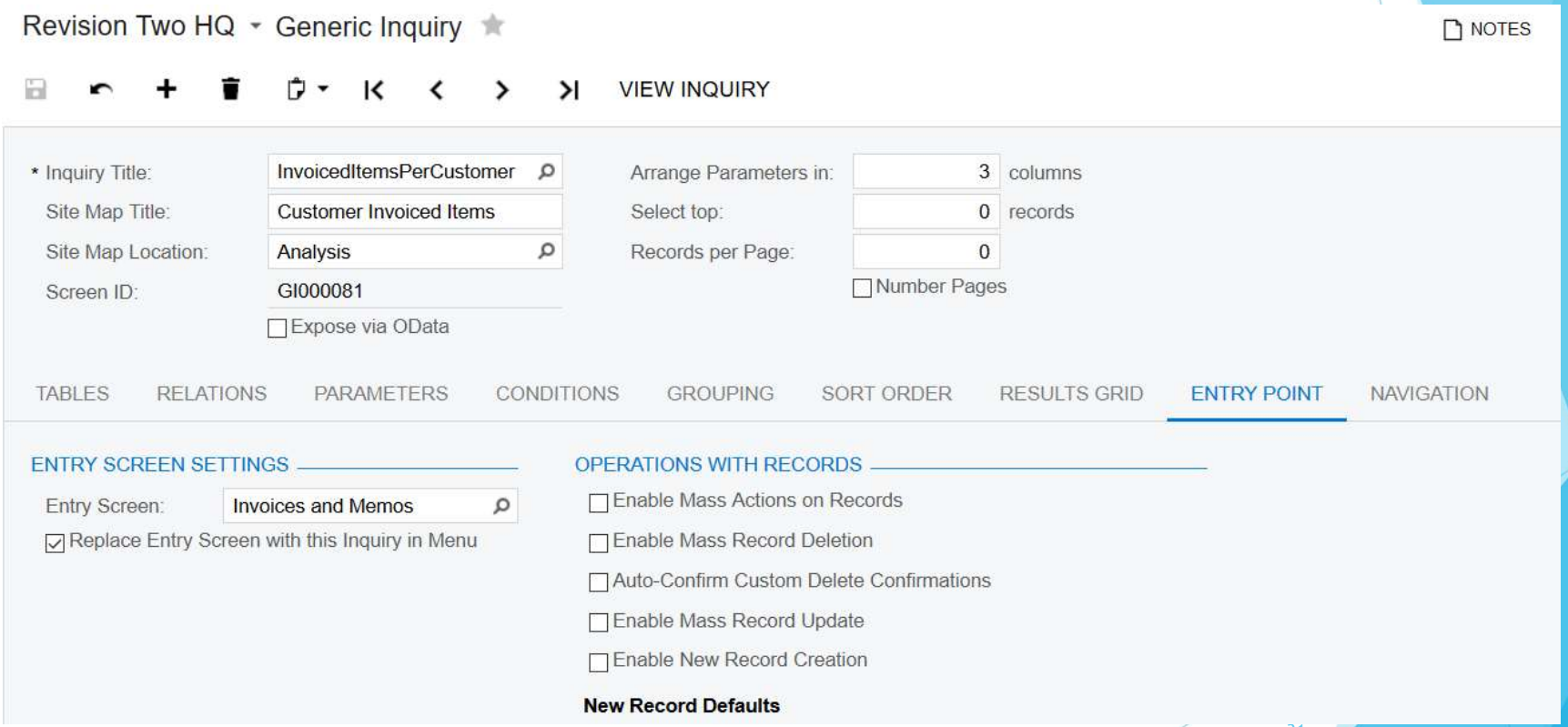
The inquiry parameters used in the inquiry conditions must be specified in

Acumatica
THE CLOUD ERP

Exercise 4: You are a Pro!

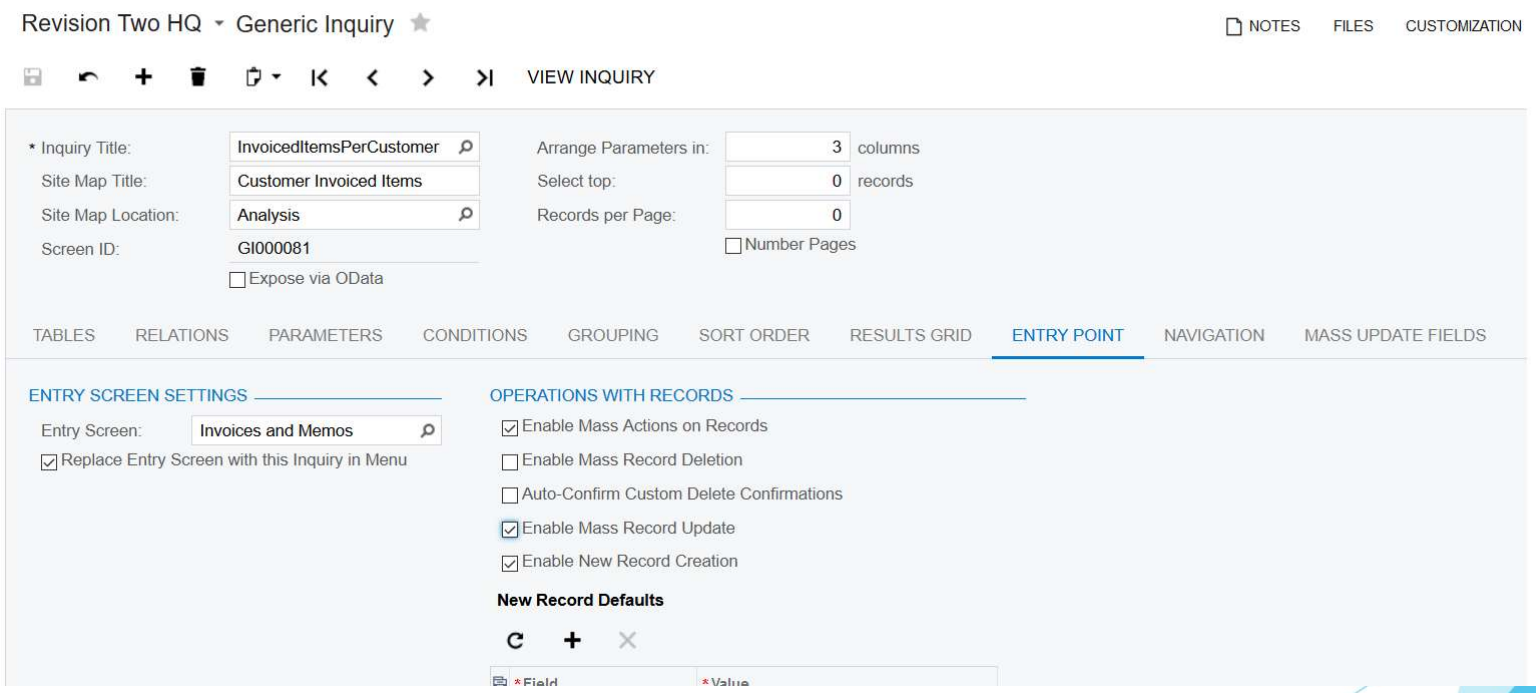
- Add entry screen
- Set mass actions

Generic Inquiry – Entry Point



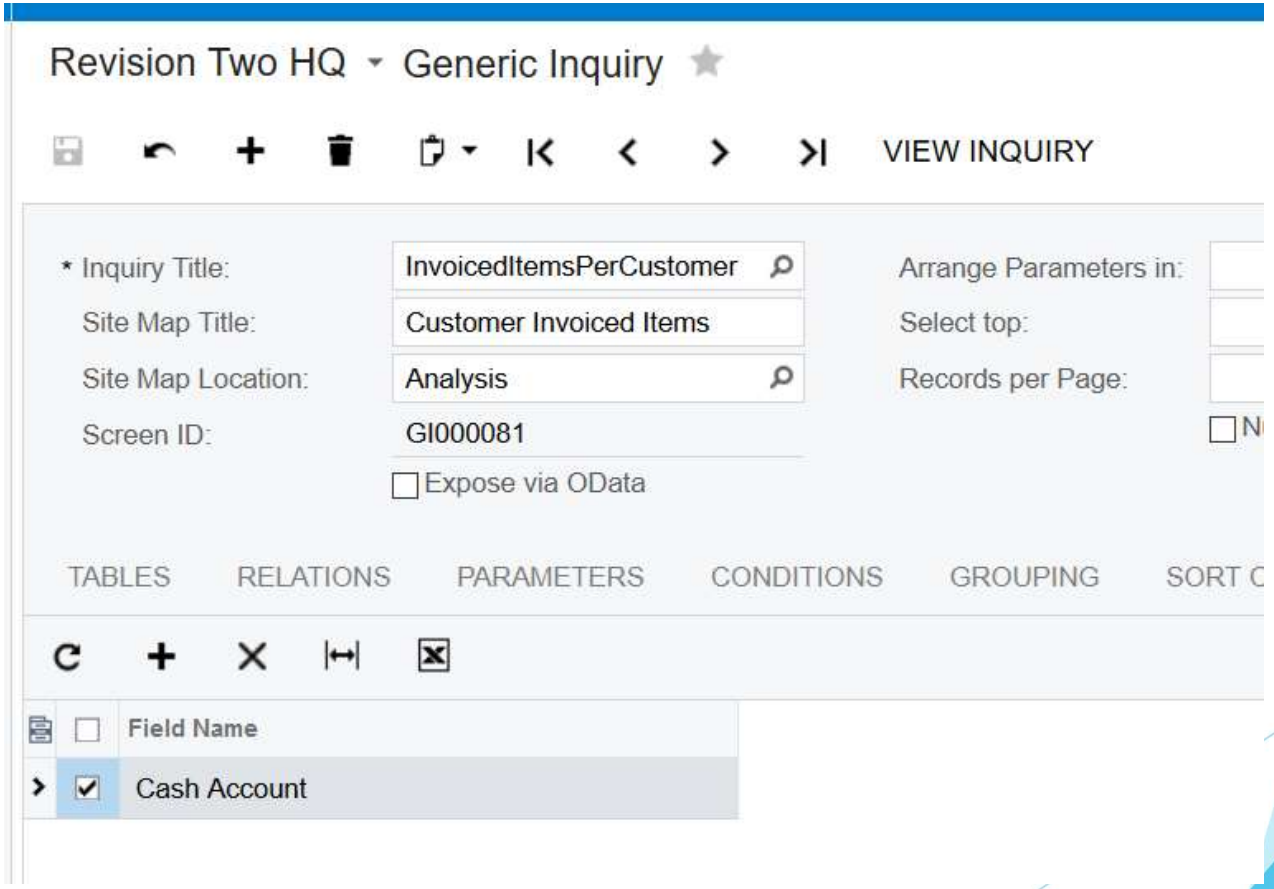
Acumatica
THE CLOUD ERP

Generic Inquiry – Mass Actions



Acumatica
THE CLOUD ERP

Generic Inquiry – Mass update fields

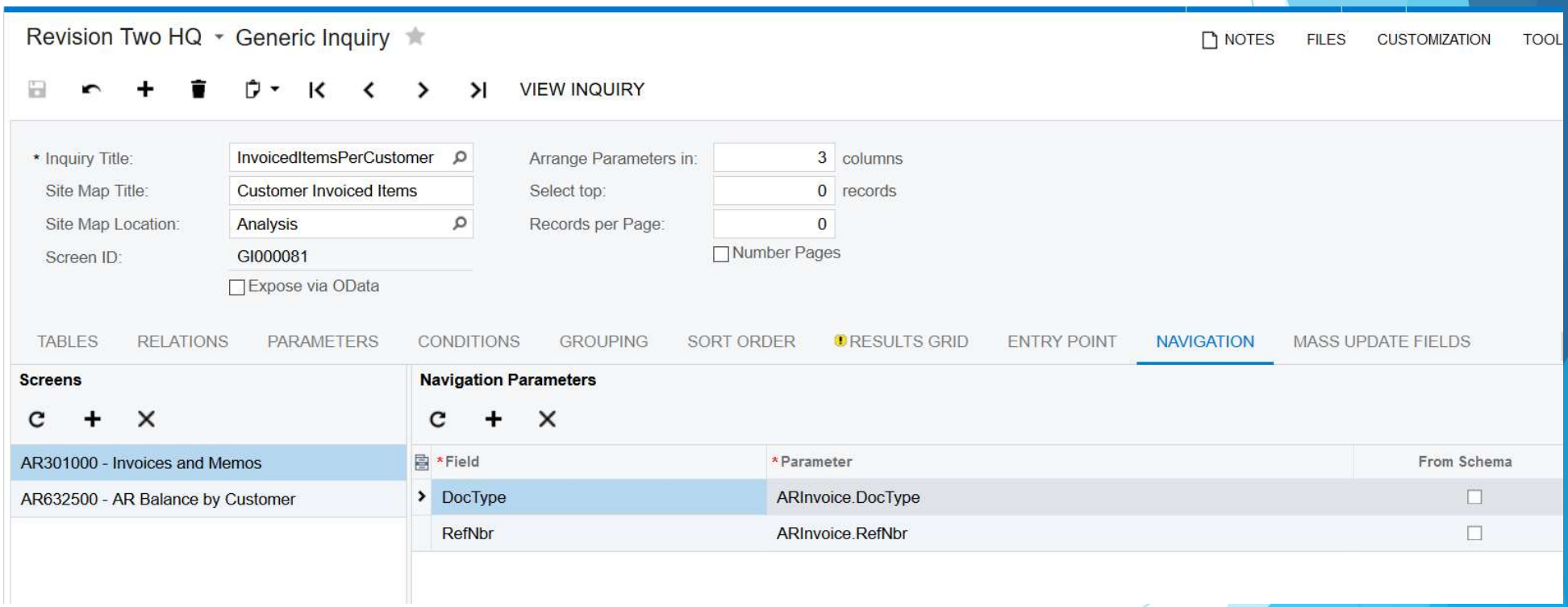


Acumatica
THE CLOUD ERP

Exercise 5: Level Expert!

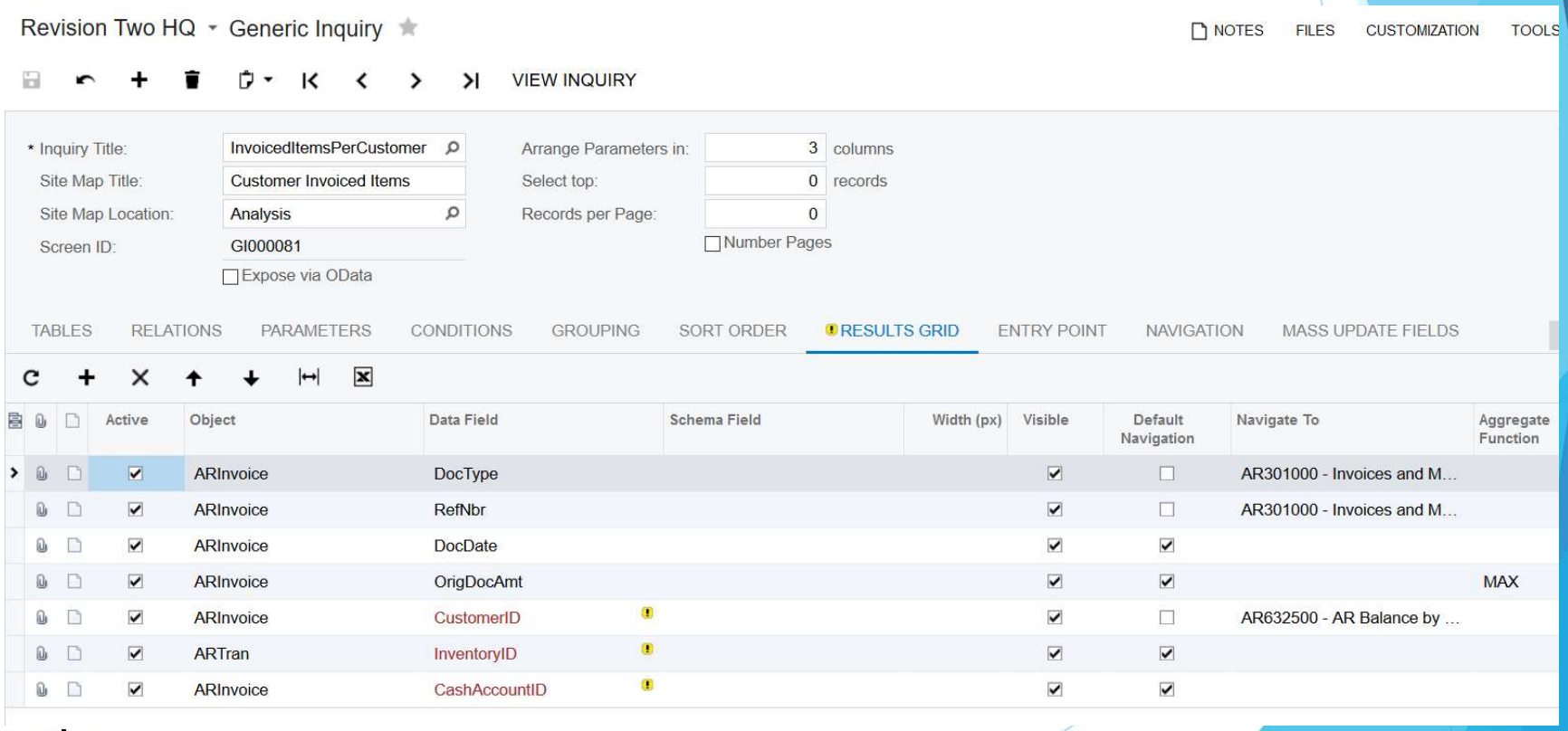
- Add navigation to a different form
- Update results grid accordingly

Generic Inquiry – navigation



Acumatica
THE CLOUD ERP

Generic Inquiry – results grid with navigation

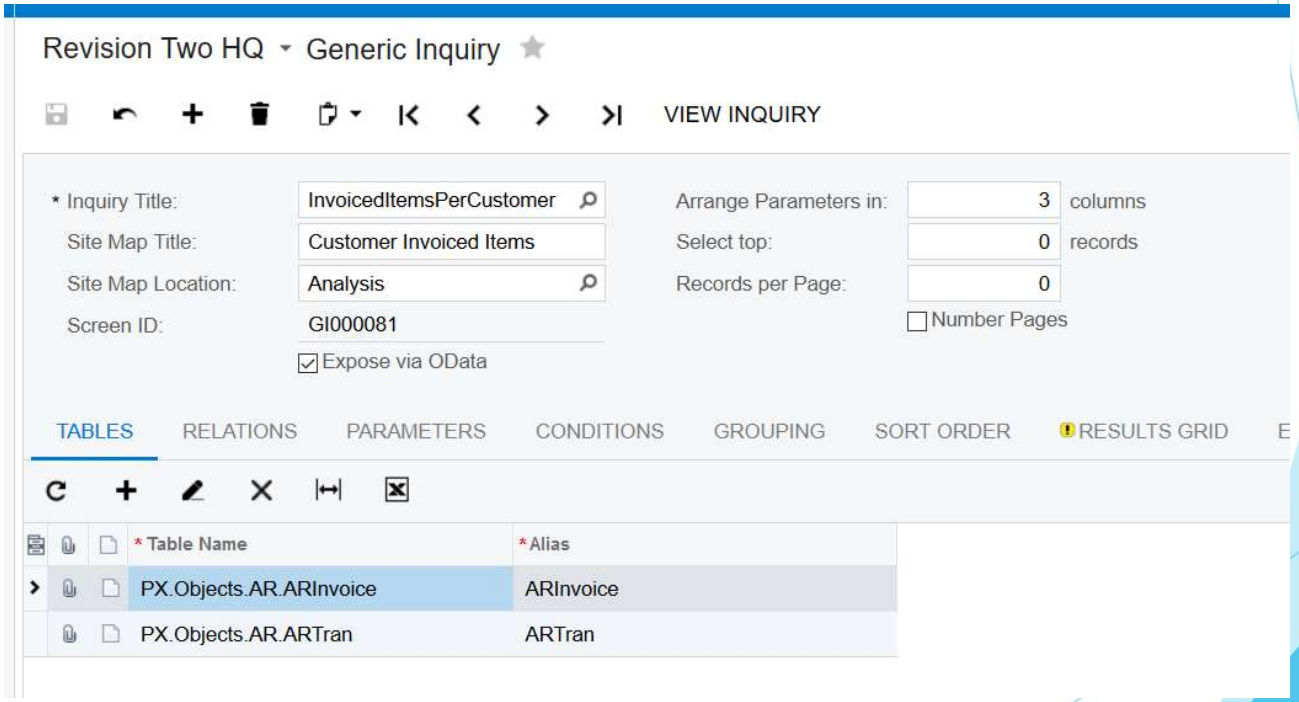


Acumatica
THE CLOUD ERP

Exercise 6: Level Master!

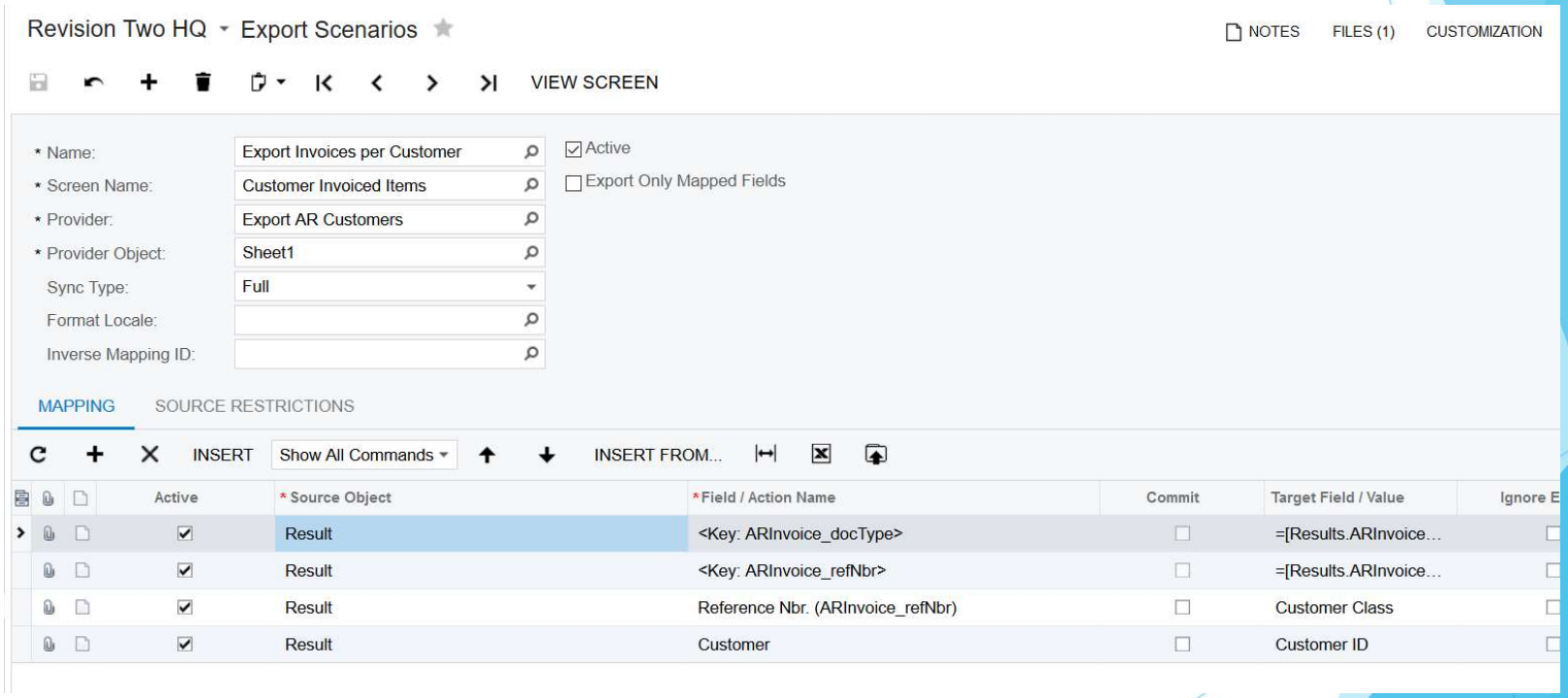
- Expose GI to odata
- Use Gi as a screen source for export scenario

How to use gi with odata



Acumatica
THE CLOUD ERP

Use gi in an export scenario



Acumatica
THE CLOUD ERP

KEY POINTS to remember

- Don’t have to be a developer or DB Admin to build generic inquires
- Inspect element feature
- Recognize key fields (comes with experience!)
- Build the gi gradually
- DACs do not necessarily match actual tables in data base
- Acumatica uses virtual dacs also that get data at run-time and as such do not display values in a generic inquiry
- Gis can be exposed to odata
- to schedule an export of data from multiple screens, use the Gi as a source screen in an export scenario

Additional exercises:

- Show closed financial periods
- Set the current default period in a parameter
- Using the @me condition
- Showing attributes on GI
- Restriction groups and Gis

Day 2: Report Designer

Overview of Report Designer and Reports

Acumatica
THE CLOUD ERP

Goals for the day

- Get familiar with Report Designer application
- Create and modify existing reports

Objectives

In this lesson you will learn how to...

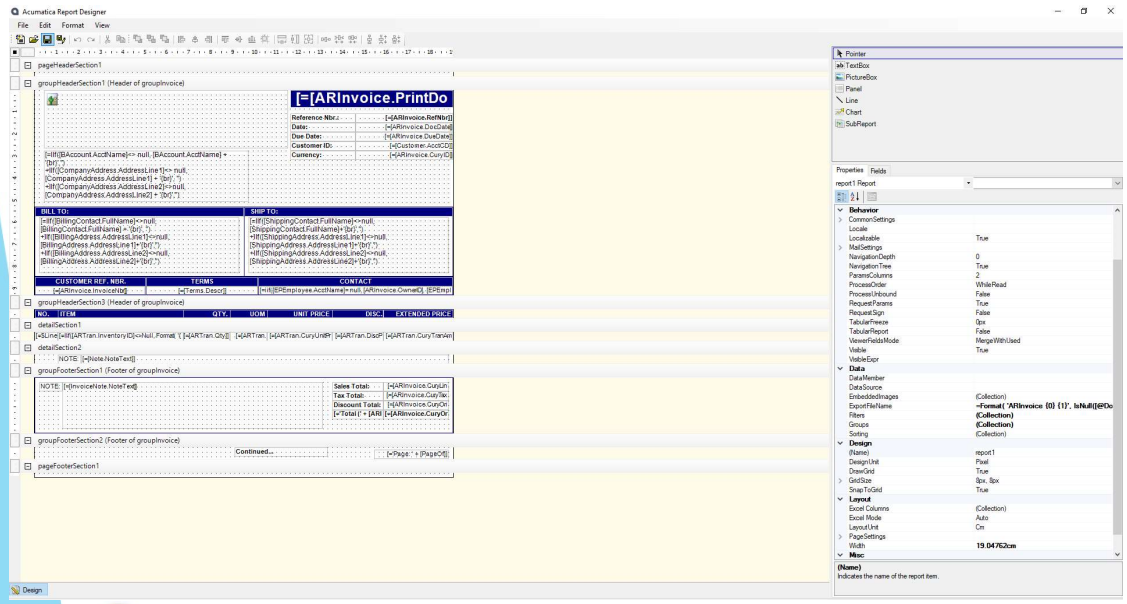
- Understand Report structure
- Modify existing reports
- Create new reports

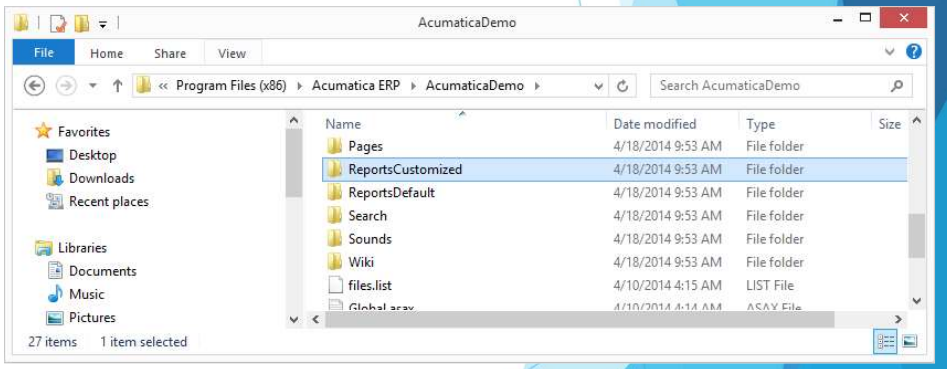
Agenda

- Report Designer overview
- Modifying a report with Report Designer
- Creating a report in Report Designer
- Scheduling reports

What is Report Designer?

Report Designer is an Acumatica proprietary application that provides visual tools for creating and modifying reports for use in Acumatica ERP





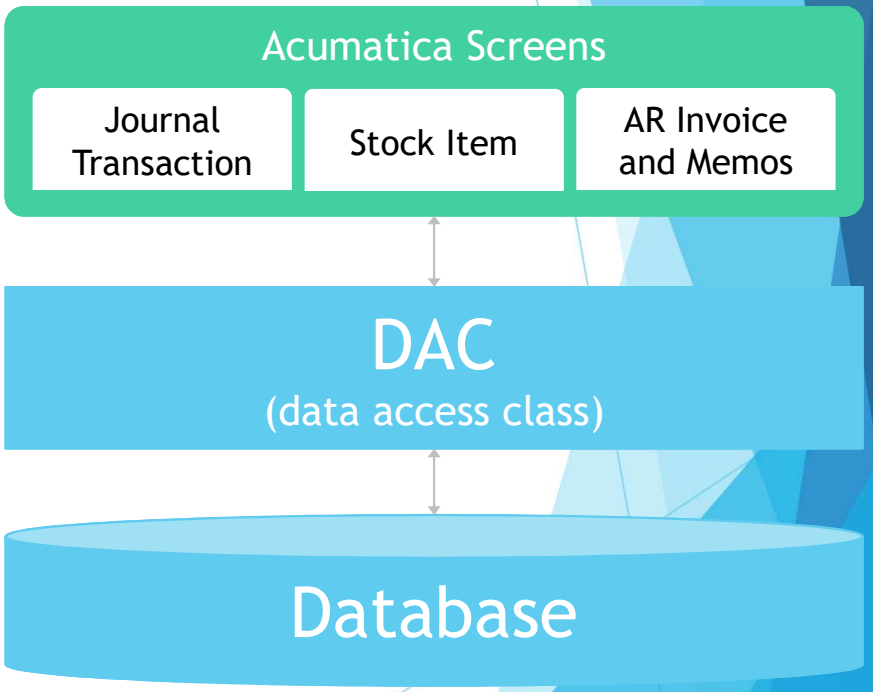
Acumatica
THE CLOUD ERP

How does it work?

- Standalone application
- Works only on Windows
- Uses Data Access Classes to retrieve data from Data Base
- Uses report engine to format the data and display the formatted output

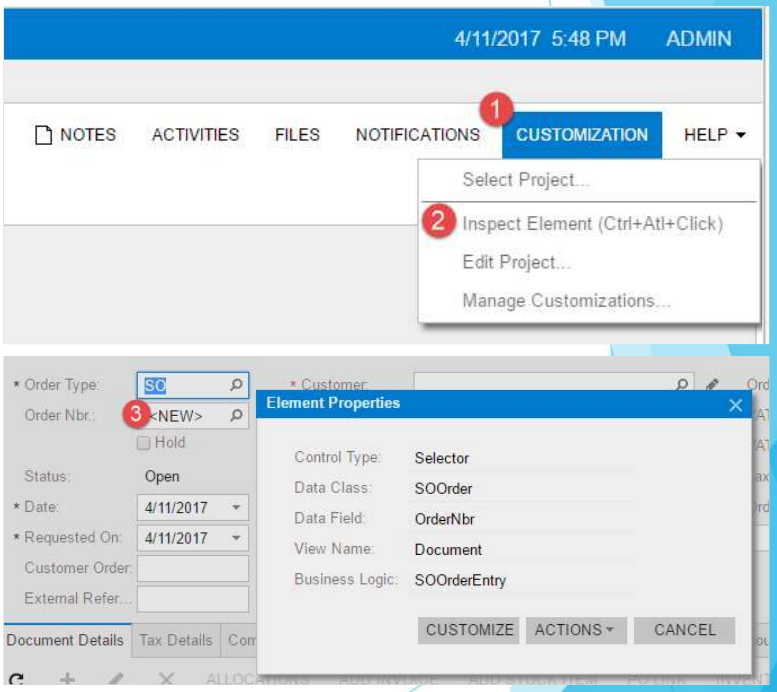
Data Access Classes

- DAC: Similar to database, but not identical
- Other terms
  - BQL
  - Schema



Finding Field Names

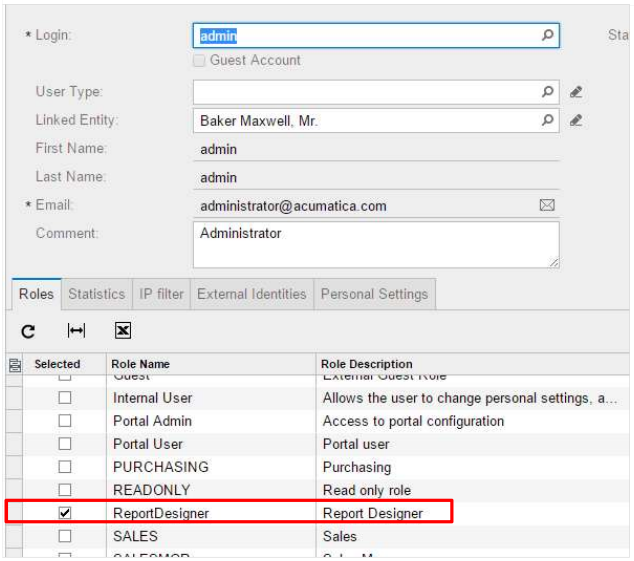
- Customizer role required
- Click “Inspect Element”
- Click field you want to learn about
  - Data Class (table)
  - Data Field (field name)
- Natural key (CD) versus surrogate/machine key (ID)

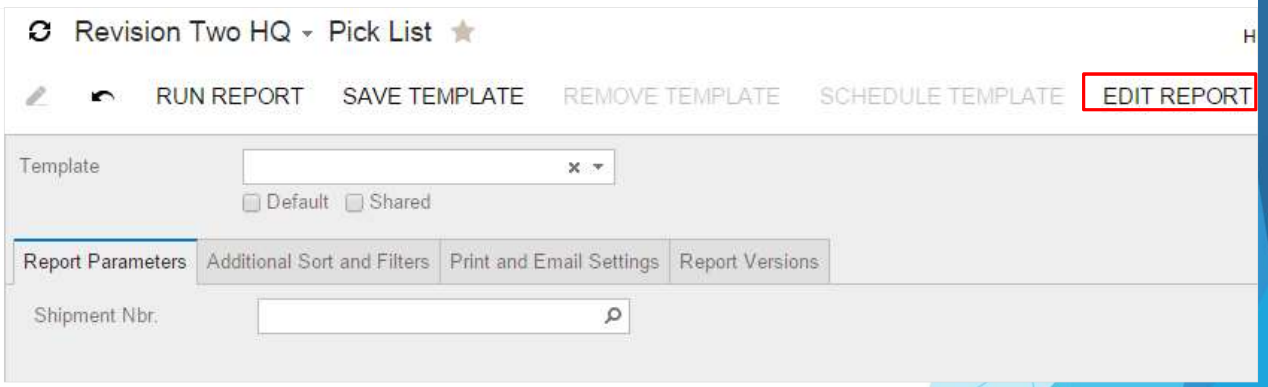


Acumatica
THE CLOUD ERP

Report Designer Role

- Allows editing reports directly from screens
  - Assign role in Configuration > User Security > Manage > Users

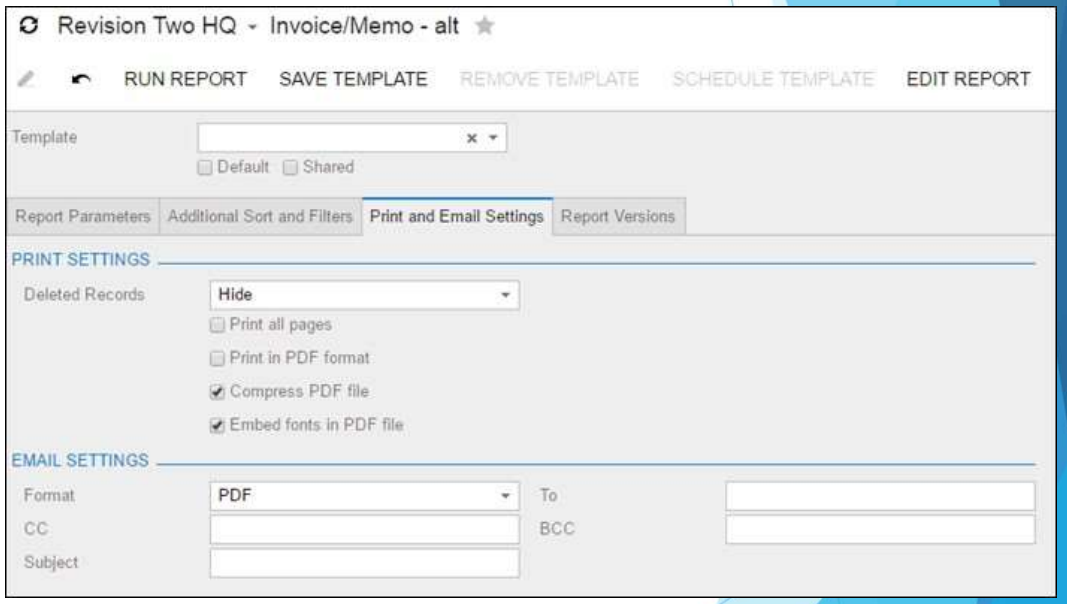




Acumatica
THE CLOUD ERP

Running an existing report

- Print and Email Settings
  - Print settings
  - Email settings
- In Report Designer
  - Activity Source
  - Template IDs



Acumatica
THE CLOUD ERP

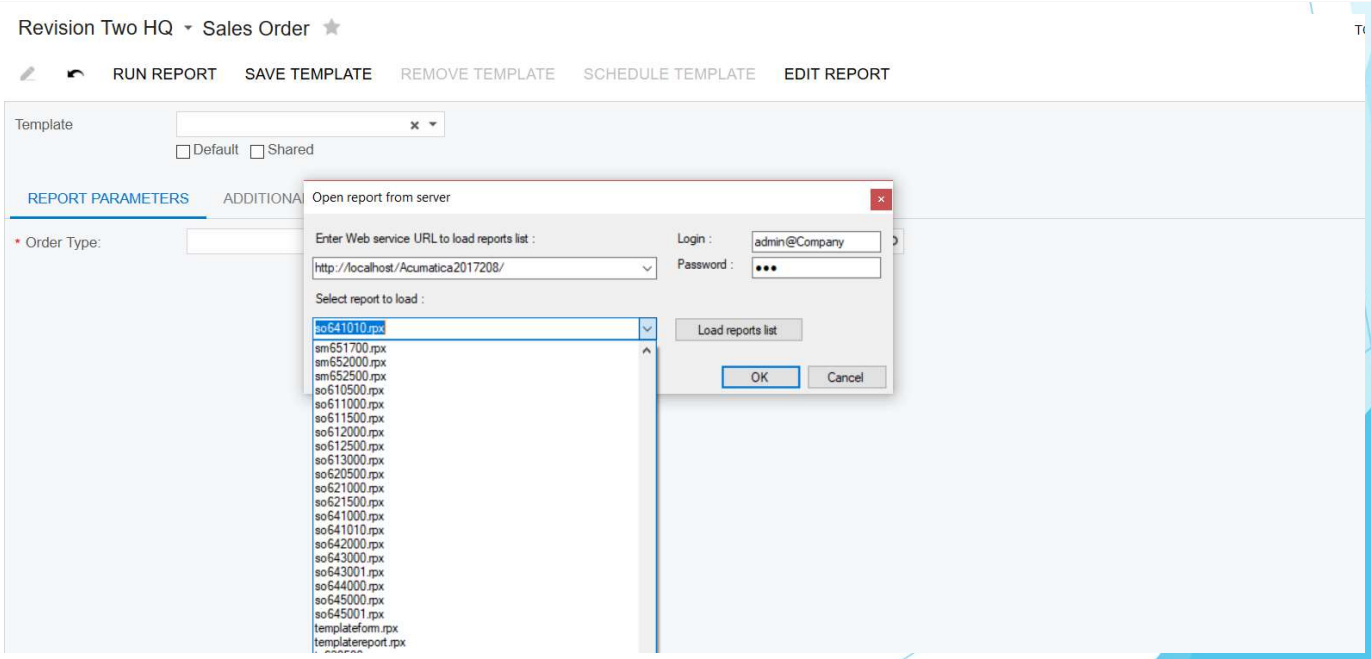
Running an existing report

- Additional Sorts and Filters
  - Sorting conditions: Shows existing and lets you over-ride
  - Filtering conditions: Add to existing filters

Acumatica
THE CLOUD ERP

Opening a report to be modified

- Directly from the ERP Instance
- Open Report Designer and enter URL and login credentials

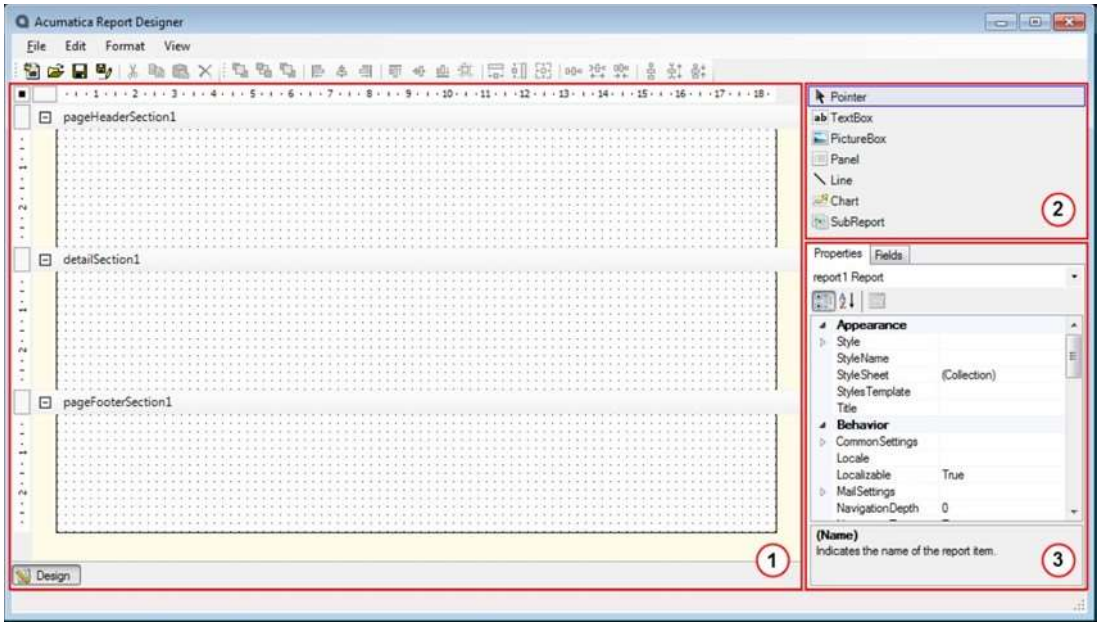


Acumatica
THE CLOUD ERP

Creating a new report

- Basic SQL knowledge on how to join tables and conditions for joining
- Structure of the Report Designer itself

Report Designer

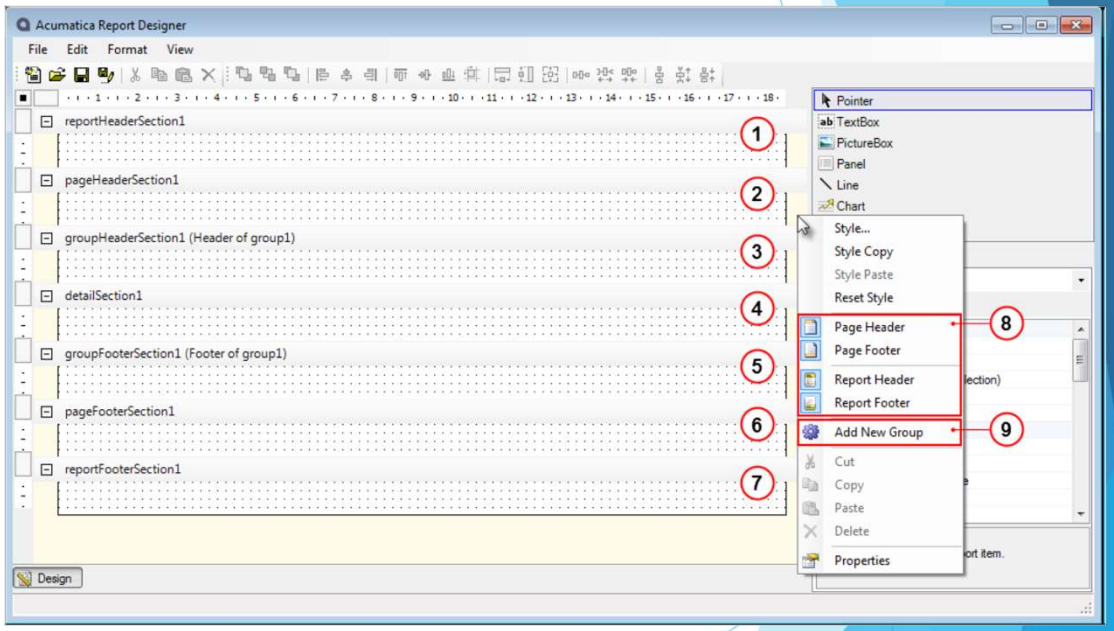


1. Design Area
2. Tools Area
3. Properties and Fields Area

Acumatica
THE CLOUD ERP

Modifying a Report Layout

- Detail
- Group header(s) and footer(s)
- Page header and footer
- Report header and footer



Acumatica
THE CLOUD ERP

Adding Fields to the Header

- Company ID
  - =Report.GetDefUI('RowCompanyBAccount.AcctName')
- Logged In User
  - =Report.GetDefUI('RowAccessInfo.DisplayName')
- Page numbers
  - Global variables in expression builder

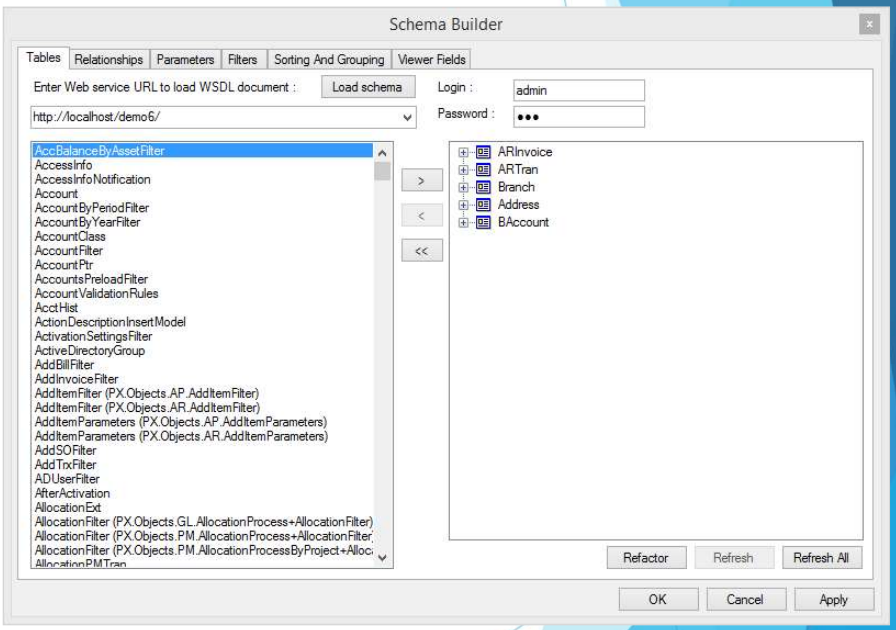
Poll question 1

What is the Report Designer used for?

Acumatica
THE CLOUD ERP

Building a Schema in Report Designer

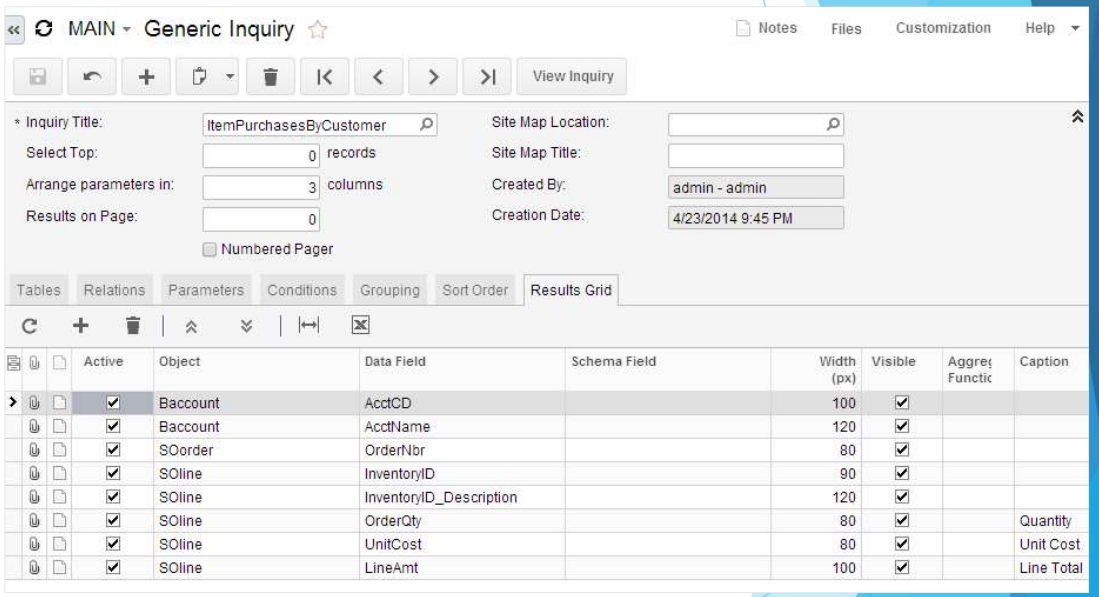
- Tables
- Relationships
- Parameters
- Filters
- Sorting and Grouping
- Viewer Fields



Acumatica
THE CLOUD ERP

Selecting Data

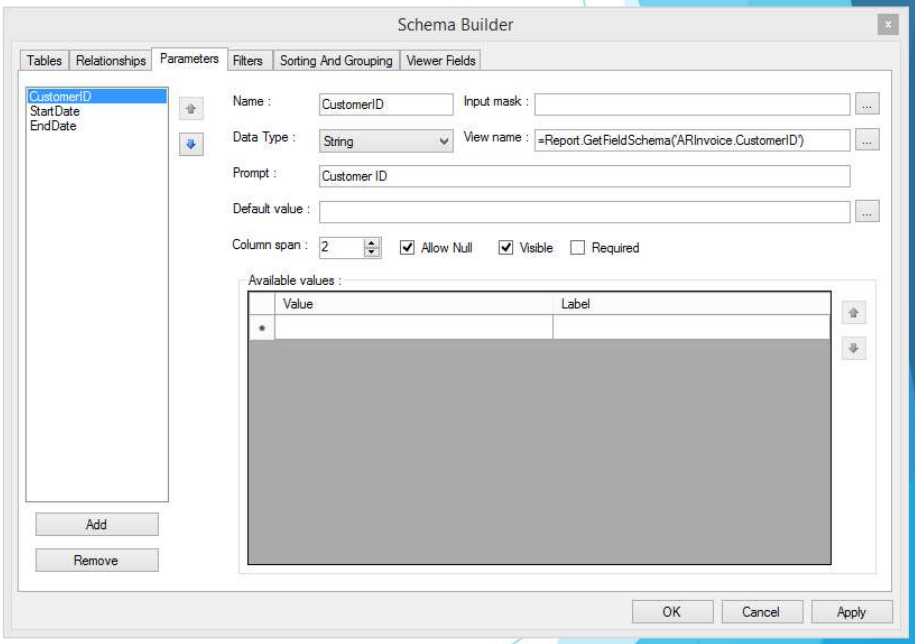
- Build ‘schema’ using the Generic Inquiry Writer
  - Run instantly without saving
  - View / search values of data fields



Acumatica
THE CLOUD ERP

Setting Parameters

- Similar to Generic Inquiry
  - Data Type
  - Report.GetFieldSchema
  - Default values



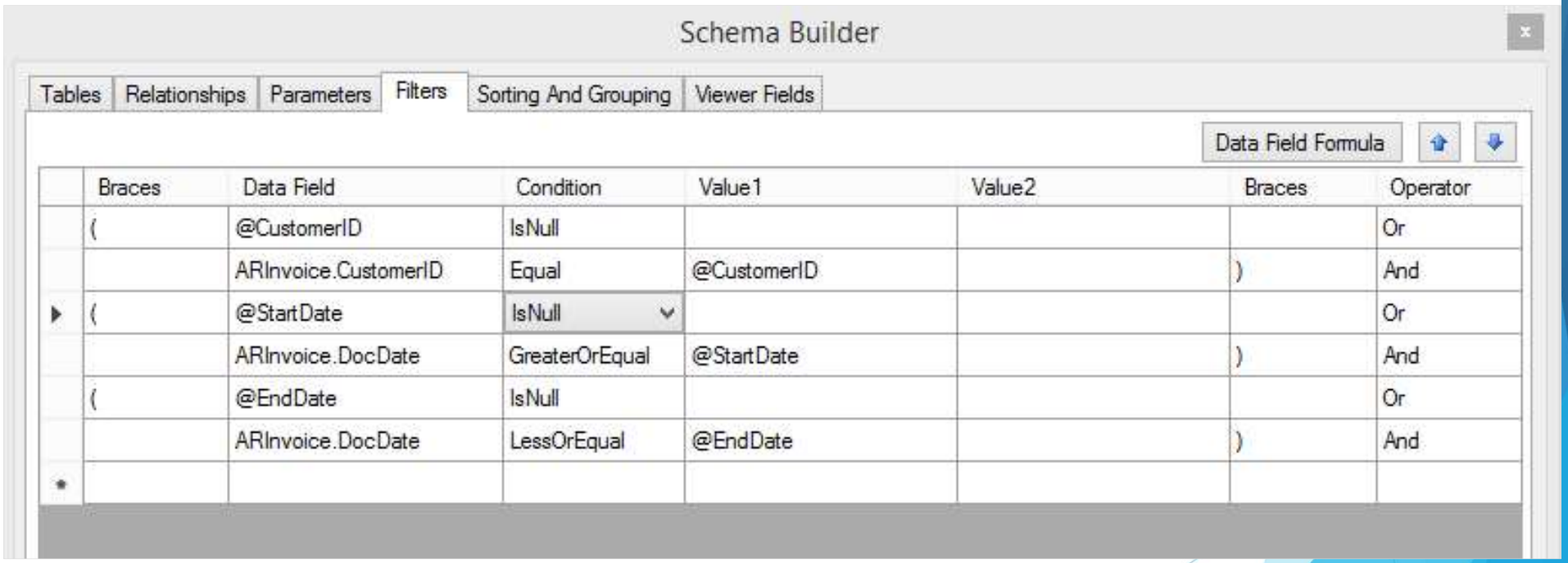
Acumatica
THE CLOUD ERP

Poll question 2

What is the Prompt field used for?

Setting Filters

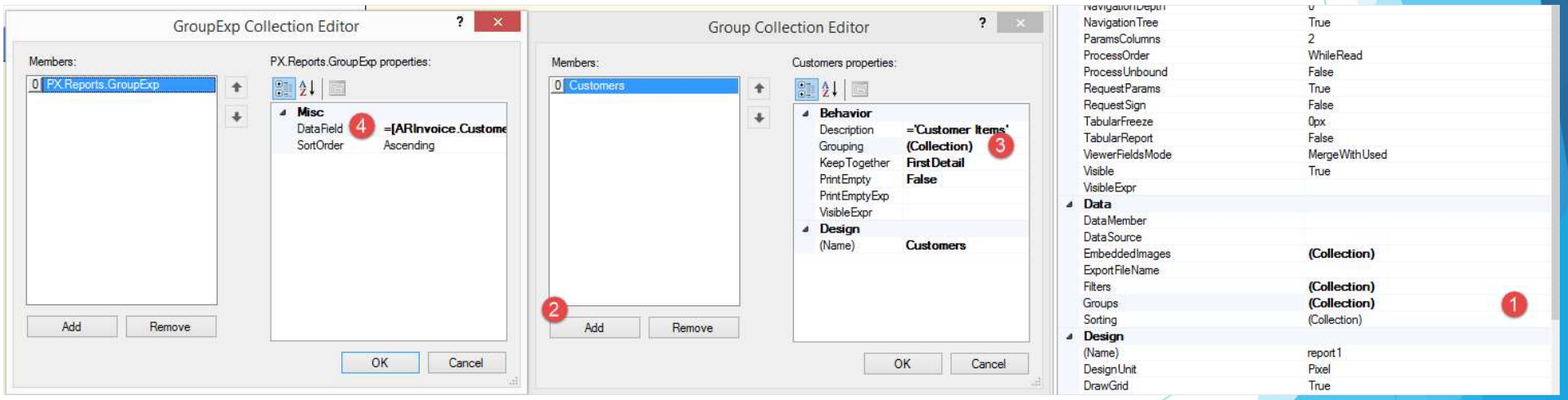
Similar to Generic Inquiry



Acumatica
THE CLOUD ERP

Sorting and Grouping

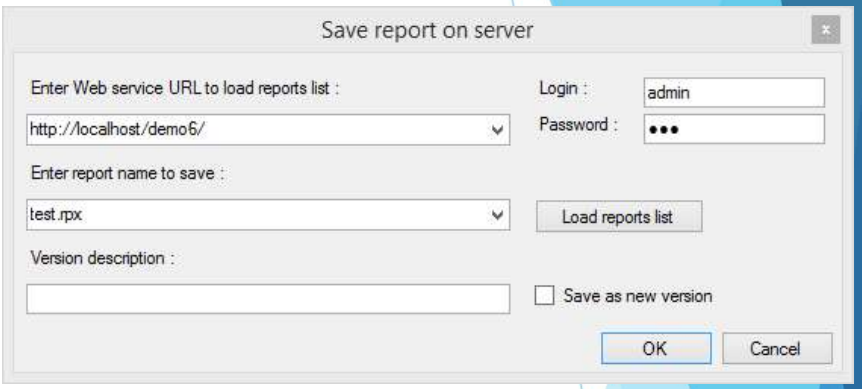
- Bigger Role than Generic Inquiry
  - Schema area
  - Report properties area

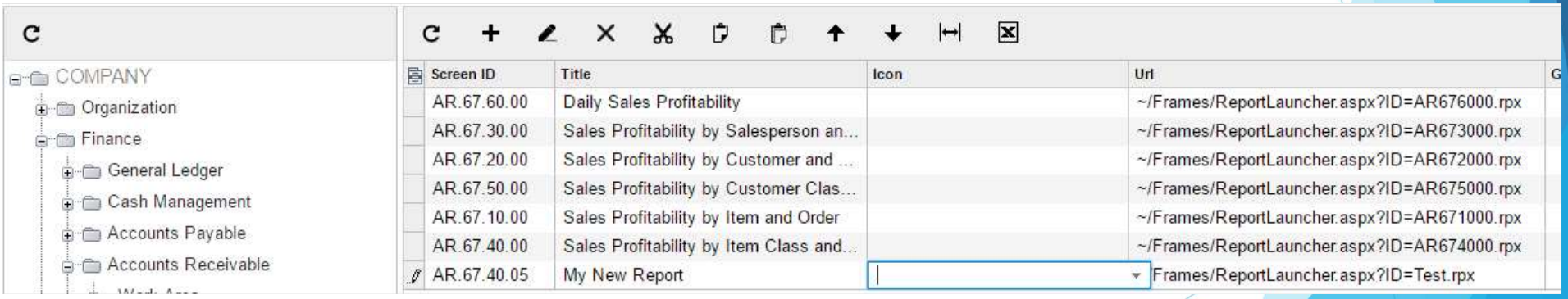


Acumatica
THE CLOUD ERP

Publish and Test

- Save to server
- Add to sitemap
- Run





Acumatica
THE CLOUD ERP

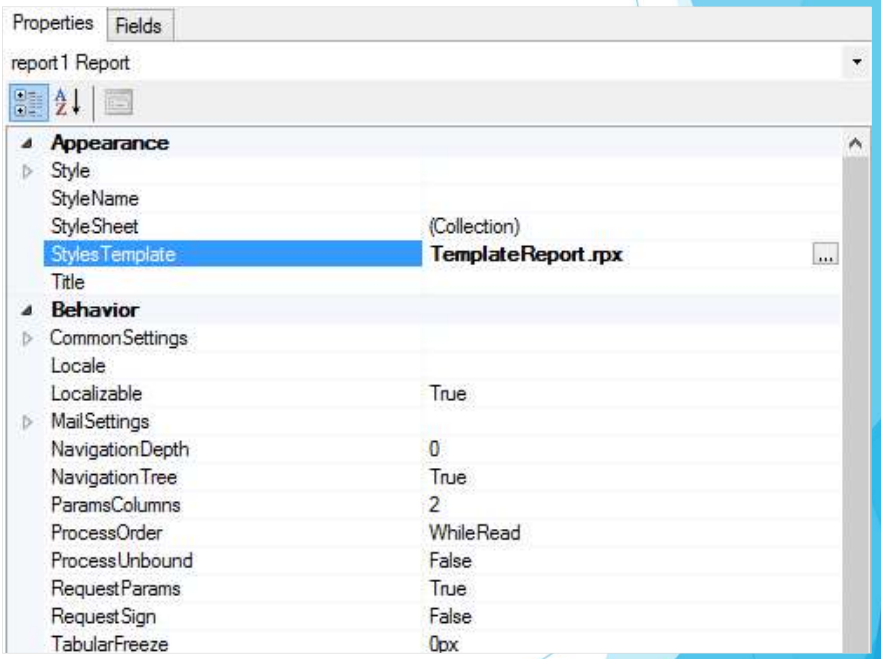
Poll question 3

To open the report from the corresponding report form in Acumatica ERP, you must have the following role assigned to you…

Acumatica
THE CLOUD ERP

Using formatting templates

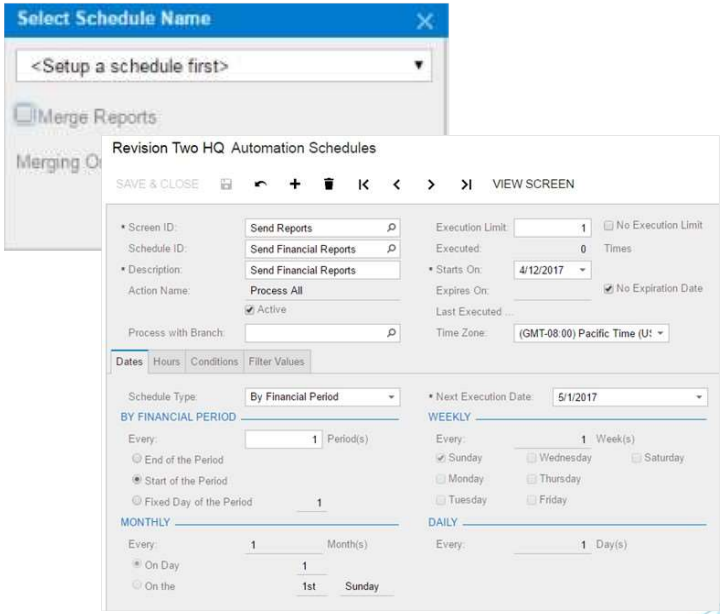
- Use Templates to:
  - Provide consistency
  - Simplify mass changes



Acumatica
THE CLOUD ERP

Scheduling Reports

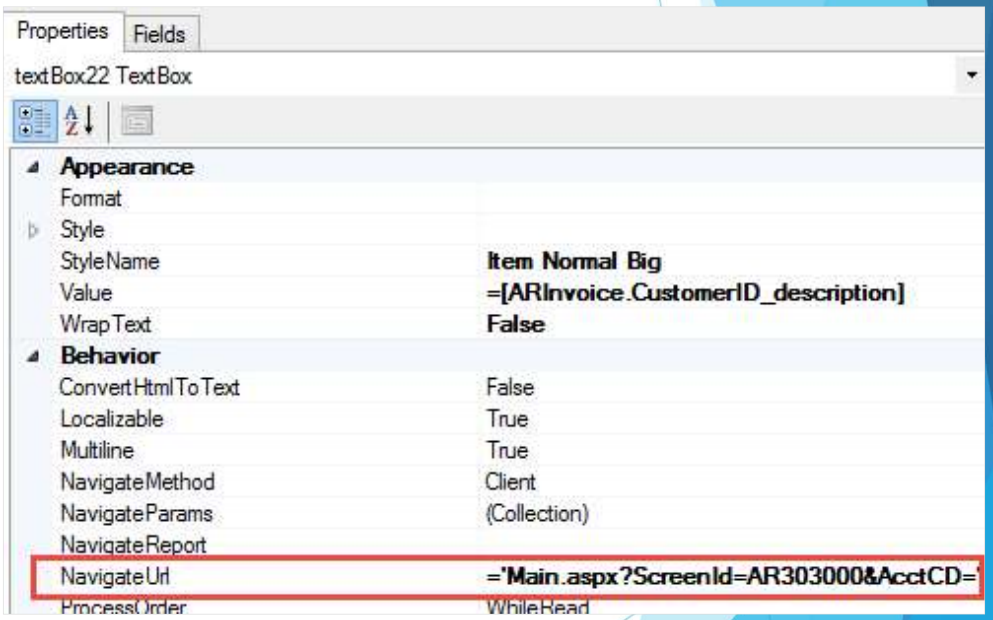
- Scheduling Reports
  - Create schedule
  - Add reports to schedule



Acumatica
THE CLOUD ERP

Linking and navigation

- Link to URL / Screen
- Link to Report
  - Pass Parameters



Acumatica
THE CLOUD ERP

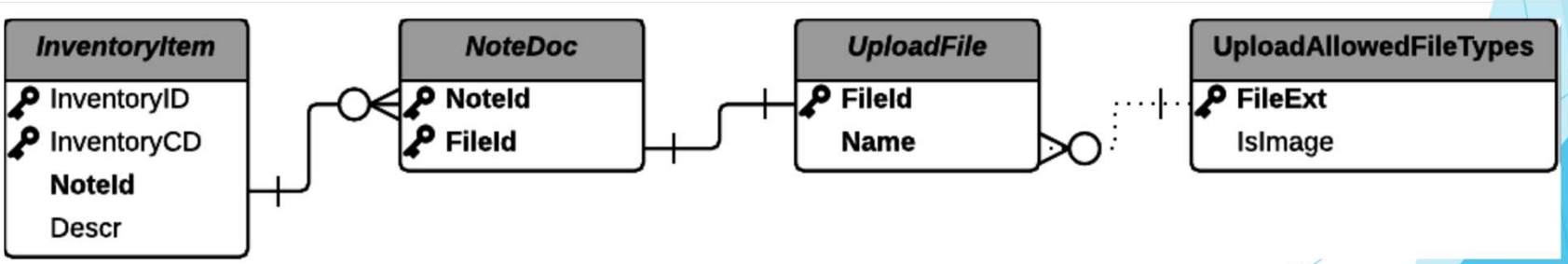
Formatting Values Displayed on a Report

- Format specifiers of any data fields used in a report
  - =[ARTran.TranAmt.Format]
- Standard numeric format specifiers
  - P: 0.39 -> 39.00%
- Custom numeric format specifiers
  - ###,##0.00: 123 -> 123.00
- Standard date format specifiers
  - d: 2017-04-12T13:45:30 -> 04/12/2017
- Custom date format specifiers
  - dd: 2017-04-02T13:45:30 -> 02

Adding Graphics

Types of graphics

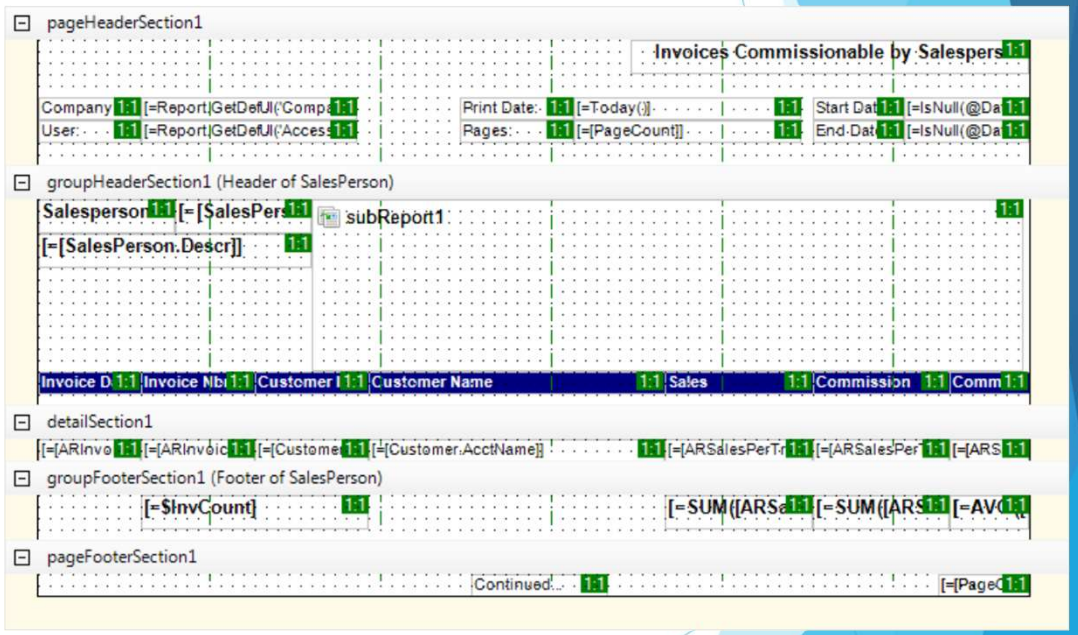
- Embedded
- External
- Barcode
- Database



Acumatica
THE CLOUD ERP

Defining Excel Settings

- Excel properties for each cell
- Auto or manual mode



Acumatica
THE CLOUD ERP

KEY POINTS to remember

- Don’t have to be a developer or DB Admin to create or modify reports
- Inspect element feature
- Recognize key fields (comes with experience!)
- Build the report gradually
- Report Designer role assigned is a must
- Custom views can be imported and used in Acumatica ERP

Day 3: Report Designer

OMG! More of Report Designer!

Acumatica
THE CLOUD ERP

Goals for the day

- Become a Pro in creating and troubleshooting reports

Agenda

- Tabular reports
- Using Variables on Reports
- Subreports
- Tips and Tricks

Poll question 1

What section of the report contains its main data and is considered a central part of the report?

Acumatica
THE CLOUD ERP

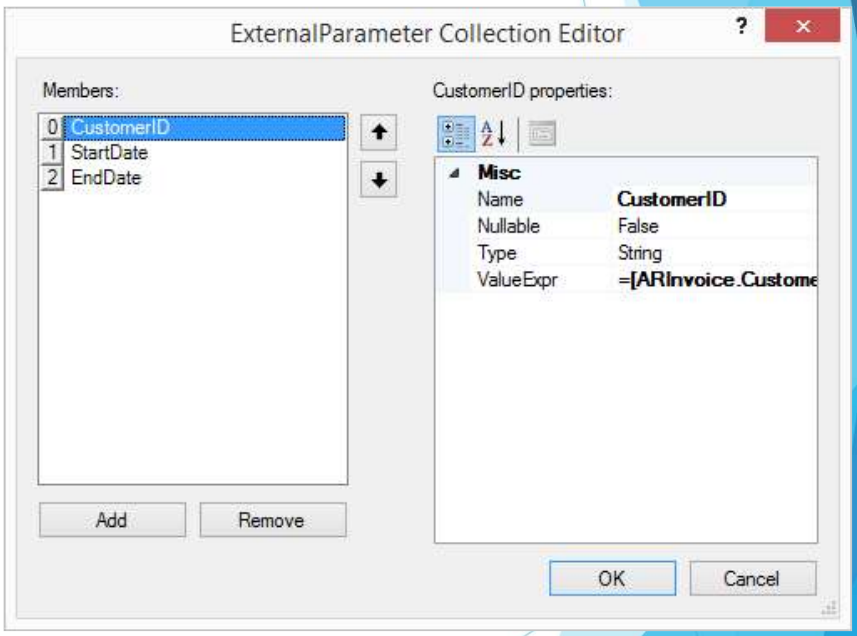
Poll question 2

Report Designer cannot be used on a Mac computer.

Acumatica
THE CLOUD ERP

Tabular reports

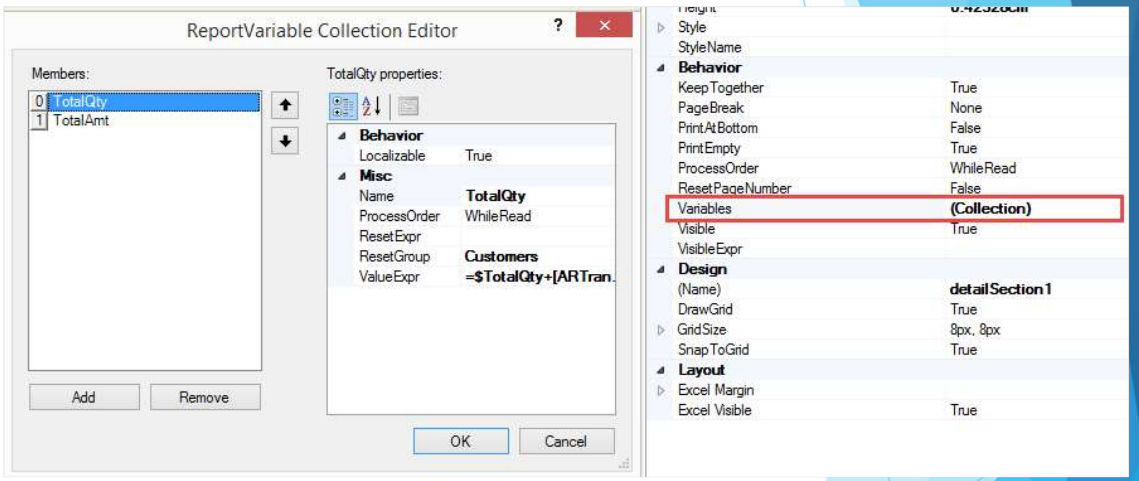
- Link to Report
  - Verify Size
  - Pass parameters



Acumatica
THE CLOUD ERP

Variables

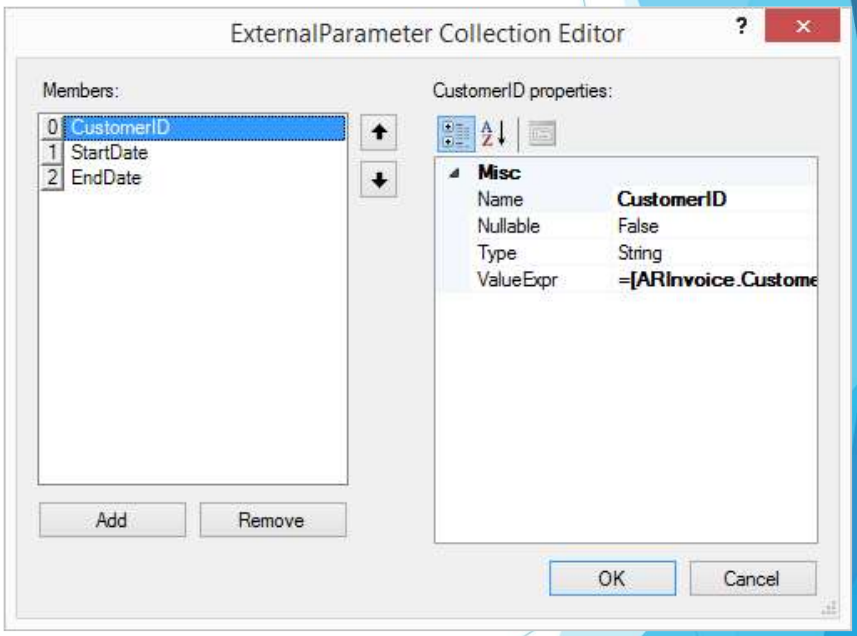
- Add to section where used
  - Set reset group
  - Set value expression



Acumatica
THE CLOUD ERP

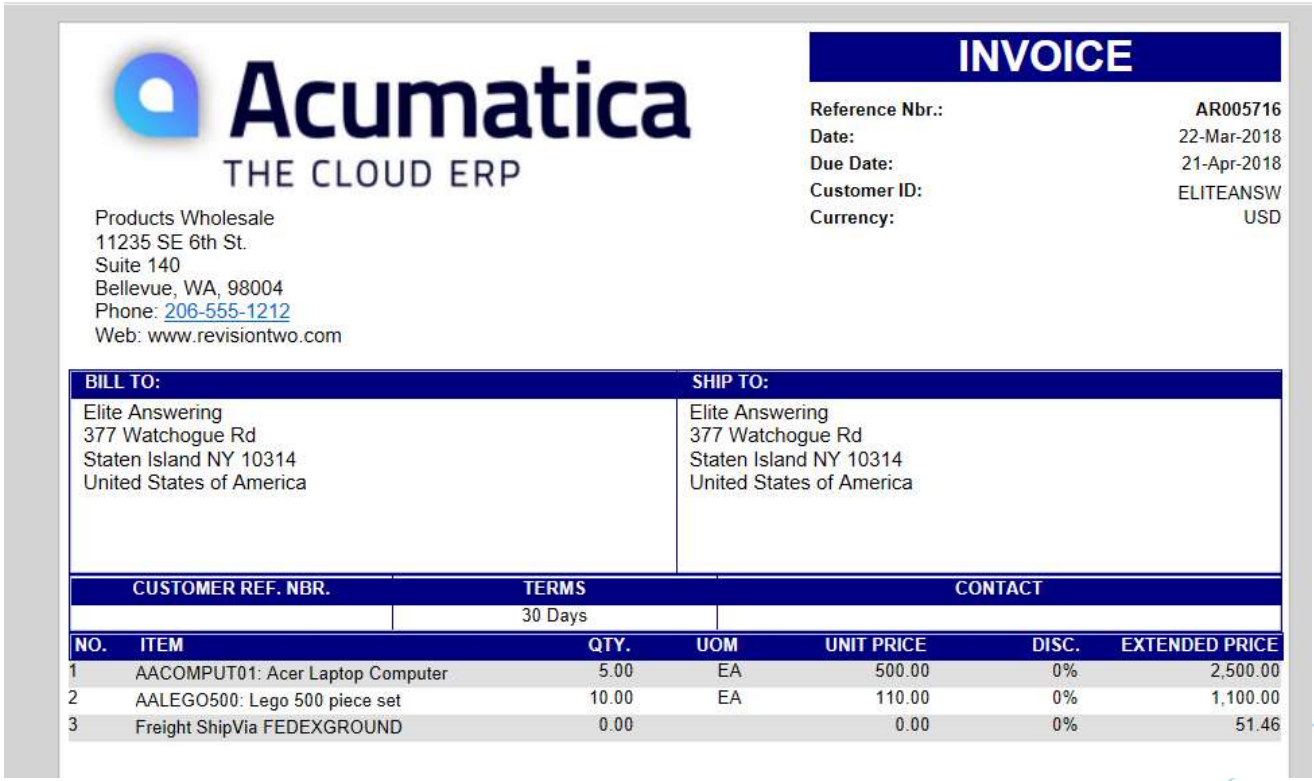
Adding Sub-Reports

- Link to Report
  - Verify Size
  - Pass parameters



Acumatica
THE CLOUD ERP

Conditional formatting



Acumatica
THE CLOUD ERP

INVOICE

Reference Nbr.:	**AR005716**
Date:	22-Mar-2018
Due Date:	21-Apr-2018
Customer ID:	ELITEANSW
Currency:	USD

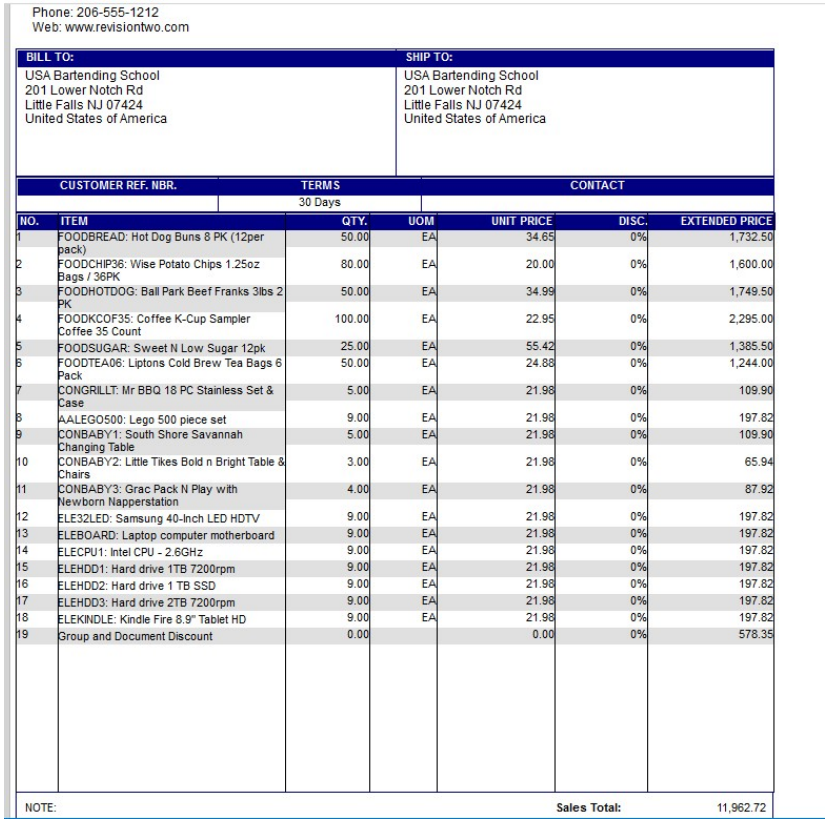
Products Wholesale
11235 SE 6th St.
Suite 140
Bellevue, WA, 98004
Phone: 206-555-1212
Web: www.revisiontwo.com

BILL TO:	SHIP TO:
Elite Answering 377 Watchogue Rd Staten Island NY 10314 United States of America	Elite Answering 377 Watchogue Rd Staten Island NY 10314 United States of America

CUSTOMER REF. NBR.	TERMS	CONTACT
	30 Days	

NO.	ITEM	QTY.	UOM	UNIT PRICE	DISC.	EXTENDED PRICE
1	AACOMPUT01: Acer Laptop Computer	5.00	EA	500.00	0%	2,500.00
2	AALEGO500: Lego 500 piece set	10.00	EA	110.00	0%	1,100.00
3	Freight ShipVia FEDEXGROUND	0.00		0.00	0%	51.46

Creating a table grid in Report Designer



Phone: 206-555-1212
Web: www.revisiontwo.com

BILL TO:	SHIP TO:
USA Bartending School 201 Lower Notch Rd Little Falls NJ 07424 United States of America	USA Bartending School 201 Lower Notch Rd Little Falls NJ 07424 United States of America

CUSTOMER REF. NBR.	TERMS	CONTACT
	30 Days	

NO.	ITEM	QTY.	UOM	UNIT PRICE	DISC.	EXTENDED PRICE
1	FOODBREAD: Hot Dog Buns 8 PK (12per pack)	50.00	EA	34.65	0%	1,732.50
2	FOODCHIP36: Wise Potato Chips 1.25oz Bags / 36PK	80.00	EA	20.00	0%	1,600.00
3	FOODHOTDOG: Ball Park Beef Franks 3lbs 2 PK	50.00	EA	34.99	0%	1,749.50
4	FOODKCOF35: Coffee K-Cup Sampler Coffee 35 Count	100.00	EA	22.95	0%	2,295.00
5	FOODSUGAR: Sweet N Low Sugar 12pk	25.00	EA	55.42	0%	1,385.50
6	FOODTEA06: Liptons Cold Brew Tea Bags 6 Pack	50.00	EA	24.88	0%	1,244.00
7	CONGRILLT: Mr BBQ 18 PC Stainless Set & Case	5.00	EA	21.98	0%	109.90
8	AALEGO500: Lego 500 piece set	9.00	EA	21.98	0%	197.82
9	CONBABY1: South Shore Savannah Changing Table	5.00	EA	21.98	0%	109.90
10	CONBABY2: Little Tikes Bold n Bright Table & Chairs	3.00	EA	21.98	0%	65.94
11	CONBABY3: Grac Pack N Play with Newborn Napperstation	4.00	EA	21.98	0%	87.92
12	ELE32LED: Samsung 40-Inch LED HDTV	9.00	EA	21.98	0%	197.82
13	ELEBOARD: Laptop computer motherboard	9.00	EA	21.98	0%	197.82
14	ELECPU1: Intel CPU - 2.6GHz	9.00	EA	21.98	0%	197.82
15	ELEHDD1: Hard drive 1TB 7200rpm	9.00	EA	21.98	0%	197.82
16	ELEHDD2: Hard drive 1 TB SSD	9.00	EA	21.98	0%	197.82
17	ELEHDD3: Hard drive 2TB 7200rpm	9.00	EA	21.98	0%	197.82
18	ELEKINDLE: Kindle Fire 8.9" Tablet HD	9.00	EA	21.98	0%	197.82
19	Group and Document Discount	0.00		0.00	0%	578.35

NOTE: **Sales Total:** 11,962.72

Acumatica
THE CLOUD ERP

MISC on Reports

- Fields not available in tables in Build Schema
- Aging Reports
- Formatted Text from Word in Report Designer
- Shipping address on AR invoice
- Blank page printing on report
- Links not displayed on Excel
- Check form with Remittance sections
- Open report from menu and using @parameter for subreport
- Add a new report on the Reports menu from a screen
- Dependent parameters

Poll question 3

To make the tabular report which you have created on the Report Designer visible for user in Acumatica ERP, you must:

Acumatica
THE CLOUD ERP

Hands on Exercises

ORDINARY	CHALLENGING	CHALLENGING +
Add Notification Template to Sales Order Report	Show Back Ordered items on the SO Invoice	Print Inventory Item labels per qty
Set Sales Order Details by Inventory Item report to show Quotes	Add Carrier Tracking Numbers to the Shipment Confirmation report	

Day 4:
Filters, Dashboards and Pivot tables

Miscellaneous

Acumatica
THE CLOUD ERP

Goals of the day

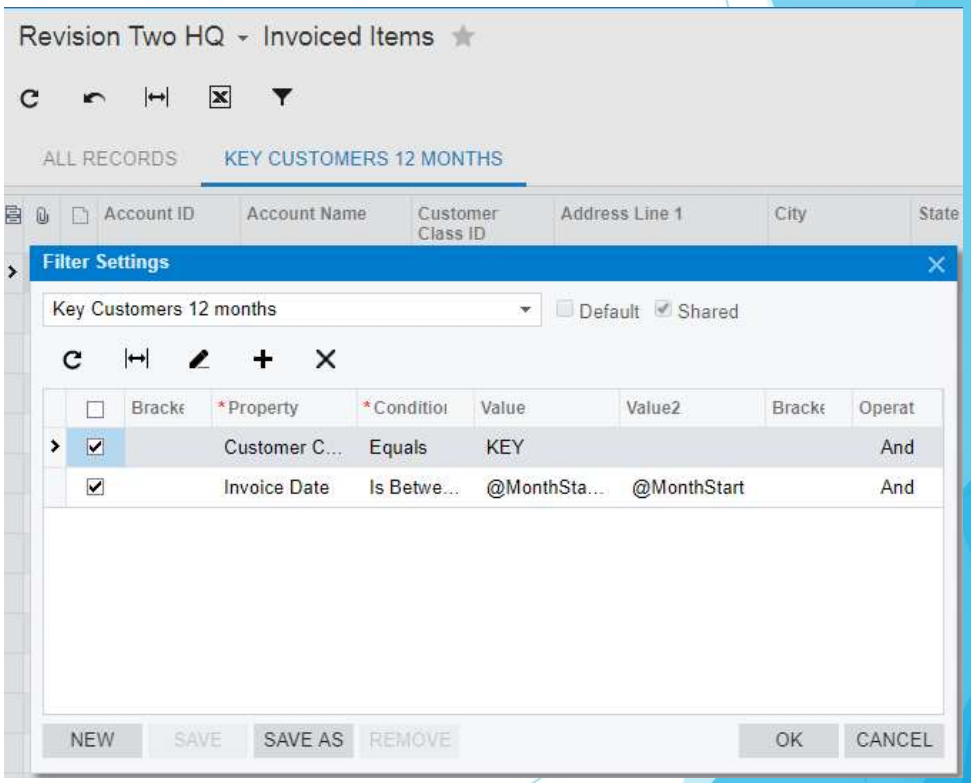
- Use Filters to get the right data for you
- Use Pivot Tables to analyse your data
- Use Generic Inquiries to create dashboards

Agenda

- Filters overview
- Control who sees what
- Creating Pivot tables
- Creating Dashboards

Shared Filters

- Narrow results
- Share for use in dashboards and marketing lists



Acumatica
THE CLOUD ERP

Who can see what?

- Set access rights for generic inquires
- Set access rights for pivot tables
- Set access rights for dashboards

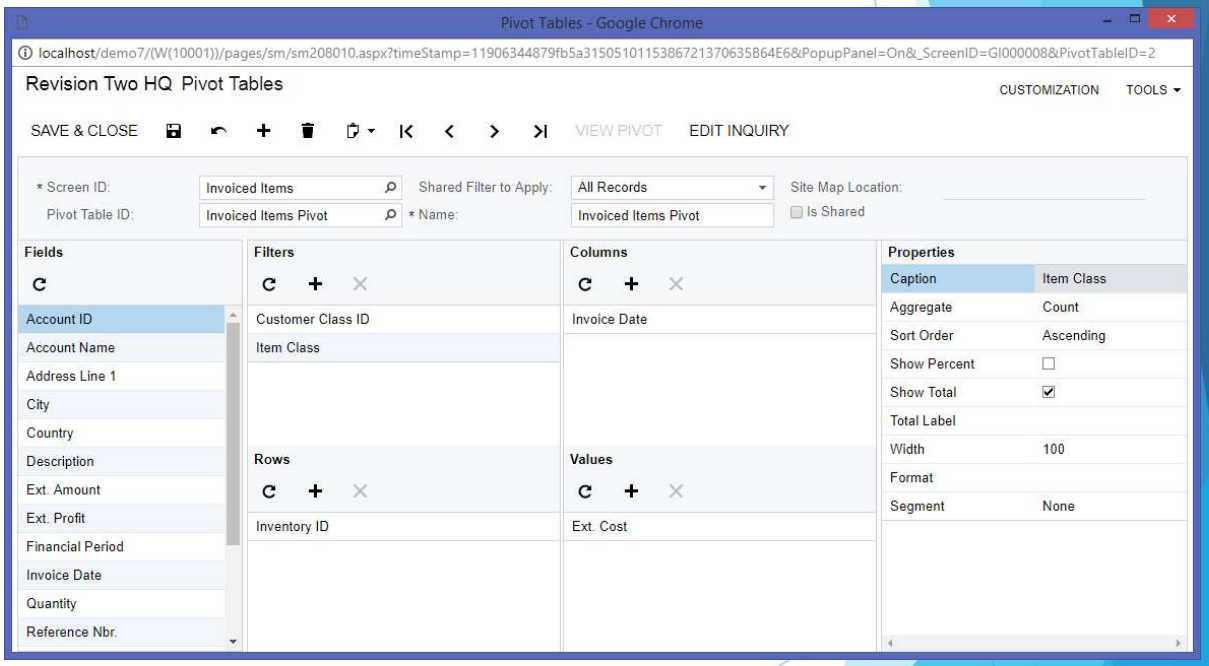
Poll question 1

Select the option that is NOT TRUE about the reusable filters.

Acumatica
THE CLOUD ERP

Pivot Tables

- Define rows and columns
- Include date fields for special rounding and grouping
- Include Class fields in filters to provide additional configuration options



Acumatica
THE CLOUD ERP

Poll question 2

From a single generic inquiry, you can create…

Acumatica
THE CLOUD ERP

Dashboards

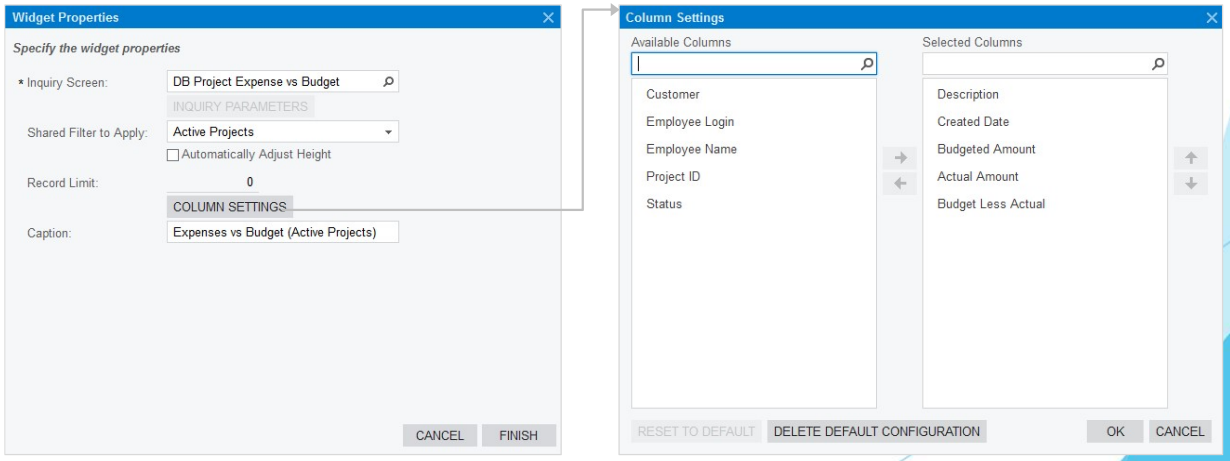
Use generic inquires and shared filters to create dashboards

Acumatica
THE CLOUD ERP

Dashboards – Data Table

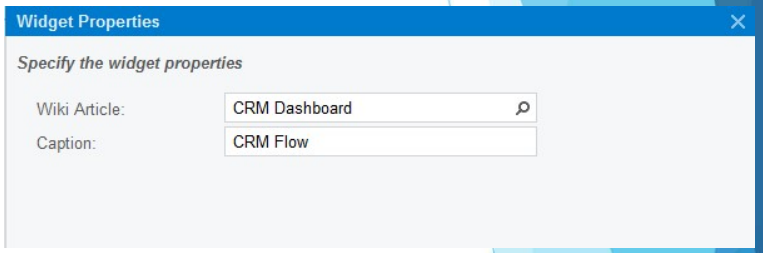
EXPENSES VS BUDGET (ACTIVE PROJECTS)

Description	Created Date	Budgeted Amount	Actual Amount	Budget Less Actual
T&M project with inventory issue	10/22/2015	98,340.00	96,308.48	2,031.52
Marlin Beverage Process Re-archi...	3/2/2017	9,920.00	18,442.00	-8,522.00
Internal projects 2017 - track expe...	3/2/2017	108,500.00	71,897.18	36,602.82
Revenue recongition based on labor	3/2/2017	11,250.00	2,814.10	8,435.90



Acumatica
THE CLOUD ERP

Dashboards – Wiki Page



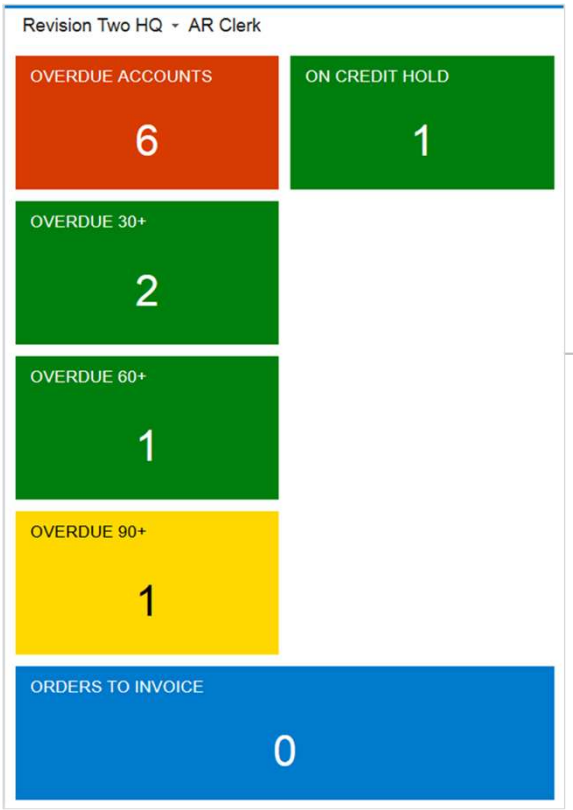
Acumatica
THE CLOUD ERP

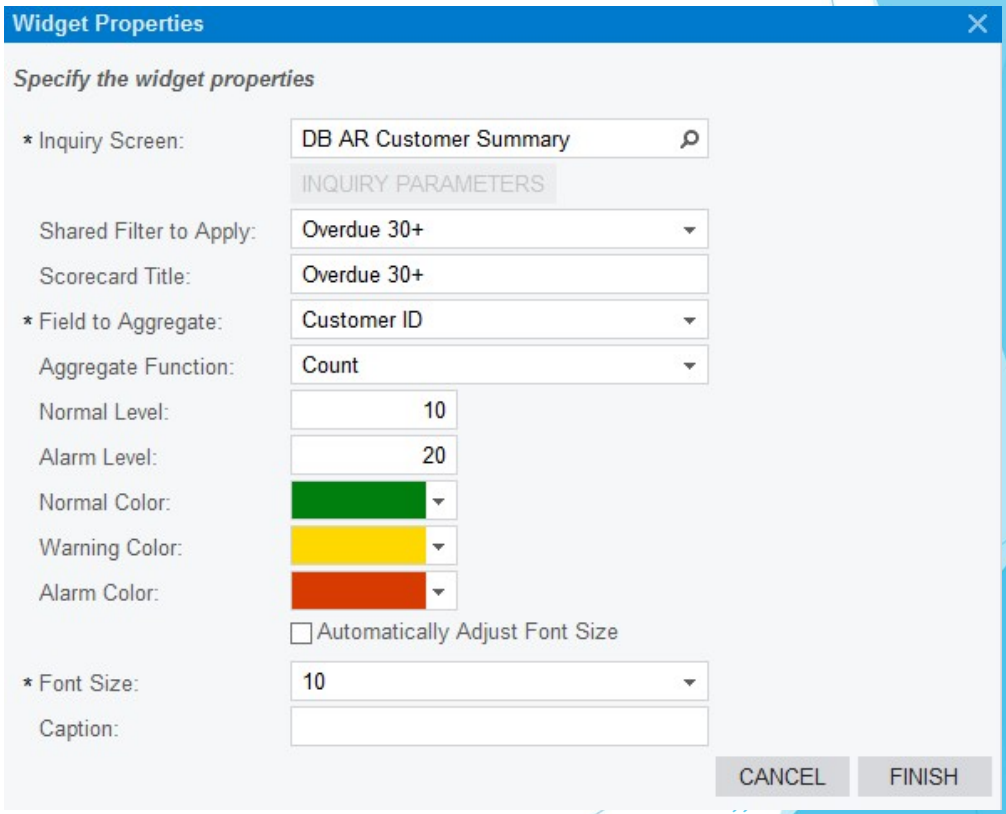
Poll question 3

Select the option that is NOT TRUE about the reusable filters.

Acumatica
THE CLOUD ERP

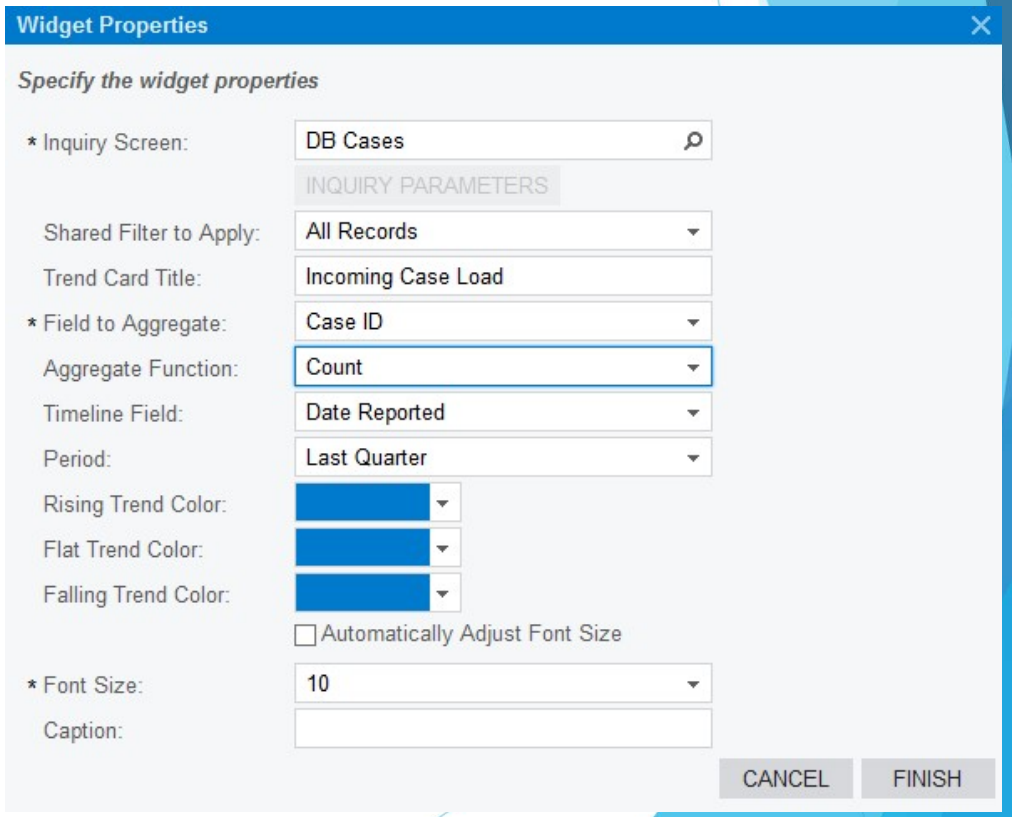
Dashboards – Scorecard KPI





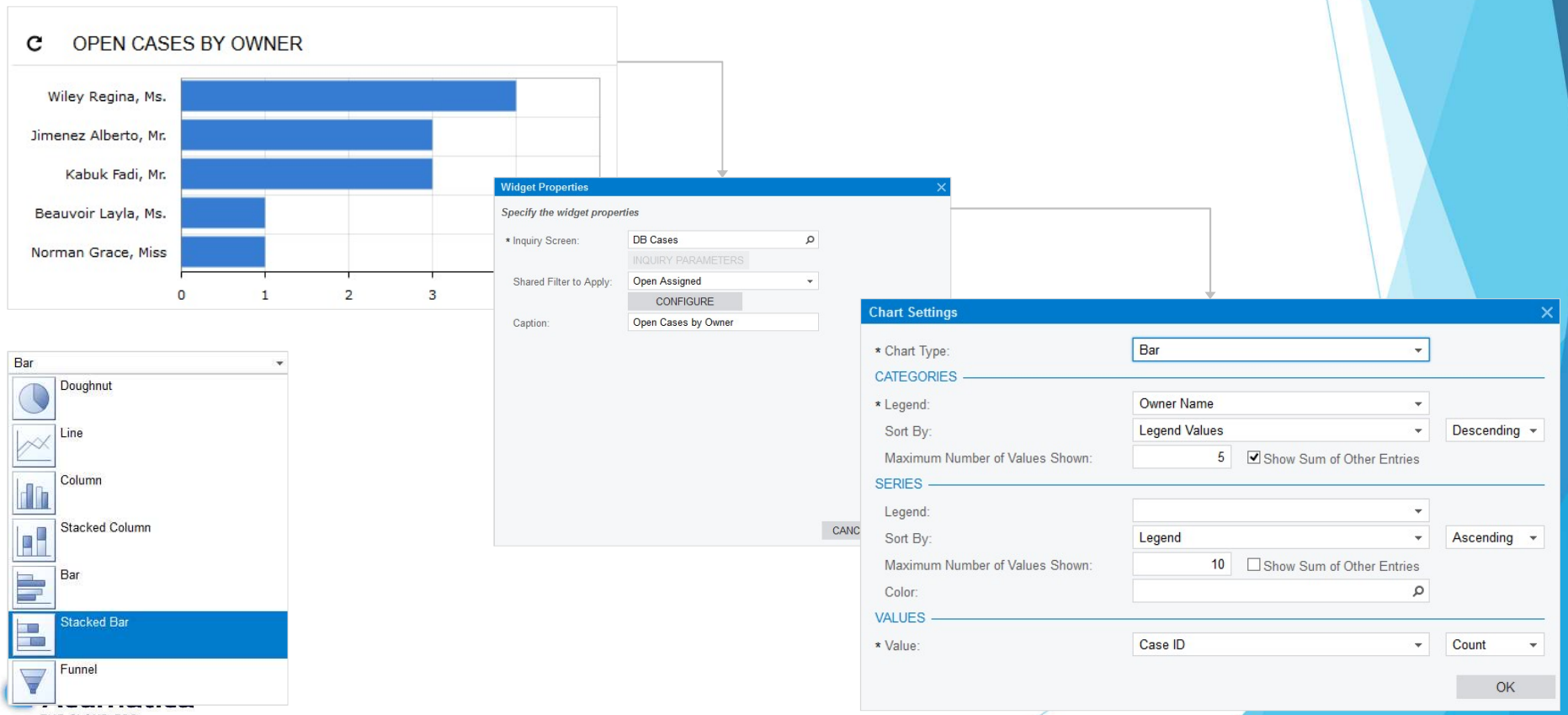
Acumatica
THE CLOUD ERP

Dashboards – Trendcard KPI



Acumatica
THE CLOUD ERP

Dashboards – Chart



THE CLOUD ERP

Feedback

Help us improve this class by providing feedback:

https://www.surveymonkey.com/r/onlinesessions2018

THANK YOU!

Acumatica
THE CLOUD ERP