

Welcome to the **Crystal Reports: Tips and Tricks**

The presentation will begin shortly.
Please note that all attendees are in listen only mode.
A recording of this webinar will be sent out to all attendees.

Presented by:





Inquiries may be submitted using the **Questions** window.

Questions ✕

Show Answered Questions

X	Question ▲	Asker	Rec'd	📌	Answer

Send Privately Send to All ⌵



About eMedApps

eMedApps is a Healthcare Information Technology Services company providing practices, clinics and hospitals with a full range of services, as well as a suite of products designed to increase efficiency and facilitate communication.

- Founded in 1999
- Working as partner with NextGen since 2001
- Worked as subcontractor for NextGen
- Serving healthcare clients across USA
- Services and Products for NextGen clients



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About Our Presenter

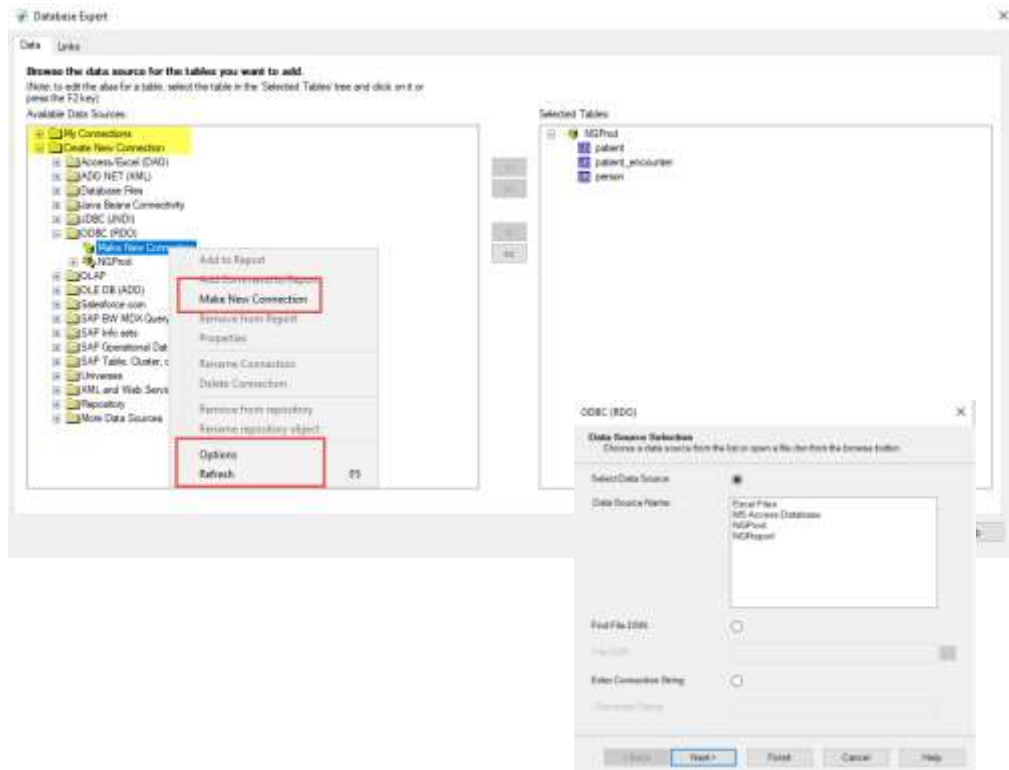
Victoria (Vicky) Wieronski has been with eMedApps since 2013. She is a Senior Application Specialist and has over thirty years of experience in healthcare. She loves boating, jet skiing, being outdoors and playing with her English Mastiffs, Norris and Steve.



Preparing the Report

Data Connections

- Identify the data connections
 - Browsing your data source
 - My Connections
 - Create New Connection
- Data source types
 - Tables
 - Views
 - Stored Procedures
 - Commands



Data Connections, cont.

- Options
 - Data explorer filters
 - Advanced options
 - Automatic smart linking
- Refresh



Data Explorer

- Tables
- Views
- System Tables

Table name LIKE:

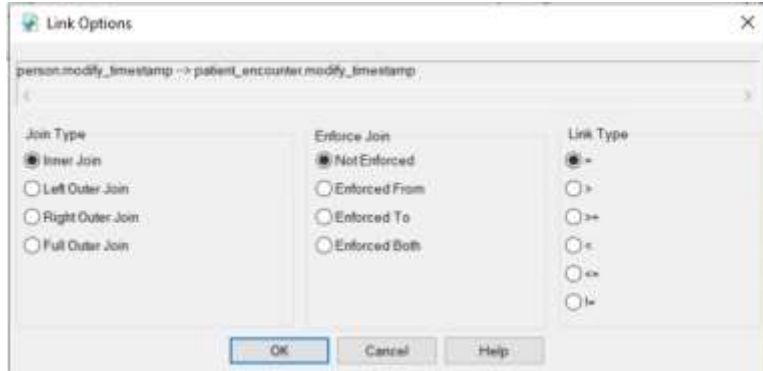
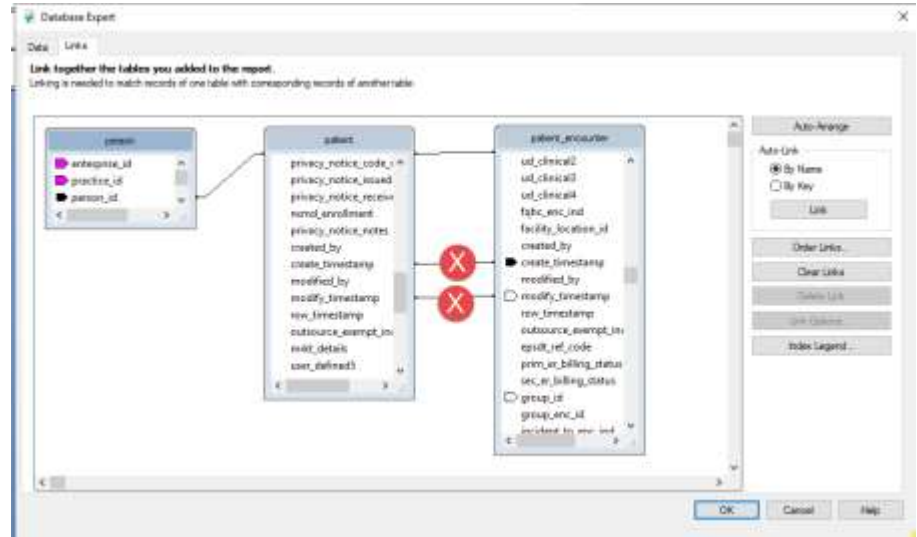
Patient% (%)

Owner LIKE:



Link Options

- Smart Linking vs. Manual
- Join Type
- Enforce Join



Link Options, cont.

- Not enforced – default option
 - Link will only apply if explicitly in the “Select” statement
- Enforced From
 - Link is used when the ‘to’ table is used by the “Select” and join is enforced.
- Enforced To
 - Link is used when the ‘from’ table is used by the “Select” and join is enforced.
- Enforced Both
 - Link is enforced whether you use the ‘to’ or ‘from’ tables



Enforce Join

Not Enforced

Enforced From

Enforced To

Enforced Both

```
SQLQuery1.sql - EM...PS\wieronskiv (73)*  + X
--Person - Table A
--Patient_encounter - Table B
Select a.first_name, a.last_name, a.person_nbr from person a
join patient_encounter b on b.person_id = a.person_id
where b.billable_ind = 'Y'

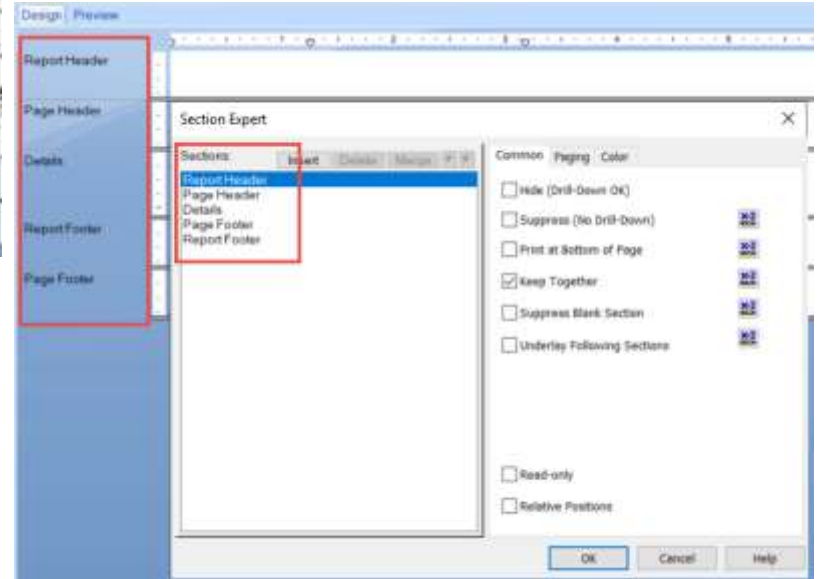
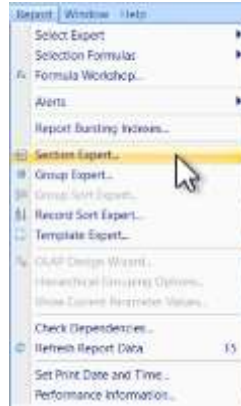
--Without the enforce join you may end up with this:
Select a.first_name, a.last_name, a.person_nbr from person a
```

DEMO

Report Body

Defaults and Section Expert

- Report Section Defaults
 - Report Header
 - Page Header
 - Details
 - Report Footer
 - Page Footer
- Forced or Conditional Suppression
- Additional Sections



Defaults and Section Expert, cont.

- Cross tabs

Report Header

Comparative Analysis For the Period : ?@begin_d - ?@end_date

Pane Header

URRVW_CARRIER_ID	URRVW_FAC_NM	ACTIVE_TOT	test
------------------	--------------	------------	------

Details

URRVW_CARRIER_ID	URRVW_FAC_NM	ACTIVE_TOT	#test
------------------	--------------	------------	-------

Report Footer a

Admissions Summary For Top 10 Hospitals By Group

Column #1 Name	Total
Admits	Days
Admit	Days
Row #2 Name	@Admit_date:N_STAY @Admit_date:W_LEN_STAY
1 Name	@Admit_date:N_STAY @Admit_date:W_LEN_STAY
Total	@Admit_date:N_STAY @Admit_date:W_LEN_STAY

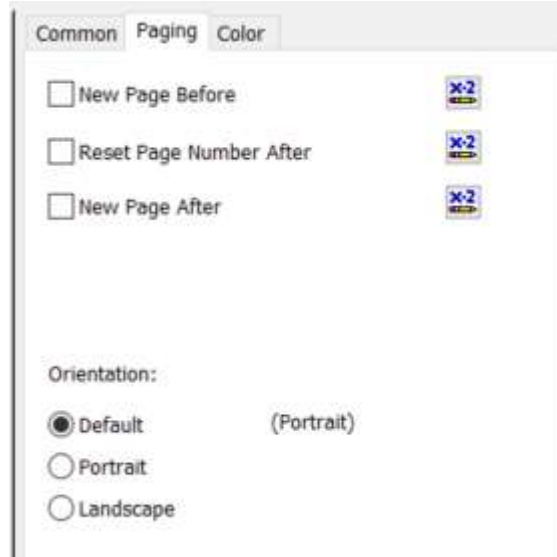
Report Footer b

Active Members By Group

	Active Total
Total	Sum of #test
Row #1 Name	Sum of #test


Defaults and Section Expert, cont.

- Paging
 - Breaks and conditions
- Color
 - Formula conditions



Common Paging Color

New Page Before 

Reset Page Number After 

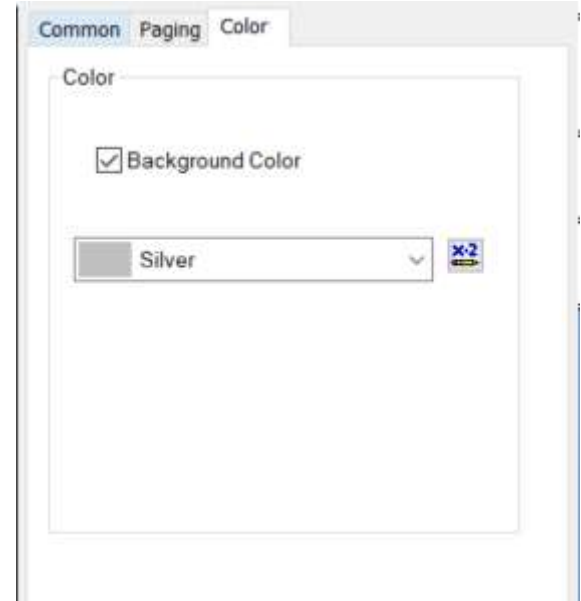
New Page After 

Orientation:

Default (Portrait)

Portrait

Landscape



Common Paging Color

Color

Background Color

 Silver 

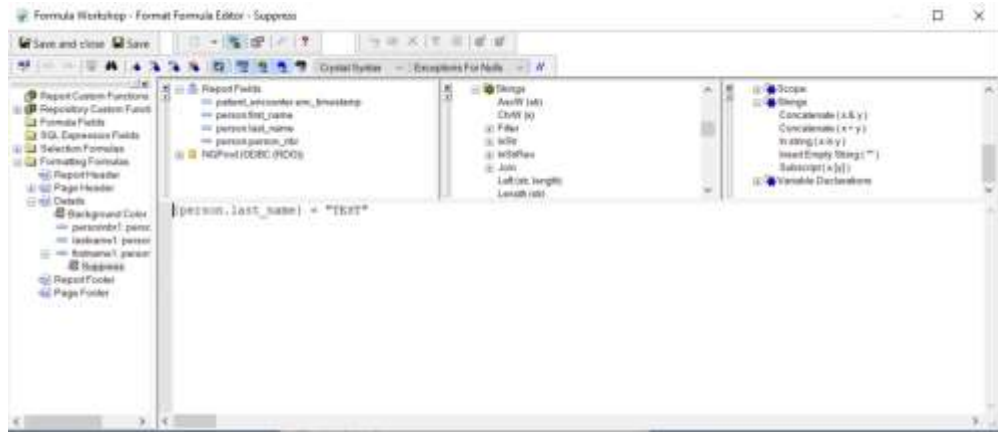
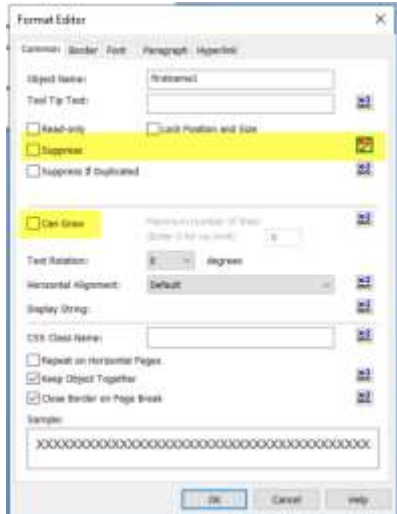
```
if {person.last_name} = "TEST" then crRed else if {person.last_name} <> "TEST" then crGreen
```

Defaults and Section Expert, cont.

- Formatting

Very similar to other application formatting

- Can Grow
- Conditional – Section vs. Field



1110	Adler	Grace
1111	Adler	Grace
1112	Adler	Grace
1130	Levi	
1131	Levi	
1132	Levi	
1142	McClure	Tammie
1143	McClure	Tammie
1144	Levi	
1146	Levi	
1165	Reagan	John
1170	Levi	
1191	Adler	Simon
1192	Thompson	Shelby

DEMO

Parameters

1. Name
2. Type - Define
3. List of Values (Static or Dynamic)
4. Value or Description Field
5. Value
6. Value Options
 - a) Prompt text
 - b) Multiple values
 - c) Range values

The screenshot shows the 'Create New Parameter' dialog box with the following fields and options:

- 1**: Name field (containing 'My Parameter')
- 2**: Type dropdown (set to 'String')
- 3**: List of Values dropdown (set to 'Static')
- 4**: Value Field and Description Field (both set to '(None)')
- 5**: Value field in the table below (containing 'Click here to add item...')
- 6**: Value Options section containing a table of settings.

Option	Setting
Show on (Viewer) Panel	Editable
Prompt Text	Enter My Parameter:
Prompt With Description Only	False
Optional Prompt	False
Default Value	
Allow custom values	True
Allow multiple values	False
Allow discrete values	True
Allow range values	False
Min length	
Max length	
Edit mask	
Show Value or Description	Show Value

Parameters, cont.

- Static vs. Dynamic - What do I choose?
 - Multiple and Range values

The screenshot shows the 'Edit Parameter: Provider' dialog box. The 'Name' field is 'Provider', 'Type' is 'String', and 'List of Values' is 'Dynamic'. Below the 'Choose a Data Source' section, a table lists the data source 'provider_id' with its description 'description' and parameter 'Provider'. At the bottom, there are 'Value Options' for 'Level 1 (provider_id)' including settings like 'Option', 'Show on (Newer) Field', 'Prompt Text', 'Sort Order', 'Prompt With Description Only', 'Optional Prompt', 'Allow multiple values', 'Allow discrete values', 'Allow range values', and 'Show Value or Description'.

Value	Description	Parameters
provider_id	description	Provider

Option	Setting
Show on (Newer) Field	Editable
Prompt Text	Enter provider name
Sort Order	Ascending by Description
Prompt With Description Only	True
Optional Prompt	False
Allow multiple values	True
Allow discrete values	True
Allow range values	False
Show Value or Description	Show Description

The screenshot shows the 'Edit Parameter: EncDateBeg' dialog box. The 'Name' field is 'EncDateBeg', 'Type' is 'Date Time', and 'List of Values' is 'Static'. The 'Value Field' and 'Description Field' are both set to '(None)'. There is an 'Actions' dropdown menu and a 'Value' field with the text 'Click here to add item'.

The screenshot shows the 'Edit Parameter: EncDateEnd' dialog box. The 'Name' field is 'EncDateEnd', 'Type' is 'Date Time', and 'List of Values' is 'Static'. The 'Value Field' and 'Description Field' are both set to '(None)'. There is an 'Actions' dropdown menu and a 'Value' field with the text 'Click here to add item'.

```
[patient_encounter.enc_timestamp] in {?EncDateBeg} to {?EncDateEnd} and  
[patient_encounter.rendering_provider_id] = {?Provider}
```

Parameters, cont.

- Embedding a parameter into a formula

Edit Parameter: Enter The File Type

Edit a parameter and list of values.

Name: Type: List of Values:

Value Field: Description Field:

Actions

Value	Description
SMS	
Phone	
Email	
Click here to add item	

Formula Workshop - Formula Editor - FileDate

Crystal Syntax Exceptions For Nulls

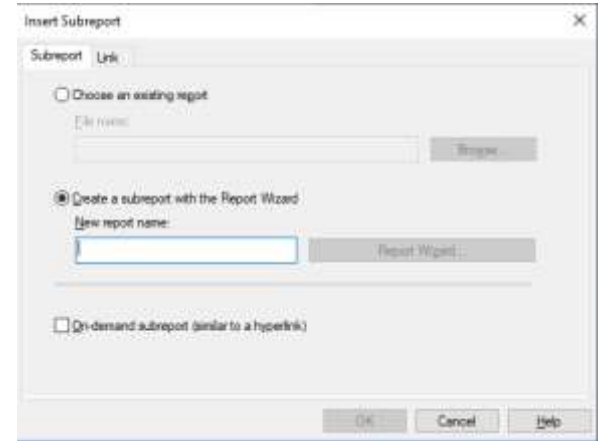
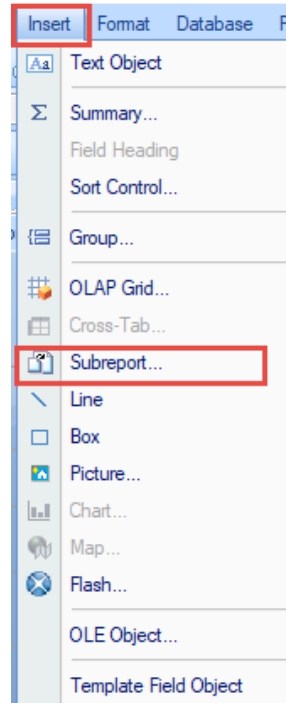
```
if (?Enter The File Type) = 'SMS' then  
currentdate+1  
else if (?Enter The File Type) = 'Phone' then  
currentdate+3  
else currentdate+5
```

DEMO

Sub-Reports

Inserting a Sub-Report

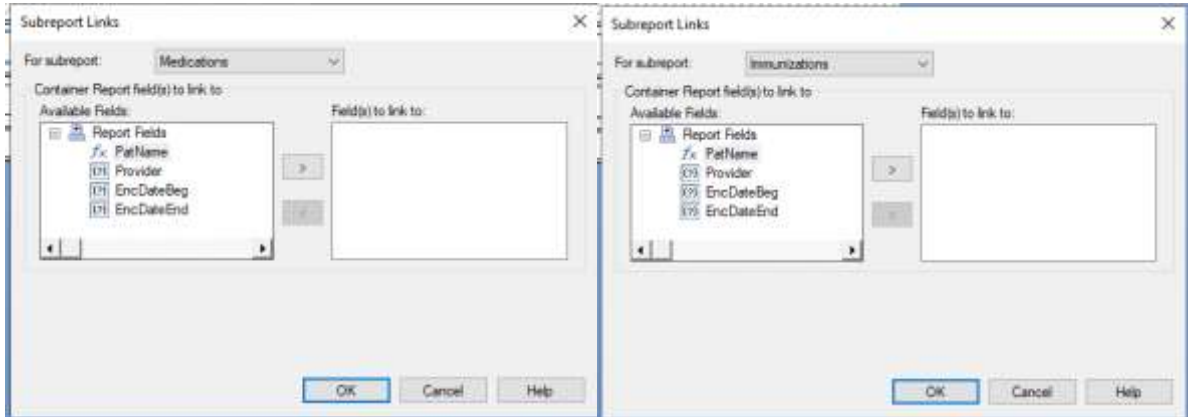
- Unlinked sub-report
 - Report is unrelated to the parent report tables/fields, independent. No tables are even needed on parent report.
 - Great for month end summaries and management reports
- Linked sub-report
 - Report is related and dependent on the parent report tables/field
 - Great for showing related detail in various ways



Unlinked sub-report

Unrelated objects
not linked

Unlinked Sub Reports	
Medications	
Immunizations	



Linked sub-report

Related objects
linked together

MRN	PatName	enc_nbr	enc_timestamp	description	actText
@MRN	@PatName	enc_nbr	enc_timestamp	description	actText

LabResults

- Database Fields
 - order_ (Parent)
 - patient
 - patient_encounter
 - person
 - provider_mstr
- Formula Fields

- Database Fields (Child)
 - lab_nor
 - lab_results_obr_p
 - lab_results_obx
- Formula Fields
- SQL Expression Fields

Subreport Links

For subreport: LabResults

Container Report field(s) to link to:
Available Fields: Report Fields

- patient_encounter_enc_
- person_last_name
- person_first_name
- patient_encounter_enc_
- provider_mstr_descriptor

Fields to link to:
order_order_module_order_num

order_order_module_order_num field link
Subreport parameter field to use: order_order_module_order_num

Select data in subreport based on field

OK Cancel Help

DEMO

Tips and Tricks



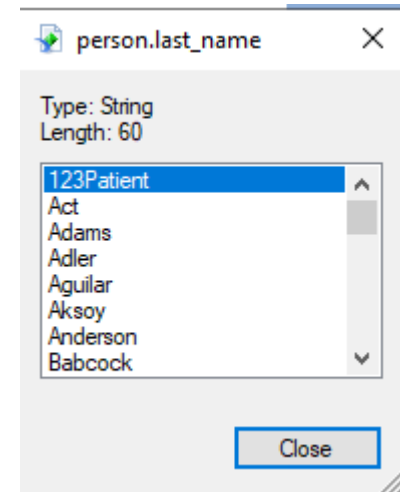
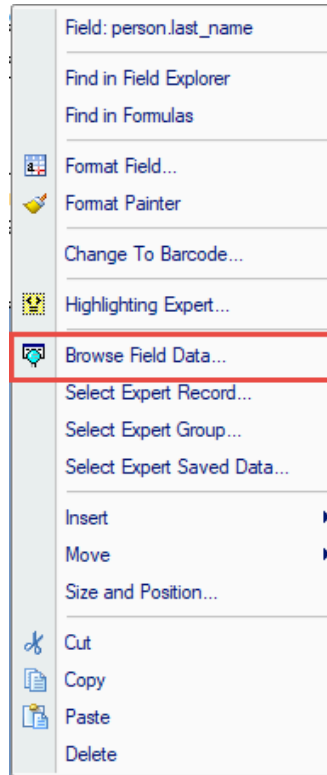
Tips and Tricks

- Browse Data
- Preview and Zoom
 - Magnification Factor
 - Fit One Dimension
 - Fit whole page
- Options and Report Options
- Customized formatting
- Data links up to date
- Data links – Never assume they are valid
- Working with Null or Blank Values
- Formula Values
- Show SQL
- Select Distinct Records

Tips and Tricks

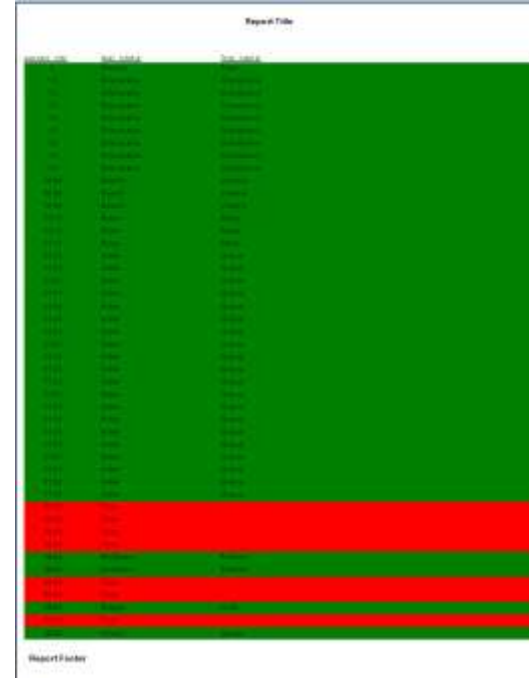
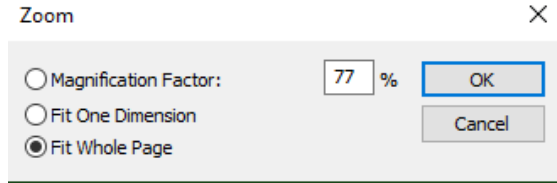
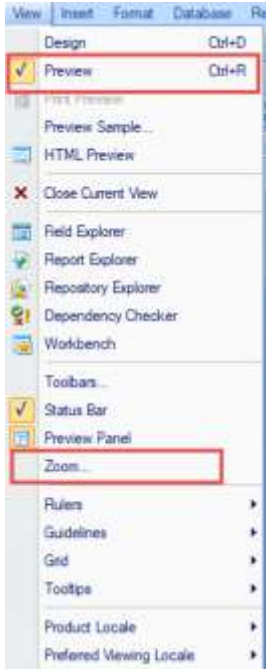
- Browse Data

Browsing data is accessible in many places within your report



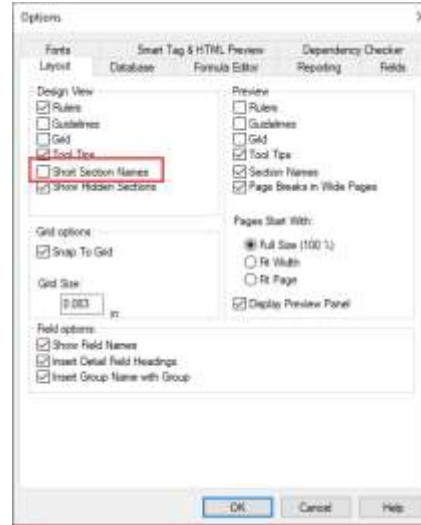
Tips and Tricks

- Preview and Zoom



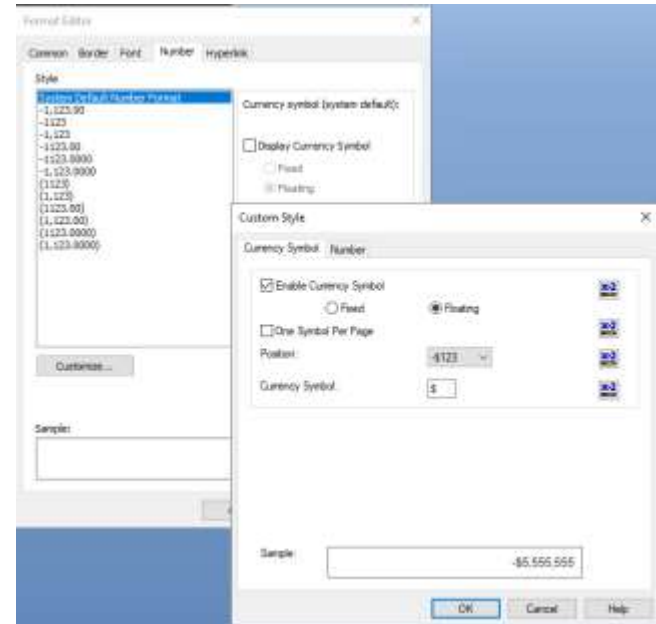
Tips and Tricks

- Options
 - Short Section Names
- Report Options
 - Save Data with Report – Uncheck
 - Use Indexes or Server for Speed - Check



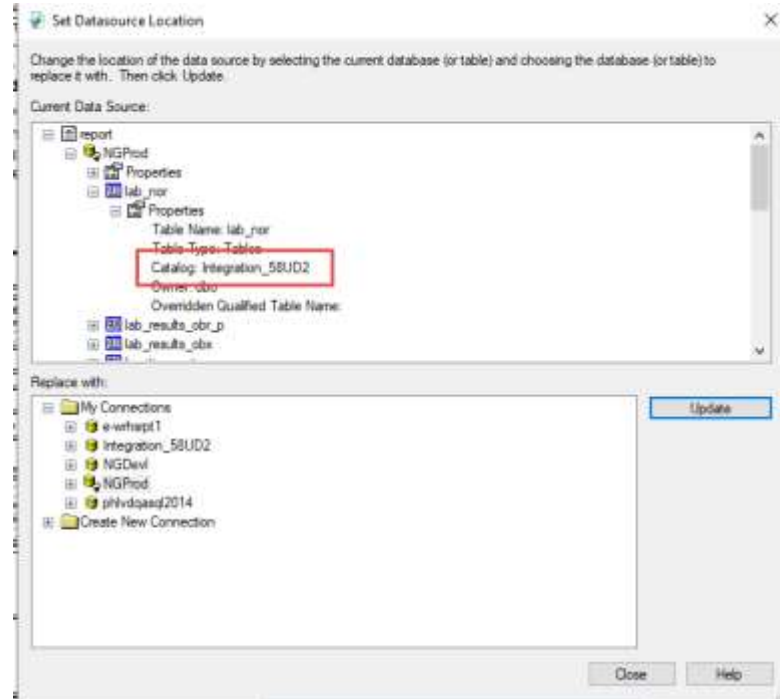
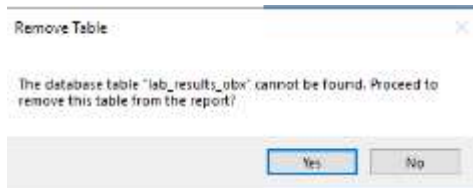
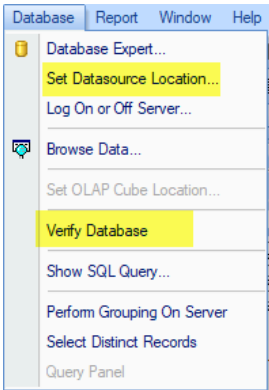
Tips and Tricks

- Customize Formatting
 - Specific symbols
 - Negatives
 - Conditional formatting



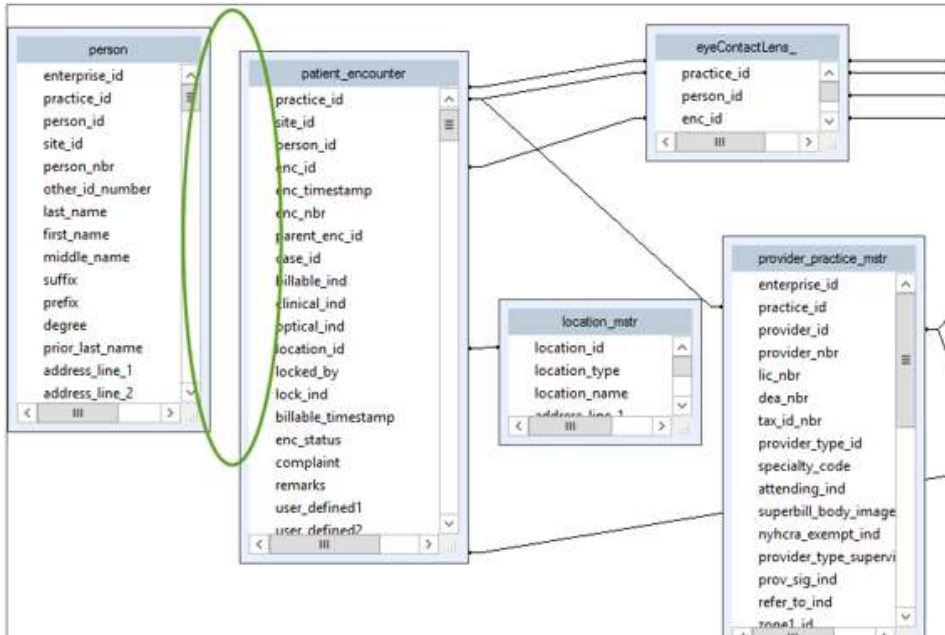
Tips and Tricks

Ensure the crystal report's database data link is up to date



Tips and Tricks

Ensure the table links are valid



Tips and Tricks

Working with NULL or blank values

The screenshot shows the Formula Editor window for 'Per6085'. The main text area contains the formula: `{{#Num6085}}/{{#Den6085}}*100`. A green-bordered box highlights a warning message: "Your report may run today however data is fluid and you may have an error tomorrow." To the right, a code editor shows the formula with conditional logic: `if {{#Den6085}} = 0 then 0 else
if {{#Den6085}} = 1 then ({{#Num6085}}/{{#Den6085}})*100`. The interface includes a menu bar with 'Save and close' and 'Save', a toolbar with various icons, and a left-hand pane with a tree view of 'Report Custom Functions', 'Repository Custom Functions', and 'Formula Fields'.

Tips and Tricks

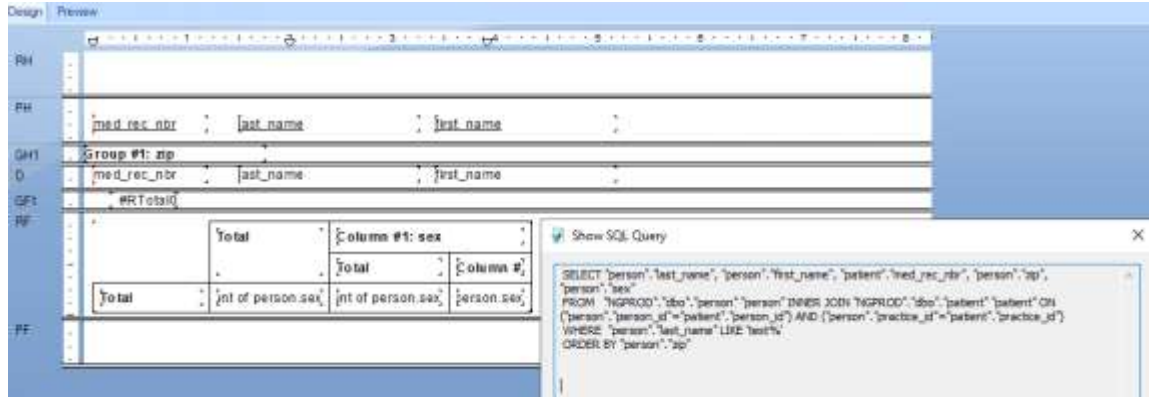
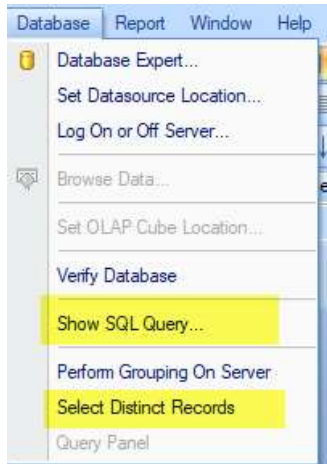
Formula Values

The image displays two overlapping windows from the Crystal Reports application. The background window is the 'Cross-Tab Expert' dialog, which is used for configuring pivot tables. It features a tree view of 'Available Fields' on the left, including 'Report Fields' (person_last_name, person_first_name, patient_med_rec_ctr, person_age, person_sex, % test, % Total) and 'NGProc (ODBC (RDO))' (patient, enterprise_id, practice_id). The 'Columns' section contains 'person_age', and the 'Summarized Fields' section contains 'Count of person_age'. The foreground window is the 'Formula Workshop - Formula Editor - test', which shows a list of functions on the left and a text area on the right containing the following formula:

```
if (person.sex) = "M" then "Male"  
else if (person.sex) = "F" then "Female"  
else "Other"
```

Tips and Tricks

Show SQL
Select Distinct Records

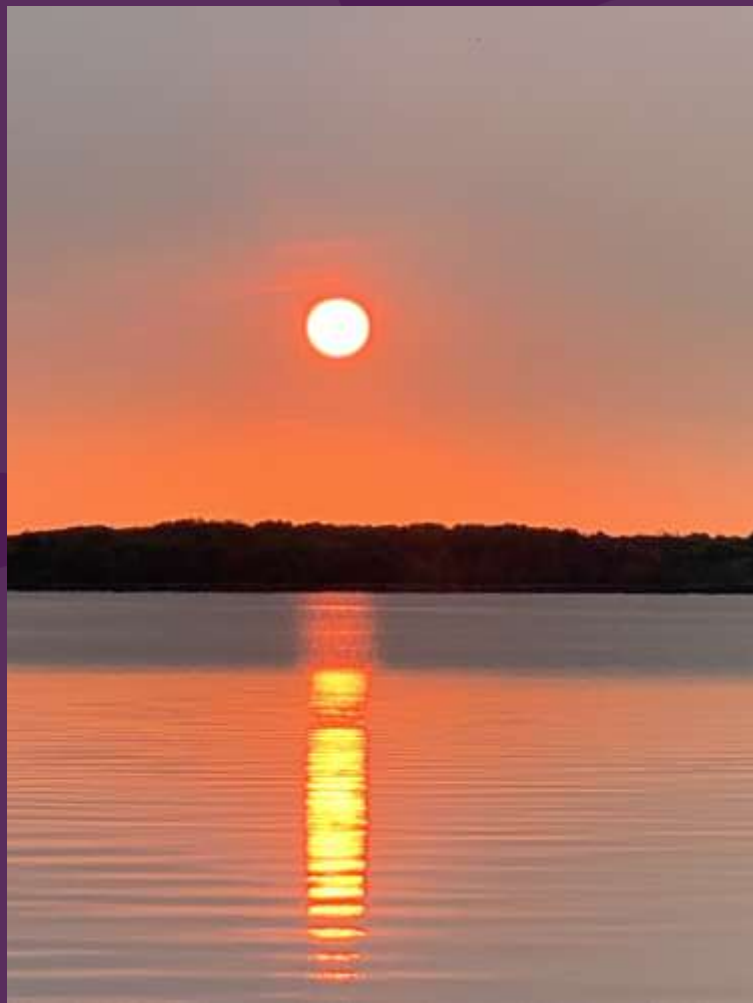


Design Review

med_rec_nbr	last_name	first_name
Group #1: zip		
med_rec_nbr	last_name	first_name
#RTotals		
Total	Column #1: sex	
Total	Total	Column #2
Total	int of person.sex	int of person.sex
Total	person.sex	

```
SELECT 'person'.last_name, 'person'.first_name, 'patient'.med_rec_nbr, 'person'.sex, 'person'.last FROM 'NCPROD'.dbo.'person'.person INNER JOIN 'NCPROD'.dbo.'patient'.patient ON ('person'.person_id='patient'.person_id) AND ('person'.practice_id='patient'.practice_id) WHERE 'person'.last_name LIKE 'last%' ORDER BY 'person'.sex
```

DEMO



Q&A

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