



NOMADS QUERY ENHANCEMENTS 2020 - 2024

DireXions 2024

AGENDA

- 1. Features**
- 2. Query+ Options**
- 3. Query-Based Utilities**





FEATURES

Named Formulas

- Assign a name to a formula
- Easily identify a formula throughout the Query Subsystem

(Columns list, Filters, Formulas, Show/Hide/Reorder Columns,
Chart Definitions, Copy/Export, Profile columns displays, etc.)

- Now you can:
 - Use the evaluated result of the formula in another formula
 - Use the formula as a parameter in a display option
 - Reference the formula by name in a Report Writer definition
 - Specify a column name for use within the *QUERY* interface

NOMADS QUERY FEATURES

Named Formulas

- Optional
- Names start with FML_ (default FML_QueryName_n)
 - E.g. FML_MyFormula

PVX PLUS TECHNOLOGIES LTD. Query Formula Definition

Formula Name FML_CreditUsed

Column Title Fixed Credit Used

Formula (BALANCE*100)/CREDITLIMIT

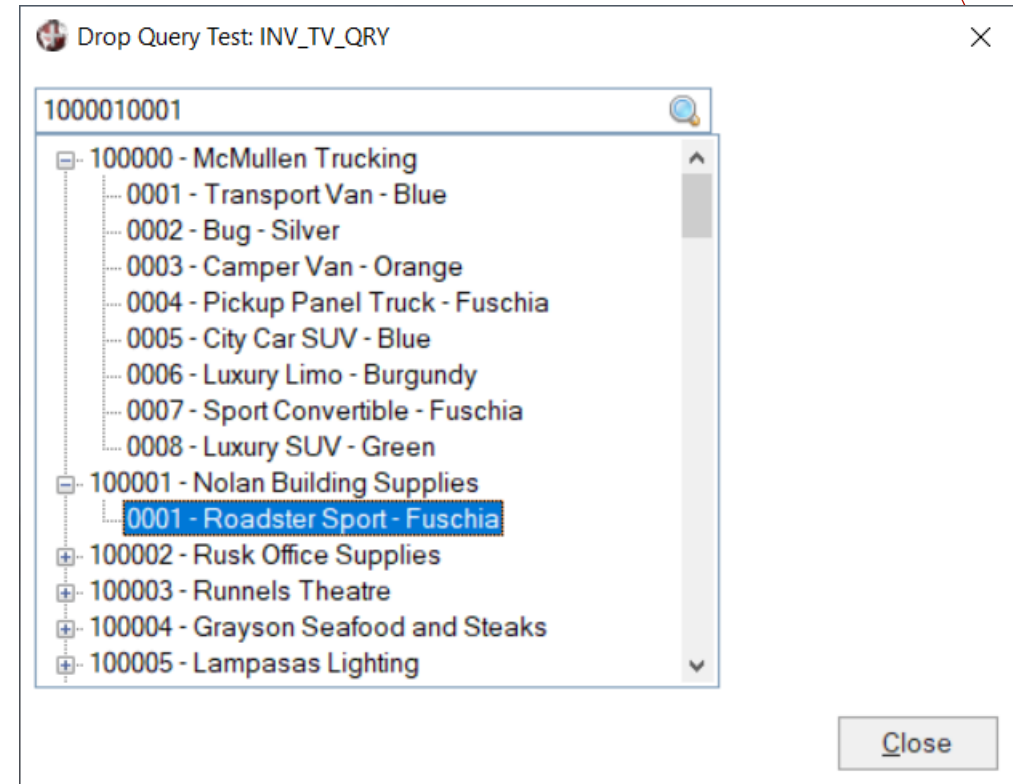
Width 20 **Alignment** Default **Format** Mask Program
Fixed ##0%

Display Option Method: PercentBarWithLabel **Define**

```
Columns
Clientid
ClientName
Balance
CreditLimit
FML_CreditStatus:STR(CREDITLIMIT-BALANCE)
FML_CreditUsed:(BALANCE*100)/CREDITLIMIT
<< eof >>
```

Drop Tree

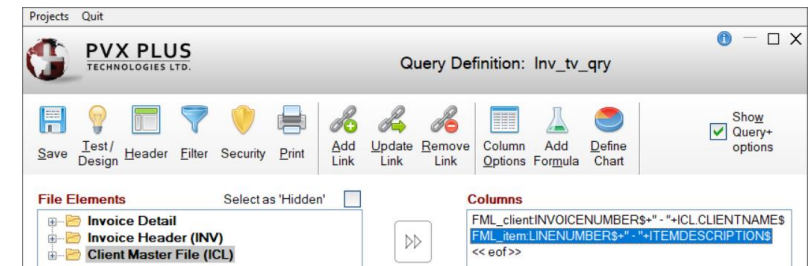
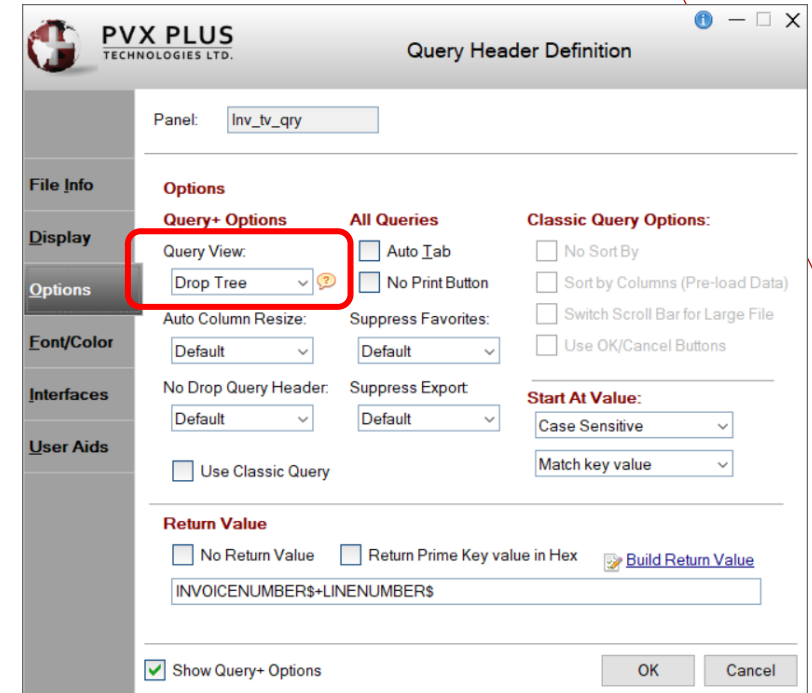
- New query view similar to *Drop Query*, but uses a tree view to display data
- Displayed directly on the current panel adjacent to the multi-line
- Useful when records can be grouped



NOMADS QUERY FEATURES

Drop Tree

- Defined in Query Header Options tab - Query View
- Supports limited run-time popup menu:
 - Find, Refresh, Print, Filters, Profile
- Can also be used to load a smart tree view



Access External Data

- External data can be passed to a query at run-time using global variables (not new)
- Can be used in filters and formulas
- New special %QRY_VARIOL\$ and %QRY_VARDATA\$ Query+ variables have been created to pass variable names and values that can be accessed by the query

NOMADS QUERY FEATURES

Access External Data

- %QRY_VARIOL\$ - A compiled IOLIST containing the names of the variables to hold the external data
- %QRY_VARDATA\$ - The data for the variables in REC() format

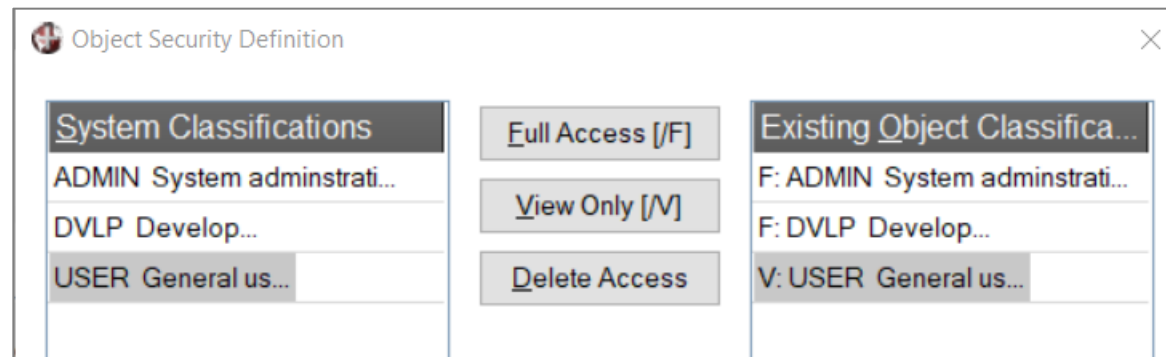
```
LOCAL %QRY_VARIOL$=CPL("IOLIST ThisVal$,ThatVal")
```

```
LOCAL %QRY_VARDATA$=REC(IOL=%QRY_VARIOL$)
```

When the query runs, ThisVal\$ and ThatVal will be populated and can be used in filters, formulas, etc.

Security

- Previously, security was based on Data Dictionary settings for files and fields, and this is still supported
- New security settings within the Query Definition based on the Security Manager with *Security Classes* and *Users*
 - Set Security Classifications to *Full Access* or *View Only*



NOMADS QUERY FEATURES

Security



- Three levels of security:

- Top level (query/main file)

- Determines if query can be displayed at all

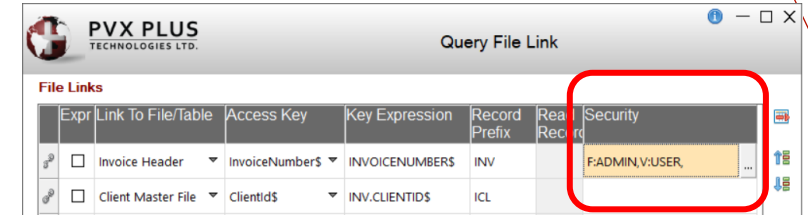
- Link file definitions

- Determines if the fields in the linked files are displayed

- Column definitions (fields/formulas)

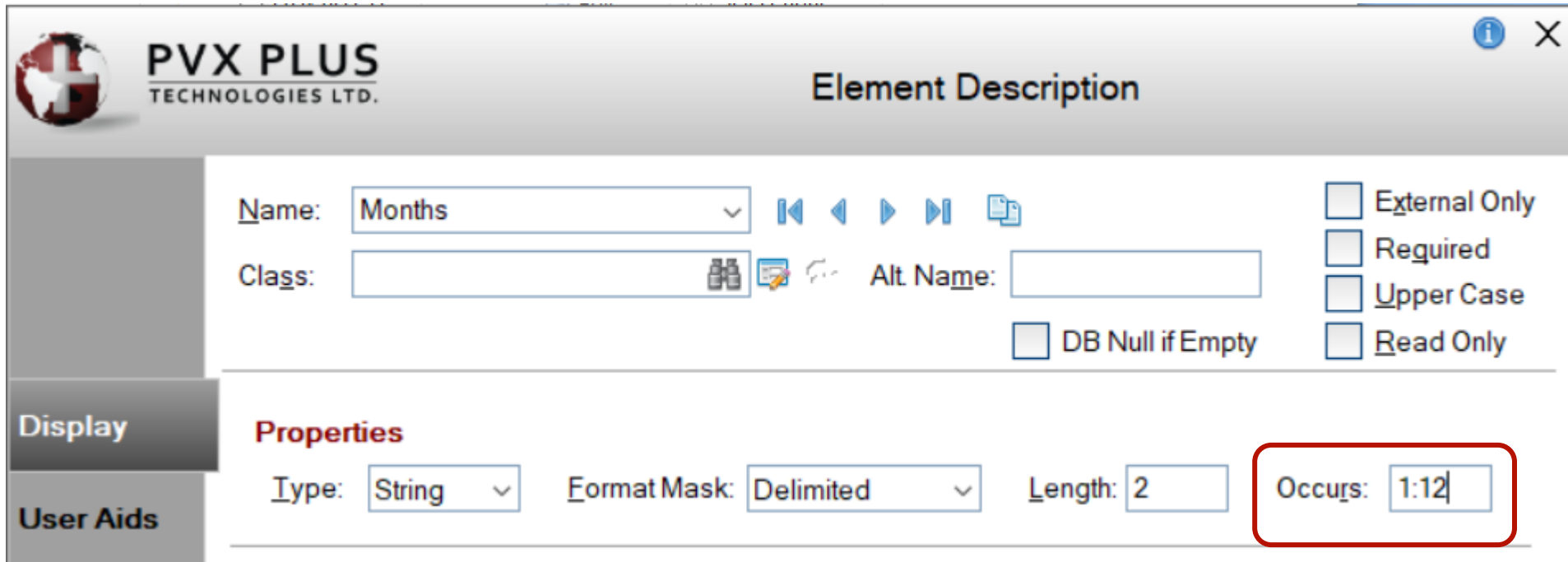
- Determines if specific fields are displayed

- Settings carry through to query-related features such as Smart Controls, Auto Charts, *QUERY*, etc.



Array Support

- Support for Data Dictionary elements defined via “Occurs”

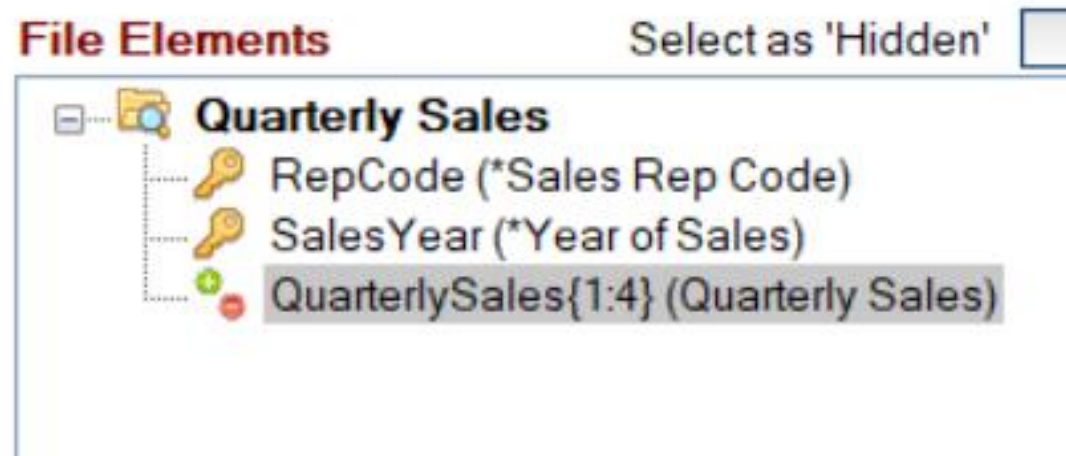


The screenshot shows the 'Element Description' window from PVX PLUS TECHNOLOGIES LTD. The window has a sidebar on the left with 'Display' and 'User Aids' buttons. The main area contains the following fields and options:

- Name:** Months (dropdown menu)
- Class:** (empty text box)
- Alt Name:** (empty text box)
- Properties:**
 - Type:** String (dropdown menu)
 - Format Mask:** Delimited (dropdown menu)
 - Length:** 2 (text box)
 - Occurs:** 1:12 (text box, highlighted with a red border)
- Checkboxes:** External Only, Required, Upper Case, DB Null if Empty, Read Only (all unchecked)

Array Support

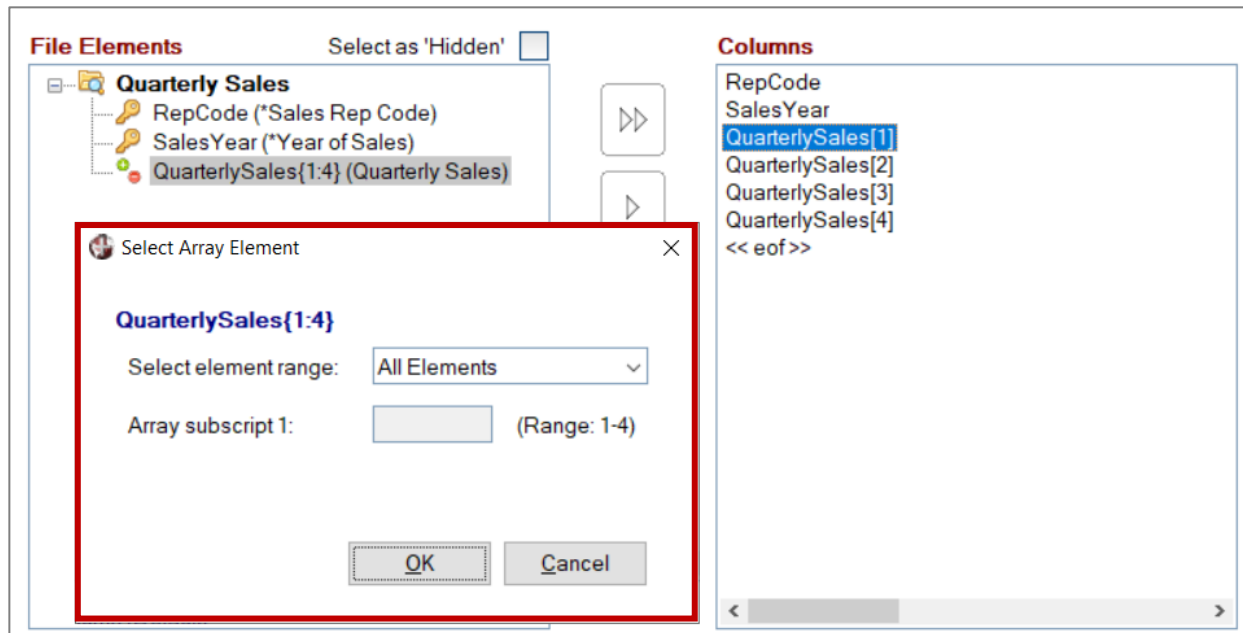
- Displayed in the Query Definition File Elements list with dimension in braces, e.g. `Month${1:1 2}`, `ThreeD{1:2,1:3,1:4}`



NOMADS QUERY FEATURES

Array Support


- When you select an array entry from the *Elements* list you can specify *All Elements* or a *Single Element* by entering a subscript



NOMADS QUERY FEATURES

Array Support

- Array elements are identified using square brackets
 - E.g. Month\$[1], ThreeD[2,1,1]

Formula Name	<input type="text" value="FML_Totals"/>	
Column Title	<input type="text" value="Yearly Total"/>	
Formula	<input type="text" value="QUARTERLYSALES[1]+QUARTERLYSALES[2]+QUARTERLYSALES[3]+QUARTERLYSALES[4]"/>	
Width	<input type="text" value="15"/>	
Alignment	<input type="text" value="Default"/>	
Format	<input checked="" type="radio"/> Mask <input type="radio"/> Program	
	<input type="text" value="Fixed"/>	<input type="text" value="\$###,##0.00"/>

Composite Key Definitions for File Links

- Previously you had to know the segment details to concatenate the key string

E.g. PAD(Company\$,5,\$00\$)+PAD(Department\$,10,\$00\$)+EmployeeID\$

File Links

Expr	Link To File/Table	Access Key	Key Expression	Record Prefix	Read Record	Security
<input type="checkbox"/>	Employee	Company\$ + Department\$ + EmployeeID\$	PAD(Company\$,5)+PAD(Department\$,10)+EmployeeID\$	EMP		

Key Expression

Target Key Definition:
Company\$(1,5)+Department\$(1,10)+EmployeeID\$(1,10)

Enter a literal value:

Or a program variable:

Key Segments:

- PAD(Company\$,5)
- PAD(Department\$,10)
- EmployeeID\$
- << End >>

NOMADS QUERY FEATURES

Composite Key Definitions for File Links

- Now you can generate a `KEY=F1$:F2$` expression just knowing the fields
 - Check the *Generate a KEY=F1\$:F2\$ expression* option
 - Select the fields that make up the key and the *Key Expression Builder* utility builds the expression for you


The screenshot shows a software interface for building key expressions. At the top, it displays the 'Target Key Definition' as `Company$(1,5)+Department$(1,10)+Employeeid$(1,10)`. Below this, there are two input fields: 'Enter a literal value:' and 'Or a program variable:'. To the right, a 'Key Segments:' list contains 'Company\$', 'Department\$', 'Employeeid\$', and '<< End >>'. A red box highlights the 'Key Segments' list. To the right of the list, another red box highlights the checked option 'Generate a KEY=F1\$:F2\$ expression' with a green checkmark icon.

NOMADS QUERY FEATURES

Composite Key Definitions for File Links

- Generates a Key Expression using the F1\$:F2\$:f3\$ syntax
 - E.g. KEY(__fileFN,KNO=0,KEY=Company\$:Department\$:EmployeeID\$)

File Links

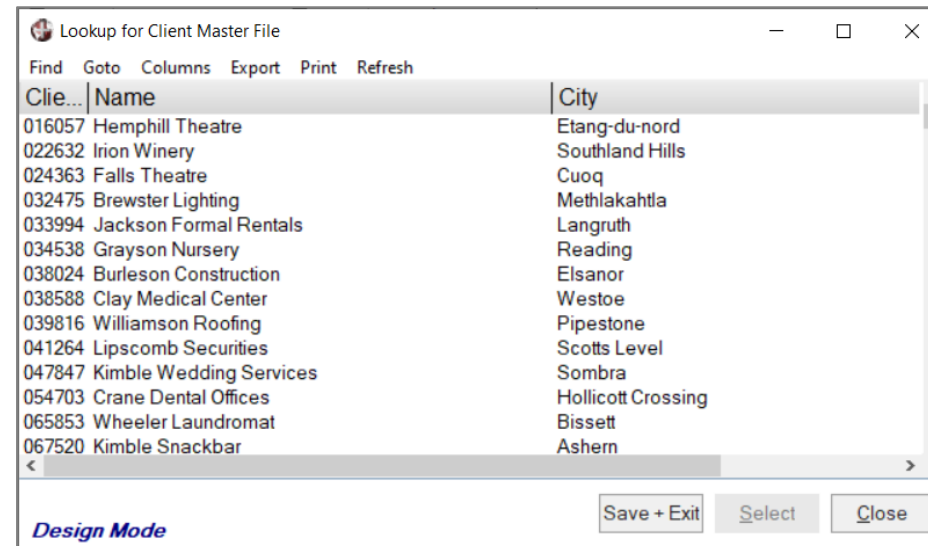
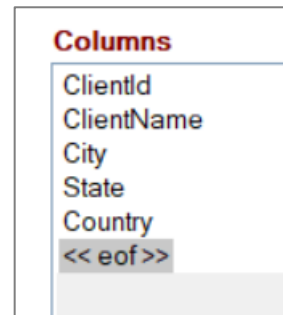
	Expr	Link To File/Table	Access Key	Key Expression	Record Prefix	Read Record	Security
	<input type="checkbox"/>	Employee ▼	Company\$ + Department\$ + EmployeeID\$ ▼	KEY(__linkFN,KNO=0,KEY=Company\$:Department\$:EmployeeID\$)	... EMP		

Composite Key Definitions for File Links

- Can handle changes in key segment length if file keys are updated
- Feature also added to other features such as *File Link Definitions*, *Views Data Source Maintenance*, etc.

Save Changes when Testing

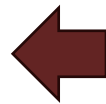
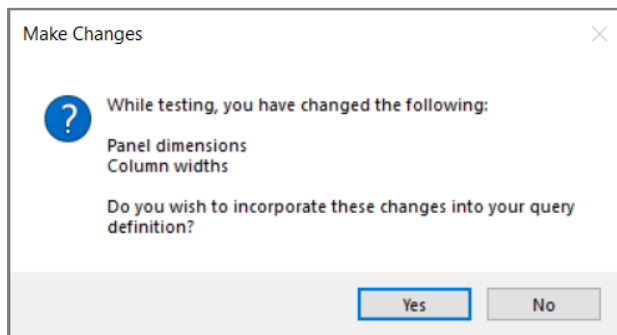
- Often it is difficult to determine the widths of the columns or the size of the panels when creating a query definition



NOMADS QUERY FEATURES

Save Changes when Testing

- When testing Query+ and Drop Query definitions certain changes can be saved when exiting the test panel
 - Column widths, *Show/Hide/Reorder Columns* may be altered
 - Query+ panel size can be adjusted
 - Save + Exit button added



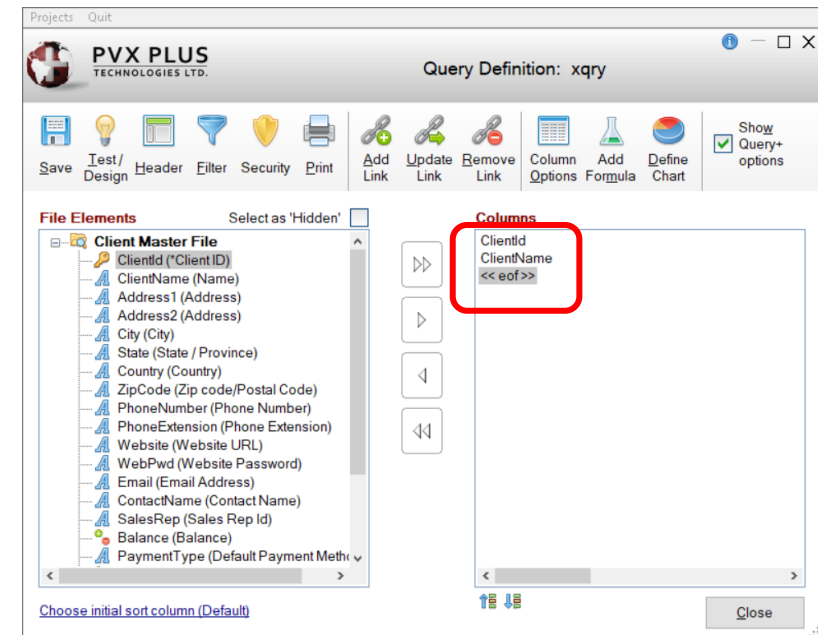
Client ID	Name	City	State / Province	Country
016057	Hemphill Theatre	Etang-du-nord	QC	Canada
022632	Iron Winery	Southland Hills	ON	Canada
024363	Falls Theatre	Cuoq	QC	Canada
032475	Brewster Lighting	Methlakahtla	BC	Canada
033994	Jackson Formal Rentals	Langruth	MB	Canada
034538	Grayson Nursery	Reading	NS	Canada
038024	Burleson Construction	Elsanor	MB	Canada
038588	Clay Medical Center	Westoe	SK	Canada
039816	Williamson Roofing	Pipestone	MB	Canada
041264	Lipscomb Securities	Scotts Level	ON	Canada
047847	Kimble Wedding Services	Sombra	ON	Canada
054703	Crane Dental Offices	Hollicott Crossing	NL	Canada
065853	Wheeler Laundromat	Bissett	ON	Canada
067520	Kimble Snackbar	Ashern	MB	Canada
069944	Moore Seafood and Steaks	Black Pines	BC	Canada
072005	Brown Steak House	Westville	NS	Canada
072410	San Saba Office Supplies	Winchester Park	MB	Canada
075395	Midland Formal Rentals	Bend	BC	Canada
078964	Houston Pharmacy	Medora	MB	Canada

Design Mode

Save + Exit Select Close

Auto-Select Key Field Columns

- When creating a new query, the Columns list box is now automatically populated with:
 - Elements that make up the chosen key
 - First non-key field ≥ 15 characters
(Not applicable to queries based on Views or manually defined files)
- Then you can add/remove the fields you want



Query_Row\$ Added

- Added special Query_Row\$ variable containing the contents of the query row selected
- Can be used in *Selection Logic* or *Return Value* expressions

Selection Logic 

Test ARG_1\$="" OR POS(UCS(ARG_1\$)=UCS(QUERY_ROW\$))>0

Query Row\$ Added

- Allows testing the entire row to match a value

Product Code:

Product Code	Product Description	Price	Qty on Hand	Std Cost
CAR-3310-RED	Compact Sedan - Red	8.75	27	6.56
CAR-3311-GRN	Compact Sedan - Green	8.50	208	6.38
CAR-3312-BLU	Compact Sedan - Blue	9.75	105	7.31
CAR-3313-LME	Compact Sedan - Lime	9.50	625	7.13
CAR-3314-PNK	Compact Sedan - Fuschia	9.50	131	7.13
CAR-3315-CYN	Compact Sedan - Cyan	9.25	204	6.94
CAR-4210-YLW	2Dr Sedan - Yellow	8.50	611	6.38
CAR-4211-SEA	2Dr Sedan - Seagreen	9.75	134	7.31
CAR-4212-VIO	2Dr Sedan - Violet	8.25	162	6.19
CAR-4213-LME	2Dr Sedan - Lime	9.25	89	6.94
CAR-4214-RED	2Dr Sedan - Red	10.25	233	7.69
CAR-4215-BLU	2Dr Sedan - Blue	8.75	343	6.56

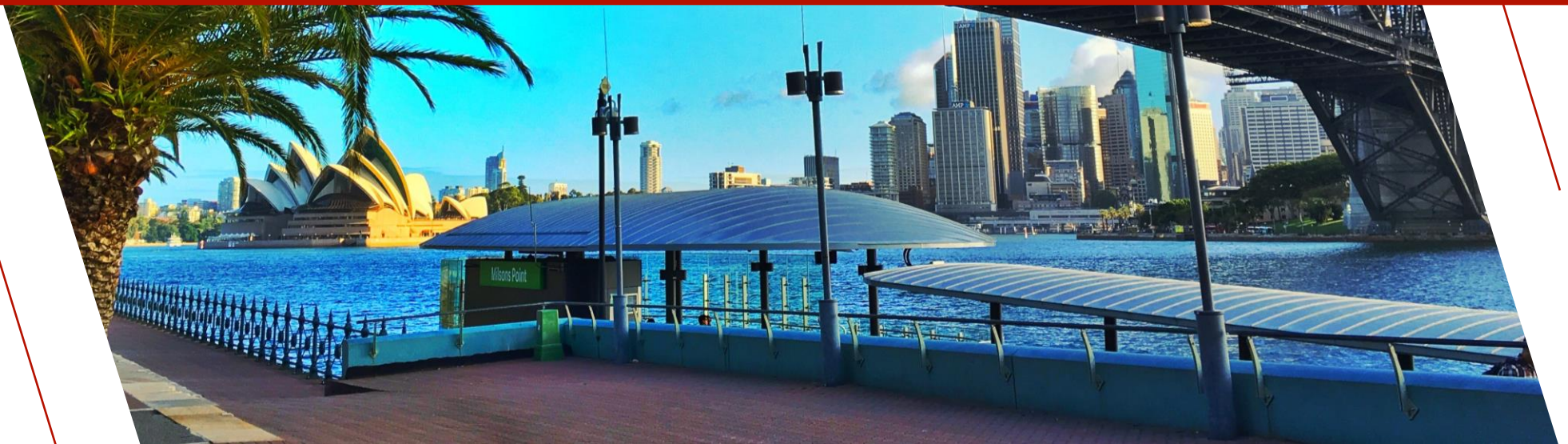
Select Close

Selection Logic

Test



QUERY+ OPTIONS



Suppress Records with Duplicate Return Values

- Show/Process only the first record of a series
 - E.g. Displaying the invoices with VAN products where there could be several VAN type detail lines

Product Code	Item Description	Invoice Number	Name	Sales Rep Name
VAN-2120-BLU	Transport Van - Blue	100000	McMullen Trucking	Chuck Mitchell
VAN-1124-ORG	Camper Van - Orange	100000	McMullen Trucking	Chuck Mitchell
VAN-1125-VIO	Camper Van - Violet	100002	Rusk Office Supplies	Anastasia Nelson
VAN-4111-ROS	Panel Van - Pale Rose	100002	Rusk Office Supplies	Anastasia Nelson
VAN-2121-BUR	Transport Van - Burgundy	100002	Rusk Office Supplies	Anastasia Nelson
VAN-2124-SEA	Transport Van - Seagreen	100003	Runnels Theatre	Betty Turner
VAN-4124-ORG	Passenger Van - Orange	100007	Grimes Landscaping	Donna Kerr
VAN-4110-SLV	Panel Van - Silver	100008	Cameron Electrical Contracting	Anastasia Nelson
VAN-4122-PNK	Passenger Van - Fuschia	100009	Stephens Wine and Spirits	Anastasia Nelson

NOMADS QUERY OPTIONS

Suppress Records with Duplicate Return Values

- Query Selection Definition - *Suppress Duplicates*
 - *Suppress records based on duplicate return values* option

Suppress Duplicates

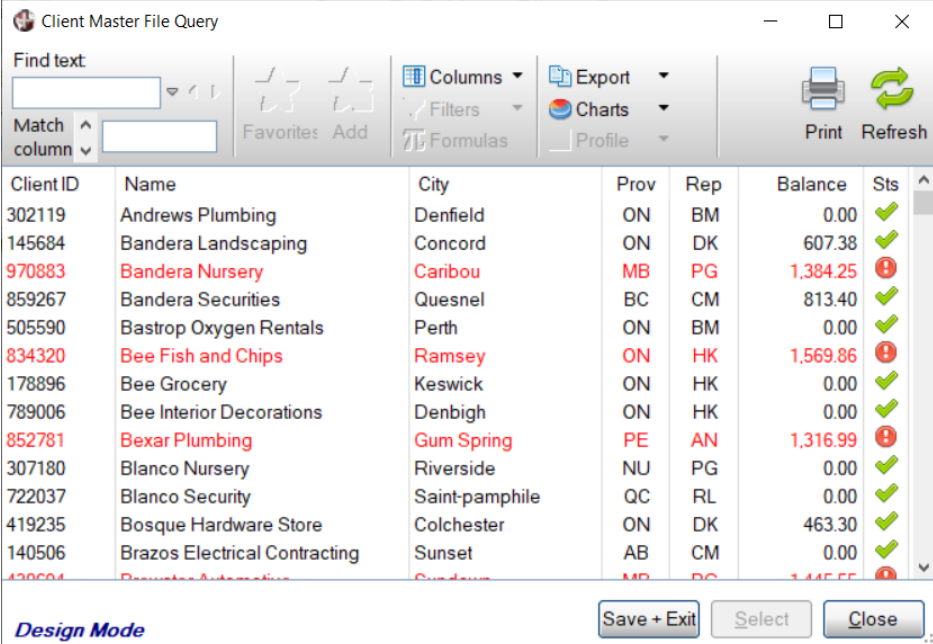
Suppress records based on duplicate return values

- Show/Process only the first record of a series

Product Code	Item Description	Invoice Number	Name	Sales Rep Name
VAN-2120-BLU	Transport Van - Blue	100000	McMullen Trucking	Chuck Mitchell
VAN-1125-VIO	Camper Van - Violet	100002	Rusk Office Supplies	Anastasia Nelson
VAN-2124-SEA	Transport Van - Seagreen	100003	Runnels Theatre	Betty Turner
VAN-4124-ORG	Passenger Van - Orange	100007	Grimes Landscaping	Donna Kerr
VAN-4110-SLV	Panel Van - Silver	100008	Cameron Electrical Contracting	Anastasia Nelson
VAN-4122-PNK	Passenger Van - Fuschia	100009	Stephens Wine and Spirits	Anastasia Nelson
VAN-4124-ORG	Passenger Van - Orange	100011	Cass Theatre	Hank Kane
VAN-1124-ORG	Camper Van - Orange	100014	Leon Bistro and Bar	Olivia Blackwood
VAN-4114-PRL	Panel Van - Pearl	100015	Dawson Farm Equipment	Gordon Taylor

Row Display Options

- Option to conditionally change color/highlighting on individual rows to highlight a condition:
 - *Bold Text* – Display text in bold font
 - *Colors* – set text & background colors
 - *HiLiteColor* – Set background color
 - *TextColor* – Set text color
 - *User display* – Specify your own display string



The screenshot shows a window titled "Client Master File Query" with a toolbar containing options like "Find text", "Match column", "Columns", "Export", "Charts", "Profile", "Print", and "Refresh". Below the toolbar is a table with the following data:

ClientID	Name	City	Prov	Rep	Balance	Sts
302119	Andrews Plumbing	Denfield	ON	BM	0.00	✓
145684	Bandera Landscaping	Concord	ON	DK	607.38	✓
970883	Bandera Nursery	Caribou	MB	PG	1,384.25	!
859267	Bandera Securities	Quesnel	BC	CM	813.40	✓
505590	Bastrop Oxygen Rentals	Perth	ON	BM	0.00	✓
834320	Bee Fish and Chips	Ramsey	ON	HK	1,569.86	!
178896	Bee Grocery	Keswick	ON	HK	0.00	✓
789006	Bee Interior Decorations	Denbigh	ON	HK	0.00	✓
852781	Bexar Plumbing	Gum Spring	PE	AN	1,316.99	!
307180	Blanco Nursery	Riverside	NU	PG	0.00	✓
722037	Blanco Security	Saint-pamphile	QC	RL	0.00	✓
419235	Bosque Hardware Store	Colchester	ON	DK	463.30	✓
140506	Brazos Electrical Contracting	Sunset	AB	CM	0.00	✓
428694	Brazos Automotive	Sundown	MB	PG	1,445.55	!

At the bottom of the window, there are buttons for "Design Mode", "Save + Exit", "Select", and "Close".

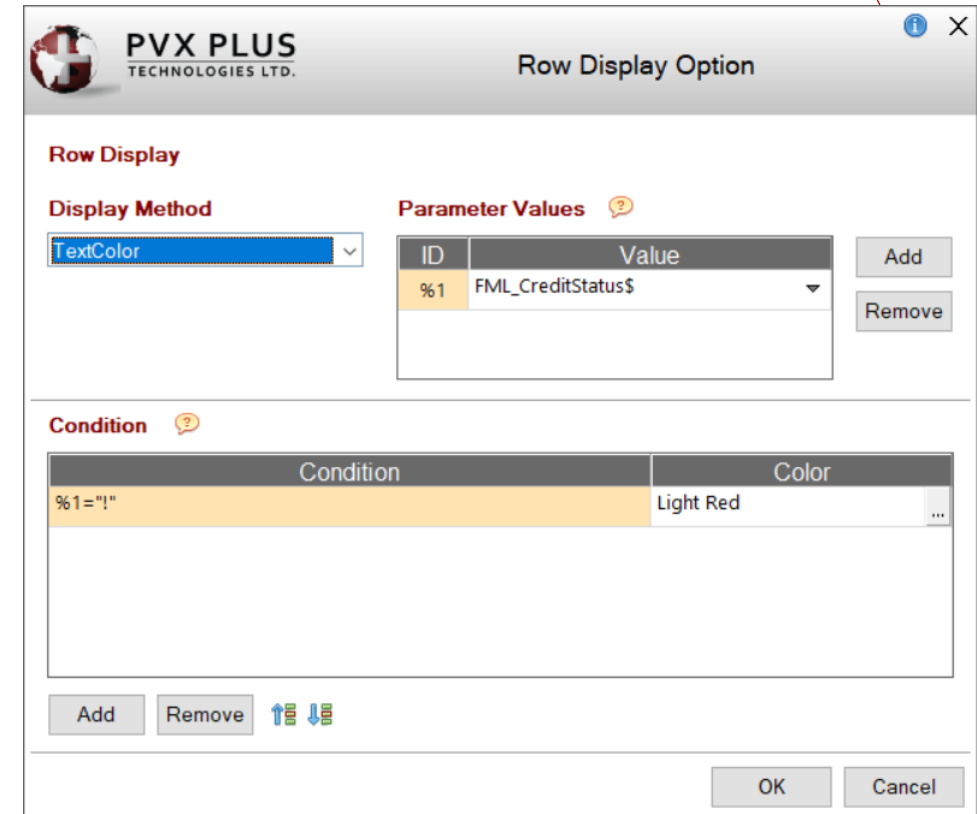
Row Display Options

- [Query Header Display Tab](#)
 - *Row Highlight – Add row display options*

Row Highlight

 [Edit row display \(TextColor\)](#)

- [Row Display Option](#) interface



Change Font/Color

- Enhanced the Query+ Font/Color definition
 - Add run-time support for Library Default and Panel settings for font and color
 - Allow Font Specification and Attributes for individual queries
 - Allow setting Background color for individual queries

The screenshot shows a dialog box titled "Font Specification" with the following sections:

- Font Specification:** A dropdown menu for "Font" set to "<Default Graphic Font>" and a dropdown menu for "Size" set to "Regular".
- Color:** Two rows of color selection controls. The first row is for "Foreground" and the second for "Background", both currently set to "Default". Each row includes a color swatch and a small icon.
- Attributes:** Three checkboxes: "Bold" (unchecked), "Italics" (unchecked), and "ANSI Characters" (checked).
- Theme:** A checkbox for "Expression" (unchecked) and a dropdown menu for selecting a theme.

Choose Initial Sort Column

- Allows ascending/descending sort on non-key columns
 - Can even sort on Formula values
 - Occurs after list is loaded when query first displayed
 - Doesn't use Load-on-demand or Background Loading

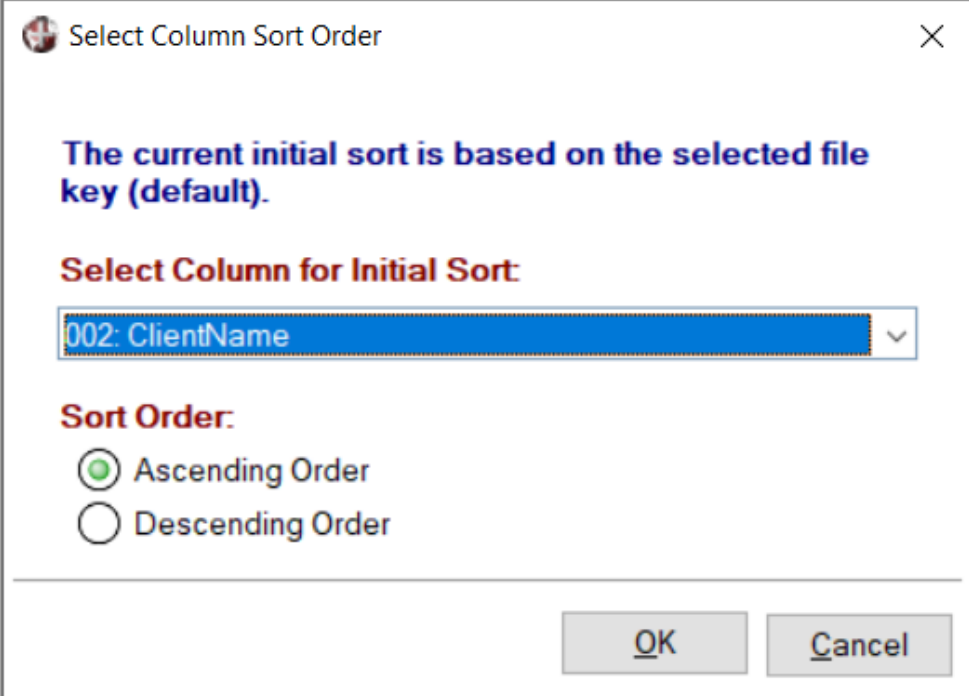
NOMADS QUERY OPTIONS

Choose Initial Sort Column

- Choose *initial sort column* at bottom of Query Definition screen

[Choose initial sort column \(Default\)](#)

- Invokes *Select Column Sort Order*



The screenshot shows a dialog box titled "Select Column Sort Order" with a close button (X) in the top right corner. The dialog contains the following text and controls:

- A message: "The current initial sort is based on the selected file key (default)." in blue text.
- A label: "Select Column for Initial Sort:" in red text.
- A dropdown menu showing "002: ClientName" with a downward arrow.
- A label: "Sort Order:" in red text.
- Two radio button options: "Ascending Order" (selected) and "Descending Order".
- Two buttons at the bottom right: "OK" and "Cancel".

Start Value Option

- Sometimes the value in the query multi-line does not match the sort key used in the query, so the lookup fails
 - E.g. the multi-line has a client code but the query is sorted by client name

Client ID	Name	Sts	City	Prov	Rep	Balance
302119	Andrews Plumbing	✓	Denfield	ON	BM	0.00
145684	Bandera Landscaping	✓	Concord	ON	DK	607.38
970883	Bandera Nursery	!	Caribou	MB	PG	1,384.25
859267	Bandera Securities	✓	Quesnel	BC	CM	813.40
505590	Bastrop Oxygen Rentals	✓	Perth	ON	BM	0.00
834320	Bee Fish and Chips	!	Ramsey	ON	HK	1,569.86
178896	Bee Grocery	✓	Keswick	ON	HK	0.00
789006	Bee Interior Decorations	✓	Denbigh	ON	HK	0.00
852781	Bexar Plumbing	!	Gum Spring	PE	AN	1,316.99
207180	Blanco Nursery	✓	Diverside	NU	BC	0.00

← No match

NOMADS QUERY OPTIONS

Start Value Option

- New *Start At Value* option in Header Options
 - *Start At Value* options:
 - *Match Options*
 - *Match Key Value*
 - *Match Return Value*

Start At Value:

Default to Uppercase ▾

Match return value ▾

Client ID: 834320

Client Master File Query

Find text: 834320

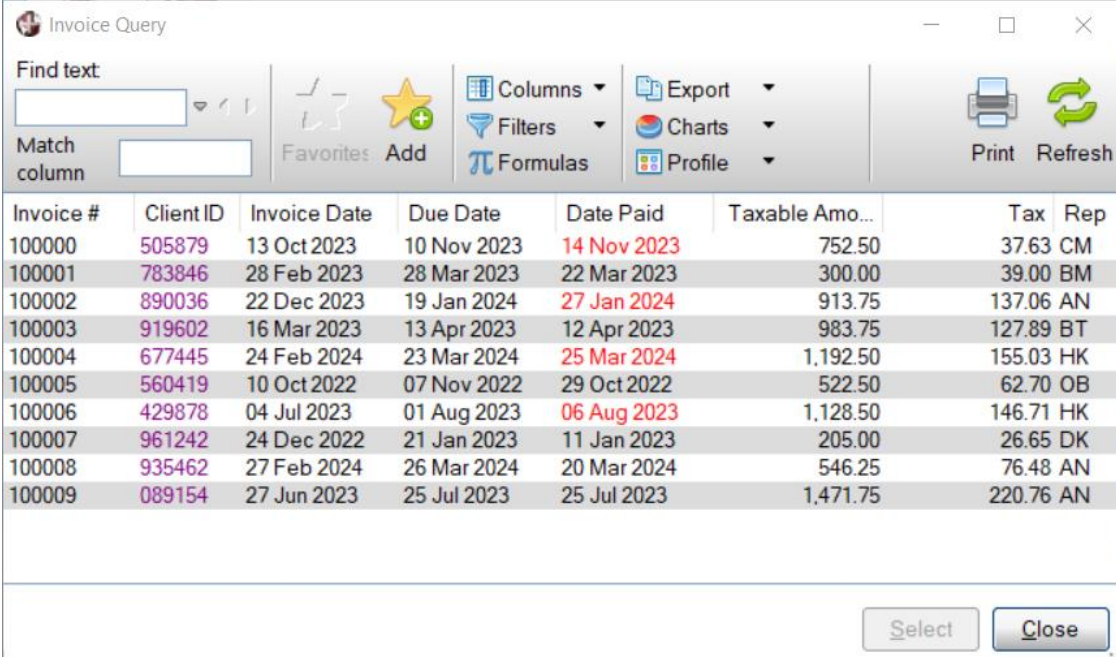
Match column:

Client ID	Name	Sts	City	Prov	Rep	Balance
834320	Bee Fish and Chips	!	Ramsey	ON	HK	1,569.86
178896	Bee Grocery	✓	Keswick	ON	HK	0.00
789006	Bee Interior Decorations	✓	Denbigh	ON	HK	0.00
852781	Bexar Plumbing	!	Gum Spring	PE	AN	1,316.99
307180	Blanco Nursery	✓	Riverside	NU	PG	0.00
722037	Blanco Security	✓	Saint-pamphile	QC	RL	0.00
419235	Bosque Hardware Store	✓	Colchester	ON	DK	463.30
140506	Brazos Electrical Contracting	✓	Sunset	AB	CM	0.00

Select Close

Continue While

- Selection criteria option for when you want to stop a query before the logical end
 - E.g.
 - First 10 records →
 - When a total is reached
 - Etc.




The screenshot shows a window titled "Invoice Query" with a toolbar at the top containing options like "Find text", "Match column", "Columns", "Export", "Filters", "Formulas", "Charts", "Profile", "Print", and "Refresh". Below the toolbar is a table with the following data:

Invoice #	Client ID	Invoice Date	Due Date	Date Paid	Taxable Amo...	Tax	Rep
100000	505879	13 Oct 2023	10 Nov 2023	14 Nov 2023	752.50	37.63	CM
100001	783846	28 Feb 2023	28 Mar 2023	22 Mar 2023	300.00	39.00	BM
100002	890036	22 Dec 2023	19 Jan 2024	27 Jan 2024	913.75	137.06	AN
100003	919602	16 Mar 2023	13 Apr 2023	12 Apr 2023	983.75	127.89	BT
100004	677445	24 Feb 2024	23 Mar 2024	25 Mar 2024	1,192.50	155.03	HK
100005	560419	10 Oct 2022	07 Nov 2022	29 Oct 2022	522.50	62.70	OB
100006	429878	04 Jul 2023	01 Aug 2023	06 Aug 2023	1,128.50	146.71	HK
100007	961242	24 Dec 2022	21 Jan 2023	11 Jan 2023	205.00	26.65	DK
100008	935462	27 Feb 2024	26 Mar 2024	20 Mar 2024	546.25	76.48	AN
100009	089154	27 Jun 2023	25 Jul 2023	25 Jul 2023	1,471.75	220.76	AN

NOMADS QUERY OPTIONS

Continue While

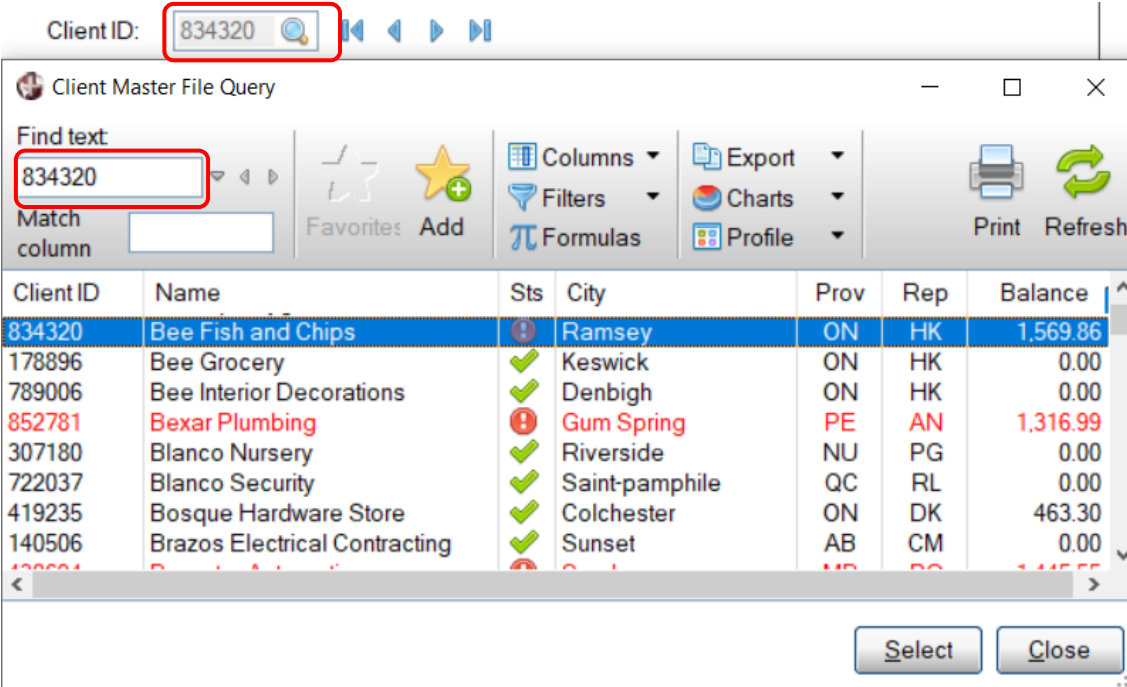
- Query Selection Definition – Continue While...
 - Processing continues while the processing condition is true
 - Based on the initial order of the records read
 - Can be a *Test* expression or *Call* a program that returns an EXIT code to stop
 - Added a special query variable QRY_REC_COUNT for instances where the limit is the number of records

Continue While... 

Test

Find Text

- Display the query multi-line value passed to the query in the *Find Text* box of the run-time query



The screenshot shows the 'Client Master File Query' window. At the top, the 'Client ID' field contains '834320'. Below this, the 'Find text' field also contains '834320'. The 'Match column' field is empty. The table below displays a list of clients with columns for Client ID, Name, Sts, City, Prov, Rep, and Balance. The first row is highlighted in blue.

Client ID	Name	Sts	City	Prov	Rep	Balance
834320	Bee Fish and Chips	!	Ramsey	ON	HK	1,569.86
178896	Bee Grocery	✓	Keswick	ON	HK	0.00
789006	Bee Interior Decorations	✓	Denbigh	ON	HK	0.00
852781	Bexar Plumbing	!	Gum Spring	PE	AN	1,316.99
307180	Blanco Nursery	✓	Riverside	NU	PG	0.00
722037	Blanco Security	✓	Saint-pamphile	QC	RL	0.00
419235	Bosque Hardware Store	✓	Colchester	ON	DK	463.30
140506	Brazos Electrical Contracting	✓	Sunset	AB	CM	0.00



QUERY-BASED UTILITIES



QUERY

- Access the contents of a query like a standard read-only file
 - New KNO=* option to automatically use the key specified in the query definition
 - Enhanced to better handle duplicate, descending and composite keys
 - SEQPFX=Y – Prefixes a 10-digit sequence number to the key value to ensure unique values and correct record sequence
 - KEYPAD=Y – Replaces \$00\$ padding in compound keys with spaces

QUERY-BASED UTILITIES

2024

*tools/qryprint

- Prints a formatted PDF report based on a query definition

Client ID	Name	City	Prov	Rep	Balance	Sts
302119	Andrews Plumbing	Denfield	ON	BM	0.00	✓
145684	Bandera Landscaping	Concord	ON	DK	607.38	✓
970883	Bandera Nursery	Caribou	MB	PG	1,384.25	!
859267	Bandera Securities	Quesnel	BC	CM	813.40	✓
505590	Bastrop Oxygen Rentals	Perth	ON	BM	0.00	✓
834320	Bee Fish and Chips	Ramsey	ON	HK	1,569.86	!
178896	Bee Grocery	Keswick	ON	HK	0.00	✓
789006	Bee Interior Decorations	Denbigh	ON	HK	0.00	✓
852781	Bexar Plumbing	Gum Spring	PE	AN	1,316.99	!
307180	Blanco Nursery	Riverside	NU	PG	0.00	✓
722037	Blanco Security	Saint-pamphile	QC	RL	0.00	✓
419235	Bosque Hardware Store	Colchester	ON	DK	463.30	✓
140506	Brazos Electrical Contracting	Sunset	AB	CM	0.00	✓
430694	Brewster Automotive	Sundown	MB	PG	1,445.55	!

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Client Master File Query

Status: != Over credit limit

Client ID	Name	City	Prov	Rep	Balance	Sts
302119	Andrews Plumbing	Denfield	ON	BM	0.00	
145684	Bandera Landscaping	Concord	ON	DK	607.38	
970883	Bandera Nursery	Caribou	MB	PG	1,384.25	!
859267	Bandera Securities	Quesnel	BC	CM	813.40	
505590	Bastrop Oxygen Rentals	Perth	ON	BM	0.00	
834320	Bee Fish and Chips	Ramsey	ON	HK	1,569.86	!
178896	Bee Grocery	Keswick	ON	HK	0.00	
789006	Bee Interior Decorations	Denbigh	ON	HK	0.00	
852781	Bexar Plumbing	Gum Spring	PE	AN	1,316.99	!
307180	Blanco Nursery	Riverside	NU	PG	0.00	
722037	Blanco Security	Saint-pamphile	QC	RL	0.00	
419235	Bosque Hardware Store	Colchester	ON	DK	463.30	
140506	Brazos Electrical Contracting	Sunset	AB	CM	0.00	
430694	Brewster Automotive	Sundown	MB	PG	1,445.55	!
032475	Brewster Lighting	Methlakahltla	BC	PG	0.00	
072005	Brown Steak House	Westville	NS	OB	1,550.21	
038024	Burleson Construction	Elsanor	MB	CM	557.94	
882769	Burnet Repairs	Forest	ON	DK	206.23	
935462	Cameron Electrical Contracting	Long Lake	PE	AN	74.10	
826016	Cass Theatre	Rutherglen	ON	HK	1,557.99	
962910	Chambers Fish and Chips	Fonthill	ON	DK	0.00	
701743	Chambers Locksmiths	Lac Seul Post	ON	DK	0.00	
599121	Childress Hardware Store	Princeton	ON	HK	703.42	
038588	Clay Medical Center	Westoe	SK	PG	127.60	
299086	Cochran Business Park	Dresden	ON	HK	0.00	
447971	Coke Construction	Finvale	BC	CM	0.00	
137842	Coke Pet Shop	Spencer	NL	AN	1,559.68	!
753284	Coleman Delivery Service	Millhaven	ON	HK	1,333.12	!
706513	Collingsworth Lighting	Winnipeg	MB	PG	0.00	
467530	Collingsworth Wedding Service	Laurentides	QC	GT	10.64	
626449	Coryell Wedding Chapel	Bednesti	BC	CM	814.52	
054703	Crane Dental Offices	Hollicott Crossing	NL	AN	0.00	
585279	Crosby Fish and Chips	Windsor	NS	AN	0.00	
518159	Dawson Business Park	Armstrong	ON	HK	0.00	
336147	Dawson Farm Equipment	Saint-louis-de-terreb	QC	GT	787.75	
503838	Dickens Wine and Spirits	Kiosk	ON	DK	979.43	
762699	Ellis Locksmiths	Bull River	BC	PG	1,739.64	!
313689	Ellis Office Supplies	Iduna	SK	PG	0.00	
350353	Ellis Roofing	New Fellowship	PE	BT	0.00	
024363	Falls Theatre	Cuoq	QC	RL	0.00	
433276	Falls Tree Farm	Prince Rupert	BC	PG	252.00	
764436	Fannin Business Park	Big Sandy	ON	DK	0.00	
841910	Fayette Interior Decorations	Chesley	ON	DK	0.00	
083775	Fayette TV and Stereo Store	Aylesford	NS	AN	2,038.66	!

Jane

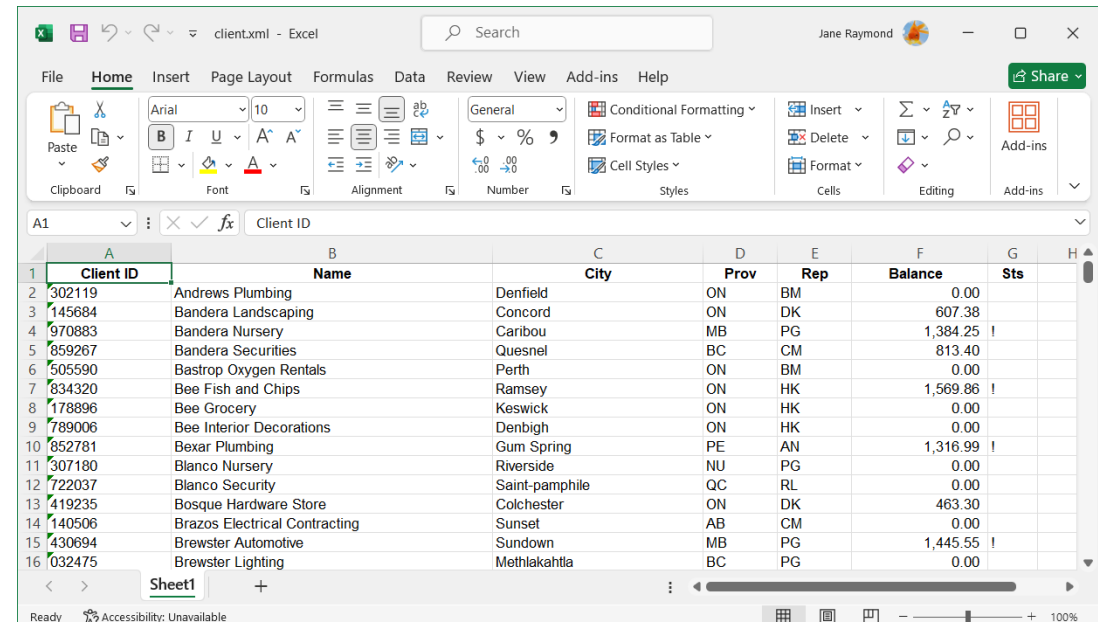
*tools/qryprint

CALL "***tools/qryprint**", *queryName*\$, *queryLib*\$, *pdffile*\$_
[, *queryopts*\$, *show_flg*\$, *subheader*\$]

- Includes content options (*queryopts*\$) to show hidden columns in the query definition (H) and display numeric calculation options (Total/Average/Minimum/Maximum) in subheader (C)
- Includes interactive options (*show_flg*\$) to show error messages (E), display a progress bar (P) and display the PDF file when done (D)
- Can include text for a subheader on the first page of the report

*tools/qryexport

- Exports data to a spreadsheet-supported file based on a query definition
 - Supported file types:
 - .csv – Comma separated
 - .txt – Tab delimited
 - .slk – Symbolic link
 - .xml – Microsoft XML



Client ID	Name	City	Prov	Rep	Balance	Sts
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178896	Bee Grocery	Keswick	ON	HK	0.00	
789006	Bee Interior Decorations	Denbigh	ON	HK	0.00	
852781	Bexar Plumbing	Gum Spring	PE	AN	1,316.99	!
307180	Blanco Nursery	Riverside	NU	PG	0.00	
722037	Blanco Security	Saint-pamphile	QC	RL	0.00	
419235	Bosque Hardware Store	Colchester	ON	DK	463.30	
140506	Brazos Electrical Contracting	Sunset	AB	CM	0.00	
430694	Brewster Automotive	Sundown	MB	PG	1,445.55	!
032475	Brewster Lighting	Methlakahtla	BC	PG	0.00	

QUERY-BASED UTILITIES

*tools/qryexport

CALL **"*tools/qryexport"**, *queryName\$*, *queryLib\$*, *exportfile\$*
[, queryopts\$, show_flg\$]

- Type of export file determined by file extension
- Includes content options (*queryopts\$*) to show hidden columns in the query definition (H)
- Includes interactive options (*show_flg\$*) to show error messages (E), display a progress bar (P) and display the file in the default spreadsheet app when done (D)