Jet Reports Training

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Introduction

Part 1

Introduction

Part 2

Jet Reports' functions

Part 3

How to design the reports

Part 4

CNA's Reports

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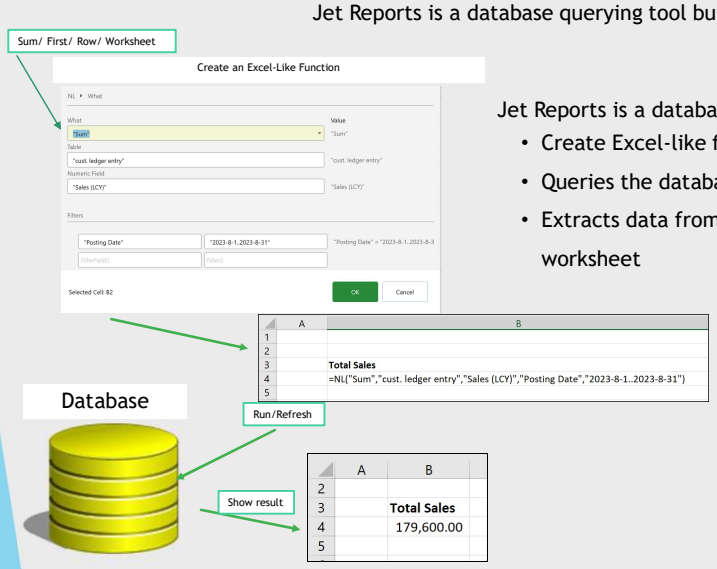
What is Jet Reports?

Jet Reports is a database querying tool built into Excel.



Jet Reports is a database querying tool built into Excel.

- Create Excel-like functions
- Queries the database
- Extracts data from the database and returns it into the Excel worksheet

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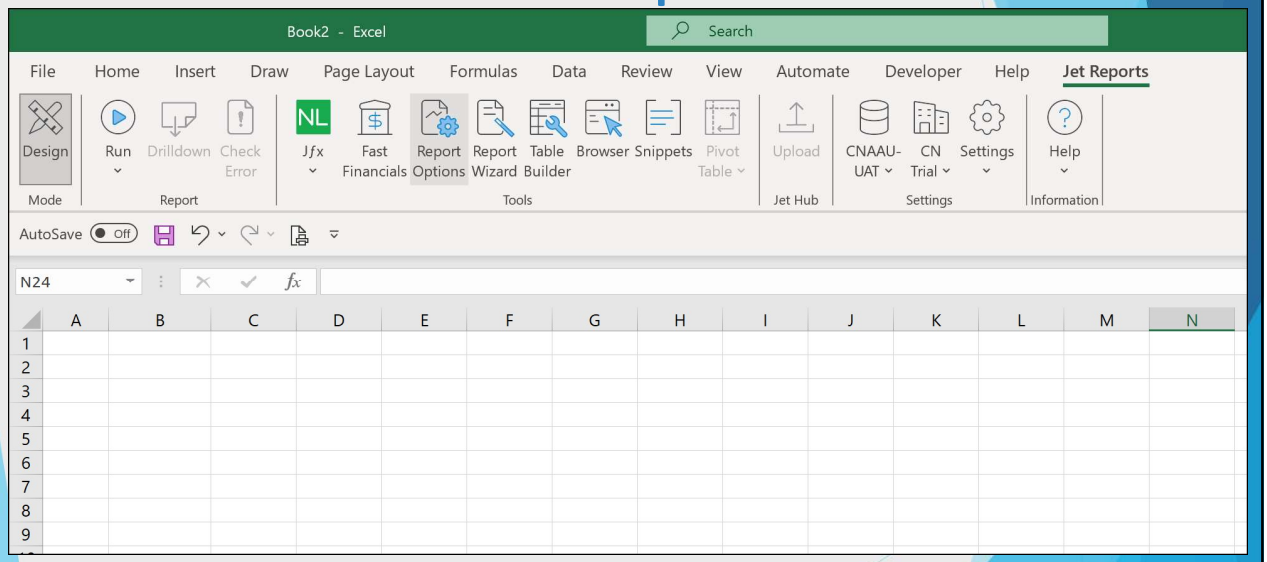
What Does Jet Reports Look Like?



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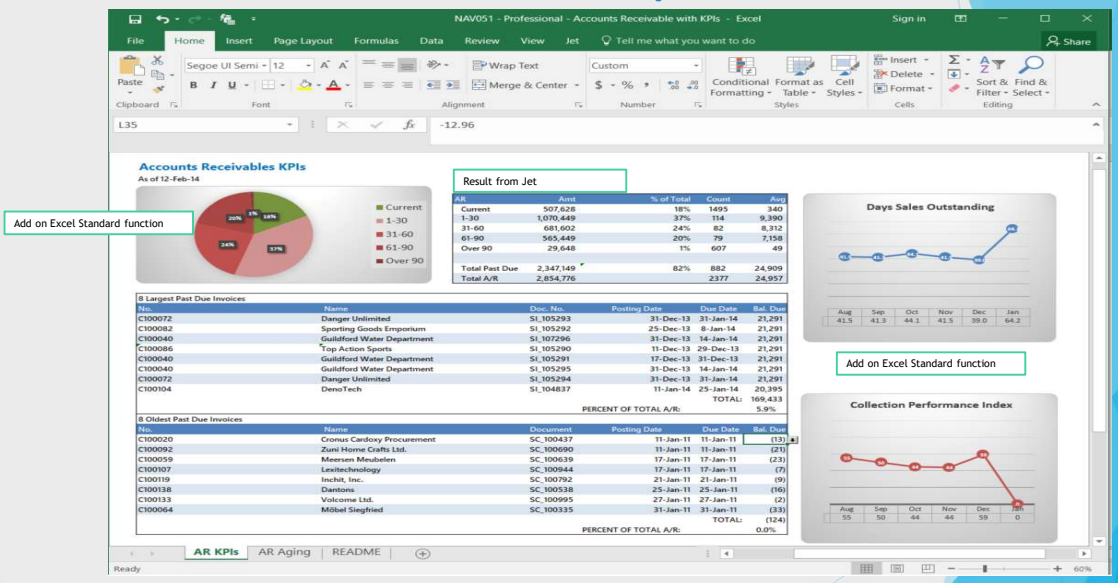
What does a Jet Report Look Like?



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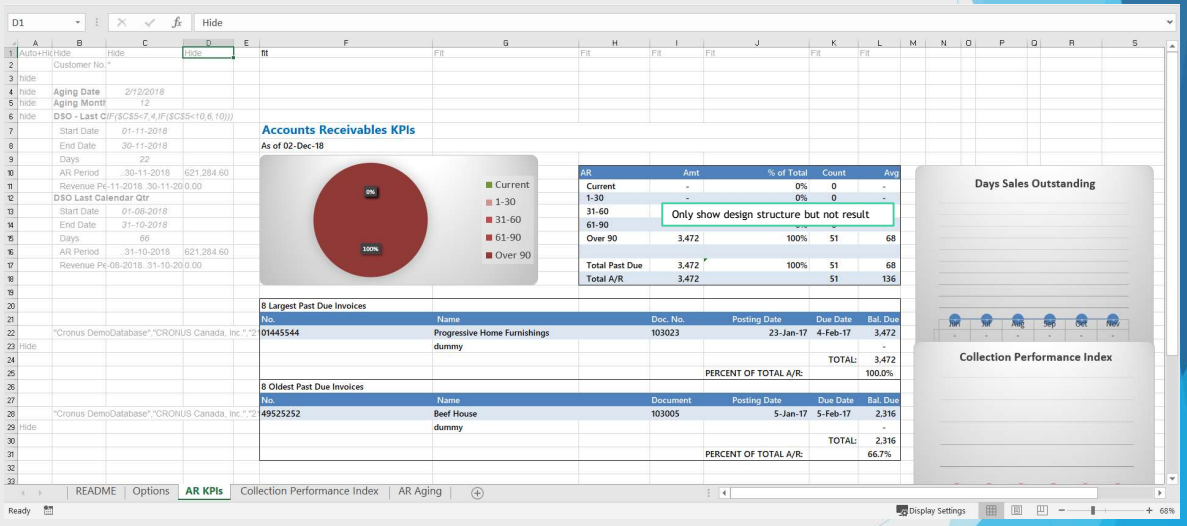
In Design Mode

View of Jet Designer



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Jet Reports Users

Designer
- Can create, edit and delete Jet Reports queries
- Has ALL permissions in Jet Reports

Viewer
- Can run or refresh queries in a Jet Reports report
- May be able to change report filters (e.g. Posting Date)

Excel User
- Does not have Jet Reports installed
- Cannot refresh the data (result may not be up to date)

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Report Writing Procedure

Predevelopment Stage

Create a mockup report

- Select filters, table and fields
- Select report layout (incl. Grouping/ just show list)
- Create Options Page
- Set up Report page (new sheet on Excel)

Development Stage

Create the report

- Create List and detail
- Add subtotals and end totals
- Always Test the report before pass the report to viewer

"+Value", if not viewer/ excel user may not able to view the report

Distribution Stage

Prepare the report for distribution

- Simulate viewer mode & run the report
- Save in Report mode before pass the report to viewer

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Mockup Report

Example of a Mockup Report

	B	C	D	E	F	G	H	I	J	K
2										
3										
4										
5		Table needed:	Cust. Ledger Entry (CLE)	Customer (C.)						
6										
7		Field needed:	Customer No.	Customer Name	Description	Amount	Posting Date	Salesperson Code		
8			(CLE)	(C.)	(CLE)	(CLE)	(CLE)	(CLE)		
9		Common Field:	Customer No.	No.						
10										
11		Filter:	Posting Date							
12										
13		Report Layout:	Details Report							
14										
15										
16										

Easy for different Jet Report Designers to know the design of the report

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Tables in the Database

Master Table

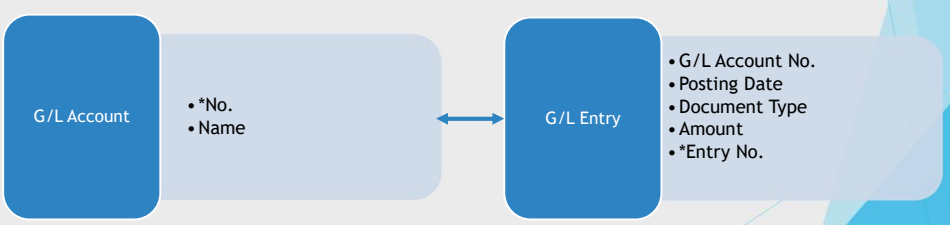
G/L Account

- Each record is a unique G/L Account
- Basic general ledger account information from G/L Account Card

Sub Table

G/L Entry

- Each Record is a unique debit or credit to a G/L Account



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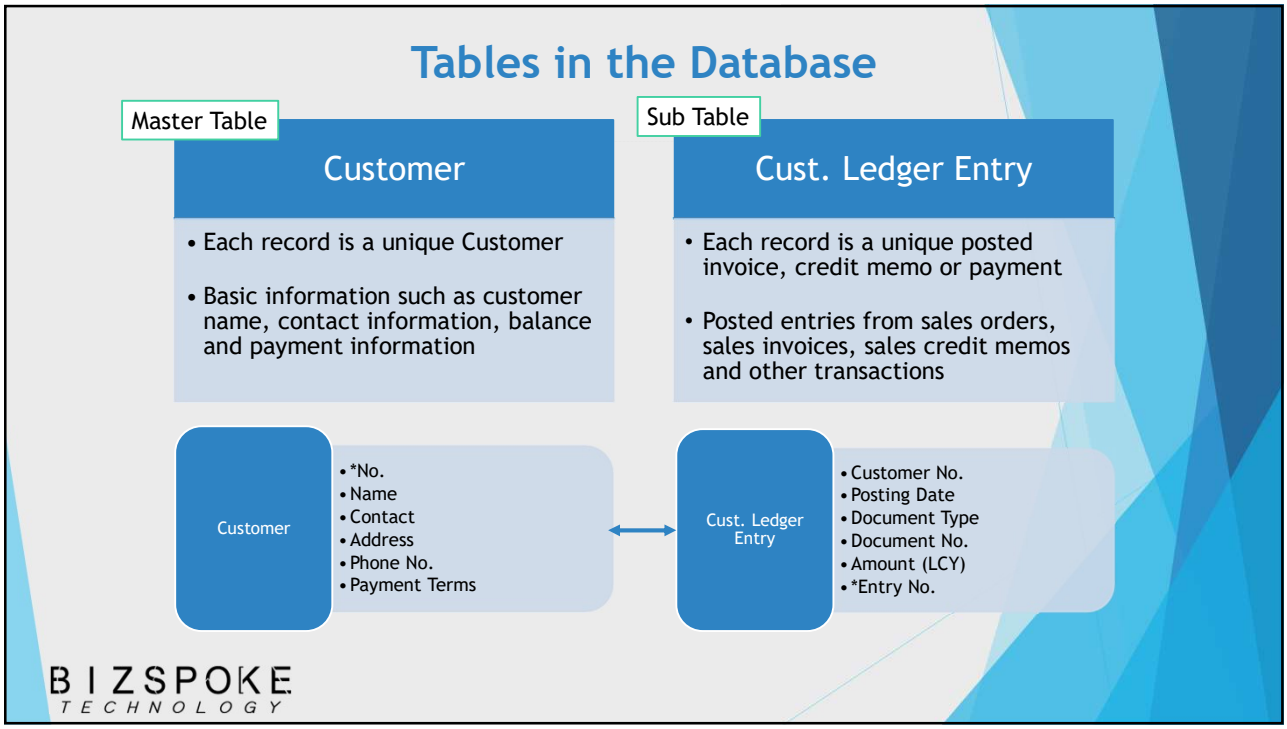
Tables in the Database
Master Table
Customer
• Each record is a unique Customer
• Basic information such as customer name, contact information, balance and payment information
Sub Table
Cust. Ledger Entry
• Each record is a unique posted invoice, credit memo or payment
• Posted entries from sales orders, sales invoices, sales credit memos and other transactions
Customer
• *No.
• Name
• Contact
• Address
• Phone No.
• Payment Terms
Cust. Ledger Entry
• Customer No.
• Posting Date
• Document Type
• Document No.
• Amount (LCY)
• *Entry No.
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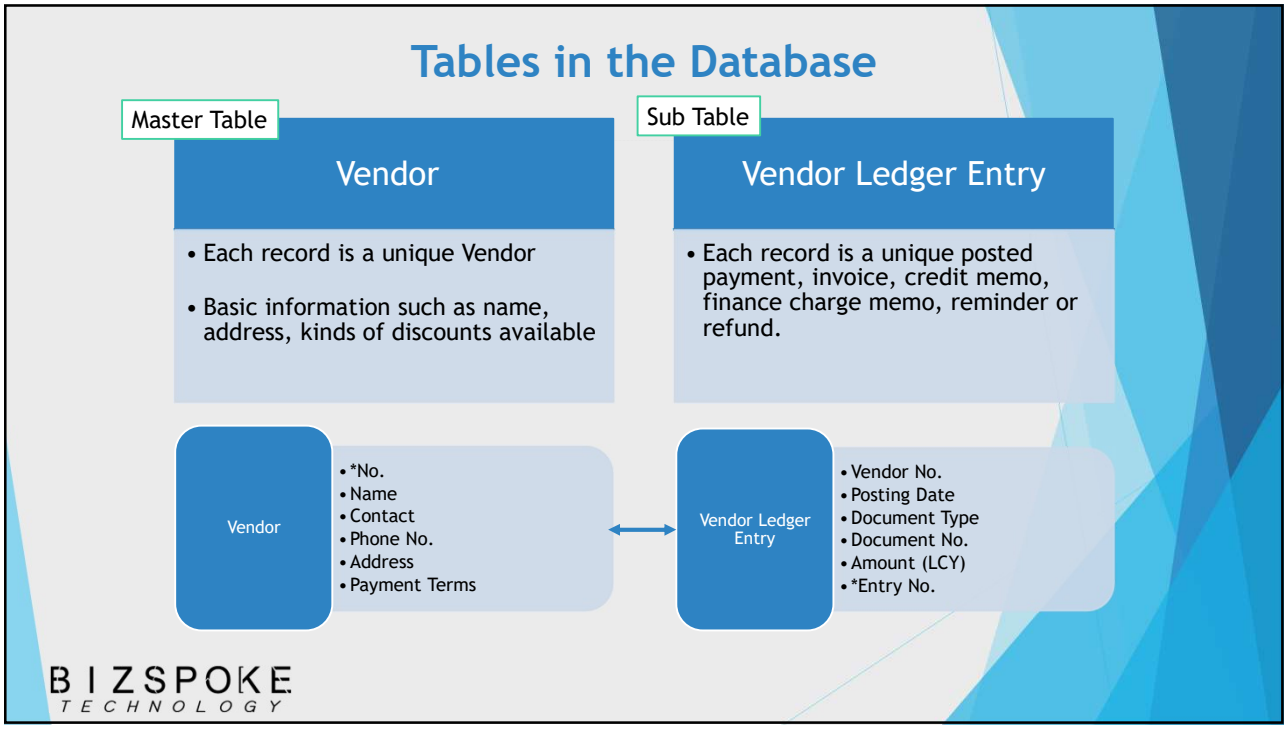
Tables in the Database
Master Table
Vendor
• Each record is a unique Vendor
• Basic information such as name, address, kinds of discounts available
Sub Table
Vendor Ledger Entry
• Each record is a unique posted payment, invoice, credit memo, finance charge memo, reminder or refund.
Vendor
• *No.
• Name
• Contact
• Phone No.
• Address
• Payment Terms
Vendor Ledger Entry
• Vendor No.
• Posting Date
• Document Type
• Document No.
• Amount (LCY)
• *Entry No.
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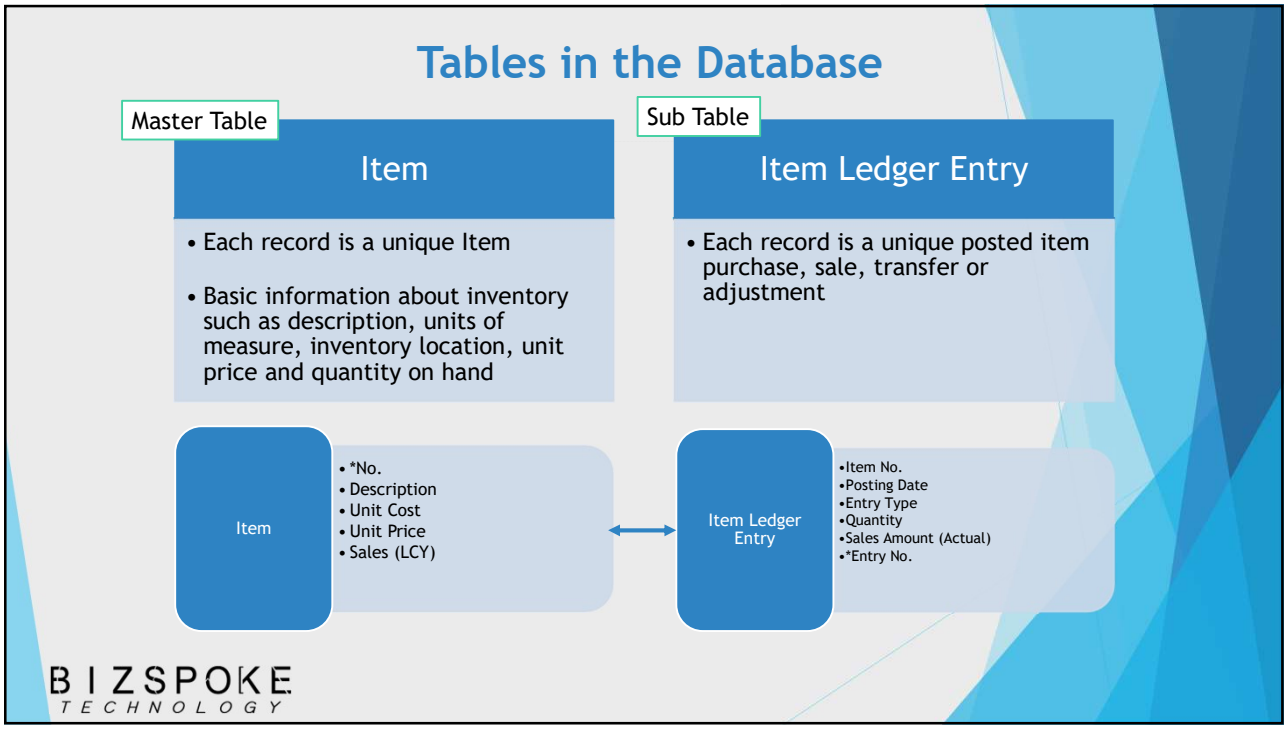

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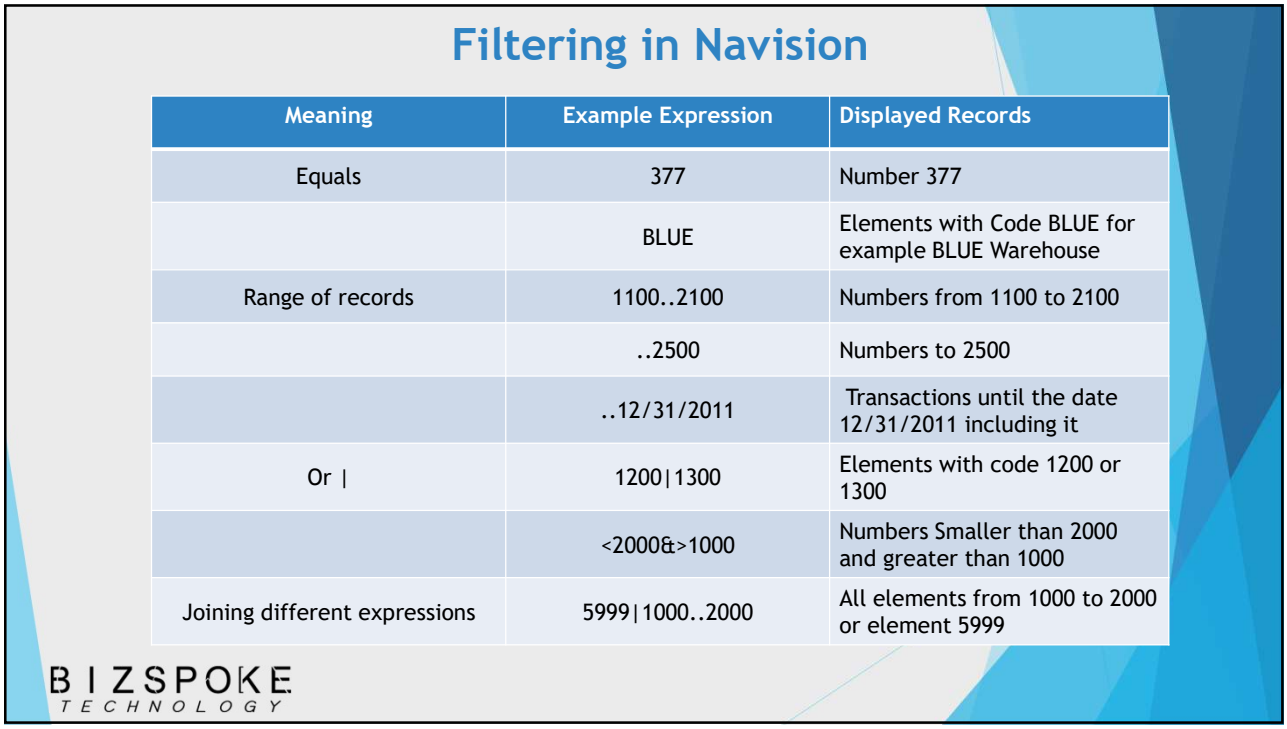

Meaning	Example Expression	Displayed Records
Equals	377	Number 377
	BLUE	Elements with Code BLUE for example BLUE Warehouse
Range of records	1100..2100	Numbers from 1100 to 2100
	..2500	Numbers to 2500
	..12/31/2011	Transactions until the date 12/31/2011 including it
Or |	1200|1300	Elements with code 1200 or 1300
	<2000&>1000	Numbers Smaller than 2000 and greater than 1000
Joining different expressions	5999|1000..2000	All elements from 1000 to 2000 or element 5999

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Excel Addressing Modes

Locking Rows

- For example C$5 – lock the 5th row

Locking Columns

- For example $C5 – lock the C column

Absolute Locking

- For example C5 – lock the 5th row and column C

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Modes & Report

Design | Run | Drilldown | Check Error

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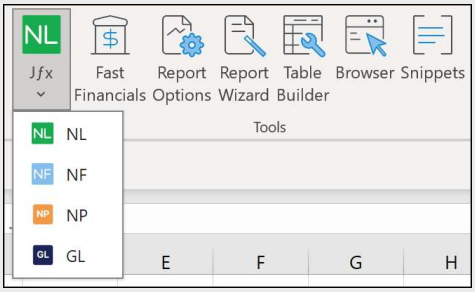
Tools



- Function Wizard (NL,NF, NP, GL)
- Fast Financial
- Report Options
  - Filters
- Report Wizard
- Table Builder
  - Design Tool - 3 difference layouts
- Browser
- Snippets
  - Shortcuts
  - e.g. Months

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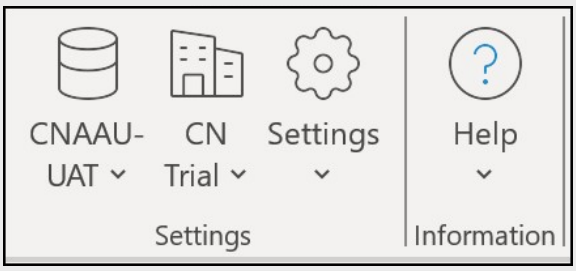
Settings & Information



- Data Source Settings
  - Connect to SQL DB
- Application Settings
  - Licence Information
- Help & About
  - Online Help Centre

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Jet Functions

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Part 2 Overview

1	Jet Reports Keywords
2	Browser Report
3	Filtering in the NL Function
5	Report Option & NL(Lookup)
6	Report Option Keywords
7	Browser – Drag & Drop Actions
8	Summing – Anchor Rows
9	Graphs (excel standard function)
10	Jet Scheduler
11	Replicator
12	GL Function
13	Sharing Snippet
14	Report Wizard
15	Table Builder

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Jet Reports - Keywords

Always remember: Row 1 + Column A ONLY for keywords

	A	B	C	D	E	F	G	H	I
1	Auto+Hide		Hide	Fit	Fit	Fit	Fit	Fit	
2									
3									
4				Name	No.	City	Contact	Balance	
5			,"Training","CF	The Cannon Group PLC	10000	Atlanta	Mr. Andy Teal	255797.35	
6									
7									

Keyword	Location	Action
Hide	Row 1	Automatically hides the column or row in Report mode
Fit	Row 1	Automatically formats the width of the column for the widest cell in Report mode
Auto+ Hide	Column A & Row 1	Automatically display when user click on report mode, refresh or drag and drop by browser

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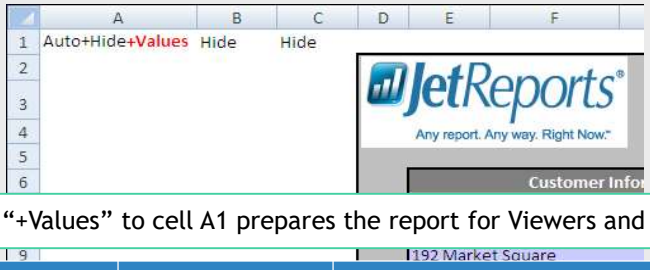
"Auto+Hide+Values"



Adding "+Values" to cell A1 prepares the report for Viewers and Excel Users.

Keyword	Location	Action
Auto+Hide+Values	Column A & Row 1	If you would like to design a report that can be available to people who are not Jet Reports Designers, you can convert the workbook to values by placing "Auto+Hide+Values" in cell A1 of any worksheet

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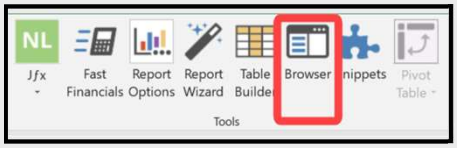
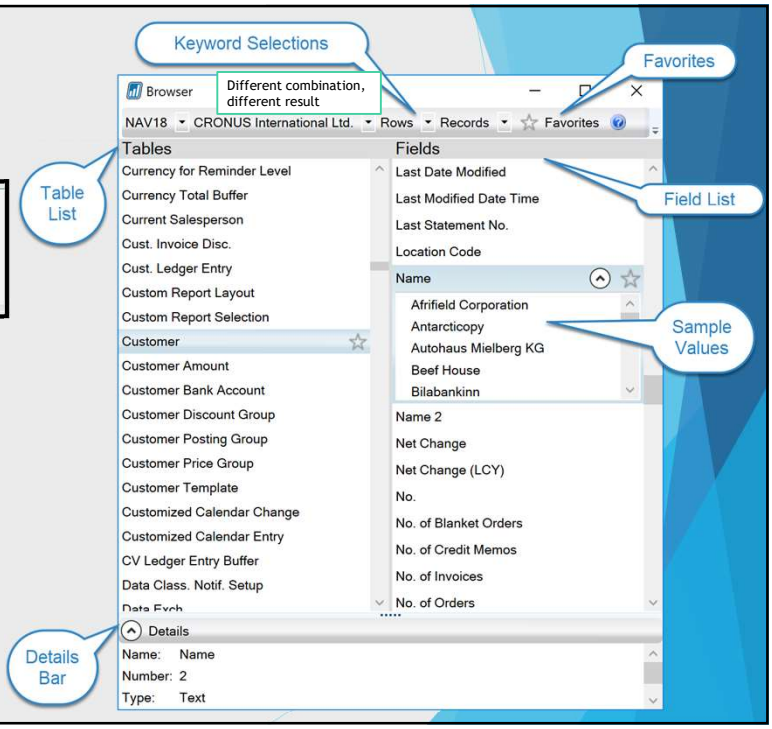
Browser



Jet Browser

- easy-to-use interface
- utilize advanced searching
- drag-and-drop functionality to create reports
- select tables and fields as favorites



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Drag & Drop Actions

Keyword Selections	Dragged Item	Result
Rows, Columns **(Records)**	Single or Multiple Fields	**Detail List** - Record List and NF functions for all selected fields. Drag more fields into the same region to create more NF functions. (e.g. Each Sales Record by Customer)
Rows, Columns, Sheets **(Values)**	Single Field	**Summary List** - Unique List of values from the selected field. (e.g. January Sales **Total** by Customer)
Sum	Numeric Field	NL(Sum) function that sums the values in the dragged field.
Count	Table	NL(Count) function that counts the records in the dragged table
Count	Field	NL(CountUnique) function that counts the unique values in the dragged field.
First	Field	NL(First) that displays the first value in the dragged field.
First	Table	NL function for the first record in the dragged table.

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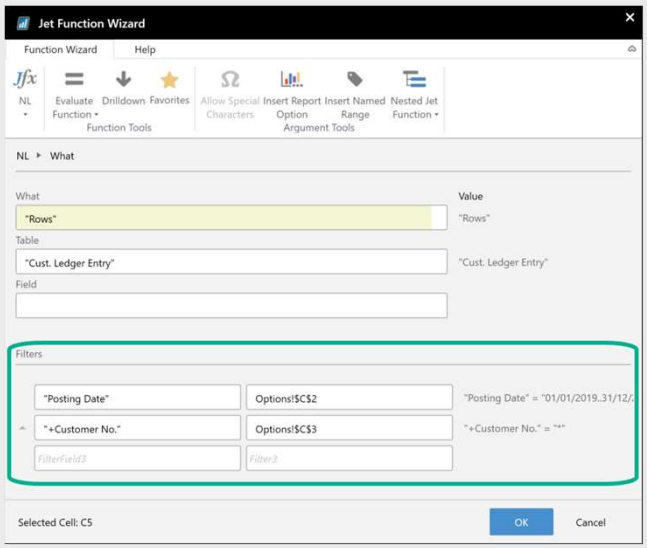
Filtering



Definition

- A filter is a method for selecting records in a table that match specified criteria.

Examples

- Filter the Posting Date between 1/1/2020 and 31/12/2020

You can apply up to 10 filters in each NL function

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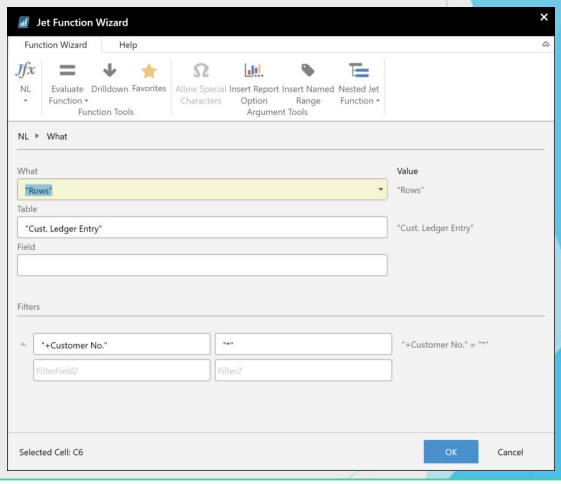
Filtering in the NL Function

Filtering is a useful way to see only the data needed in the report

Filtering in Jet:

- There must be at least **"*"** as the default filter to avoid the "Empty Filter Not Allowed" error.
- **Option** - Report filters use cell references for the filter value. Viewers can change report filters.
- **Hard-coded filters** are only changeable by a Designer.



Up to 10 filters can be applied

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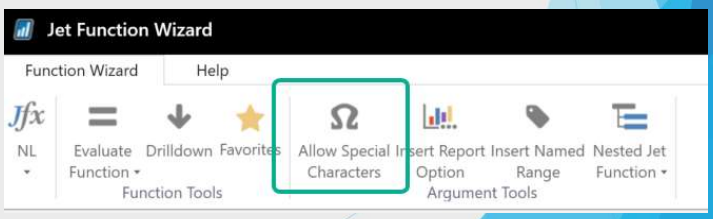
Avoiding Errors using "@@"

- Avoid the **Empty Filter Not Allowed** error message
- Jet functions referring to a blank cell will cause the Empty Filter Not Allowed error message. "Allow Special Characters" will ignore blank values.

Function : **NL("First","Customer","Name","No.")**
Result : *#VALUE!*
The FilterField 'No.' has an empty Filter argument, which is not allowed. Use '' to filter for blank, or prefix the Filter argument with @@ if it is a cell reference.



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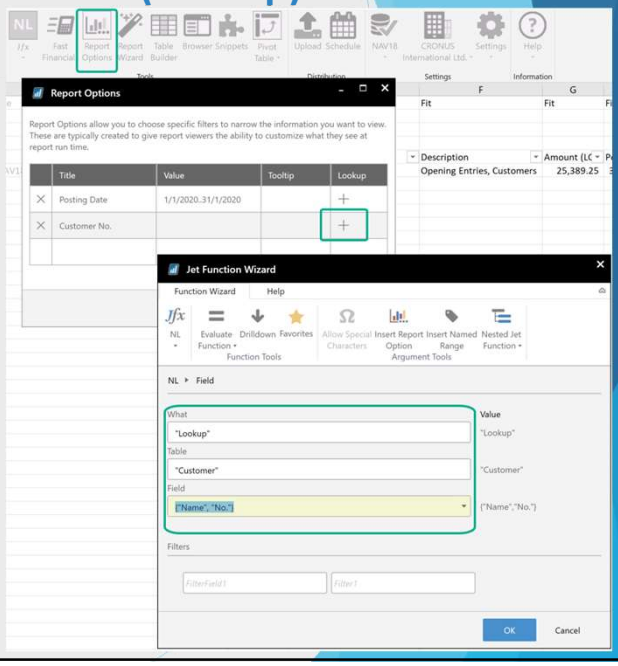
Report Options & NL(Lookup)

- Use the highest level table for the value the NL(Lookup) is displaying.
  - Example: If displaying "Customer No.", use the Customer table rather than the customer transaction table.
- Do not include NL(Lookup) functions for dates. The user does not need to access the database to find a list of possible dates that can be input.



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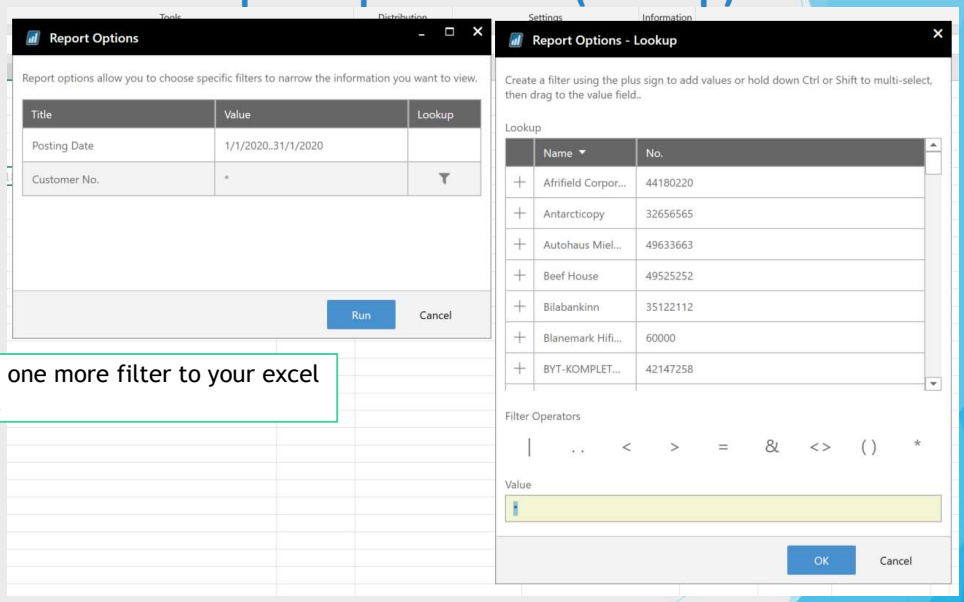
Report Options & NL(Lookup)



Now try to add one more filter to your excel - Customer No.

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Summing: Anchor Row

- The Anchor Row is the row directly below the replicated region

In Design Mode: Include the anchor row in the sum range

Customer No.	Customer Name	Phone No.	Total Sales
C100008	Blanemark Hifi Shop	+44 60 406 98 23	$ 202,769.49
	Anchor Row		
			=SUM(G7:G8)

In Report Mode: the sum range expands to calculate a dynamic total

Customer No.	Customer Name	Phone No.	Total Sales
C100008	Blanemark Hifi Shop	+44 60 406 98 23	$ 202,769.49
C100012	Bainbridges	+1 (810) 659-6711	$ 123,687.79
C100013	Candoxy Kontor A/S	+45 96 156 36 60	$ 53,959.12
C100014	Candoxy Nederland BV	+22 20 489 09 43	$ 68,008.11
		Anchor Row	
			=SUM(G7:G11)

Hide the Anchor Row

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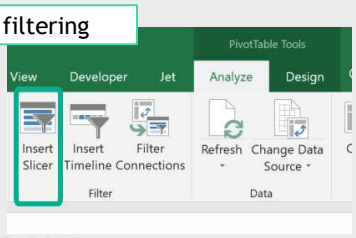
Insert Pivot Table / Graph

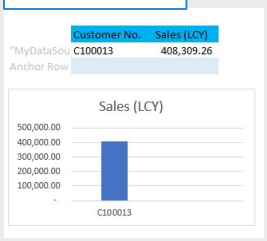
Can also create summary report by Pivot Table
- Use the data from Details report

- Use Excel functionality to create the graph
- Exercise: to create Customer Sales report with graph

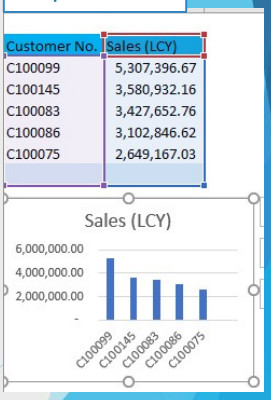
To let user do filtering



In Design Mode:



In Report Mode:



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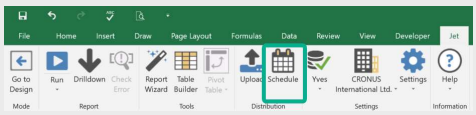
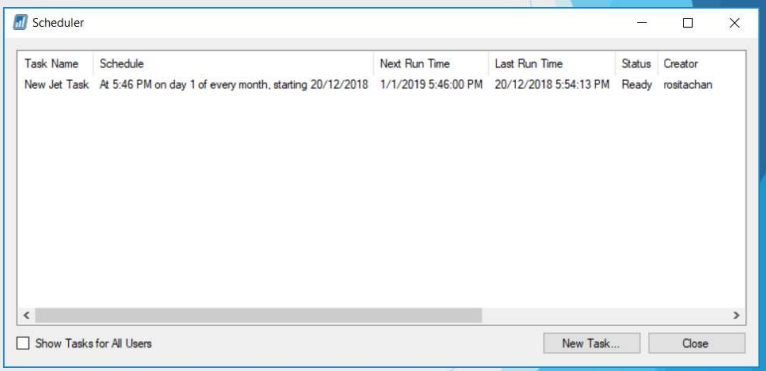
Jet Scheduler

Jet Reports Scheduler is a tool that allows users to schedule Jet Essentials reports to run automatically - without requiring further user interaction. User can also control where the output file is saved to, if the report should be emailed once it has been generated, and the output format of the report.



If need to send by email, need set SMTP in App Settings



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Sharing Snippets

Snippets are small, reusable report parts that can be shared between Jet Reports users.

Support Topics > Jet Professional > Online Help and Jet Express

Snippets

My Documents

Sample Snippets are available in Jet Knowledgebase

- https://jetsupport.jetreports.com/hc/en-us/articles/115001593867-Snippets

Snippet Files are stored in "My Documents"

- C:\Documents and Settings\user\My Documents\Jet Reports Snippets

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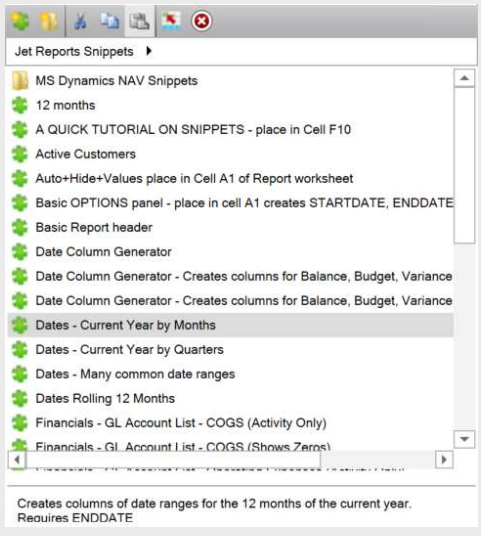
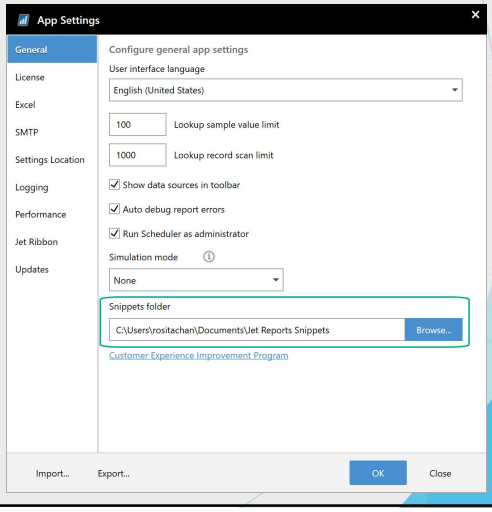
Snippets



Basic Options Panel

Dates - Current Year by Months



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Report Options – NP(Datefilter)

- Use NP(Datefilter) to construct a date range for use as a filter.

	A	B	C	D
1	Auto+Hide	Title	Value	Lookup
2				
3		**FILTERS:**		
4		Document Type	Invoice|credit memo	
5	Option	Salesperson	*	Lookup
6	Option	Start Date	1/1/2016	
7	Option	End Date	1/31/2016	
8		Posting Date	1/1/2016..1/31/2016	

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Exercise 3: Insert Snippets

- Open a new excel worksheet
- Drag and drop “Basic Option Panel” snippet
- Create Dates – Current Year by Months

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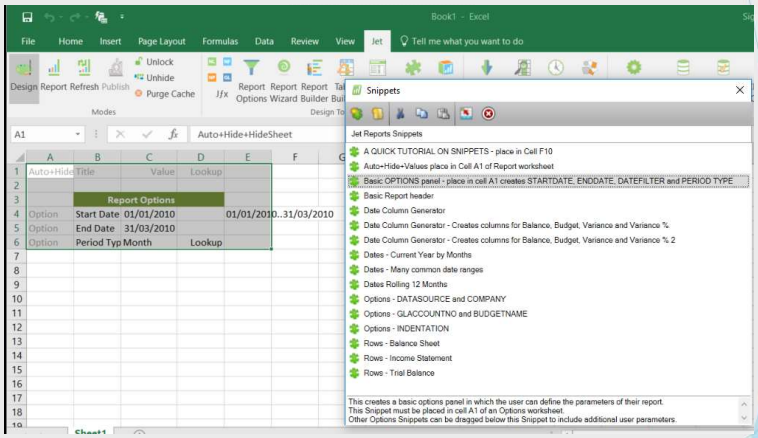
Snippets



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Replicator

- A replicator is the NL function that creates a dynamic list
- The “What” parameter determines the region of the worksheet replicated.

Replicators:

NL(Rows)	Inserts a copy of the current **row** for each value in the resulting list.
NL(Columns)	Inserts a copy of the current **column** for each value in the resulting list.
NL(Sheets)	Inserts a copy of the current **worksheet** for each value in the resulting list.

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Replicator – NL(Rows)

NL(Rows) will make a copy of the entire row for each value in the database

Jet functions in Design mode

Posting Date	1/1/2016..12/31/2016	
Customer No.	Customer Name	Total Sales
C100103	AlphaQuote	$ 172,253.98
		$ 172,253.98

Jet functions in Report mode

Posting Date	1/1/2016..12/31/2016	
Customer No.	Customer Name	Total Sales
C100103	AlphaQuote	$ 172,253.98
C100012	Bainbridges	$ 123,687.79
C100141	Bargottis	$ 348,475.80
C100112	Basingers	$ 88,027.95
		$ 732,445.52

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Replicator – NL(Columns)

NL(Columns) will make a copy of the entire column for each value meeting the filter criteria

Jet functions in Design mode

Item Category Code
AWARDS
$ 43,493,581.75

Jet functions in Report mode

Item Category Code	Item Category Code	Item Category Code	Item Category Code	Item Category Code
AWARDS	BAGS	CAPS	CLOCKS	CORP GIFTS
$ 43,493,581.75	$ 13,000,664.52	$ 12,842,847.36	$ 13,107,294.53	$ 17,308,743.31

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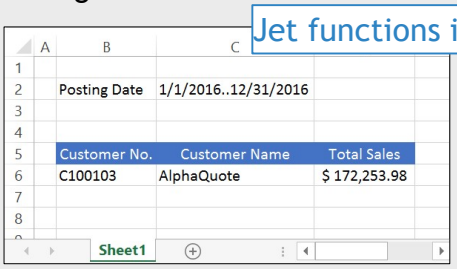
Replicator – NL(Sheets)

NL(Sheets) will make a copy of the entire worksheet for each value meeting the filter criteria

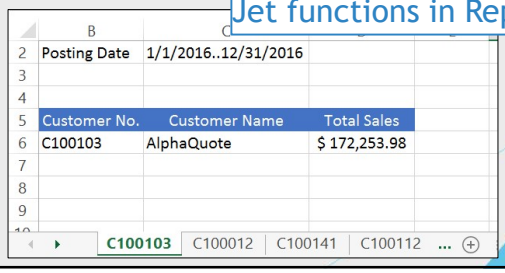
Jet functions in Design mode



	A	B	C
1			
2		Posting Date	1/1/2016..12/31/2016
3			
4			
5		Customer No.	Customer Name	Total Sales
6		C100103	AlphaQuote	$ 172,253.98
7			
8			

Sheet1

Jet functions in Report mode



	B	C
2	Posting Date	1/1/2016..12/31/2016
3		
4		
5	Customer No.	Customer Name	Total Sales
6	C100103	AlphaQuote	$ 172,253.98
7			
8			
9			

C100103 | C100012 | C100141 | C100112 ...

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Matrix Report

A matrix report uses the replicators NL(Rows) and NL(Columns), and data functions where the replicators intersect. The NL(Columns) function must be placed at least one column to the right of the NL(Rows) function to function properly.

	Columns →		
Rows ↓			
	functions	functions	functions
	functions	functions	functions
	functions	functions	functions
	functions	functions	functions

Combine NL(Rows), NL(Columns) and data functions to provide a dynamic list that will expand in 2 directions.

Customer No.	January Total Sales	February Total Sales	March Total Sales
Customer 1	$ 1,000.00	$ 1,025.00	$ 1,050.00
Customer 2	$ 12,000.00	$ 12,500.00	$ 13,000.00
Customer 3	$ 500.00	$ 550.00	$ 600.00
Customer 4	$ 4,099.00	$ 5,065.00	$ 6,031.00
Customer 5	$ -	$ 7,500.00	$ 15,000.00

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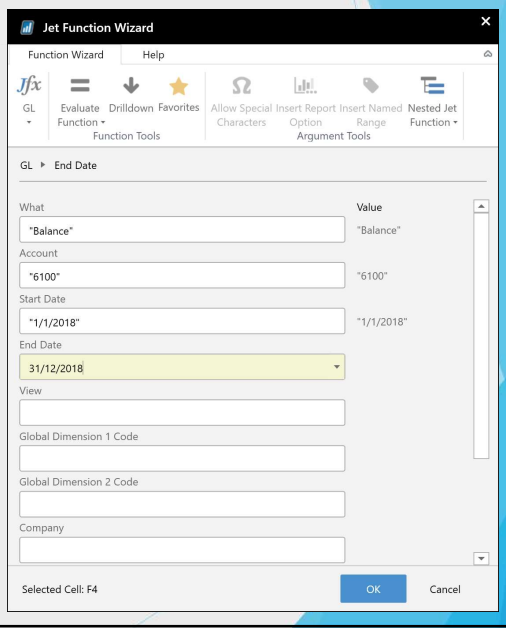
GL Function

For financial reporting, GL functions knows how to read and sum up your General Ledger Entries.
Returns the budget, balance, net change, quantity, debits or credits of the G/L Account of a given company based on filters.



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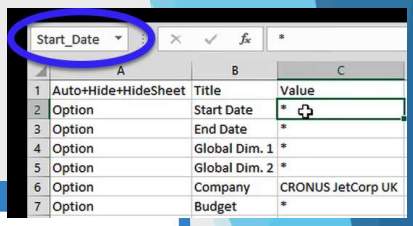
Fast Financial

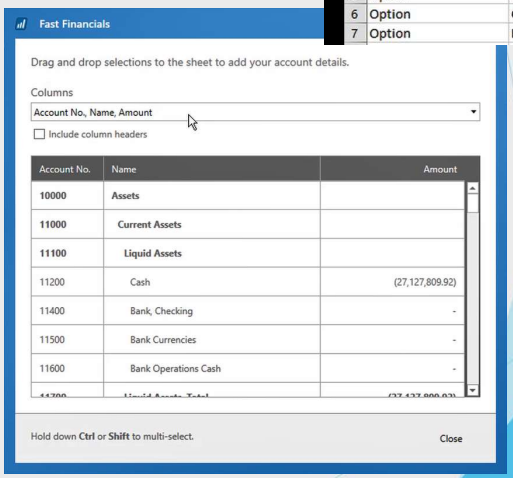
Select Multiple Accounts without using the CTRL key

- To make it easier to select/deselect your Fast Financials accounts, each account can be toggled on and off with a simple click of the mouse - and you can still use the SHIFT key to select a range of accounts.

Report Option Dates on the report sheet

- To make copying or adding replicating functions easier than ever, your Fast Financials Report Option dates are now also placed directly on the report sheet. The GL functions and the variance formulas reference those dates, rather than the named ranges on the Options sheet.





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Report Wizard

You can easily create an entire report from a **single** table in your database using the Report Wizard, accessible from the **Report Wizard** button on the Jet Reports ribbon.

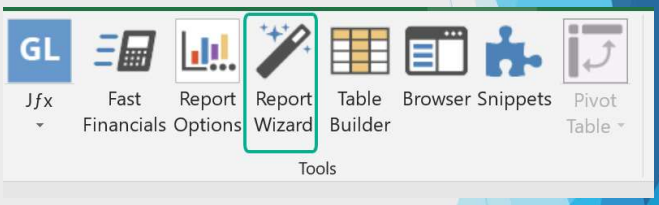
Structured report interface

Grouping Reports

- The Report Wizard will add subtotals and grand totals to the report with a couple clicks.

Single table

- All the fields in the report must come from the same table



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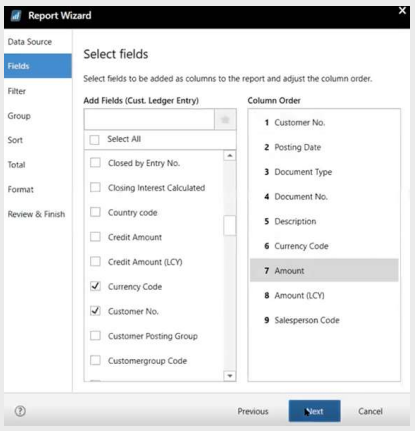

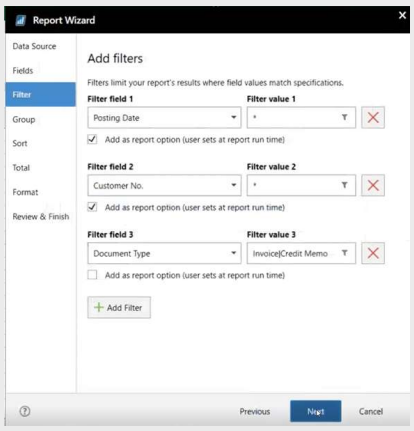

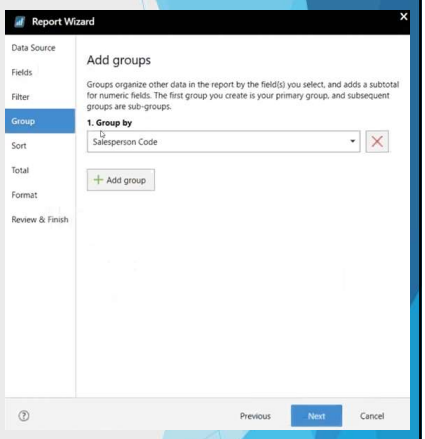

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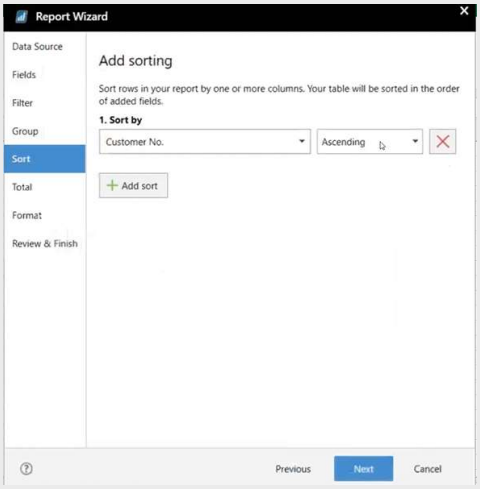

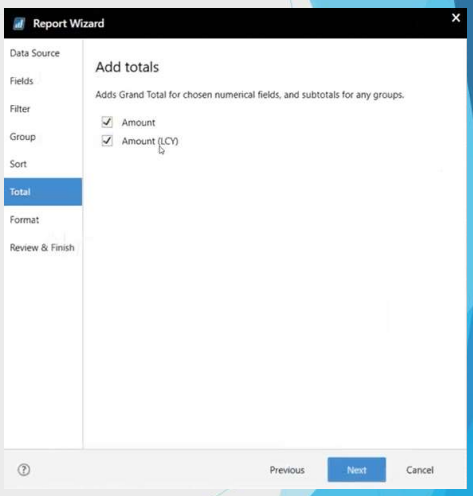

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Grouping

Grouping is a method for segmenting data in a way that provides spacing usually used for subtotals.

Customer Sales by Salesperson

Salesperson Code	Salesperson Name	Commission %	Customer No.	Customer Name	Total Sales
JR	John Roberts	5%			
			C100046	John Haddock Insurance Co.	$ 9,399.86
			C100100	Keybase, Inc.	$ 9,599.84
			C100103	AlphaQuote	$ 19,299.73
			Subtotal for John Roberts		**$ 38,299.43**
MD	Mary A. Dempsey	5%			
			C100084	The Cannon Group PLC	$ 24,581.43
			C100089	University of Oregon	$ 16,659.46
			C100096	D-Com Industries	$ 8,329.72
			Subtotal for Mary A. Dempsey		**$ 49,570.61**
					$ 87,870.04

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Grouping Procedure

1) Create the Primary List and Detail

2) Create the Secondary List and Detail

Primary List

The values that you want the data to be grouped by

Use an NL("Rows=4") replicator function

Detail Functions

NF, NL(First), NL(Sum), NL(Count), etc…

Place the detail on the same row as the primary list replicator

Secondary List

This list reoccurs for each value in the primary list

Use an NL("Rows") replicator function

Place one row below the primary list

Filter on the values in the primary list function

Detail Functions

NF, NL(First), NL(Sum), NL(Count), etc…

Place the detail on the same row as the secondary list replicator

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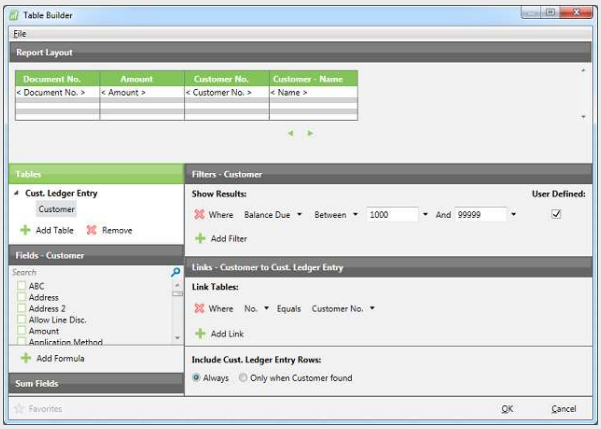
Table Builder

Jet Reports **Table Builder** helps you to insert an NL("Table") function in your workbook. This creates an Excel table (from one or more database tables) which can be used as the basis for pivot tables and charts.



Tables and Fields	Filters
Customer	
Balance Due	1000..99999

Document No.	Amount	Customer No.	Customer - Name
2801	5787.68	49525252	Beef House
2802	4630.14	49525252	Beef House
2803	8102.75	49525252	Beef House
103006	60229.13	42147258	BYT-KOMPLET s.r.o.
103007	3868.29	43687129	Designstudio Gmunden
103010	3999.98	32656565	Antarcticopy
103011	1441.34	49633663	Autohaus Mielberg KG
104005	-1005.62	49633663	Autohaus Mielberg KG
2804	5093.16	49525252	Beef House
2806	-2420.54	49633663	Autohaus Mielberg KG
103012	6807.5	46897889	Englunds Kontorsmöbler AB
103013	2311.22	01445544	Progressive Home Furnishings
2807	1005.62	49633663	Autohaus Mielberg KG
103004	71444.9	50000	Concord Water Department
2808	9260.29	49633663	Autohaus Mielberg KG
2805	-2315.07	49525252	Beef House
2809	5787.68	49633663	Autohaus Mielberg KG
103017	88163.9	35451236	Gagn & Gaman
2810	-1157.54	49633663	Autohaus Mielberg KG
103019	2583.95	40000	Deerfield Graphics Company
103020	1420.02	50000	Concord Water Department
Total	275038.78		21

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Part 3 Overview

1	Dynamic Listing
2	Detail List Process
3	Detail List Visual
4	Summary List
5	Subtotals for Grouping

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Dynamic Listing

Detail List

- To creates a list by simply dumping a set of the table's records into the worksheet.

Summary List

- Summary lists are used to summarize data from tables whose records are too detailed for the desired results of the list.

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Detail List Process

A data dump creates a list by simply dumping a set of the table's records into the worksheet.

1) Record List

- Use an NL function to select which records to dump into the report.

2) Select Fields

- Use NF functions to determine which fields to display for each record.

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Detail List Visual

	B	C	D	E	F	G
1						
2			No.	Name	City	Contact
3		=NL("Rows","Customer",,"Salesperson Code","PS")	=NF($C3,"No.")	=NF($C3,"Name")	=NF($C3,"City")	=NF($C3,"Contact")
4						

1) Record List

2) Select Fields

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Summary Lists

Summarize data from detail tables

The summary list produces a unique list of values from tables whose records are too detailed for the desired results of the list.

Data functions in the replicated region will include a filter to the unique list.

Many data functions will use the same filters as the replicator.

Unique List

Use an NL(Rows) function to list unique values from a selected field.

Data Functions

Use data functions to retrieve data for each value in the unique list.

Data functions:

- NL(First)
- NL(Sum)
- NL(Count)
- NL(Last)
- NL(CountUnique)

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Summary List - Visual

	A	B	C	D
11				
12		Customer No.	Customer Name	Total Sales
13		NL("Rows","Cust. Ledger Entry","Customer No.","Posting Date",C3,"Document Type","Invoice")	=NL("First","Customer","Name","No.",$B13)	=NL("Sum","Cust. Ledger Entry","Sales ($)","Customer No.",$B13,"Posting Date",C3,"Document Type","Invoice")
14				

Unique List: NL(Rows)

Data functions referring back to unique list

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