EXPLICIT CONTENT

Getting what you want out of Evergreen with minimum* cursing.

*Well, less cursing. Maybe.

WE ARE GATHERED HERE TODAY…

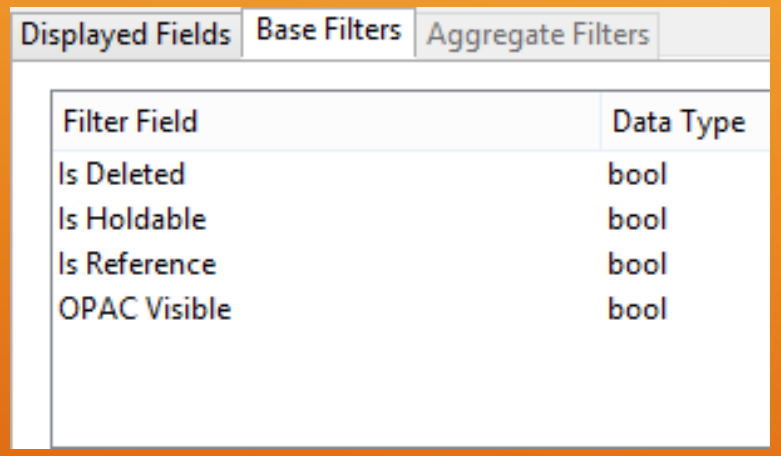
- Data Types Refresher
- Dred Nullability
- A real-life sample report using nullability and aggregate functions

A WHIRLWIND TOUR OF DATA TYPES

Love them if you can, hate them if you must, but ignore them at your peril.

BOOL

To be or not to be, that is the Boolean.



	A	B	C	D
1	Is Deleted	Is Holdable	Is Reference	OPAC Visible
2	0	1	0	1

ID

Often imitated, but never duplicated.

I mean *never*.

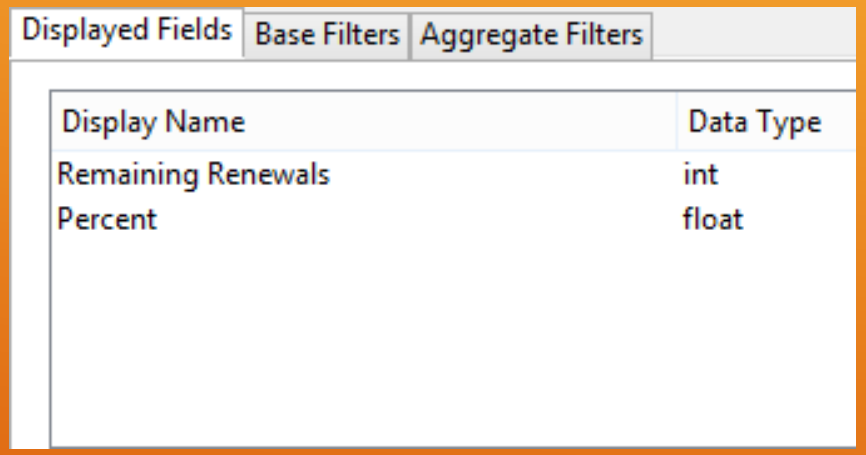
Displayed Fields | Base Filters | Aggregate Filters

Filter Field	Data Type
Copy ID	id
Record ID	id
Organizational Unit ID	org_unit
Code	id

	A	B	C	D
1	Copy ID	Record ID	Organizational Unit ID	Code
2	3023699	10117737	18	dvd

INT AND FLOAT

Floats are only fractionally more complicated than ints.

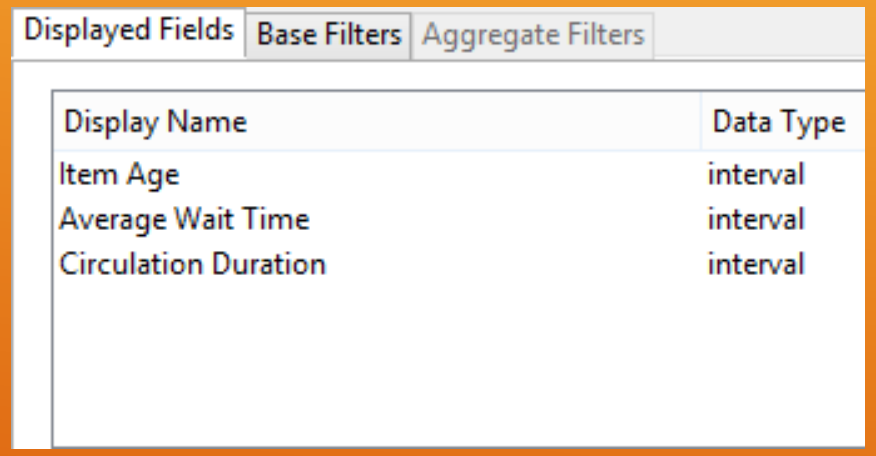


	A	B
1	Remaining Renewals	Percent
2	1	0.25

INTERVAL

Wait for it…

Boom, 3 seconds.



	A	B	C
1	Item Age	Average Wait Time	Circulation Duration
2	6 mons		21 days

MONEY

It's all $ ¢ ¥ £ ₩ Rs ₤ ₣ € to me.

Displayed Fields | Base Filters | Aggregate Filters

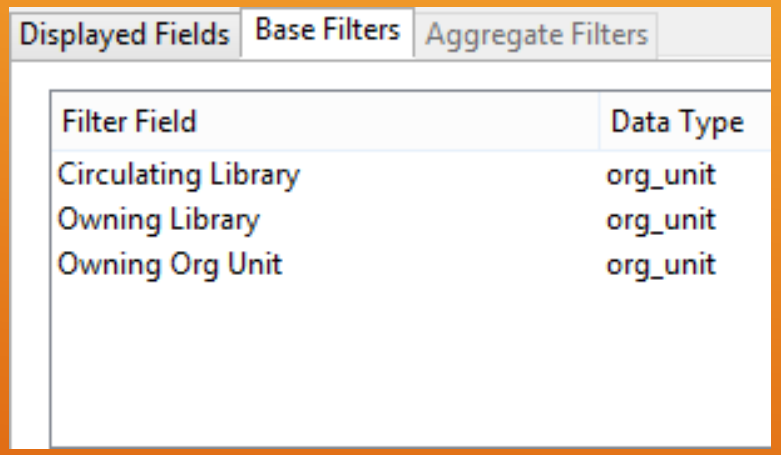
Filter Field	Data Type
Price	money
Cost	money
balance_owed	money
total_owed	money
total_paid	money

	A	B	C	D	E
1	Price	Cost	balance_owed	total_owed	tota_paid
2	20	17.5	35	37.5	2.5

ORG_UNIT

Consortia, systems, and branches, oh my!

Not ideal in Displayed Fields.



	A	B	C
1	Circulating Library	Owning Library	Owning Org Unit
2	18	18	17

TEXT

Words, words, words!

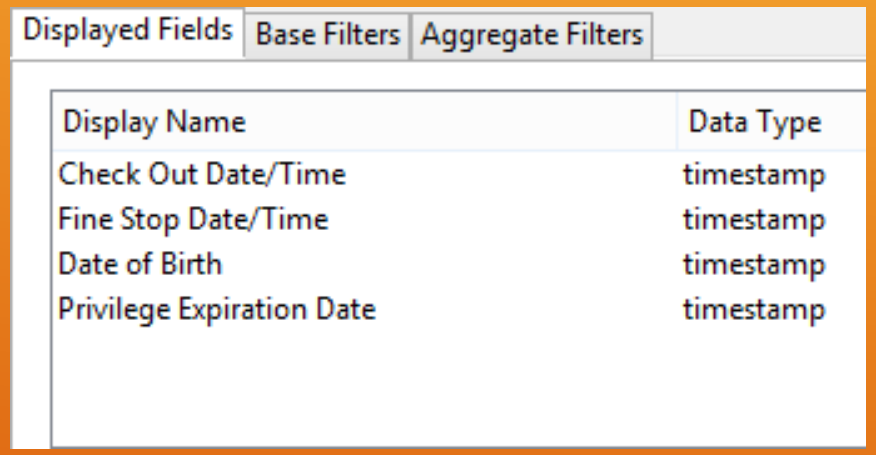
Displayed Fields | Base Filters | Aggregate Filters

Display Name	Data Type
Shelving Location	text
Call Number	text
Title	text
Author	text
Barcode	text

	A	B	C	D	E
1	Shelving Location	Call Number	Title	Author	Barcode
2	Adult Fiction	FIC SMI	The Wayward Booksmith	Arron Smith	37500123456789

TIMESTAMP

At the tone, the time will be 2013-05-09 15:07:00-04



	A	B	C	D
1	Check Out Date/Time	Fine Stop Date/Time	Date of Birth	Privilege Expiration Date
2	2013-05-01 13:37:51-04	2013-05-07 14:21:16-04	1979-12-15 21:57:15-05	2050-01-01 23:59:59-05

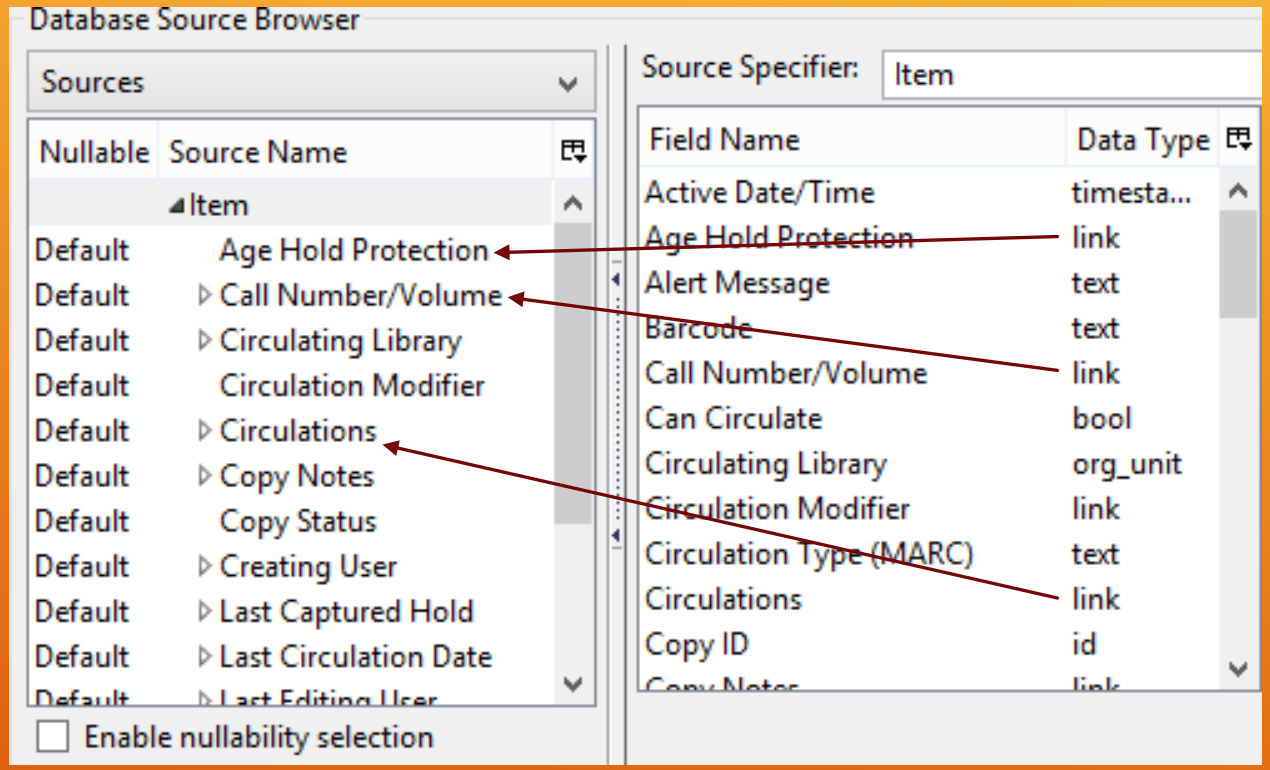
LINK

Chicanery!

Displayed Fields | Base Filters | Aggregate Filters

Display Name	Data Type
Call Number	link
Call Number ID	id
Bib Record	link
Record ID	id
Age Hold Protection	link
Rule ID	id

	A	B	C	D	E	F
1	Call Number	Call Number ID	Bib Record	Record ID	Age Hold Protection	Rule ID
2	2533620	2533620	10117737	10117737	2	2



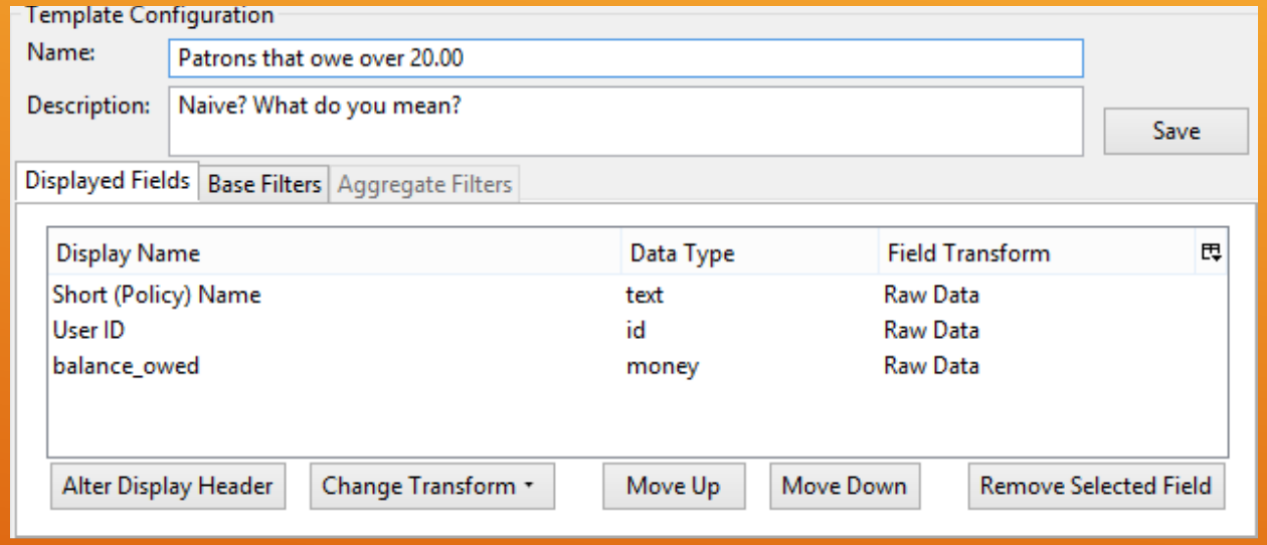
LINK

Put an end to this treachery.

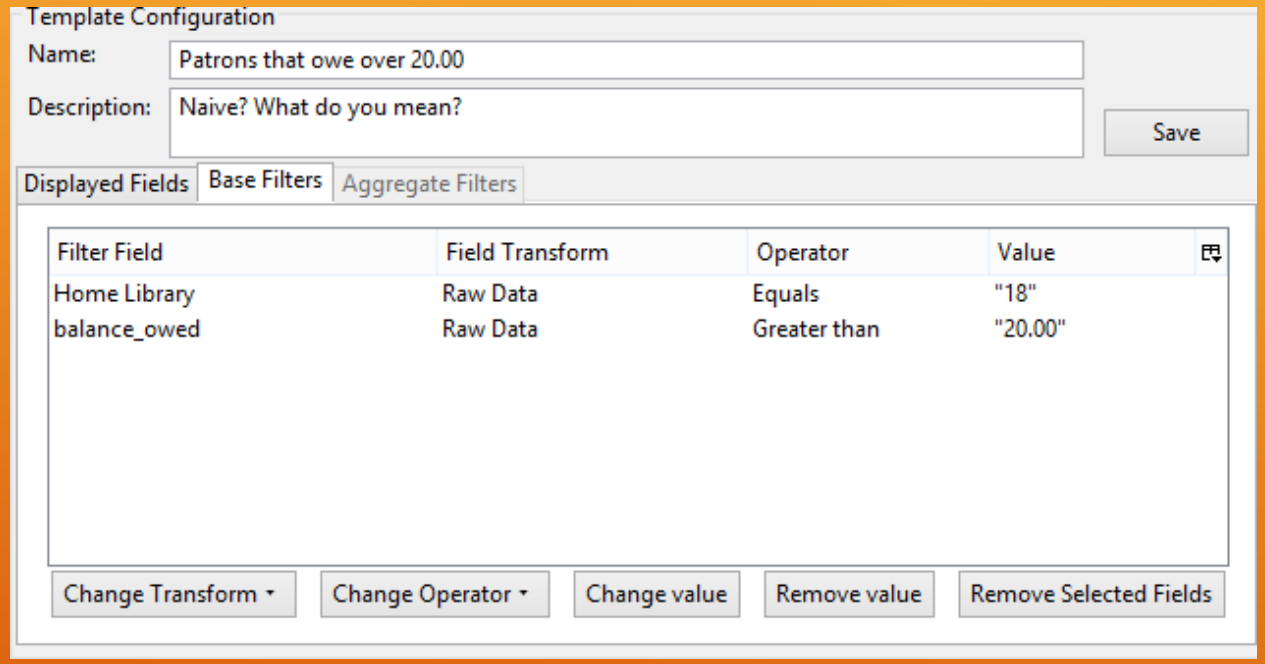
A BRIEF INTERLUDE

Wherein a report is written and hopes are dashed

PRESENTING PATRONS A "UNIQUE" OPPORTUNITY



Our tale begins with the ILS User Source. Displayed are Short (Policy) Name from the Home Library Link, User Id, and balance_owed from the Open Billable Transactions link.



THE OLD COLLEGE TRY

Home Library and balance_owed play the part of base filters.
The report is scheduled, and then…

RUIN

18355 results, 4493 with balances.

Mistakes were made.

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	69010	
3	JCPLS	69013	
4	JCPLS	69014	
5	JCPLS	69015	
6	JCPLS	69016	
7	JCPLS	69017	
8	JCPLS	69018	
9	JCPLS	69019	
10	JCPLS	69020	
18348	JCPLS	3995061	
18349	JCPLS	3995105	
18350	JCPLS	3995138	
18351	JCPLS	3995170	
18352	JCPLS	3995290	
18353	JCPLS	3995588	
18354	JCPLS	3995601	
18355	JCPLS	3995848	
18356	JCPLS	3995930	

NULLABILITY

When a database gives you a blank stare

User Id	Barcode	Birthdate	First Name	Last Name
1	1234		Lou	Anderson
2	5678	1982-09-07	Sue	Smith

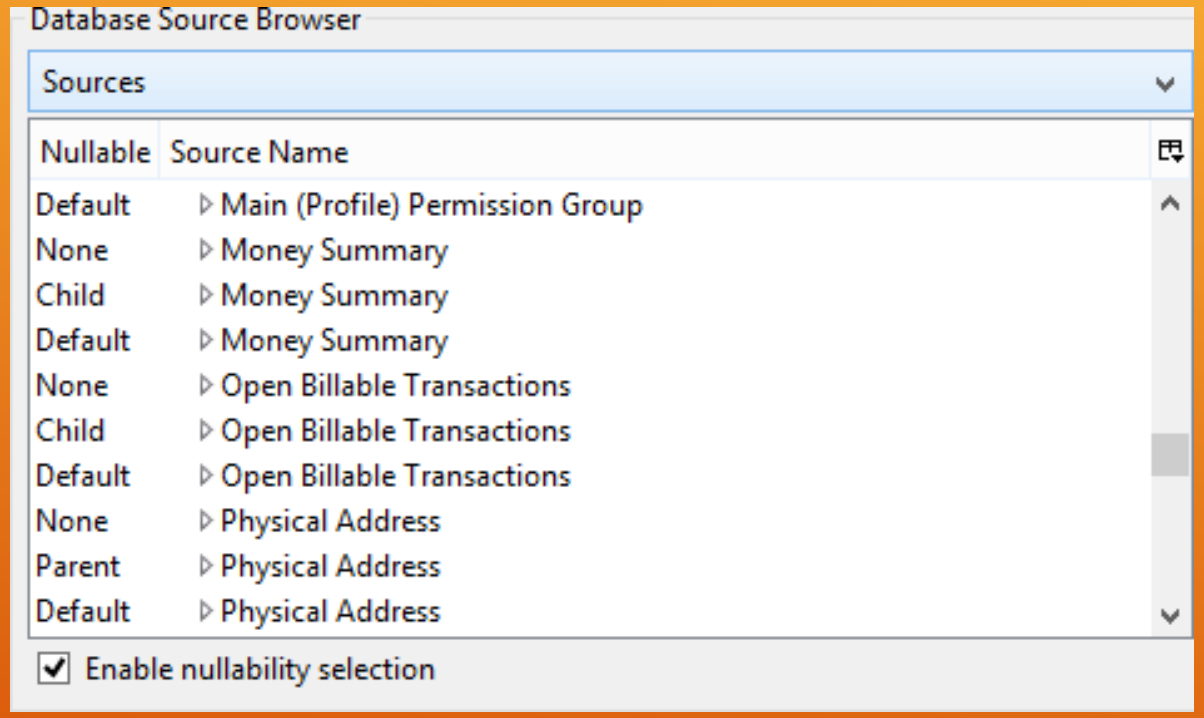
A DATABASE IS LIKE A BOX OF CHOCOLATES

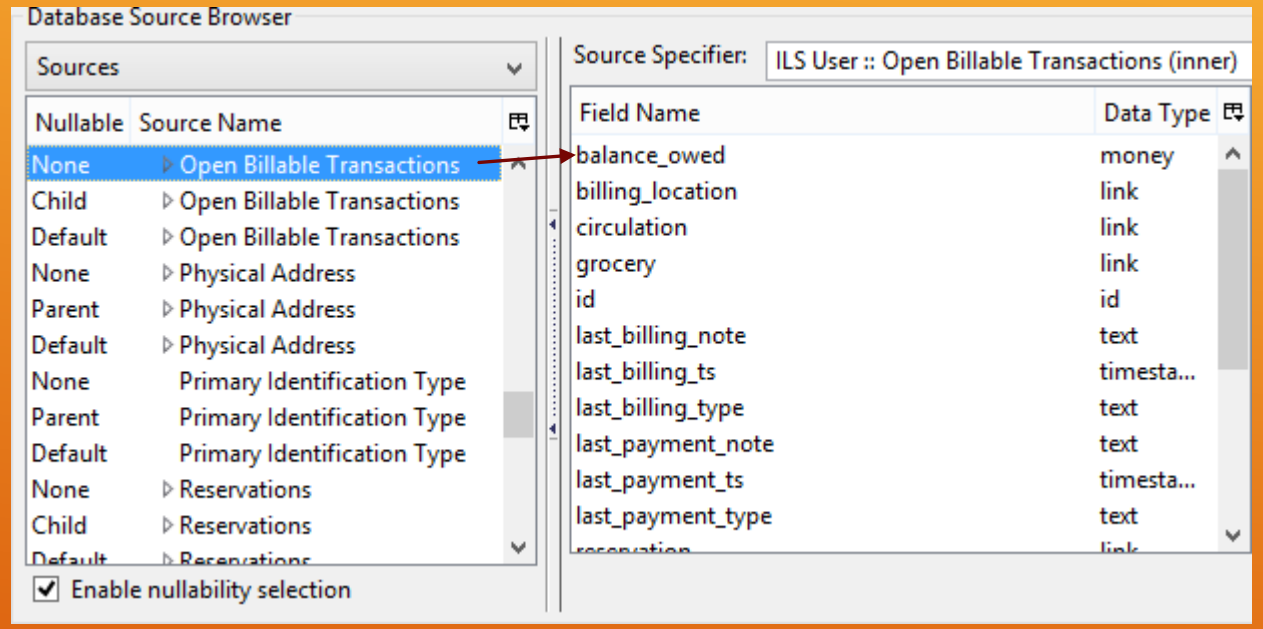
Sometimes pieces are missing

If a filter field is accessed through a link and that link is null, reports may include erroneous results. Such as *every single patron*.

THERE'S *ALWAYS* ANOTHER CHECKBOX

3 times the links, 3 times the fun?





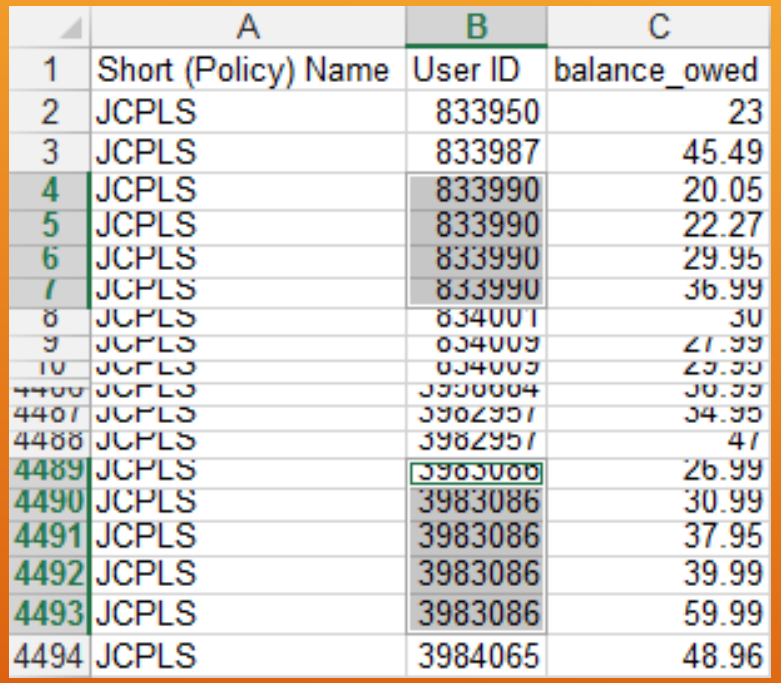
THE ROAD TO VICTORY

Follow the link with None in the nullable column to banish blanks.

LESS REALLY IS MORE

Less filler, more flavor

But I see see see a problem…



	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	833950	23
3	JCPLS	833987	45.49
4	JCPLS	833990	20.05
5	JCPLS	833990	22.27
6	JCPLS	833990	29.95
7	JCPLS	833990	36.99
8	JCPLS	834001	30
9	JCPLS	834009	27.99
10	JCPLS	834009	29.95
4486	JCPLS	3956064	36.99
4487	JCPLS	3982957	34.95
4488	JCPLS	3982957	47
4489	JCPLS	3983086	26.99
4490	JCPLS	3983086	30.99
4491	JCPLS	3983086	37.95
4492	JCPLS	3983086	39.99
4493	JCPLS	3983086	59.99
4494	JCPLS	3984065	48.96

YOU AGGREGATED, BRO?

Math saves the day

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	5	5.5
3	JCPLS	5	2
4	JCPLS	5	0.75
5	JCPLS	3	1
6	JCPLS	3	3.5
7	JCPLS	2	10

Average

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	5	2.75
3	JCPLS	3	2.25
4	JCPLS	2	10

Max

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	5	5.5
3	JCPLS	3	3.5
4	JCPLS	2	10

Sum

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	5	8.25
3	JCPLS	3	4.5
4	JCPLS	2	10

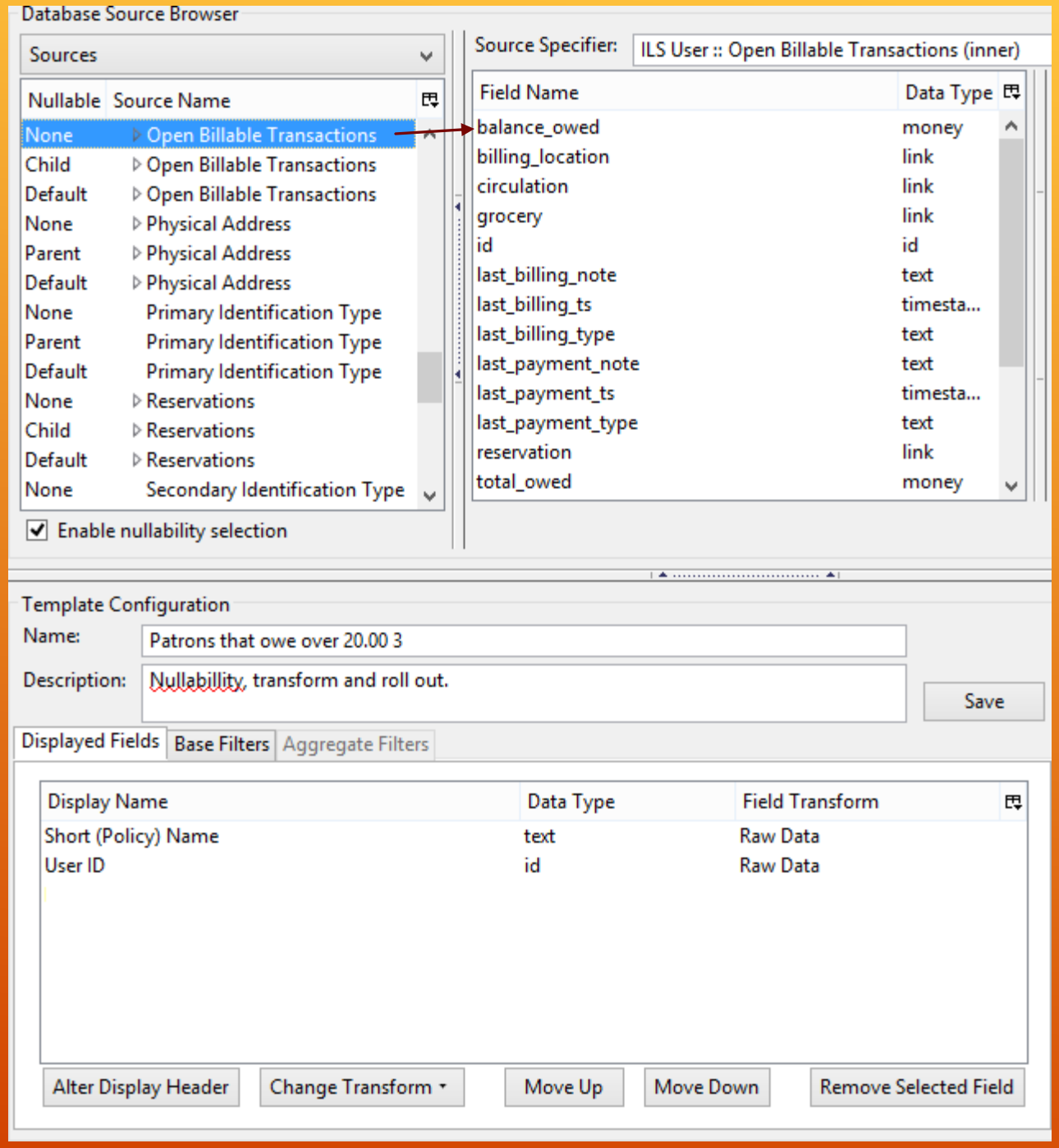
HYPOTHETICALLY SPEAKING…

Aggregate functions are special transforms that use mathemagics to collapse nearly identical results.

They can be applied to displayed fields, aggregate filters, or both.

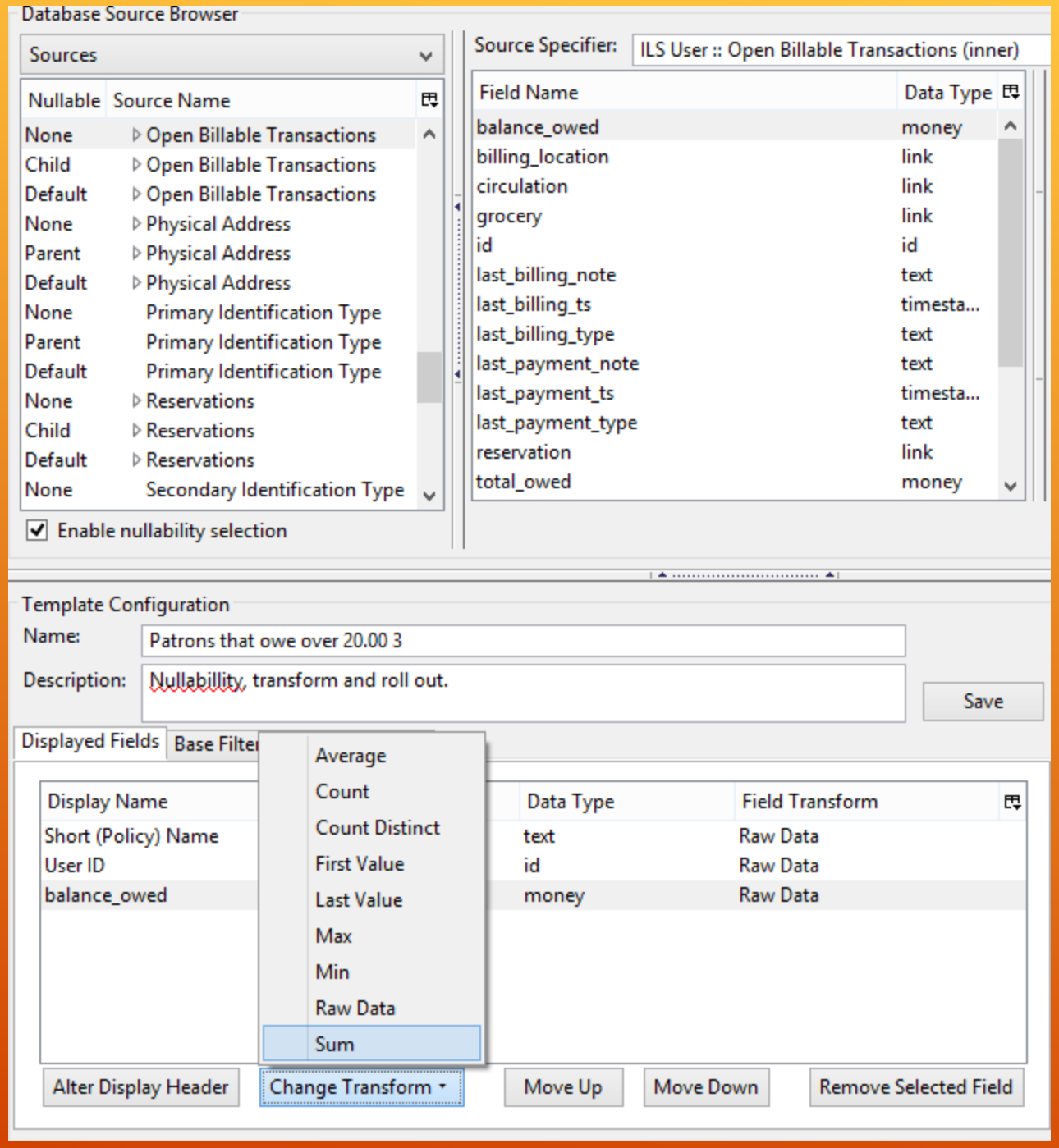
REWRITING HISTORY

Mind what you have learned; remind you of a movie, it can



ONCE MORE INTO THE TEMPLATE EDITOR…

I have a good feeling about this



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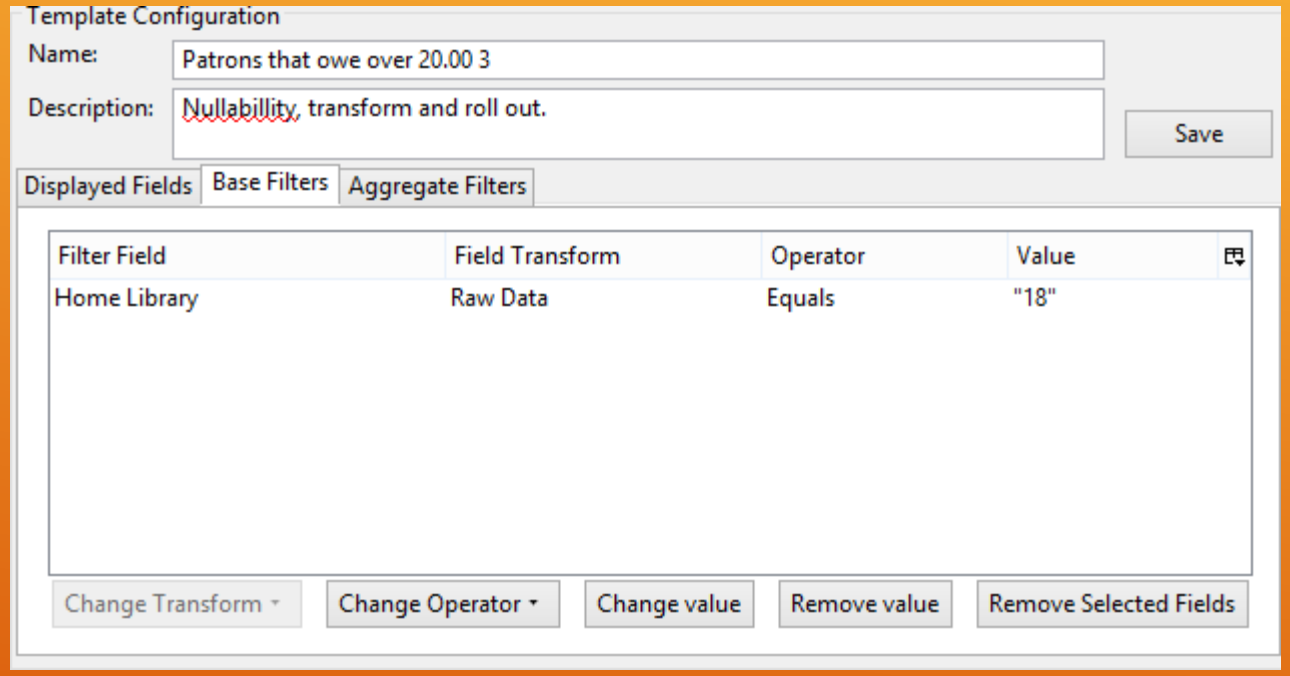
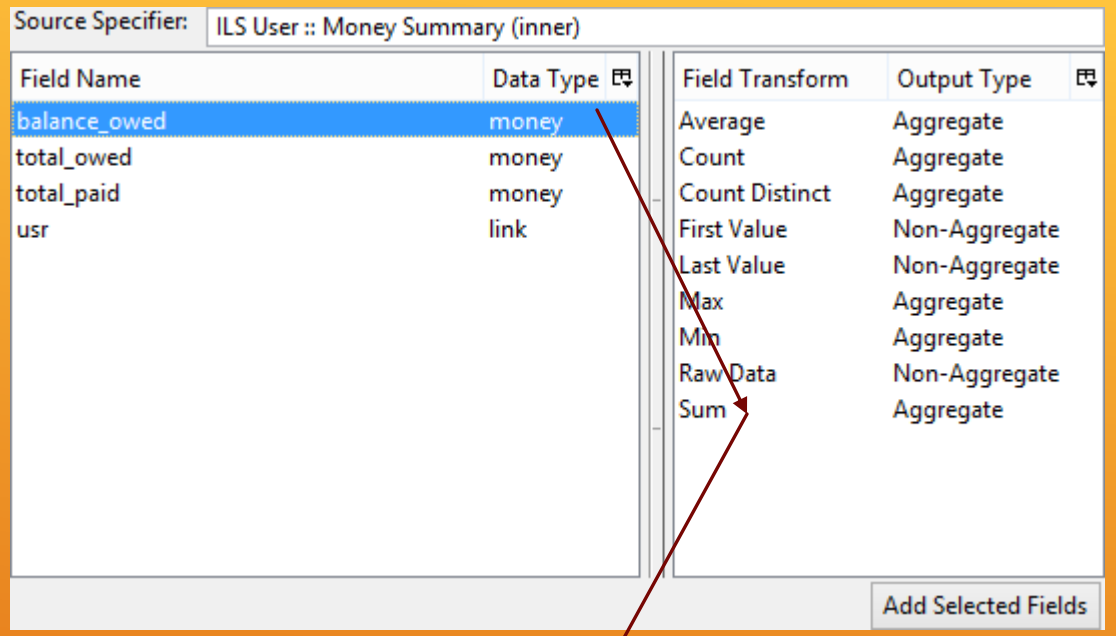
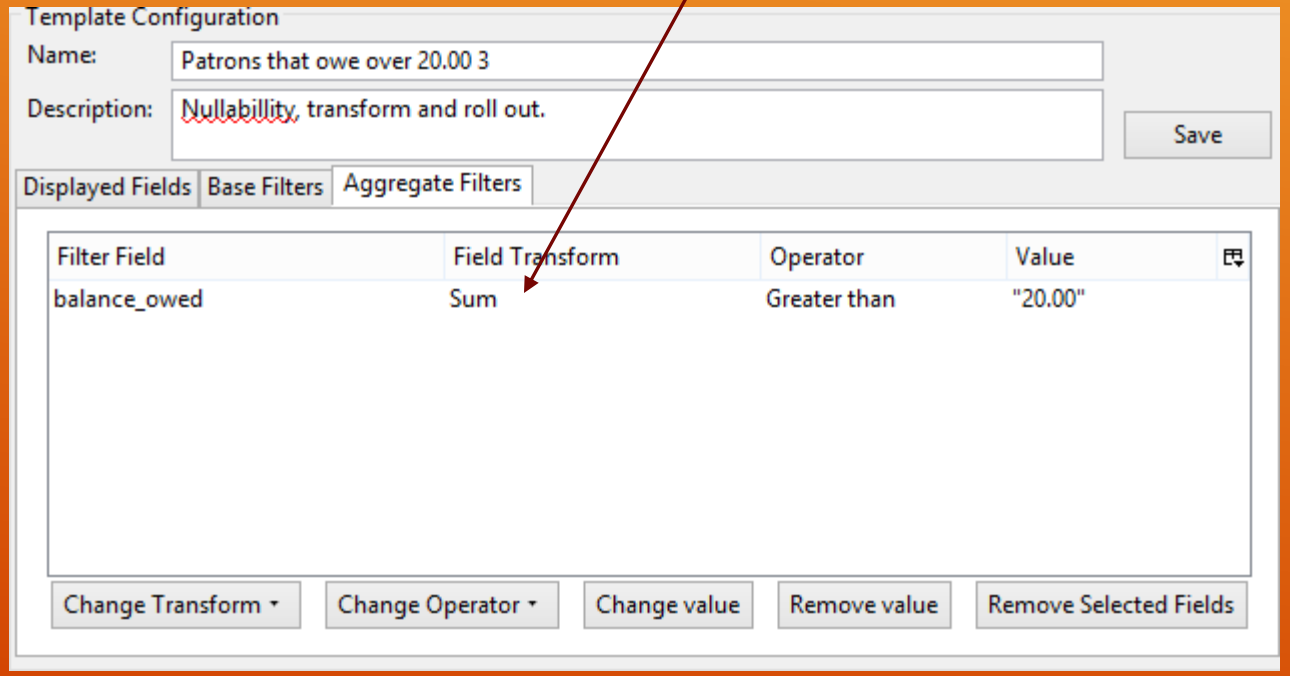


BASE FILTERS, SIMPLIFIED

One is the loneliest number





YOU LOOK FAMILIAR

Do you filter this field often?

SUCCESS

This cake is great

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	833945	38.25
3	JCPLS	833950	33
4	JCPLS	833976	39.8
5	JCPLS	833987	76.09
6	JCPLS	833990	203.58
7	JCPLS	833995	110
8	JCPLS	834001	70
9	JCPLS	834005	35
10	JCPLS	834009	165.76
3852	JCPLS	3956864	69
3853	JCPLS	3959349	23.25
3854	JCPLS	3982913	31
3855	JCPLS	3982957	91.95
3856	JCPLS	3983086	235.9
3857	JCPLS	3983450	31
3858	JCPLS	3983742	20.25
3859	JCPLS	3984065	48.96
3860	JCPLS	3988063	22

No Sum Filter = 161,551.62

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	833950	23
3	JCPLS	833987	45.49
4	JCPLS	833990	20.05
5	JCPLS	833990	22.27
6	JCPLS	833990	29.95
7	JCPLS	833990	36.99
8	JCPLS	834001	30
9	JCPLS	834009	27.99
10	JCPLS	834009	29.95
4486	JCPLS	3956064	36.99
4487	JCPLS	3962957	34.95
4488	JCPLS	3962957	47
4489	JCPLS	3983086	26.99
4490	JCPLS	3983086	30.99
4491	JCPLS	3983086	37.95
4492	JCPLS	3983086	39.99
4493	JCPLS	3983086	59.99
4494	JCPLS	3984065	48.96
4495	**Total**	=	**161551.62**

Sum filter = 373,470.43

	A	B	C
1	Short (Policy) Name	User ID	balance_owed
2	JCPLS	833945	38.25
3	JCPLS	833950	33
4	JCPLS	833976	39.8
5	JCPLS	833987	76.09
6	JCPLS	833990	203.58
7	JCPLS	833995	110
8	JCPLS	834001	70
9	JCPLS	834005	35
10	JCPLS	834009	165.78
3852	JCPLS	3956064	65
3853	JCPLS	3959349	23.25
3854	JCPLS	3962913	31
3855	JCPLS	3962957	91.95
3856	JCPLS	3983086	235.9
3857	JCPLS	3983450	31
3858	JCPLS	3983742	20.25
3859	JCPLS	3984065	48.96
3860	JCPLS	3988063	22
3861	**Total**	=	**373470.43**

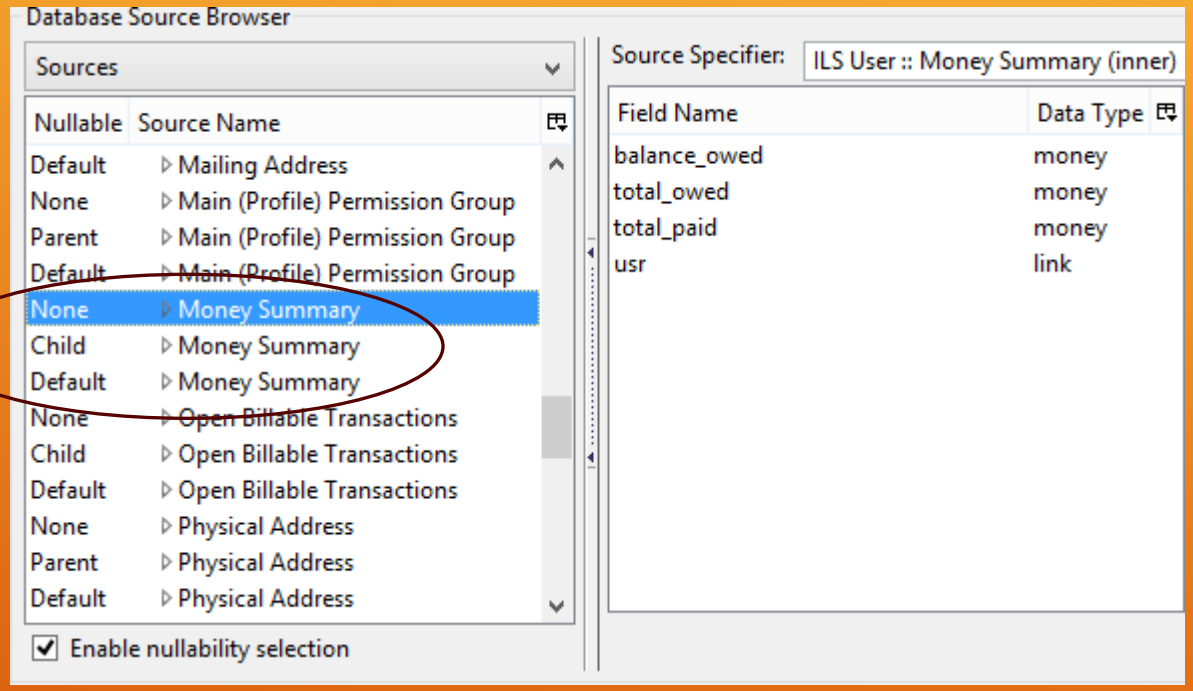
BUT THE NUMBER OF ROWS WENT DOWN?

BITE SIZED IDEAS

But wait, there's more

ALL OF THAT, AND FOR WHAT?

A recent Evergreen addition: the Money Summary link.



COUNT WHO?

Count Distinct is just so…

distinctive.

- Circulations? Count Circ Ids.
- Patrons? Count User Ids.
- Counting something? Just reach for an Id.

OPERATORS: EQUALS IS AWFUL

Equality is great for folks, but folly for filters. Choose an operator, any operator…

- Org_unit or Id? In List is lovely
- Dates? Between is best (and a transform!)
- Text? Contains Matching Substring (ignore case) conquerors all
- Bool? Well, I hear Equals is available…

QUESTIONS?

I can’t promise answers, just more words

THANK YOU

I read email at Boyer.Jason@gmail.com

I write (poorly and irregularly) at LoquaciousThesis.blogspot.com