HCQU reporter (a generic complex SQL statement generator and GUI)

Main screen

🔜 HCQU Reporter V 0.1.0.0	
[Query Builder] Query Results	
Data Source Creators Add Data Source Add Filed Lookup Data Filter Creators Add Filter Operation Add Sort Operation	
Execute this	
F F F	

Adding a data source to start with



You then get to pick what fields from the base data source you want to include in your query. (Here I have picked the name fields)



Now the data source is added to the canvas and the base selection statement is inserted into the code window

HCQU Reporter V 0.1.0.0		_ 🗆 🗙
Query Builder Query Results		
Data Source Creators Add Data Source Add Field Lookup Data Filter Creators	SELECT tblConsumer_Consumer_FirstName, tblConsumer_Consumer_MI,tblConsumer_LastName FROM tblConsumer	
Add Filter Operation Add Sort Operation		
Execute thisS	ELECT tblConsumer.Consumer_FirstName,	
100 Limit selection to X records. (0 is unlimited) E	'ROM tblConsumer	
F		

Now I want to associate some of the links in the base table to their corresponding entries in the various lookup tables by adding Field Lookup

🔜 Build Lookup Relationship			
Available Fields For Index	Available Tables for Indexing into	Fields in Table to index against	Fields to return on a Match
Control IngConsumer_ID IngConsumer_ID IngConsumer_ID IngNurseID Constrained and the set of the set			
Step 1 Select the field you want to use as the index field then click the> button	Step 2 Select the table you want to index into and then click the> button	Step 3 Select the field in this table that you want to index against and click the> button	Step 4 Finally select the field you want the index to return
Option Step 5 (what kind of JOIN to use)			
Fields in Base Table and fields in Match T	able or empty (NULL) values in match table where	e no match is found.	
C Fields in base table and fields in match tab	ole only. If match table fields do not exist then resi	ulting row in Base table is also not returned	OK Cancel

I start by selecting the field from my base table that is index field. (Nurse ID)

🖶 Build Lookup Relationship			
Available Fields For Index Control IngConsumer_ID IngConsumer_ID IngConsumer_ID IngVerseID Centrol BSU_RegistrationDate BSU_PriorityGroup_atReg BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate MR_ClosureDate MR_ClosureDate MR_ClosureDate Consumer_InstName Consumer_LastName Consumer_Status_MR PrimaryFunding_Source_ID IngCounty/ID FundingCounty Consumer_Sex	Available Tables for Indexing into CaseManagers Contacts dtproperties HCSIS_Recommendations HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE Providers Results ServicesRcvd tblAdmissions tblAdmissions tblAdmissions tblAdmissions tblAnswerChoices tblAossesments tblCMH_DiagnosticTesting tblConsumerAllergies tblConsumerAnswers tblConsumerAnswers tblConsumerPayProgram	Fields in Table to index against	Fields to return on a Match
Step 1 Select the field you want to use as the index field then click the> button □Option Step 5 (what kind of JOIN to use) Fields in Base Table and fields in Match T: C Fields in base table and fields in match table 	Step 2 Select the table you want to index into and then click the> button able or empty (NULL) values in match table where ole only. If match table fields do not exist then resu	Step 3 Select the field in this table that you want to index against and click the> button no match is found. Iting row in Base table is also not returned	Step 4 Finally select the field you want the index to return OK Cancel

Then I pick the table that this field links into (Nurses)

🔜 Build Lookup Relationship			
Available Fields For Index	Available Tables for Indexing into	Fields in Table to index against	Fields to return on a Match
Control IngConsumer_ID IngConsumer_ID SU_RegistrationDate BSU_RegistrationDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate MR_RegistratiionDate MR_RegistratiionDate MR_ClosureDate MR_ClosureDate MR_ClosureDate Consumer_IstName Consumer_LastName Consumer_Status_MR PrimaryFunding_Source_ID IngCountyID FundingCounty Consumer_Sex	CaseManagers Contacts dtproperties HCSIS_Recommendations HCSIS_TRE_TABLE HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE VALUE Varces Providers Results ServicesRcvd tblAdmissions tblAnswerChoices tblAssesments tblCMH_DiagnosticTesting tblCMH_DistitutePlacement tblConsumerAllergies tblConsumerAllergies tblConsumerComments tblConsumerComments tblConsumerCogram	IngNurseID FirstName LastName Address City State Zip Phone CellPhone HomePhone NurseSSN toTimeStamp ysnArchive	
Step 1 Select the field you want to use as the index field then click the> button	Step 2 Select the table you want to index into and then click the> button	Step 3 Select the field in this table that you want to index against and click the> button	Step 4 Finally select the field you want the index to return
Option Step 5 (what kind of JOIN to use) Fields in Base Table and fields in Match T Fields in base table and fields in match table	able or empty (NULL) values in match table wh ole only. If match table fields do not exist then re	ere no match is found. sulting row in Base table is also not returned	OK Cancel

Now I pick the field in this linked table that represents the other side of the linking mechanism. (Nurse ID again)

🖶 Build Lookup Relationship			
Available Fields For Index	Available Tables for Indexing into	Fields in Table to index against	Fields to return on a Match
Control IngConsumer_ID IngConsumer_ID IngConsumer_ID IngConsumer_ID BSU_RegistrationDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate MR_ClosureReason Consumer_IsitName Consumer_Status_MR PrimaryFunding_Source_ID IngCountyID FundingCounty Consumer_Sex	CaseManagers Contacts dtproperties HCSIS_Recommendations HCSIS_TRE_TABLE HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE VALUE Varses Providers Results ServicesRcvd tblAdmissions tblAnswerChoices tblAssesments tblCMH_DiagnosticTesting tblCMH_DistutePlacement tblConsumerAllergies tblConsumerAllergies tblConsumerAllergies tblConsumerComments tblConsumerCapProgram v	✓ IngNurseID FirstName LastName Address City State Zip Phone CellPhone NurseSSN tsTimeStamp ysnArchive	IngNurseID FirstName LastName Address City State Zip Phone CellPhone HomePhone NurseSSN tsTimeStamp ysnArchive
Step 1 Select the field you want to use as the index field then click the> button	Step 2 Select the table you want to index into and then click the> button	Step 3 Select the field in this table that you want to index against and click the> button	Step 4 Finally select the field you want the index to return
Option Step 5 (what kind of JOIN to use)	able or empty (NULL) values in match table when	e no match is found.	
C Fields in base table and fields in match ta	ble only. If match table fields do not exist then res	ulting row in Base table is also not returned	OK Cancel

Finally I get to select what other fields from the linked table I want to add to my query. We will get the nurse First name and Last name

🛃 Build Lookup Relationship			_ _ ×
Available Fields For Index Available Fields For Index Control IngConsumer_ID Consr_bsu_num BSU_RegistrationDate BSU_PriorityGroup_atReg BSU_ClosureDate BSU_ClosureDate BSU_ClosureDate BSU_ClosureReason MR_RegistrationDate MR_ClosureReason Consumer_FirstName Consumer_Status_MR PrimaryFunding_Source_ID IngCountyID FundingCounty Consumer_Status_MR PrimaryFunding_Source_ID IngCountyID FundingCounty Consumer_Status_MR Consumer_Statu	Available Tables for Indexing into CaseManagers Contacts HCSIS_Recommendations HCSIS_Recommendations HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE HCSIS_T_RE_TABLE VALUE VIturses Providers Results ServicesRvd tblAdmissions tblAnswerChoices tblAassesments tblCAms_unerAnswers tblConsumerAnswers tblConsumerAnswe	Fields in Table to index against	Fields to return on a Match IngNurseID ✓ FirstName Address City State Zip Phone CellPhone HomePhone NurseSSN tsTimeStamp ysnArchive
Step 1 Select the field you want to use as the index field then click the -> button Option Step 5 (what kind of JOIN to use) © Fields in Base Table and fields in Match Ta C Fields in base table and fields in match tab	Step 2 Select the table you want to index into and then click the> button able or empty (NULL) values in match table where le only. If match table fields do not exist then resu	Step 3 Select the field in this table that you want to index against and click the> button e no match is found. Iting row in Base table is also not returned	Step 4 Finally select the field you want the index to return OK Cancel

I optionally can select what kind of join I will be using (Need to work on language here)



Now I have my base query and the joined nurses table with the nurse name being pulled from the joined table via the constructed link. Notice the code window shows the LEFT OUTER JOIN that was constructed and that the Dashed line between the Lookup and the Data source. This dashed line indicates the Outer join nature of the selection in that some values from the linked table may be empty or NULL because that what we selected when we built the lookup in the first place.

I will quickly add another lookup on county ID



Note as you hover the icons in the graphic panel you get readout on the icons contribution to the underlying query as its being built. I all cases the Code panel tracks the interaction with the other parts of the interface.

Now we will add a filter...

🔜 Build a filter dialog			
Fields available to filter against			Number Die Los Inn 10 ml
TABLENAME.FIELDNAME	TYPE OF DATA		Numbers Dates Strings Advanced Stuff
tblConsumer.Control	STRING		Equal to some value
tblConsumer.IngConsumer_ID	NUMERIC		
tblConsumer.IngNurseID	NUMERIC		Enter the value you wish the field Enter the value you wish the field
tblConsumer.cnsr_bsu_num	STRING		condition condition
tblConsumer.BSU_RegistrationDate	DATETIME		Condition
tblConsumer.BSU_PriorityGroup_atReg	NUMERIC		
tblConsumer.BSU_ClosureDate	DATETIME		
tblConsumer.BSU_PriorityGroup_atClose	NUMERIC		
tblConsumer.BSU_ClosureReason	NUMERIC		Between a range of values Nulls or Not Nulls
tblConsumer.MR_RegistratiionDate	DATETIME		Enter the range of values you want the field to fall
tblConsumer.MR_ClosureDate	DATETIME		Into for the filter condition
tblConsumer.MR_ClosureReason	NUMERIC		
tblConsumer.Consumer_FirstName	STRING		I IS NOT NULL
tblConsumer.Consumer_MI	STRING		Lower boundary Opper boundary
tblConsumer.Consumer_LastName	STRING		
tblConsumer.Consumer_Suffix	STRING		Less than some value Greater than some value
tblConsumer.Consumer_Status_MR	NUMERIC		Enter the value you wish the field Enter the value you wish the field
tblConsumer.PrimaryFunding_Source_ID	NUMERIC		to be less than to be greater than
tblConsumer.IngCountyID	STRING		
tblConsumer.FundingCounty	STRING		
tblConsumer.Consumer_Sex	STRING		
tblConsumer.Consumer_Race	NUMERIC		Clause Thete hairs Duilte Create Clause using Set Builder
tblConsumer.Consumer_Ethnicity	NUMERIC		
tblConsumer.Consumer_DOB	DATETIME		
tblConsumer.ConsumerAddress	STRING		
tblConsumer.ConsumerApartment	STRING		
tblConsumer.ConsumerAddress3	STRING		
tblConsumer.ConsumerCity	STRING		Ok Cancel
tblConsumer.ConsumerState	STRING	•	

The Build a filter dialog allows you to see all fields of every table you reference in your query. The Base table and any table you reference via link are represented. First you select what field you want to filter on in the grid...

🖳 Build a filter dialog		
Fields available to filter against		Number Dates Strings Advanced Staff
TABLENAME.FIELDNAME	TYPE OF DATA	Numbers Dates Sumgs Advanced Stuff
tblConsumer.res_owner_cde	NUMERIC	C Ignore Case
tblConsumer.intChangeAddr	NUMERIC	
tblConsumer.intOtherResidents	NUMERIC	Equal to some value Not Equal to some value
tblConsumer.ysnArchive	BOOLEAN	Enter the value you wish the field Enter the value you wish the field
tblConsumer.IngResProviderID	NUMERIC	to be equal to for the filter to be NOT equal to for the filter
tblConsumer.txtAdmitFrom	STRING	condition condition
tblConsumer.BSU_Primary	STRING	
tblConsumer.BSU_Secondary	STRING	
tblConsumer.ysnPennhurst	BOOLEAN	
tblConsumer.IngResProviderContactID	NUMERIC	Between a range of values
tblConsumer.txtNotes	STRING	Enter the range of values you want the field to
tblConsumer.txtResProviderNotes	STRING	fall into for the filter condition
tblConsumer.dtmWhenMovedFromStateCtr	DATETIME	
Nurses.IngNurseID	NUMERIC	
Nurses.FirstName	STRING	Lower boundary Upper boundary
Nurses.LastName	STRING	- Pattern Matehing
Nurses.Address	STRING	Fattern Matching
Nurses.City	STRING	Enter the pattern desired either starting with, or ending
Nurses.State	STRING	with, or somewhere inside
Nurses.Zip	STRING	
Nurses.Phone	STRING	
Nurses.CellPhone	STRING	Starting Within Ending
Nurses.HomePhone	STRING	
Nurses.NurseSSN	STRING	Clause Thats being Built Create Clause using Set Builder
Nurses.tsTimeStamp	UNKNOWN	
Nurses.ysnArchive	BOOLEAN	
tlkpCounty.IngCounty_ID	STRING	
tlkpCounty.txtCounty	STRING	
tlkpCounty.tsTimeStamp	UNKNOWN	

Having selected the County from the lkpcounty table, the interface automatically switched to the strings Tab because that field is defined in the database as a string of characters. Now I can look for equality, inequality, ranges of values, Null, Not NULL, or various pattern matches (Starting with, Ending with, or Contains in) I also have the option to create a clause using set constructs meaning it will ask for the value being IN a set of values. I'll use this option for my query



Here I now get a list of the possible values for the field. I can select which of these I want to include in my set. Well look for only this records that are in the Lackawanna or Luzerne counties.



As you can see it has built my clause containing SQL correct IN Syntax for me. Because the field I as looking at was a string, the set is represented using 'character. If the field has been numeric the reporter would have omitted the 'characters and the values would have been numbers. If I set the type to be exclusive the syntax reverts to NOT IN and visa versa. So I click OK

🔜 Build a filter dialog		
Fields available to filter against		
TABLENAME.FIELDNAME	TYPE OF DATA	Numbers Dates Strings Advanced Stuff
tblConsumer.Control	STRING	O Ignore Case O Dont Ignore Case
tblConsumer.IngConsumer_ID	NUMERIC	
tblConsumer.IngNurseID	NUMERIC	Equal to some value Not Equal to some value
tblConsumer.cnsr_bsu_num	STRING	Enter the value you wish the field Enter the value you wish the field
tblConsumer.BSU_RegistrationDate	DATETIME	to be equal to for the filter to be NOT equal to for the filter
tblConsumer.BSU_PriorityGroup_atReg	NUMERIC	condition condition
tblConsumer.BSU_ClosureDate	DATETIME	
tblConsumer.BSU_PriorityGroup_atClose	NUMERIC	
tblConsumer.BSU_ClosureReason	NUMERIC	Between a range of values
tblConsumer.MR_RegistratiionDate	DATETIME	
tblConsumer.MR_ClosureDate	DATETIME	Enter the range of values you want the field to
tblConsumer.MR_ClosureReason	NUMERIC	
tblConsumer.Consumer_FirstName	STRING	Is NOT NULL
tblConsumer.Consumer_MI	STRING	
tblConsumer.Consumer_LastName	STRING	Lower boundary Upper boundary
tblConsumer.Consumer_Suffix	STRING	Pattern Matching
tblConsumer.Consumer_Status_MR	NUMERIC	Fature that a setting the size of a fifth and a fifth and a first
tblConsumer.PrimaryFunding_Source_ID	NUMERIC	with, or somewhere inside
tblConsumer.IngCountyID	STRING	
tblConsumer.FundingCounty	STRING	
tblConsumer.Consumer_Sex	STRING	Starting Within Ending
tblConsumer.Consumer_Race	NUMERIC	Statung Within Enong
tblConsumer.Consumer_Ethnicity	NUMERIC	
tblConsumer.Consumer_DOB	DATETIME	Clause Thats being Built Create Clause using Set Builder
tblConsumer.ConsumerAddress	STRING	btCounty IN ('Lackawanna' 'Luzeme')
tblConsumer.ConsumerApartment	STRING	
tblConsumer.ConsumerAddress3	STRING	
tblConsumer.ConsumerCity	STRING	Ok Cancel
ItblConsumer.ConsumerState	ISTRING	

Note that the clause being built shows my IN clause.. Click OK again

HCQU Reporter V 0.1.0.0		_ 🗆 ×
Query Builder Query Results		
Data Source Creators Add Data Source Add Field Lookup	IxtCounty IN (Lackawanna', Luzerne') Initial Clause	
Data Filter Creators		
Add Filter Operation		
Execute this Execute this	tblConsumer.Consumer_MI,tblConsumer.Consumer LastName,	
100 records. (0 is unlimited)	Nurses.FirstName as 'Nurses_FirstName',	
	Nurses.LastName as 'Nurses_LastName',	
	FROM tblConsumer	
1	LEFT OUTER JOIN Nurses ON tblConsumer.lngNurseID = Nurses.lngNurseID	
	LEFT OUTER JOIN tlkpCounty ON tblConsumer.lngCountyID = tlkpCounty.lngCoun WHERE (txtCounty IN ('Lackawanna', 'Luzerne'))	
F		
F		
F		

I now have my lookup filter added to the canvas and my code windows now contains the resulting where clause

Now I will add another filter on Nurse Name being NOT NULL. When I click the OK to leave the filter making process I get a different dialog because I now have another choice to make

🛃 Select where you want to connect this filter	_ _ ×
Connect this new filter directly to the data source. (This generates an AND condition between this new filter and the results of all other filters)	
Or select one of the existing filters to connect this to	
3 btCounty IN (Lackawanna','Luzeme')	Kind of connection to Make This setting dictates the type of logic that will be applied to the connection filter. AND as in THS OR AND THAT, or OR as in THIS OR THAT
	Ok Cancel

Because I already have a filter in this query, the software is asking me whn I want to connect this filter that I just made. I have the option of connecting this directly to the table, or connecting this directly to the pre-exiting filter. I lso get to choose what kind of clause I will use in the connection. AND being all inclusive or the OR clause wher one side or the other can be false and records will still flow through.

In my case I will connect to the existing filter using the and clause...

Select where you want to connect this filter	_ 🗆 🗵		
Connect this new filter directly to the data source. (This generates an AND condition between this new filter and the results of all other filters)			
Or select one of the existing filters to connect this to			
3 btCounty IN ('Lackawanna','Luzeme')	Kind of connection to Make		
	This setting dictates the type of logic that will be applied to the expendition		
	OR AND THAT, or OR as in		
	THIS OR THAT		
	Ok Cancel		
	///		

and click OK



Note that my filter is now a little larger and the new clause Nurses.Firstname IS NOT NULL has been added to the previous contents using the AND clause.

Finally I can click the execute this and examine the Query results tab to see the results of my work

	-					
ery Builder Query Results						
						F F F
Query Res	ults					-
onsumer FirstName	Consumer MI	Consumer LastName	Nurses FirstName	Nurses LastName	tlkpCounty_txtCounty	
AMI LYNN	{NULL}	PALUCH	Sharon	Fairburn	Luzerne	
ichael	(NULL)	Boruta	Lisa	Sinclair	Lackawanna	
ENNIFER	(NULL)	KELLMER	Lisa	Sinclair	Luzerne	
ANDRA	(NULL)	STROCK	Lisa	Timek	Luzerne	
NDA	(NULL)	PELCZAR	Sharon	Fairburn	Luzerne	
ARYANN	(NULL)	ABRAMCHECK	Lisa	Timek	Luzerne	
OHN	{NULL}	POPPLE	Lisa	Sinclair	Luzerne	
OBERT	{NULL}	MALESKY	Tara	Morgan	Luzerne	
ARBARA	(NULL)	KNEPP	Sharon	Fairburn	Luzerne	
IANE	{NULL}	SAMUELS	Lisa	Timek	Luzerne	
ELEN	{NULL}	PETROSKY	Sharon	Fairburn	Luzerne	
EVIN	{NULL}	DOMIN	Lisa	Timek	Luzerne	
ARY	{NULL}	CASO	Lisa	Timek	Luzerne	
RENDA	{NULL}	MCMANUS	Sharon	Fairburn	Luzerne	
OBERT	{NULL}	JENKINS	Tara	Morgan	Luzerne	
HILLIP	{NULL}	GALLAGHER	Lisa	Sinclair	Luzerne	
ICHAEL	{NULL}	SABOL	Lisa	Timek	Luzerne	
elly	{NULL}	Green	Sharon	Fairburn	Lackawanna	
OBERT	{NULL}	SEBOLKA	Tara	Morgan	Luzerne	
ACQUELINE	{NULL}	CIANNELLI	Tara	Morgan	Luzerne	
RISTINA	{NULL}	FETCHEN	Tara	Morgan	Luzerne	
DAN	{NULL}	FREDERICK	Sharon	Fairburn	Luzerne	
teven	{NULL}	Perko	Tara	Morgan	Lackawanna	
ICHARD	{NULL}	MOSHER	Lisa	Sinclair	Luzerne	
MY	{NULL}	REIDLINGER	Lisa	Timek	Luzerne	
ILLIAM	{NULL}	FOX	Tara	Morgan	Luzerne	
ELVIN	{NULL}	CORNELL	Lisa	Sinclair	Luzerne	
HONDA	{NULL}	GIBSON	Lisa	Sinclair	Luzerne	
TANLEY	R	FETTIG	Lisa	Sinclair	Luzerne	
EAN	{NULL}	FLYNN	Tara	Morgan	Luzerne	
EANN	{NULL}	НИМКО	Lisa	Timek	Luzerne	
ONALD	{NULL}	LEITZEL	Tara	Morgan	Luzerne	
ERALD	{NULL}	CONDEN	Lisa	Sinclair	Luzerne	
ohn	(NULL)	Yeager	Lisa	Sinclair	Lackawanna	

I am free to go back to the query builder and edit or add to its contents and re-query the database to view my handy work.

TODO

More filtering options Sorting Options Grouping Options Function fields (COUNTS, SUM, DIFFS etc) used in conjunction with Grouping

More to come...