Subject: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 00:47:29 GMT
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I just found U++ yesterday, so this is all new to me.

The program I am working on has a SqLite3 backend with two tables. One table references the other (like a foreign key). I was working on implementing this when I found the Join() functions. I could not, however, make these work as I expected. Are there any examples? It would be great to see the Address book example written with a SqLite backend.

Also, I'm not sure I even understand what SqlDetails does, much less how to use it. Can anyone shed some light on this?

Thanks.

Subject: Re: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 05:27:37 GMT
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Ok, so after playing with it some more I figured it out somewhat.
My SqlArray's are now properly Join'ed and working as they should. Now how do I set the SqlArray to allow inserts, deletes, and modifications? I think for modifications I can do something like
EditString editDesc;
AddColumn("DESCRIPTION","Description").Edit(editDesc);
which seems to work ok.

I also have SqlDetail setup to populate some EditStrings with the values. Now how can I make it so edits to these are saved back to the database?

Subject: Re: SqlArray Join
Posted by mirek on Wed, 19 Jul 2006 09:11:52 GMT
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To insert / remove rows, use

SqlArray arr;
.....
arr.Removing().Appending();

SqlDetails are reserved for quite rare 1:1 relations (means - one table is represented by SqlArray and for each line of this SqlArray there is _single_ record in another joined table, which is edited

by SqlDetails Ctrls).

If what you want to do is to edit some columns of record of single table in SqlArray rows and rest in separate Ctrls, just add those Ctrls to SqlArray (ArrayCtrl::AddCtrl).

Important thing to understand here is that not every "index" in ArrayCtrl "row" corresponds to single column in ArrayCtrl (SqlArray is ArrayCtrl derivative). Some indicies can be bound to external Ctrls, some can be completely hidden and respectively, some columns of ArrayCtrl can "merge" more indicies (e.g. you have YEAR, MONTH and DAY columns in your database and you want to display them in single SqlArray column).

Mirek

Subject: Re: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 15:07:36 GMT
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luzr wrote on Wed, 19 July 2006 05:11If what you want to do is to edit some columns of record of single table in SqlArray rows and rest in separate Ctrls, just add those Ctrls to SqlArray (ArrayCtrl::AddCtrl).
Ok, I tried that but there are a few problems. The control I added is not automatically populated with the value from the database- should it be or do I have to do this manually?
This is why I was using SqlDetail, I have a 1-to-1 because I am editing the same row on the same table. Maybe not what it was designed for, but it seems to work here.

I'm sure I'll have some more questions in a little bit.

Let me also add that I had to do some core hacking to even get it to compile (I'm using the Win32 package that includes MinGW). The SqLite3 package referenced the DocTypes package which complained about a missing DocTypes.h. I removed those dependencies. It then had problems with ambiguous calls that I resolved by adding TRUE to them.

Subject: Re: SqlArray Join
Posted by mirek on Wed, 19 Jul 2006 15:13:17 GMT
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Quote:
Ok, I tried that but there are a few problems. The control I added is not automatically populated with the value from the database- should it be or do I have to do this manually?

It should be. How are you trying that? The right approach is

SqlArray table;

...
table.AddCtrl(COLUMNID, myctrl);

Quote:
This is why I was using SqlDetail, I have a 1-to-1 because I am editing the same row on the same table. Maybe not what it was designed for, but it seems to work here.

Yes, it should. But it is unnecessary complex

Quote:
Let me also add that I had to do some core hacking to even get it to compile (I'm using the Win32 package that includes MinGW). The SqLite3 package referenced the DocTypes package which complained about a missing DocTypes.h. I removed those dependencies. It then had problems with ambiguous calls that I resolved by adding TRUE to them.

Strange, what U++ version?

Mirek

Subject: Re: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 16:36:21 GMT
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luzr wrote on Wed, 19 July 2006 11:13It should be. How are you trying that? The right approach is

SqlArray table;
...
table.AddCtrl(COLUMNID, myctrl);

I have the SqlArray named "CListView" on a TabCtrl named "tab" with a tab named "list". I used the designer to add a StringEdit called "strName1" to the list layout.
list.CListView.AddCtrl("NAME",list.strName1);
I eventually want to move the controls to a different tab, but I have them here for testing.
When I navigate to different rows, it does look like the control might be refreshing, but there is nothing there. It will save data to the database, but not show it.
luzr wrote on Wed, 19 July 2006 11:13Strange, what U++ version?
The current release, 605, with MinGW bundled.

Thanks for your help.

Subject: Re: SqlArray Join
Posted by mirek on Wed, 19 Jul 2006 19:17:21 GMT
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rbmatt wrote on Wed, 19 July 2006 12:36luzr wrote on Wed, 19 July 2006 11:13It should be. How are you trying that? The right approach is

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luzr wrote on Wed, 19 July 2006 11:13Strange, what U++ version?
The current release, 605, with MinGW bundled.

Thanks for your help.

Hard to say. Can you pack and send the whole package?

Subject: Re: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 20:53:42 GMT
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luzr wrote on Wed, 19 July 2006 15:17Hard to say. Can you pack and send the whole package?
Thanks for looking into it. Make sure you have simple2.db in the same folder you run it from.

File Attachments
1) EzellApp4.zip, downloaded 1992 times

Subject: Re: SqlArray Join
Posted by mirek on Wed, 19 Jul 2006 21:48:48 GMT
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OMG:

#include <SqlCtrl/SqlArray.cpp>
#include <SqlCtrl/SqlDetail.cpp>

Should be

#include <SqlCtrl/SqlCtrl.h>

If I compile it that way (minus menu line commented out...), it works as I would expect.

BTW,

```
	// Kinda dumb that we have to do this
 // isn't there a better way?
 SqlId JOBID("JOBID");
 SqlId NAME("NAME");
 SqlId CUSTOMER_ID("CUSTOMER_ID");
```

You #define something like this (actually, in TSql package it is defined, but 'T' packages are somewhat 'less canonical'):

```
#define SQLID(x)    const SqlId x(#x);
```

Anyway, the best way is to do db schema in U++ and get those defines for free.

Mirek

Subject: Re: SqlArray Join
Posted by rbmatt on Wed, 19 Jul 2006 22:09:14 GMT
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Must be some Mirek Magic
I made the change to the #include's and commented out my menu line (was testing and I forgot to remove it before I packaged it) but no luck. It still doesn't work here. Just a blank box that has some hidden functionality. Are you using MinGW to compile or MS VC++?

Subject: Re: SqlArray Join
Posted by rbmatt on Fri, 21 Jul 2006 04:35:05 GMT
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I just installed MS VC++ Express and the Windows SDK, and I get the same results. The test name box is not populated with the name. Interesing though, if you enter something in the box, it will show that in the box for all subsequent times you view that row. It also saves that to the database.

Subject: Re: SqlArray Join
Posted by mirek on Fri, 21 Jul 2006 12:33:46 GMT

OK, I hope I have found it.

The trouble is that bug exposes only in the start (you double-click on first record). I have tested after clicking to another row - there it was OK.

Anyway, the bug is caused by wrong placement of

```
 list.CListView.Query();
```

You are performing the query _before_ you join with detail. Query sets the cursor to the first row, means detail will not get loaded for this row....

Putting it at the end of constructor fixed the problem.

I have taken the oportunity a tried to improve the code a bit:

```
#include <CtrlLib/CtrlLib.h>
#include <SqlCtrl/SqlCtrl.h>
#include <plugin/Sqlite3/Sqlite3.h>

#define LAYOUTFILE <EzellApp4/EzellApp4.lay>
#include <CtrlCore/lay.h>

class EzellApp4 : public WithEzellApp4Layout<TopWindow> {
 WithListLayout<ParentCtrl> list;
 WithDetailLayout<ParentCtrl> detail;
 // The SQLite session

 // For editing
 EditDate editDate;
 EditString editDesc;
 EditString editCost;

public:
 typedef EzellApp4 CLASSNAME;
 void SwitchView();
 void CrossUpdate(int);
 EzellApp4();
};

void EzellApp4::CrossUpdate(int i)
{
 // In progress
 PromptOK("Yea, OK");
```

```
 list.CListView.Refresh();
}

EzellApp4::EzellApp4()
{
 // Setup the layouts
 CtrlLayout(*this, "Bean Heat and Air- Customer Files");
 CtrlLayout(list);
 CtrlLayout(detail);

 Sizeable();
 Zoomable();

 // Tell tab control what slave ctrls to use
 tab.Add(list, "Customers");
 tab.Add(detail, "Details");

 // Kinda dumb that we have to do this
 // isn't there a better way?
 SqlId JOBID("JOBID");
 SqlId NAME("NAME");
 SqlId CUSTOMER_ID("CUSTOMER_ID");

 // Setup primary customer list
 list.CListView.SetTable("CUSTOMERS");
 list.CListView.AddColumn("ID", "Id");
 list.CListView.HeaderObject().HideTab(0);
 list.CListView.AddColumn("NAME","Name");
 list.CListView.AddColumn("ADDRESS","Address");
 list.CListView.AddColumn("CSZ","City, State Zip");
 list.CListView.AddColumn("PHONE1","Phone 1");

 list.CListView.AddCtrl("NAME",list.strName1);
 list.CListView.AddCtrl("NAME", detail.strName);
 list.CListView.AddCtrl("ADDRESS", detail.strAddress);
 list.CListView.AddCtrl("CSZ", detail.strCSZ);

 list.CListView.SetOrderBy(NAME);
 list.CListView.WhenLeftDouble = THISBACK(SwitchView);

 detail.detailList.SetTable("JOBS");
 detail.detailList.AddColumn("JOBID","Id");
 detail.detailList.HeaderObject().HideTab(0);
 detail.detailList.AddColumn("DONEDATE","Date").Edit(editDate);
 detail.detailList.AddColumn("DESCRIPTION","Description").Edit(editDesc);
 detail.detailList.AddColumn("COST","Cost").Edit(editCost);
 detail.detailList.SetOrderBy(JOBID);
 detail.detailList.Join(CUSTOMER_ID, list.CListView);
```

```
 detail.detailList.Removing().Appending();

 list.CListView.Query();
}

void EzellApp4::SwitchView()
{
 tab.Set(1);
}

GUI_APP_MAIN
{
 Sqlite3Session session;

 if(!session.Open(ConfigFile("simple2.db"))) {
  Exclamation("Error opening the database file");
  return;
 }

#ifdef _DEBUG
 session.SetTrace();
 session.LogErrors(true);
#endif

 SQL = session;

 EzellApp4().Run();
}
```

Changes:

SqlDetails are really not necessary.

Most application do not use more than single DB engine, therefore it is a good ideal to define default session - you do not have to se it everywhere ("SQL=session").

Opening session in constructor is really bad thing

BTW, is your database schema fixed in existing .db file, or is it a part of application you are developing? U++ has nice support for schemas... I would be happy to help you with that...

...because, in fact, it would not be a bad idea to finally add some nice SQL example to U++

Mirek

Subject: Re: SqlArray Join
Posted by rbmatt on Fri, 21 Jul 2006 15:16:55 GMT
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luzr wrote on Fri, 21 July 2006 08:33OK, I hope I have found it.Thanks so much
luzrAnyway, the bug is caused by wrong placement of

list.CListView.Query();

You are performing the query _before_ you join with detail. Query sets the cursor to the first row, means detail will not get loaded for this row....

Putting it at the end of constructor fixed the problem.
Makes sense now
luzrI have taken the oportunity a tried to improve the code a bit:Wow, thanks a million.
luzrMost application do not use more than single DB engine, therefore it is a good ideal to define default session - you do not have to se it everywhere ("SQL=session").
Makes sense, good tip.
luzrOpening session in constructor is really bad thing
I guess this is also because there will only be one DB session but possibly multiple instances of my app window, also performance.
luzrBTW, is your database schema fixed in existing .db file, or is it a part of application you are developing? U++ has nice support for schemas... I would be happy to help you with that...
I have lots of data that is currently in a spreadsheet. I will use php or perl to parse it out into a usable CSV or something similar. The actual structure of the DB can still be changed. The reason I did not opt for schemas was because I thought it might add a little extra (code size, memory usage) to the final product. If all the processing is pre-compile, it might be beneficial to add it in here. Advice?
luzr...because, in fact, it would not be a bad idea to finally add some nice SQL example to U++
I'll be glad to offer my app as a tutorial and help write it.

Thanks again

Subject: Re: SqlArray Join
Posted by rbmatt on Sat, 22 Jul 2006 05:42:51 GMT
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Ok, so I worked through several things today.
I added schema support so while in debug mode it will update my schema based on the .sch file. Then I use sch to automatically define all my SqlId's.
I found out why I was having a problem with data reverting to old states. Got that (mostly) fixed.
I don't think there is a way for me to manually make the changes to the database (short of actually writing the code). What I mean is UpdateRow() is protected so I cannot call it. There are no member functions that say "write this to the db" that I see.
Also inserting does not seem to be working. I traced the code as best I could.
The program does a late insert but somehow it looks like it only wants to do an update. The update code looks like:

update CUSTOMERS set NAME = 'test', ADDRESS = NULL, CSZ = NULL, PHONE1 = NULL, NAME = 'test' where ID is NULL
Well, there is no entry where ID is NULL so nothing happens.
And to get the autonumber we need to set ID = NULL which it does not do.
I've attached my new version.
Thanks.
P.S. What are the lines in the DocEdit? Is there a way to turn that off?

File Attachments

1) EzellApp4_v2.zip, downloaded 1973 times

Subject: Re: SqlArray Join
Posted by mirek on Sun, 23 Jul 2006 17:15:47 GMT
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Quote:
luzrOpening session in constructor is really bad thing
I guess this is also because there will only be one DB session but possibly multiple instances of my app window, also performance.

The reson why it is bad thing is that if open fails, you will end with semiconstructed object...

Quote:
I have lots of data that is currently in a spreadsheet. I will use php or perl to parse it out into a usable CSV or something similar. The actual structure of the DB can still be changed. The reason I did not opt for schemas was because I thought it might add a little extra (code size, memory usage) to the final product.

Only a little - and it is also possible to exculde that using #ifdef _DEBUG

Mirek

Subject: Re: SqlArray Join
Posted by rbmatt on Sun, 23 Jul 2006 17:49:33 GMT
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Hmm.. I thought my addition of schemas was working properly...

EDIT: nevermind, I think I got that sorted

Subject: Re: SqlArray Join
Posted by forlano on Sat, 10 Mar 2007 17:44:00 GMT

rbmatt wrote on Sat, 22 July 2006 07:42Ok, so I worked through several things today.
I added schema support so while in debug mode it will update my schema based on the .sch file.
Then I use sch to automatically define all my SqlId's.
I found out why I was having a problem with data reverting to old states. Got that (mostly) fixed.
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Well, there is no entry where ID is NULL so nothing happens.
And to get the autonumber we need to set ID = NULL which it does not do.
I've attached my new version.
Thanks.
P.S. What are the lines in the DocEdit? Is there a way to turn that off?

Hello,

I was unable to compile the package with 2007.1.rc2.
Perhaps something changed during these months. Any hope to fix it? I remind I was able to compile it with old version. Now all the complains come from the .sch file.

Luigi