Subject: GridCtrl large data set from DB
Posted by lokki on Wed, 17 Feb 2010 08:50:36 GMT
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Hello.

I'm using a GridCtrl in my app to display, search and edit data from the database and starting having problems as the amount of data grows. I believe it's caused by a bad design or bad usage of GridCtrl in my app.

In current implementation, the GridCtrl is filled by with all data from the DB table when window is displayed. I'm also using GridCtrl's search functionality to filter displayed data. The search however is getting really slow (search is immediate as I type into the default search input box in GridCtrl).

Do you have any suggestion on how to handle large data set in GridCtrl? How do you do that?

My idea is, that the GridCtrl won't be filled with all the data at the begining, but just with a subset, say limited to 100 records. The search will have to be overriden by a custom functionality, that it doesn't search the records in GridCtrl's memory, but that it calls a "like" query on the DB and display the output in GridCtrl.

Would that be a good approach or do you have a better idea? I just don't like storing all the data from the database table in the GridCtrl memory, while the amount of data is growing.

Thanks in advance

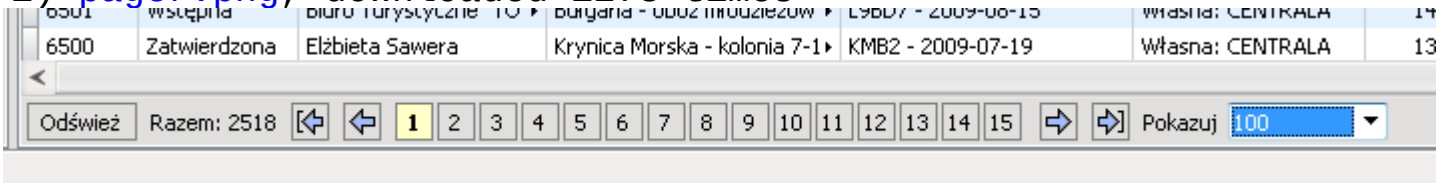
Subject: Re: GridCtrl large data set from DB
Posted by unodgs on Wed, 17 Feb 2010 11:06:55 GMT
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Current GridCtrl's search algorithm is indeed slow. I can improve that, but it won't solve your problem anyway. If your database table size grows constantly no matter how searching implementation efficient will be some day you'll hit the wall. And filling grid with data will be taking more and more time as well as memory space. Another thing worth mentioning here is that users are mostly interested in new/fresh data, so loading everything to the memory is in most cases unnecessary.
In my application I use paging control (see the screen-shot). I wrote it myself and if you want I can publish it (but first I need to separate it from my project and write simple example for it). If any button or arrow is pressed I simply generate new query to database that returns a proper result range. Basically this is the same query used to load all data with offset/limit instructions added. Most databases support them. Also if you need sorting you must do it by changing the database query otherwise you will sort only visible part of data and consistency with paging will be lost.
So as you can see I'm doing the same what you were thinking of.
Other solution is to use virtual rows (but GridCtrl doesn't support them) and to load data on the fly as one moves the scrollbar. But that needs some smart cashing strategy, otherwise scrolling experience will be bad. It's very nice solved in xceed grid - http://xceed.com/Grid_WPF_Intro.html.

Just run the demo. Maybe I'll add something similar to GridCtrl one day
And of course grid searching will be working on loaded data only (for current page). You have to provide your own searching method to search all database data.

File Attachments

1) pager.png, downloaded 1273 times



Subject: Re: GridCtrl large data set from DB
Posted by lokki on Wed, 17 Feb 2010 12:05:59 GMT
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Thanks Unodgs for quick reply. So I'm going to try the idea and will see how it will behave.

The search is important part of the application, because user is always interested only into records he searches for.

Subject: Re: GridCtrl large data set from DB
Posted by fudadmin on Wed, 17 Feb 2010 13:42:45 GMT
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to Speed up searches you can hide some columns. To avoid searching in all columns I made Skip column in my package:http://www.ultimatepp.org/forum/index.php?t=msg&
&th=4970&goto=25191#msg_25191

You can try it. Maybe uno sees it useful and includes into his?

Btw, it would be nice to have virtual grid. I'm strugling myself with 2 mln. records.
