

WinForms Data Grid v20.1 Summary Computation for Selected Rows Video Script

Video URL: https://www.youtube.com/watch?v=3qwx9IUmE_o

Product URL: <https://www.devexpress.com/products/net/controls/winforms/grid/>

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With our v20.1 update, you and your end-users will be able to control how summaries are calculated within the DevExpress WinForms Data Grid. Summary computation support has been available for nearly 20 years, but with this update, you'll be able to restrict summary computations to records selected by end-users.

In this video, I'll show you the grid's new user-interface elements and describe how different summary settings affect actual computation. Let's get started and dive into our new feature – Summary by Selection.

As you can see in this image, our standard summary computation logic computed values against an entire dataset for individual columns. Notice the grid's footer – in this example, it automatically computed the sum for its Model Price column and count for the ID column.

Summary computations are an invaluable analytics tool, but what if a user wants to see computations for selected rows? If you've used our WinForms Grid in the past, you know that workarounds exist to enable summaries against selected records. With v20.1, we've made it extremely easy to incorporate this functionality without code or workarounds.

Let me show you how this actually works within the UI. I'll first select a few rows within the grid. The minute I begin making selections, take a look at the grid footer. As you can see, summaries have changed and are now being updated as records are selected. Very cool! And check out the blue icon – we added that UI element to clearly show that the summary is not for the entire dataset – when visible, the icon tells users that the summary applies only to selected records.

Let's get back to the UI – I'll invoke the summary computation popup via a right click in the footer cell. Quick reminder to new users – this summary popup is a built-in UI element - so users can apply computations on the fly without you having to introduce custom UI or computation logic to your app.

I'll navigate to the new MODE submenu – as you can see, it now includes 3 options. All Rows is our classic implementation. When summaries are enabled for a given column and if All Rows is active, the grid computes summaries for all rows in a dataset.

The second menu item in the MODE submenu is Selection. This menu does what its name

implies. It computes summaries for selected rows only. If no row is selected, it will display nothing in the footer. If one or more rows are selected, it will aggregate selected column values and display it in the footer.

Now, here is the interesting MODE – the one we definitely recommend – Mixed Mode. When you select Mixed mode, we only aggregate selected data if two or more records are selected. If one or fewer records are selected, our WinForms Grid computes the summary against all records in the dataset and displays this value in the footer. Why is this important? Well, if you have only selected a single record, you already know the “aggregate” value – it’s simply the value displayed in the grid cell. If you have no records selected, the footer would be empty and it could cause confusion for end users accustomed to seeing values within the footer.

Let me quickly recap Mixed Mode. Notice if 1 or zero records selected, the WinForms Grid computes summaries against all rows.

As soon as I select 2 rows, the summary in the footer is automatically updated and reflects the aggregate value of those records selected within the grid. By selecting additional rows, the grid recomputes the summary – automatically.

And yes - as you’d expect, if I select all rows, the summary will be computed against all records in the grid. Remember we are in mixed mode mode, so the footer displays the custom icon to inform end-users of how we’re computing values on their behalf. If record selection is cleared and thus no rows are selected, the summary value in the footer will return to all rows mode and the icon will disappear.

Once again, Summary by Selection can be enabled using our built-in Summary Computation Mode sub-menu. Invoke the menu via a right mouse click in the Grid’s footer.

If you don’t want to offer users access to this menu and its options, you can easily hide the menu from end-users. And of course, you can manage all of this in code as needed.

Let’s now take a look at Summary by Selection Mode and it’s impact when data is grouped within our WinForms Data Grid

If you’ve enabled the record selection checkbox column and if data is grouped within the grid, we’ve made it super-easy for users to compute summaries without forcing them to select individual rows within the group.

In this example, we grouped records by the Trademark column. As you can see, the grid now displays a total of 12 grouped rows. If we check the checkbox in the Dodge group column, our WinForms Grid will automatically apply the summary against the records in the Dodge group – in this case a total of 4 records.

If we select more group rows, such as Ford, Honda, Land Rover, the summary will automatically

recompute summary values.

Now, let me expand the Land Rover group node. If I unselect a value manually, the grid will once again automatically recompute its summary values.

By default, our WinForms Data Grid computes summaries against All Rows. Record selection does not impact this option one bit. As you can see in this example, when All Rows is selected, the grid does not recompute summary values. This represents the classic behavior of our WinForms Grid.

I'll now change selection mode to Selection. Let's take a look at the footer to see what happens. Notice that if no rows are selected, the footer displays zero values for the footer. The blue icon is visible to tell end-users that summary computations are driven by record selection. Now, once we start selecting rows, summaries change based on the values associated with selected rows.

Remember, this is all done without writing a single line of code – this is all managed by the Grid internally – you don't have to worry about implementation details.

I'll go ahead and clear record selection within the grid and quickly change Summary by Selection to Mixed mode. As you can see, with zero or 1 row selected, summary values are computed against all records in the grid. The minute I select 2 or more rows, summary computation will be driven by Selection mode.

Everything is automatic.

Before I wrap up, let me mention when you can use Summary by Selection. This new feature is only available in Client dataset mode. It is not available for Instant Feedback or Server Mode. The reasons are I'm sure obvious, but in Instant Feedback and Server Mode, records are not fully loaded within the grid, so automatic summary computations are not possible.

I hope you've enjoyed this introductory tutorial on Summary by Selection mode. If you liked this video, please give us a thumbs up. If you have questions, please comment below. Please remember to subscribe to this channel for more great DevExpress videos.

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