Subject: Quiz #5
Posted by mirek on Mon, 27 Dec 2021 16:41:53 GMT
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What does this layout designer button do?

File Attachments
1) layout.png, downloaded 334 times

Subject: Re: Quiz #5
Posted by Lance on Mon, 27 Dec 2021 20:04:50 GMT
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mirek:

Yeah, it's a very handy facility. I tried and learned something new.

When designing layout, we turn to add new Ctrl, copy& paste, and moving things around, resulting in Ctrls not in sensible tab-order. By selecting a group of Ctrls and apply the button, the layout designer will order the Ctrls in a left-to-right-top-to-bottom order so navigate by tabbing will not seem to be random.

Note the selected Ctrls will be removed from the layout and then insert to the very front of the layout after sorting by their position.

Great to know. I used to do it manually with a lot of effort and many rounds of try-and-error.

Subject: Re: Quiz #5
Posted by mirek on Mon, 27 Dec 2021 22:50:26 GMT
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Lance wrote on Mon, 27 December 2021 21:04mirek:

Yeah, it's a very handy facility. I tried and learned something new.

When designing layout, we turn to add new Ctrl, copy& paste, and moving things around, resulting in Ctrls not in sensible tab-order. By selecting a group of Ctrls and apply the button, the layout designer will order the Ctrls in a left-to-right-top-to-bottom order so navigate by tabbing will not seem to be random.

Note the selected Ctrls will be removed from the layout and then insert to the very front of the layout after sorting by their position.

Great to know. I used to do it manually with a lot of effort and many rounds of try-and-error.

BTW, it is a rare example of bubblesort usecase :)

The one and only advantage of pure bubblesort is that it can work well when the sorting predicate has "fuzzy" state (the ordering of two elements is not known), which is sometimes the case when deciding order here...

Subject: Re: Quiz #5
Posted by Lance on Tue, 28 Dec 2021 01:35:36 GMT
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I will need to take a look at the source to see what you mean exactly by "fuzzy". I suppose you mean the exact ordering of two controls cannot be determined by their size/position alone, eg, need to take into consideration of surrounding ones?

Subject: Re: Quiz #5
Posted by Lance on Tue, 28 Dec 2021 02:04:12 GMT
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It's good to understand the logic the system used to order Ctrls. So I copy the Predicate herebool RectLess(const Rect& a, const Rect& b)
{
 int d = min(a.bottom, b.bottom) - max(a.top, b.top);
 int w = min(a.GetHeight(), b.GetHeight());
 return d > w / 2 ? a.left < b.left : a.top < b.top;
}
If the height of common vertical part is over half of height of the shorter ctrs, compare horizontally, otherwise , compare vertically.

Given any two Ctrls, the predicate is deterministic. Is this predicate not transitive, ie. a<b, b<c doesn't imply a<c? What if we pass the predicate to a quicksort like algorithm?

Subject: Re: Quiz #5
Posted by mirek on Tue, 28 Dec 2021 08:29:45 GMT
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I believe that if we used quicksort, results could be quite unpredictable.
