A Step To The Left

With 'One Level Higher', what you see is not necessarily what you've got…

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Look. A form with twenty-six buttons, each lovingly laid out and labeled with a letter of the alphabet. Twenty-six times, each button's action or OML has been opened and adapted so that the subform can be filtered to reflect the letter on the button.

Well … actually … no. Who wants to work that hard!

There is but one button. It's sat on a subform, set to show twenty-six times.

This is one practical example of the 'one level higher' concept at work. Let me show you how it works.

First, here's the structure of the document. I start with Looper, and hang from it two sets of subforms.

The first is to Customer, and is related to Looper, matching its indexed field LastName to Looper's vMatch. So if vMatch contains "S*", we'll see all the Customer records with a last name starting with 'S', as in the screen shot.

The second is to … Looper. You can simply consider this table as a set of ordinal numbers – that is, numbers in order. So I can manipulate Looper values into anything that has some kind of order, which can include the 'x'th value in a string. And if that string happens to be the letters of the alphabet … well, here's a form-only virtual called vInit, text 1, derived:

```
midc ( "ABCDEFGHIJKLMNOPQRSTUVWXYZ" , LooperNo , 1 )
```

Whatever is the LooperNo for this subform record becomes the location of the corresponding letter in that string.

What kind of relationship should be used between Looper and itself? Well, you are used, I hope, to describing relationships in terms of their cardinality: 1:1, 1:M, M:N. Here's a cheeky variation on the many-to-many, which we could call the 'all-to-all': if you have no match fields in the relationship, every record in one table will match ALL the records in the other!

That is what I have here: a link between Looper and itself, matching on nothing, which retrieves everything.

I only want the first twenty-six. So I simply display the subform two rows by thirteen columns, and remove the scrollbar.

Ups and Downs

I want vInit to behave like a button that the user clicks on to select the filtering letter. So I've styled it to appear like a raised button. It has two OML scripts. The first is the most important, since it sets the filter. This goes against its Clicked event:

```
define "t" number .

t := setglobal ( 1 , concat ( vInit.value , "*" ) ) .
t := clearselectionfilter () .
```

When the user clicks this button field, join its label to the asterisk wildcard, and push that into global 1. Then refresh the screen and the record selection using the clearselectionfilter action.

The other OML, against the ValueLoaded event, reinforces visually the form's behaviour. This event fires each time a new value is loaded into the field object – when the form is first opened, and each time clearselectionfilter fires.

Unfortunately we don't have any preset styling options, but instead must describe the red, green and blue content of each part of the border to make it appear sunken.
The border elements are called highshine, highshade, lowshine and lowshade, as shown here:
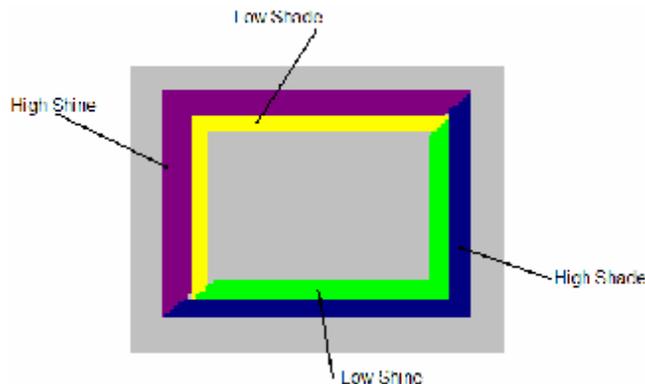
An 'if' statement checks to see if the field object value matches the value in global 1:

```
define "tStr" text 1 .

tStr := getglobal ( 1 ) .

if vInit.value = tStr then
  vInit.highshine.color.red    := 0 .
  vInit.highshine.color.green := 0   .
  vInit.highshine.color.blue   := 0 .

  vInit.highshade.color.red    := 255 .
  vInit.highshade.color.green := 255 .
  vInit.highshade.color.blue   := 255 .

  vInit.lowshine.color.red    := 192 .
  vInit.lowshine.color.green := 192 .
  vInit.lowshine.color.blue   := 192 .

  vInit.lowshade.color.red    := 0 .
  vInit.lowshade.color.green := 0 .
  vInit.lowshade.color.blue   := 0 .

  vInit.font.bold := 1 .

else

  vInit.highshine.color.red    := 255 .
  vInit.highshine.color.green := 255   .
  vInit.highshine.color.blue   := 255 .

  vInit.highshade.color.red    := 0 .
  vInit.highshade.color.green := 0 .
  vInit.highshade.color.blue   := 0 .

  vInit.lowshine.color.red    := 128 .
  vInit.lowshine.color.green := 128 .
  vInit.lowshine.color.blue   := 128 .

  vInit.lowshade.color.red    := 255 .
  vInit.lowshade.color.green := 255 .
  vInit.lowshade.color.blue   := 255 .

  vInit.font.bold := 0 .

end
```

(RBG 0,0,0 = black; 255,255,255 = white; 128,128,128 = Gray; 192,192,192 = Silver).

For good measure, I put the label in bold if selected. This styling imitates the behaviour of the taskbar you might have at the bottom of your Windows XP screen.

In version 7, I can swap the field for a button, as we can now change the value of the button label. This gives the added advantage that we can navigate to the button via the keyboard, but we will still need the sunken appearance styling. Additionally, I don't think buttons have ValueLoaded events, so we may still need a non-visible vInit field to respond to that.

And that's just about it. Now, this happens to use the alphabet to filter records. But I've live versions that instead filter by department, by borough, by type of facility. In these

instances, I am using the real data in a department, borough or facility table, which means that if I add, remove or change the name of a department, my document should continue to work.

Or put it another way, this article just scratches the surface of what can be achieved with this 'step to the left' style of filtering.

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§   *If you have any comments on this article, or suggestions for future material, please e-mail me at adri@n10net.com.*

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