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Subject: Re: Catalyst CatDestroyDefaults

Posted by [David Fanning](#) on Sun, 28 Jun 2009 14:09:30 GMT

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David Fanning writes:

> It is probably appropriate that this comes on the heels of  
> another discussion a week or so ago about the inability of  
> UNDEFINE to undefine everything. And the reason for the problem  
> is similar. It never occurred to me to store a heap variable  
> in a Catalyst default value. ;-)  
>  
> But, now I know someone wants to do that, the solution is simple.  
> If the internal pointer points to a heap variable, destroy that, too.  
> And since I already spent an hour getting UNDEFINE to do just that  
> a week ago, I decided to use that to get the job done.  
>  
> So, be sure you have the latest UNDEFINE, and you can download  
> a new CatListValue object here:  
>  
> <http://www.dfanning.com/programs/undefine.pro>  
> .../programs/catalyst/source/core/catlistvalue\_\_define.pro  
>  
> Tested only lightly, as I am late for work, as usual. :-)

Whoops! Should have tested this more extensively for the  
Law of Unintended Consequences. :-(

It was a good idea, in theory, but it had trickle down  
effects in other parts of Catalyst. The most sensible course  
seems to me to keep the underlying behavior the same,  
but to allow different behavior by means of a keyword.  
(Almost \*always\* the most sensible course, but I do not  
always think clearly before the coffee kicks in.)

Thus, three Catalyst routines have changed to support a  
DESTROY\_ON\_CLEANUP keyword to the CatListValue object.  
If this keyword is set, the IDL variable stored in the  
CatListValue storage location is destroyed with UNDEFINE  
when the CatListValue object is destroyed.

The same keyword is available now for CatSetDefault, so  
that you can destroy variables when default variables are  
cleaned up. The following code will prevent memory leakage  
when storing an object as a Catalyst default value.

```
pb = Obj_New('ProgressBar')  
CatSetDefault, 'ProgressBar', pb, /DESTROY_ON_CLEANUP
```

## CatDestroyDefaults

The following three routines have changed:

```
.../catalyst/source/utilities/catsetdefault.pro  
.../catalyst/source/core/catlist__define.pro  
.../catalyst/source/core/catlistvalue__define.pro
```

Documentation of this keyword is pretty extensive, but please ask questions if you are not clear about it.

Cheers,

David

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David Fanning, Ph.D.  
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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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