Subject: Re: Creating Variables in Programs
Posted by Martin Schultz on Fri, 10 Jul 1998 07:00:00 GMT
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Craig Markwardt wrote:
>
>> IDL> r=execute('a=fltarr(200)')
>> IDL> help,a
>> A FLOAT = Array[200]
>>
>
> There is a "gotcha." in the case of a compiled procedure, the
> variable "a" must have already been defined. The following is usually
> sufficient:
> [...]

Huh? Here is a little program:

```
-------------------------------------
pro testexec,name

  r=execute(name+'=findgen(10)')

  print,r
  print,b
return
end
-------------------------------------
```

Of course, you have to call it as testexec,'b' in order to have it work properly ;-), but it demonstrates that you don't have to have your variable initialized!!

But I don't really see the point of the original question: why the h... do you want to do this? To my knowledge, creating variables only makes sense if you know what to do with them afterwards - and in order to do something with them, you must know their name beforehand. If you want to export your newly created variables to the main program or some other procedure, you would have to proceed completely different. I would create a structure with
  template = { name:'', pvalue:ptr_new() }
(or an array of these structures with replicate(...))

then manipulatge the string 'name=expression' to 'tmp=expression', store the 'name' field in the name tag of the structure and pvalue=ptr_new(tmp) will save the value.

This would act as a container (sounds awfully like OOP doesn't it ?),

and you would have to do a lot of type and error checking in any routine
that uses the information in this structure (array). Note, that IDL
itself would not "know" anything about your variables - but, as I said,
it doesn't make sense if it had to.

... and don't forget to clean up your heap once a while...

Martin.

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Subject: Re: Creating Variables in Programs
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Martin Schultz <mgs@io.harvard.edu> writes:
>
> Perry Phillips wrote:
>>
>> Does anyone know of a way to create a new array under program control, ie
>> create a string and use that string to make an array. As far as I can see
>> this is impossible in IDL?
>>
>> --
>> Perry Phillips p.phillips@mail.utexas.edu
>
>
> here's a quick example
>
>
> IDL> r=execute('a=fltarr(200)')
> IDL> help,a
> A FLOAT = Array[200]
>

There is a "gotcha." in the case of a compiled procedure, the

variable "a" must have already been defined. The following is usually
sufficient:

```
A = 0
...
R = EXECUTE('A=FLTARR(200)')
```

The IDL internal compiler needs to know that "A" exists before it can
be assigned to in an EXECUTE statement. The same applies for
restoring variables: all the variables in the SAVE file must be
predefined in the procedure. Assigning zero to them is fine.

Craig

--

 -- --------------
Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@astrog.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
 -- --------------

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A               FLOAT     = Array[200]
```

Martin.
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