Subject: Re: accessing variables with their string names
Posted by Martin Schultz on Fri, 19 Dec 1997 08:00:00 GMT

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Natalie Rooney wrote:
>
> Hello. I'm trying to create a graphical user interface to do analysis
> and plotting of research data. My widget contains a list widget where I
> display the names of the data the user has read in.
>
> The problem is: I wanted the user to be able to read in a dat file of
> saved variables. I don't know what the names of the variables will
> necessarily be. I figured out a way to get the STRING names of the
> restored variables into an array. But, I still need a way to access the
> data that the variables contain for plots, etc. Is there any way to
> access the variables' data if all you have is a string array of the
> variables' names? I'd appreciate any help.
>
> Thanks,
> Natalie Rooney

If I understand you correctly, all you need is something like
```
    timeind = where(names eq 'TIME')
    ind = where(names eq VARNAME)
    if (ind(0) ge 0) then plot,data(timeind,*),data(ind,*)
```

Here data is the data array, and names stores the variable name strings.
In the example above, data has the dimension (M,N), with M variable
names and N observations.

You can get the VARNAME from the widget via the following procedure:
```
    ; get names and selection of x or y list
    widget_control,widget_id,get_value=names
    ; determine selection in x or y list
    ; (requires knowledge of the structure of cw_xysel !!)
     widget_control,widget_info(widget_id,/child),get_uvalue=xyst ate
    sel = widget_info(xystate.listID,/list_select)
```
This is actually a piece of code from my EXPLORE widget application.
You may want to check my web page for this, and if you like the general
idea, I am sure you can find a handful of information with respect to
what you are trying to do if you take a look at the sources.

Regards,
Martin.

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Subject: Re: accessing variables with their string names
Posted by davidf on Fri, 19 Dec 1997 08:00:00 GMT
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Natalie Rooney (natalie@arlut.utexas.edu) writes:

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> access the variables' data if all you have is a string array of the
> variables' names? I'd appreciate any help.

Uuggh. It is *possible*, maybe, but you will probably run
into limitations. For example, you will have to name
all the "variables" something else in your program to use
them. Here is a short example of how I might approach the
problem using the EXECUTE command. I don't know any other
way that this could be accomplished, really.

```
Pro Example, varNames
Restore, 'example.sav'
ok = Execute('Plot, ' + varNames[0])
ok = Execute('var2 = ' + varNames[1])
Help, var2
END

a = Findgen(11)
b = 3.5
Save, a, b, File='example.sav'
```

Example, ['a', 'b']
END

How are you getting the "string" names of the restored
variables?

Happy Holidays,

David

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Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: accessing variables with their string names
Posted by Aviv Gladman on Fri, 19 Dec 1997 08:00:00 GMT
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Well, i'm probably not the only one to respond to this message, but here
goes:

You can use the execute function to perform operations on string
variables. Eg:

varlist=['var1','var2','var3']

for i=0, 2 do r=execute('print,'+varlist[i])

will print the contents of var1, var2, and var3. I find this a convenient
way to add callbacks to widgets on the fly, using a linked list of
string callback function names which are executed by the event handler.

Aviv S. Gladman

On Fri, 19 Dec 1997, Natalie
Rooney wrote:

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