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Subject: Re: Name of arrays

Posted by [Lajos Foldy](#) on Sun, 19 Feb 2012 13:31:21 GMT

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On Feb 19, 1:30 pm, Israel Rodriguez Hermelo <israelherm...@gmail.com> wrote:

> Hi there!  
>  
> I'd like to use a string as part of the name of an array:  
>  
> MONTH = [ 'FEBRUARY' , 'JULY' ]  
>  
> TEMPERATURE+MONTH(0)=fltarr(28)  
>  
> TEMPERATURE+MONTH(1)=fltarr(31)  
>  
> I found any way to do this simple task. Anybody can help me?  
>  
> Thanks in advance!

(scope\_varfetch('TEMPERATURE'+MONTH(0), /enter))=fltarr(28)

regards,  
Lajos

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Subject: Re: Name of arrays

Posted by [Israel Rodriguez Herm](#) on Sun, 19 Feb 2012 14:54:06 GMT

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On Feb 19, 2:31 pm, Lajos Foldy <fawltylangu...@gmail.com> wrote:

> On Feb 19, 1:30 pm, Israel Rodriguez Hermelo <israelherm...@gmail.com>  
> wrote:  
>  
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>  
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>  
>> Thanks in advance!

>  
> (scope\_varfetch('TEMPERATURE'+MONTH(0), /enter))=fltarr(28)  
>  
> regards,  
> Lajos

Thank you very much!

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Subject: Re: Name of arrays  
Posted by [David Fanning](#) on Sun, 19 Feb 2012 15:03:11 GMT  
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Lajos Foldy writes:

>  
> On Feb 19, 1:30 pm, Israel Rodriguez Hermelo <israelherm...@gmail.com>  
> wrote:  
>> Hi there!  
>>  
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>>  
>> Thanks in advance!  
>  
>  
> (scope\_varfetch('TEMPERATURE'+MONTH(0), /enter))=fltarr(28)

Be careful. That's a slippery slope and rarely a good idea. :-)

Cheers,

David

--

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

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Subject: Re: Name of arrays

Posted by [Israel Rodriguez Herm](#) on Sun, 19 Feb 2012 15:06:52 GMT

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On Feb 19, 4:03 pm, David Fanning <n...@idlcoyote.com> wrote:

> Lajos Foldy writes:

>

>> On Feb 19, 1:30 pm, Israel Rodriguez Hermelo <israelherm...@gmail.com>

>> wrote:

>>> Hi there!

>

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>

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>

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>

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>

> Cheers,

>

> David

>

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

> Coyote's Guide to IDL Programming:<http://www.idlcoyote.com/>

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Why did you say that's a slippery slope? Is there a better solution?

I'm already using it with no problems.

Regards,

Israel

---

---

Subject: Re: Name of arrays

Posted by [David Fanning](#) on Sun, 19 Feb 2012 16:00:41 GMT

Israel Rodriguez Hermelo writes:

- > Why did you say that's a slippery slope? Is there a better solution?
- > I'm already using it with no problems.

I see a lot of people who are just getting started with programming wanting to name their variables like this. It seems cool, but in the end it just leads to unmaintainable programs. A variable is a variable. The variable named "a" is just as good as the variable named "b". Yes, variables should have good names in programs. But just give them a name (e.g., "theseMonths") in the program module where you need them. Don't go looking for them all over God's creation!

Cheers,

David

--

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Subject: Re: Name of arrays

Posted by [Israel Rodriguez Herm](#) on Mon, 20 Feb 2012 09:46:33 GMT

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On Feb 19, 5:00 pm, David Fanning <n...@idlcoyote.com> wrote:

- > Israel Rodriguez Hermelo writes:
- >> Why did you say that's a slippery slope? Is there a better solution?
- >> I'm already using it with no problems.
- >
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- >
- > Cheers,
- >
- > David

>  
> --  
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> Fanning Software Consulting, Inc.  
> Coyote's Guide to IDL Programming:<http://www.idlcoyote.com/>  
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thank you for your advice David. I'll try to avoid using scope\_varfecht then.

My problem however is not simply that I want to have pretty names for my variables. The problem is that I don't know a priori the number of arrays that I will need nor their size.

For example, in some cases the input data might correspond to the months of February and July, but in other cases might correspond to January, March and April.

```
MONTH = [ 'FEBRUARY' , 'JULY' , 'SEPTEMBER' ]
```

To deal with this, I was trying:

```
Nmonths=N_ELEMENTS(MONTH)
```

```
for i=0, Nmonths-1 do begin
```

```
    readcol, MONTH(i)+'_data.txt', TEMPERATURE
```

```
    Ndays=N_ELEMENTS(TEMPERATURE)
```

```
    (scope_varfetch(MONTH(r)+'TEMPERATURE', /enter))=fltarr(Ndays)
```

```
endfor
```

I see why you wrote that scope\_varfecht makes the leads to unmaintainable

programs and I would prefer any other solution but I've been looking for it in the forum and I haven't found any. Do you have any suggestion?

Thanks in advance!

Regards,

Israel

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Subject: Re: Name of arrays

Posted by [Fabzi](#) on Mon, 20 Feb 2012 11:01:02 GMT

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Hi

On 02/20/2012 10:46 AM, Israel Rodriguez Hermelo wrote:

> The problem is that I don't know a priori the number of  
> arrays that I will need nor their size.

If you have IDL 8.\* you could use lists. Or you could use pointer arrays:

```
months = ['FEBRUARY' , 'JULY' , 'SEPTEMBER']  
data = PTRARR(N_ELEMENTS(months))  
data[0] = PTR_NEW(INDGEN(28))  
temp_feb = *data[(where(months eq 'FEBRUARY'))][0]  
IDL> help, temp_feb  
TEMP_FEB      INT      = Array[28]
```

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Subject: Re: Name of arrays

Posted by [jeffnettles4870](#) on Mon, 20 Feb 2012 15:01:24 GMT

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On Feb 20, 4:46 am, Israel Rodriguez Hermelo <israelherm...@gmail.com>  
wrote:

> On Feb 19, 5:00 pm, David Fanning <n...@idlcoyote.com> wrote:

>  
>  
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>> (e.g., "theseMonths") in the program module where you need them.

>> Don't go looking for them all over God's creation!

>

>> Cheers,

>

>> David

```

>
>> --
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> arrays that I will need nor their size.
> For example, in some cases the input data might correspond to the
> months of February and July, but in other cases might correspond to
> January, March and April.
>
> MONTH = [ 'FEBRUARY' , 'JULY' , 'SEPTEMBER' ]
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> To deal with this, I was trying:
>
> Nmonths=N_ELEMENTS(MONTH)
>
> for i=0, Nmonths-1 do begin
>
>   readcol, MONTH(i)+'_data.txt', TEMPERATURE
>
>   Ndays=N_ELEMENTS(TEMPERATURE)
>
>   (scope_varfetch(MONTH(r)+'TEMPERATURE', /enter))=fltarr(Ndays)
>
> endfor
>
> I see why you wrote that scope_varfecht makes the leads to
> unmaintainable
> programs and I would prefer any other solution but I've been looking
> for it in the forum and I haven't found any. Do you have any
> suggestion?
> Thanks in advance!
>
> Regards,
>
> Israel

```

Could you just use 31 element arrays for all months and just have some empty elements at the end of some of those arrays? It depends on what you're going to do with the arrays of course, but this is the first thing i'd try!

Jeff

---

---

Subject: Re: Name of arrays

Posted by [Brian Wolven](#) on Mon, 20 Feb 2012 18:15:41 GMT

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Or create\_struct, using the month as the tag name, for pretty much any version of IDL.

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Subject: Re: Name of arrays

Posted by [Russell\[1\]](#) on Mon, 20 Feb 2012 21:27:03 GMT

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On Feb 20, 4:46 am, Israel Rodriguez Hermelo <israelherm...@gmail.com> wrote:

> On Feb 19, 5:00 pm, David Fanning <n...@idlcoyote.com> wrote:

>

>

>

>

>

>

>

>

>

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```

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> programs and I would prefer any other solution but I've been looking
> for it in the forum and I haven't found any. Do you have any
> suggestion?
> Thanks in advance!
>
> Regards,
>
> Israel

```

This is where you should use the pointers. Consider the following:

```

months=['Jan','Feb','Sep']
x=ptr_new(months)
help,(*x)

```

But, months can change on-the-fly and contain any data type

```

data=[{month:'Jan',numberofdays:31},{month:'Feb',numberofdays:28}]
x=ptr_new(data)

```

help,(\*x),/str

and so on. Since you can do any operation on (\*x) that you would do on say months=['Jan','Feb','Sep'], this usage means you can arbitrarily define the variables and access the data. Now, it's true that as of IDL 8.\* they have introduced new variable types to do this, but until IDL 8 is standard everywhere, you might consider remaining with pointers (for backwards compatibility).

Russell

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Subject: Re: Name of arrays

Posted by [greg.addr](#) on Tue, 21 Feb 2012 11:53:36 GMT

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Well, one more suggestion - forget the months: keep the data indexed by day. Then you can have one month, three or 13 without a problem, and - probably most usefully - you can even plot them all at once! No need for scope\_varfetch, lists, pointers, structures, 28-day month fillers or any of that clever stuff...

IDL has plenty of functions to convert day indices back to dates if you want to have them in your output:

```
IDL> print,julday(1,1,2011)
2455563
IDL> caldat,2455563,m,d,y
IDL> print,m,d,y
      1      1      2011
IDL> caldat,2455563+1,m,d,y
IDL> print,m,d,y
      1      2      2011
IDL> print,2455563,format='(C(CMoA, X, CDI2.2, X, CYI5))'
Jan 01 2011
```

Greg

---