Subject: Re: Absurd Indexes
Posted by meron on Tue, 17 Jun 1997 07:00:00 GMT
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In article <33A6A7D5.777F@astro.rug.nl>, Inigo Garcia <iruiz@astro.rug.nl> writes:
> Hi !
>
> I have a problem with some "sticky dimension in a matrix. The thing is
> that if you make something like:
>
> a=findgen(4,1000)
> b=fltarr(2,*)

You probably mean:

b = a(2,*)
>
> the array I get is an [1,1000] array, and I want an [1000] array !!!
> Does someone know any way of getting rid off that "1" dimension.

> (OK, I know the "for" loop method, but, there's no other method to do it
> ?)
>
Yeah. Use the REFORM function, i.e.

b = reform(a(2,*))

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

Subject: Re: Absurd Indexes
Posted by mgs on Tue, 17 Jun 1997 07:00:00 GMT
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In article <5o6er7$c6j@news.orst.edu>, "Hans Luh" <luh@math.utk.edu> wrote:

>   Inigo Garcia wrote in article <33A6A7D5.777F@astro.rug.nl>...
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>> (OK, I know the "for" loop method, but, there's no other method to do it
>> ?)

Original attribution lost.
Assuming Inigo Garcia actually meant:

a=findgen(4,1000)
b=a(2, *)

Try the following to get rid of the leading dimension:
c = Reform(a(2, *))

From the IDL online help:
The REFORM function changes the dimensions of an array without changing the
total number of elements. If no dimensions are specified, REFORM returns a
copy of Array with all leading dimensions of size 1 removed.

--
Mike Schienle   Interactive Visuals
mgs@sd.cybernex.net   http://ww2.sd.cybernex.net/~mgs/

Subject: Re: Absurd Indexes
Posted by R. Bauer on Tue, 17 Jun 1997 07:00:00 GMT
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Inigo Garcia wrote:
>
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> Does someone know any way of getting rid off that "1" dimension.
> (OK, I know the "for" loop method, but, there's no other method to do it
?)

I can help you:

try

b=transpose(a(2,*))

or

```
b=(a(2,*))(0:999)
```

In the most cases I use transpose but the second solution is very useful
if I like to have only index 10 then it would be called:

```
b=(a(2,*))(10)
```

--
R.Bauer

Institut fuer Stratosphaerische Chemie (ICG-1)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de

Subject: Re: Absurd Indexes
Posted by Hans Luh on Tue, 17 Jun 1997 07:00:00 GMT

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Inigo Garcia wrote in article <33A6A7D5.777F@astro.rug.nl>...
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> Does someone know any way of getting rid off that "1" dimension.
> (OK, I know the "for" loop method, but, there's no other method to do it
> ?)

I am not sure that I understand your problem correctly. However, I try

```
a=findgen(4,1000)

b=fltarr(2,*)
```

on the PV-WAVE and get

```
WAVE> a=findgen(4,1000)
WAVE> b=fltarr(2,*)
```

```
b=fltarr(2,*)
          ^
% Syntax error.
```

Obviously, 'b=fltarr(2,*)' is wrong. If we use size() to check the dimensionality of a, we can find that a is a two dimensional array.

```
WAVE> print,size(a)
        2           4        1000           4        4000
```

OK. If you want an one dimensional array, just use

```
WAVE> a=findgen(1000)
WAVE> print,size(a)
        1        1000           4        1000
```

You now have an [1000] array.

Hans.

Subject: Re: Absurd Indexes

Posted by Stein Vidar Hagfors H on Tue, 17 Jun 1997 07:00:00 GMT

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Inigo Garcia wrote:

>
> Hi !
>
> I have a problem with some "sticky dimension in a matrix. The thing is
> that if you make something like:
>
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> b=fltarr(2,*)
>
> the array I get is an [1,1000] array, and I want an [1000] array !!!

I assume you meant a(2,*), not fltarr(2,*) :-)

b = reform(a(2,*)) will do it. Reform removes singular dimensions.

Stein Vidar

Subject: Re: Absurd Indexes

Posted by R. Bauer on Tue, 17 Jun 1997 07:00:00 GMT

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Inigo Garcia wrote:
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>
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> the array I get is an [1,1000] array, and I want an [1000] array !!!
> Does someone know any way of getting rid off that "1" dimension.
> (OK, I know the "for" loop method, but, there's no other method to do it
>

I don't understand what you mean

if I do:

```
a=findgen(4,1000)
help,a
A               FLOAT     = Array(4, 1000)
```

that's correct

if I do:

```
b=fltarr(2,*)
         ^
% Syntax error.
```

that's correct too.

--
R.Bauer

Institut fuer Stratosphaerische Chemie (ICG-1)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de

Subject: Re: Absurd Indexes
Posted by Inigo Garcia on Wed, 18 Jun 1997 07:00:00 GMT
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Sorry, I wrote it bad . As many of you guessed, what I wanted to say
was:

a=findgen(4,1000)
b=a(2,*)

Thanks for the help received.

```
--
                        \\|//
                        (o o)
 +----------------------oOOo-(_)-oOOo---------------------- --+
| I~nigo Garcia Ruiz                                   |
| Kapteyn Instituut             Phone:  +31-(0)50-3634083  |
| Landleven 12                  Fax:    +31-(0)50-363      |
| 9747 AD GRONINGEN (Netherlands)  e-mail: iruiz@astro.rug.nl |
 +------------------------------------------------------- --+
```

Subject: Re: Absurd Indexes
Posted by wonko on Wed, 18 Jun 1997 07:00:00 GMT

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iruiz@astro.rug.nl (Inigo Garcia) wrote:

> a=findgen(4,1000)
> b=fltarr(2,*)

You mean b=a(2,*) ?

> the array I get is an [1,1000] array, and I want an [1000] array !!!
> Does someone know any way of getting rid off that "1" dimension.
> (OK, I know the "for" loop method, but, there's no other method to do
> it ?)

Hmmm....... I wonder what this "for loop" method is.
The solution for your problem is using reform: b = reform(a(2,*))

This is often annoying, but sometimes I find it useful to have arrays
like yours, eg. when dealing with 2d images. When an image has only one
plane (z dimension), I can still access it as image(x,y,z) with z eq 0.
I sometimes use reform to add even more dimensions, like
b=reform(a(2,*), 1, 1000, 1, 1).

But I noticed IDL behaves different. I don't have it here at home (BTW,
anyone got it to work under OS/2 Warp4 yet?), but I think b=a(*,2) would
give you an 1d array.

Alex
--
Alex Schuster   Wonko@weird.cologne.de
                        alex@pet.mpin-koeln.mpg.de

Subject: Re: Absurd Indexes
Posted by George McCabe on Thu, 19 Jun 1997 07:00:00 GMT

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R. Bauer wrote:
...
> or
>
> b=(a(2,*))(0:999)
>
> In the most cases I use transpose but the second solution is very useful
> if I like to have only index 10 then it would be called:
>
> b=(a(2,*))(10)

Wow that's cool! But I'm not sure quite how to interpret the syntax.

```
IDL> help,b(2,*)
<Expression>    INT       = Array(1, 1000)
IDL> help,(b(2,*))(0:999)
<Expression>    INT       = Array(1000)
```

why do the numbers in the second pair of parenthesis refer only to the
second dimension of the array?

George

VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV
VVVVVVVV
George McCabe (HSTX)   NASA / GSFC
Tel: (301)286-8283, Fax: (301)286-0212   Code 693, B2 R151
E-mail: george.mccabe@gsfc.nasa.gov   Greenbelt, MD 20912

Subject: Re: Absurd Indexes
Posted by peter on Fri, 20 Jun 1997 07:00:00 GMT

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George McCabe (george.mccabe@gsfc.nasa.gov) wrote:
: R. Bauer wrote:
: >

: > b=(a(2,*))(10)

: Wow that's cool! But I'm not sure quite how to interpret the syntax.

: why do the numbers in the second pair of parenthesis refer only to the
: second dimension of the array?

They don't; they treat the array in the preceeding parentheses as a 1-D array. Since it has dimension 1 in its first dimension, the second subscript effective ignores it.

Peter

P.S. This kind of subscripting is very useful, esp. in expressions like xsize = (size(variable))(1). It's not immediately obvious that it is legal, but in fact it is.