
Subject: subscripting arrays with dim > 1
Posted by [fireman](#) on Fri, 28 Aug 1998 07:00:00 GMT
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I'd like to reference an array with a variable containing a subscript for each dimension, passing the subscripts as an array. For instance:

```
IDL> array = indgen(5,5)
IDL> print,array
  0   1   2   3   4
  5   6   7   8   9
 10  11  12  13  14
 15  16  17  18  19
 20  21  22  23  24
IDL> print,array[0,4]
 20
```

But I can't seem to reference each dimension. Instead, the subscript array is passed as two instances of a single subscript:

```
IDL> index=[0,4]
IDL> print,array[index]
  0   4
```

I can of course calculate a single index, but it seems a bit clunky:

```
IDL> s=size(array)
IDL> print,s
  2   5   5   2  25
IDL> print,array[index(0)*s(1)+index(1)*s(2)]
 20
- or -
IDL> print,array[long(total(s(1:s(0))*index))]
 20
```

Is there a better way?
Gwyn

--

```
_____.
/ | , , , , , _
( _ / / ( _ ) ( _ / / | _ /
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```

Gwyn F. Fireman
General Sciences Corporation

Subject: Re: subscripting arrays

Posted by [David Fanning](#) on Mon, 14 Nov 2005 05:07:40 GMT

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Benjamin Hornberger writes:

```
> this is probably simple, but I can't figure it out right now:
>
> I want to extract an element from a 2d array, and I have the 2d
> subscripts of that element available as a 2-element vector.
>
> IDL> a = dist(300)
> IDL> b = [30, 50]
> IDL> print, a[b]
>      30.0000  50.0000
>
> Not what I want. What I want is
>
> IDL> print, a[b[0], b[1]]
>      58.3095
>
> Is there a more elegant way than splitting b up?
```

If by "elegant" you mean "correct", then the answer is no. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Subject: Re: subscripting arrays

Posted by [wem](#) on Mon, 14 Nov 2005 09:53:57 GMT

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David Fanning wrote:

```
> Benjamin Hornberger writes:
>
>
>
>> this is probably simple, but I can't figure it out right now:
>>
>> I want to extract an element from a 2d array, and I have the 2d
>> subscripts of that element available as a 2-element vector.
```

```
>>
>> IDL> a = dist(300)
>> IDL> b = [30, 50]
>> IDL> print, a[b]
>>      30.0000  50.0000
>>
>> Not what I want. What I want is
>>
>> IDL> print, a[b[0], b[1]]
>>      58.3095
>>
>> Is there a more elegant way than splitting b up?
>
>
> If by "elegant" you mean "correct", then the answer is no. :-)
>
> Cheers,
>
> David
>
```

And if you mean by "elegant", "more readable", then the answer is: yes ;-)

```
IDL> a = dist(300)
IDL> b = [30, 50]
IDL> x = b[0]
IDL> y = b[1]
IDL> print, a[x, y]
```

and using comments ;-)
