
Subject: Re: How to extract a scalar from a vector?
Posted by [David Fanning](#) on Tue, 04 Jan 2011 23:37:35 GMT
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Balt writes:

> See this:
> IDL> help,cal_data[sel_cal_data,3]
> <Expression> DOUBLE = Array[1]
>
> How on earth can I make cal_data[sel_cal_data,3] into
> a scalar?

IDL> Help, (cat_data[sel_cal_data,3])[0]

Cheers,

David

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

Subject: Re: How to extract a scalar from a vector?
Posted by [penteado](#) on Tue, 04 Jan 2011 23:43:34 GMT
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> I think the problem is that IDL thinks that cal_data[sel_cal_data,2]
> and cal_data[sel_cal_data,3] are vectors of dimension 1, when they
> should be scalars.

I do not know what you mean by "thinks they are" 1-element arrays.
They *are* 1-element arrays. Any time an array indexed by an array (in
this case, the result of where), the result is an array, even if it
only has 1 element.

> See this:
> IDL> help,cal_data[sel_cal_data,
> 3]
> <Expression> DOUBLE = Array[1]

You are right that this is the problem, since the product of arrays of
different sizes has the size of the smaller of the two, in this case,

1.

> How on earth can I make cal_data[sel_cal_data,2] and
> cal_data[sel_cal_data,3] into a scalar? I tried this:

Use just one element of sel_cal_data (the one element is a scalar),
instead of the whole sel_cal_data array:

```
cal_data[sel_cal_data[0],3]
```

Subject: Re: How to extract a scalar from a vector?

Posted by [Balt](#) on Wed, 05 Jan 2011 00:03:03 GMT

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David,

Perfect solution! You never cease to amaze... thanks so much!

Cheers

- Balt

Subject: Re: How to extract a scalar from a vector?

Posted by [David Fanning](#) on Wed, 05 Jan 2011 00:08:17 GMT

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Balt writes:

> Perfect solution! You never cease to amaze... thanks so much!

This problem is one of the classic IDL gotchas!

I was just reading about it earlier today in the
Contour chapter of my new book. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: How to extract a scalar from a vector?
Posted by [R.Bauer](#) on Wed, 19 Jan 2011 07:07:48 GMT
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Am 05.01.2011 00:37, schrieb David Fanning:

```
> Balt writes:
>
>> See this:
>> IDL> help,cal_data[sel_cal_data,3]
>> <Expression>  DOUBLE  = Array[1]
>>
>> How on earth can I make cal_data[sel_cal_data,3] into
>> a scalar?
>
> IDL> Help, (cat_data[sel_cal_data,3])[0]
>
> Cheers,
>
> David
>
>
>
```

Sometimes a scalar function

http://www.fz-juelich.de/icg/icg-1/idl_icglib/idl_source/idl_work/rb_lib/scalar.pro

makes it easier to initialize data e.g.
`scalar(MAKE_ARRAY(1,val=1,type=m_type))`

cheers

Reimar

Subject: Re: How to extract a scalar from a vector?
Posted by [chrisbuc](#) on Wed, 11 Oct 2017 10:10:48 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Tuesday, 4 January 2011 23:37:35 UTC, David Fanning wrote:

```
> Balt writes:
>
>> See this:
>> IDL> help,cal_data[sel_cal_data,3]
>> <Expression>  DOUBLE  = Array[1]
>>
>> How on earth can I make cal_data[sel_cal_data,3] into
>> a scalar?
```

>
> IDL> Help, (cat_data[sel_cal_data,3])[0]
>
> Cheers,
>
> David
>
>
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thanks Dave,
I would never have thought of (arr[0])[0] to get a scaler from a 1 element array. Cheers :-)
Chris Buckley
