## Subject: Finding values in an array
Posted by Bob Fugate on Mon, 25 Jun 2001 04:26:35 GMT
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I have a vector containing a very, very large number of long integer values.

I want to compare the value of each element in the vector to the values of
the elements in the first column of a two column array until  there is a
match, and then extract the corresponding number in the second column (e.g.
by using WHERE) of the array.

Does anyone know a way to do this without using a loop?  I realise that
organizing the searched array as two rows may speed this up, however, I am
trying to avoid using a loop. The numbers in the vector vary randomly (and
it is important to preserve the original order) but the numbers in the first
column of the array are sorted and increase monotonically (if that matters).

I am new to IDL, so will greatly appreciate any suggestions.

Bob Fugate

## Subject: Re: Finding values in an array
Posted by Craig Markwardt on Mon, 25 Jun 2001 06:18:59 GMT
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Bob Fugate <rqfugate@mindspring.com> writes:

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> it is important to preserve the original order) but the numbers in the first
> column of the array are sorted and increase monotonically (if that matters).
>
> I am new to IDL, so will greatly appreciate any suggestions.

If you can guarantee that there won't be any "misses", ie all
possibilities are in your second table, then VALUE_LOCATE is your
friend.  This is new in IDL 5.3, but presumably you have at least this
version.  If not, then see my web page for a drop-in substitute. :-)

You are basically done then!

```
wh = value_locate(col1, vector)
y = col2(wh)
```

Cogitate on that for awhile and I think you will be satisfied.
Good luck,
Craig

Web page:  http://cow.physics.wisc.edu/~craigm/idl/idl.html  (Main listing)

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Subject: Re: Finding values in an array
Posted by Bob Fugate on Tue, 26 Jun 2001 01:50:37 GMT
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Craig,
Thanks. value_locate is a miracle. I was using an old handi-guide that
didn't have this function listed, and since I am new to IDL, didn't know
about it. It works very well for what I am doing and is about a zillion
times faster than the terrible routine I wrote.
I really appreciate this group. Hope I don't wear out my welcome by asking
all the time and never feeling like I can contribute.
Bob

> From: Craig Markwardt <craigmnet@cow.physics.wisc.edu>
> Organization: U. Wisc. Madison Physics -- Compact Objects
> Reply-To: craigmnet@cow.physics.wisc.edu
> Newsgroups: comp.lang.idl-pvwave
> Date: 25 Jun 2001 01:18:59 -0500
> Subject: Re: Finding values in an array
>
>
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>
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> y = col2(wh)
>
> Cogitate on that for awhile and I think you will be satisfied.
> Good luck,
> Craig
>
> Web page:  http://cow.physics.wisc.edu/~craigm/idl/idl.html  (Main listing)
>
> --
>  ---------------------------------------------------------------- --------------
> Craig B. Markwardt, Ph.D.       EMAIL:   craigmnet@cow.physics.wisc.edu
> Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
>  ---------------------------------------------------------------- --------------

## Subject: Re: Finding values in an array
Posted by david[2] on Tue, 26 Jun 2001 02:28:20 GMT
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Bob Fugate writes:

> Hope I don't wear out my welcome by asking
> all the time and never feeling like I can contribute.

Oh, you'll get to contribute. We are looking for
volunteers right now for the Hospitality Committee
for the IDL Expert Programmers Association meeting
coming up in October. We especially need designated
drivers for the Commencement program.

Cheers,

David

P.S. Let's just say a few of the drivers earned BIG
money from the programming tips (or whatever)
they heard in their cars last year.

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David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

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## Subject: Re: Finding values in an array
Posted by Craig Markwardt on Tue, 26 Jun 2001 03:26:07 GMT
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david@dfanning.com (David Fanning) writes:

> P.S. Let's just say a few of the drivers earned BIG
> money from the programming tips (or whatever)
> they heard in their cars last year.

The German contingent completely drank me under the table.  I'm not
sure I said *anything* intelligible on the car ride back to the hotel.
Then again, "unintelligible" is a valid IDL programming style, one
that I practice often. :-)

Craig

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Craig B. Markwardt, Ph.D.       EMAIL:   craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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## Subject: Re: Finding values in an array
Posted by david[2] on Tue, 26 Jun 2001 03:59:25 GMT
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Craig Markwardt writes:

> The German contingent completely drank me under the table.  I'm not
> sure I said *anything* intelligible on the car ride back to the hotel.
> Then again, "unintelligible" is a valid IDL programming style, one

> that I practice often. :-)

Was that German those guys at the end were speaking!?
I thought I had accidentally stumbled into the Fun
with Histograms lecture. :-(

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
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