
Subject: setintersection assumes sets have no repetitions?

Posted by [penteado](#) on Sat, 23 Feb 2013 20:46:15 GMT

[View Forum Message](#) <> [Reply to Message](#)

I am using Coyote's set functions, and I noticed that when I use some (not any) sets with repetitions as input, it crashes:

```
IDL>
a=[1,2,3,4,5]
IDL>
b=[1,2,2,2]
IDL>
print,setintersection(a,b,indices_a=ia,indices_b=ib,position s=pos)
% Compiled module: SETINTERSECTION.
% Compiled module: REVERSEINDICES.
% Compiled module: ERROR_MESSAGE.
```

Traceback Report from SETINTERSECTION:

```
% Out of range subscript encountered: BINDICES.
% Execution halted at: SETINTERSECTION  192 /software/idl/
others/idl-coyote-read-only/coyote/setintersection.pro
%                               $MAIN$
-1
```

Is this the expected behavior? Are the input sets supposed not to have repetitions? The documentation suggests they may have repeated elements, thus making the positions array different from indices_a.

Subject: Re: setintersection assumes sets have no repetitions?

Posted by [David Fanning](#) on Tue, 05 Mar 2013 19:00:54 GMT

[View Forum Message](#) <> [Reply to Message](#)

Paulo Penteado writes:

```
> I just noticed that the documentation changed, to say that indices_a
> and indices_b require the intersection elements to be unique, while
> positions does not.
```

I'm still waiting for Bob Stockwell to get back to me. It's his code. I just change the stuff I understand. ;-)

Cheers,

David

--

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

Subject: Re: setintersection assumes sets have no repetitions?
Posted by [bobgstockwell](#) on Thu, 14 Mar 2013 20:29:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Tuesday, March 5, 2013 12:00:54 PM UTC-7, David Fanning wrote:

> Paulo Penteado writes:
>
>
>
>> I just noticed that the documentation changed, to say that indices_a
>
>> and indices_b require the intersection elements to be unique, while
>
>> positions does not.
>
>
>
> I'm still waiting for Bob Stockwell to get back to me. It's his code. I
>
> just change the stuff I understand. ;-)
>
>
>
> Cheers,
>
>
>
> David

Hi Everyone,

sorry, even as someone who programs in IDL daily for the past few decades, I don't read this newsgroup very much.

Paulo, yes that is expected behaviour as the routine is written. It is defined to return both reverse index arrays of unique identifiers. I can extend that to repeated elements in the 'b' array easily enough, but the problem with repeated matches in both is that you (potentially) have more matches than array elements and certainly would have different numbers of matches for each element which would require a ptr array for the results.

In fact, that calculation shouldn't even be executed unless the user requests it.

I'll take a look at the code and see what modification would seem reasonable. And an example would probably be nice to add as well.

cheers,
bob
