Subject: Re: array 'minus'

Posted by mperrin+news on Tue, 19 Aug 2003 03:13:27 GMT

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tomson <tom2959@21cn.com> wrote:

- > Hi, I'd like to eliminate some elements in a array. For example,
- A=[1,2,3,4,5,6,7,8,9,0]
- > N=[3,6]
- > I want to get a array b equal to A but without A(3) and A(6). How to do
- > that?

Well, you can do something like this, using Craig Markwardt's CMSET\_OP.PRO:

```
index_a = indgen(n_elements(a))
index_minus = cmset_op(index_a, "and",/not2,N)
b = a[index_minus]
```

Just bear in mind there are probably more memory-efficient ways of doing this, if you're dealing with huge arrays. For anything under a few hundred thousand elements, the above should work just fine.

- Marshall

Subject: Re: array 'minus'

Posted by Mark Hadfield on Tue, 19 Aug 2003 05:09:06 GMT

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## tomson wrote:

- > Hi, I'd like to eliminate some elements in a array. For example,
- > A=[1,2,3,4,5,6,7,8,9,0]
- > N=[3,6]
- > I want to get a array b equal to A but without A(3) and A(6). How to do
- > that?

Well, you could do this:

```
B = make_array(size(A, /DIMENSIONS), VALUE=1B)
B[N] = 0B
```

A = A[where(B)]

The first two statements construct a mask array, B, with the same dimensions as A. The elements of B are set equal to 1 (true) when we wish to retain the corresponding element of A and 0 (false) otherwise. The final statement generates a 1D array containing only those elements of A that are flagged in B as true. If there are no true elements in B

it will generate an error.

Also I suggest you specify

```
compile_opt STRICTARRSUBS
```

at the beginning of your routine or code block (as long as you are using a version that supports it: 5.6 or greater, I think). This will ensure that subscripting B with out-of-bounds values on N will raise an error.

\_\_

Mark Hadfield "Ka puwaha te tai nei, Hoea tatou" m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: array 'minus'
Posted by Mark Hadfield on Tue, 19 Aug 2003 05:12:56 GMT
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## Mark Hadfield wrote:

```
> tomson wrote:
>
>> Hi, I'd like to eliminate some elements in a array. For example,
>> A=[1,2,3,4,5,6,7,8,9,0]
>> N=[3,6]
>> I want to get a array b equal to A but without A(3) and A(6). How to do
>> that?
>
> Well, you could do this:
> B = make_array(size(A, /DIMENSIONS), VALUE=1B)
> B[N] = 0B
> A = A[where(B)]
```

Sorry, I didn't read your post very carefully and so gave an answer that might confuse you. I used "B" for the mask array and saved the trimmed values back in "A". You wanted the trimmed values in "B". The following does this. Also it uses the "temporary" finction to delete the mask array once it's no longer needed.

```
mask = make_array(size(A, /DIMENSIONS), VALUE=1B)
mask[N] = 0B

B = A[where(temporary(mask))]
```

--

Subject: Re: array 'minus'

Mark Hadfield "Ka puwaha te tai nei, Hoea tatou" m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

```
Posted by tianyf_cn on Tue, 19 Aug 2003 06:13:59 GMT
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There are a few ways to do this.
1). Replace A(N) with -1 and then use Where() function to find
those elements that are not equal to -1.
 A(N) = -1
 b=A(where(A ne -1))
2). A more generic method to delete specified element(s) of an array.
Here we need some user-supplied function - del ind. The function is given below.
 b=del_ind(A,N)
;+
: Name:
 del ind
Purpose:
 To delete specified elements of an array.
;+++
function del_ind, array, toDel
tmp=lonarr(n elements(array))
tmp(todel)=-1
return, array (where (tmp ne -1))
end
:///
Tian.
"tomson" <tom2959@21cn.com> wrote in message news:<bhs3ot$1p1f$1@mail.cn99.com>...
> Hi, I'd like to eliminate some elements in a array. For example,
           A=[1,2,3,4,5,6,7,8,9,0]
>
           N=[3,6]
> I want to get a array b equal to A but without A(3) and A(6). How to do
> that?
> Thank you.
```

```
Subject: Re: array 'minus'
```

Posted by R.Bauer on Tue, 19 Aug 2003 08:01:57 GMT

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## tomson wrote:

```
> Hi, I'd like to eliminate some elements in a array. For example,
>
           A=[1,2,3,4,5,6,7,8,9,0]
           N=[3,6]
> I want to get a array b equal to A but without A(3) and A(6). How to do
> that?
> Thank you.
> Tomson
Dear Tomson
print,a not b(a,n)
% Compiled module: A_NOT_B.
% Compiled module: UNIQ.
               2
                    4
                         5
                               7
                                 8
                                          9
```

You can get a\_not\_b and several others from our library.

http://www.fz-juelich.de/icg/icg-i/idl\_icglib/idl\_source/idl \_html/dbase/a\_not\_b\_dbase.pro.html

There is an a\_and\_b routine and some others available.

Some people asked how to unpack tgz files. So here is an explaination what it is. The tgz extension is named tarball and it is the same as tar.gz.

You can unpack it on MS windows by winzip or on unix by gnu tar with tar zxvf file.tgz.

regards Reimar

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Forschungszentrum Juelich email: R.Bauer@fz-juelich.de http://www.fz-juelich.de/icg/icg-i/

a IDL library at ForschungsZentrum Juelich

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