
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:

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> 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, Hoesa 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]
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>> 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))]
```

--

Mark Hadfield "Ka puwaha te tai nei, Hoesa tatou"
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Subject: Re: array 'minus'

Posted by [tianyfn_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.

>
> Tomson

Subject: Re: array 'minus'
Posted by [R.Bauer](#) on Tue, 19 Aug 2003 08:01:57 GMT
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tomson wrote:

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> 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.
   0   1   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 explanation 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

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

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a IDL library at Forschungszentrum Juelich

