
Subject: Re: subarray

Posted by [Wox](#) on Wed, 19 Mar 2008 09:29:15 GMT

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On Wed, 19 Mar 2008 09:59:32 +0100, Wox <nomail@hotmail.com> wrote:

> Hi all,
>
> I've seen this somewhere but I can't find it: I want to take a
> subarray of an array by giving the number of elements for each
> dimension. When the original array is too small for one or more
> dimensions: append zero's, otherwise take the range 0:n-1.
>
> Thanks,
>
> Wout

To clarify what I want, see below. This code seems a bit clumsy though. Somehow I seem to remember there was a better way...

```
function subarray,array,dims

; Check new size
ndims=n_elements(dims)
if ndims eq 0 or ndims gt 8 then return,size(dummy)
dims>=1

; Check old size
if n_elements(array) eq 0 then array=0
s=size([array],/dim)
if n_elements(s) lt ndims then s=[s,lonarr(ndims-n_elements(s))]

; Shrink array
switch ndims of
8: if dims[7] lt s[7] then array=array[*,*,*,*,*,0:dims[7]-1]
7: if dims[6] lt s[6] then array=array[*,*,*,*,*,0:dims[6]-1,*]
6: if dims[5] lt s[5] then array=array[*,*,*,*,0:dims[5]-1,*,*]
5: if dims[4] lt s[4] then array=array[*,*,*,0:dims[4]-1,*,*,*]
4: if dims[3] lt s[3] then array=array[*,*,0:dims[3]-1,*,*,*,*]
3: if dims[2] lt s[2] then array=array[*,*,0:dims[2]-1,*,*,*,*,*]
2: if dims[1] lt s[1] then array=array[*,0:dims[1]-1,*,*,*,*,*,*]
1: if dims[0] lt s[0] then array=array[0:dims[0]-1,*,*,*,*,*,*,*]
endswitch

; Expand array
temp=temporary(array)
```

```
array=make_array(dimension=dims,value=temp[0])
```

```
case ndims of
```

```
1: array[0]=temporary(temp)
```

```
2: array[0,0]=temporary(temp)
```

```
3: array[0,0,0]=temporary(temp)
```

```
4: array[0,0,0,0]=temporary(temp)
```

```
5: array[0,0,0,0,0]=temporary(temp)
```

```
6: array[0,0,0,0,0,0]=temporary(temp)
```

```
7: array[0,0,0,0,0,0,0]=temporary(temp)
```

```
8: array[0,0,0,0,0,0,0,0]=temporary(temp)
```

```
endcase
```

```
; Return size
```

```
return,size(array)
```

```
end;function subarray
```

Subject: Re: subarray

Posted by [Gaurav](#) on Wed, 19 Mar 2008 10:19:09 GMT

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On Mar 19, 1:59 pm, Wox <nom...@hotmail.com> wrote:

- > I've seen this somewhere but I can't find it: I want to take a
- > subarray of an array by giving the number of elements for each
- > dimension. When the original array is too small for one or more
- > dimensions: append zero's, otherwise take the range 0:n-1.

'EXTRAC' should be your tool of choice! Look up the usage in help.

Cheers

Gaurav

Subject: Re: subarray

Posted by [Wox](#) on Wed, 19 Mar 2008 10:30:27 GMT

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On Wed, 19 Mar 2008 03:19:09 -0700 (PDT), Gaurav

<selfishgaurav@gmail.com> wrote:

> On Mar 19, 1:59i½pm, Wox <nom...@hotmail.com> wrote:

- >> I've seen this somewhere but I can't find it: I want to take a
- >> subarray of an array by giving the number of elements for each
- >> dimension. When the original array is too small for one or more

>> dimensions: append zero's, otherwise take the range 0:n-1.
>
>
> 'EXTRAC' should be your tool of choice! Look up the usage in help.
>
> Cheers
>
> Gaurav

That's it! I knew I saw it somewhere. Thanks.
