
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
```
