
Subject: Re: Max value vector

Posted by [Amara Graps](#) on Wed, 26 May 1999 07:00:00 GMT

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"Thomas C. Stubbings" wrote:

>
> What I would need is something like the MATLAB command max(i) where i is an
> array(n,m) and max(i) returns a vector containing the maximum value of each
> column. The IDL max command only returns a scalar containing the absolute
> maximum of the array.
>
> I even tried a big loop running through each column to find the max of each,
> but IDL doesnt accept loops with 64000 iterations
>
> What alternatives do I have?
>
> Thomas

Thomas,

Here is another alternative among your choices. I wrote this simple function to mimic Matlab's min function. Just change the occurrences of "min" with "max" and you'll have what you are looking for.

Amara

```
FUNCTION WMMIN, array, ind
;+
;NAME:
;    WMMIN
;
;PURPOSE:
;    To find the minimum elements of an array or matrix. This
;    function works the same way as Matlab's MIN: [y,ind]=min(array)
;
;CATEGORY:
;    Math.

;CALLING SEQUENCE:
;    Result = WMMIN(array, ind)
;
;INPUTS:
;    Array: The data array.
;
;OUTPUTS:
```

```
; Result =
;      WMMIN returns the lowest value of an array, or if the
array
;      is a matrix, it returns the lowest value of each
*column* in
;      the matrix.
;      ind = the index of the lowest value(s).
```

```
;NOTES: IDL's array indices are one less than Matlab's.
```

```
;EXAMPLE:
```

```
; >array=[[1,3,2],[6,3,4],[9,1,0]]
; >print, array
; 1   3   2
; 6   3   4
; 9   1   0
; y= WMMIN(array, ind)
; >print, y
; 1   1   0
; >print, ind
; 0   2   2
```

```
;MODIFICATION HISTORY:
```

```
; Amara Graps, BAER, San Francisco, December 1994.
; Amara Graps, Multiplex Answers, Heidelberg, April 1999.
; Modified to handle "degenerate" matrices (0 length in one
dimen)
;-
```

```
array = REFORM(array) ;eliminates the "degenerate" dimension(s)
```

```
t = SIZE(array)
```

```
IF t(0) eq 1 THEN BEGIN
```

```
  ;1D array
  minval = MIN(array)
  ind = !c
```

```
ENDIF ELSE BEGIN
```

```
  ;Matrix
  numcol = t(1)      ;number of columns
  numrow=t(2)        ;number of rows
```

```
  minval = FLTARR(numcol)
  ind = FLTARR(numcol)
```

```
  ;Step through the cols, and find the mins of the columns
  ;(the way Matlab does it)
  FOR i = 0L, numcol-1 DO BEGIN
```

```
tt = array(i,*)
minval(i) = MIN(tt)
ind(i) = !c
```

```
END    ;i
```

```
ENDELSE
```

```
!c = 0
```

```
RETURN, minval
```

```
END
```

```
.*****
,
--
```

```
***** ***
```

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```
***** ***
```

"Never fight an inanimate object." - P. J. O'Rourke