Subject: Re: Function that returns the dimension of an array?
Posted by rmoss4 on Sat, 02 Nov 2002 01:18:22 GMT
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K Banerjee wrote:
> Is there such a function in IDL? Say the array A is 2 by 3. I am looking for
> a function that returns an array containing the entries 2 and 3.
>
> Thanks.

You are looking for the SIZE function.

r

Subject: Re: Function that returns the dimension of an array?
Posted by David Fanning on Sat, 02 Nov 2002 04:40:16 GMT
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K Banerjee (kbanerjee@ucwphilly.rr.com) writes:

> Is there such a function in IDL? Say the array A is 2 by 3. I am looking for
> a function that returns an array containing the entries 2 and 3.

You are looking for this:

```
dim = Size(array, /Dimensions)
```

While we are on the subject though, here is a one-off
that I find myself using over and over in my own work.
I use it to find the proper window size for images,
when I am not sure if I have an 8-bit or 24-bit
image, or how the 24-bit image is interleaved. Might
be handy to someone. :-)

```
dim = ImageDimensions(unkownImage, XSize=xsize, $
   YSize=ysize, TrueIndex=trueIndex
Window, XSize=xsize, YSize=ysize
TV, unknownImage, True=trueIndex
```

Cheers,

David

--
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```
;************************************************************ ***
FUNCTION ImageDimensions, image, $

; This function returns the dimensions of the image, and also
; extracts relevant information via output keywords. Works only
; with 2D and 3D (24-bit) images.

; All keywords are OUTPUT keywords.

   XSize=xsize, $          ; The X size of the image.
   YSize=ysize, $          ; The Y size of the image.
   TrueIndex=trueindex, $  ; Position of "true color" index (0 for 2D).
   XIndex=xindex, $        ; The position or index of the X image size.
   YIndex=yindex           ; The position or index of the Y image size.

   ; Get the number of dimensions and the size of those dimensions.

ndims = Size(image, /N_Dimensions)
dims =  Size(image, /Dimensions)

   ; Is this a 2D or 3D image?

IF ndims EQ 2 THEN BEGIN
   xsize = dims[0]
   ysize = dims[1]
   trueindex = -1
   xindex = 0
   yindex = 1
ENDIF ELSE BEGIN
   IF ndims NE 3 THEN $
 Message, /NoName, 'Unknown image dimensions. Returning.'
   true = Where(dims EQ 3, count)
   trueindex = true[0] + 1
   IF count EQ 0 THEN Message, /NoName, 'Unknown image type. Returning.'
   CASE true[0] OF
      0: BEGIN
         xsize = dims[1]
         ysize = dims[2]
         xindex = 1
         yindex = 2
         ENDCASE
      1: BEGIN
         xsize = dims[0]
         ysize = dims[2]
         xindex = 0
```

```
        yindex = 2
        ENDCASE
      2: BEGIN
        xsize = dims[0]
        ysize = dims[1]
        xindex = 0
        yindex = 1
        ENDCASE
    ENDCASE
ENDELSE
RETURN, dims
END
;*************************************************************** ****
```