Subject: Re: Max value vector
Posted by Evan Fishbein on Sun, 23 May 1999 07:00:00 GMT
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Tom,

I have a routine that finds the max and min over the first index of a multidimension array
using a for loop as you described. You need to make sure that the for loop variable is a long by initializing it to long

The code below takes x1(n1,n2...nn) and returns lu(n2..nn,2) where lu(...,0) are the lowerbounds and (lu(...1) are the upperbounds

```
function lubound, x1, ignore=ignore, all=all
;
; calculates the lubounds of elements of x1 have the same 2nd, 3rd...nth
;    indices.  i.e. bounds by contracting over the first index.
;
if n_elements(all) ne 1 then all=0
if all eq 0 then begin
  x=reform(x1)
end else begin
  x=reform(x1, n_elements(x1))
end
sx=size(x)

  if n_elements(ignore)  eq 0 then begin
    if sx(0) le 1 then begin
      lub= [min(x), max(x)]
    end else begin
      nx=sx(2+sx(0))/sx(1)
      lub=make_array(nx, 2, type=sx(sx(0)+1) )
      x=reform(x, sx(1), nx)
      for i=0l, nx-1 do begin
        lub(i,*)=[min(x(*,i)), max(x(*,i)) ]
      end
      lub=reform(lub, [sx(2:sx(0)),2] )
    end
  end else begin
    if sx(0) le 1 then begin
      ips=where(x ne ignore)
      if ips(0) ge 0 then begin
        lub= [min(x(ips)), max(x(ips))]
      end else begin
        lub=replicate(ignore,2)
      end
    end else begin
```

```
      nx=sx(2+sx(0))/sx(1)
      lub=make_array(nx, 2, type=sx(sx(0)+1) )
      x=reform(x, sx(1), nx)
      for i=0l, nx-1 do begin
        ips=where(x(*,i) ne ignore)
        if ips(0) ge 0 then begin
          lub(i,*)= [min(x(ips,i)), max(x(ips,i))]
        end else begin
          lub(i,*)=replicate(ignore,2)
        end
      end
      lub=reform(lub, [sx(2:sx(0)), 2] )
    end
  end
return, lub
end
```

"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
