Subject: Re: Finding common elements in two arrays
Posted by andy on Tue, 26 Jul 1994 16:39:57 GMT
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In article <CtJyp1.77x@ngdc.noaa.gov>, greg@farpoint.ngdc.noaa.gov (Greg Ushomirskiy) writes:
> A while ago there has been a discussion on what is the fastest way to find common
> elements in a pair of arrays. Of course, then I didn't listen, and now I need to
> do just that -- find common values in two arrays of longs. Since the articles
> describing the solution already expired, can someone post a summary?
>
> Thanks...
>
>
> --
> Greg Ushomirskiy #include <std_disclaimer.h>
> greg@farpoint.ngdc.noaa.gov
> National Geophysical Data Center
> NOAA, US. Department of Commerce

Ahhh! Those were the days. What a good discussion.
I don't know if this is the *BEST* solution, but it
is one that I found useful. I added some comments
but did not change the workings.

```
; General purpose routine to return the common elements of two vectors.
; Uses USERLIB routine UNIQ to obtain unique elements of a,b.
; Written by M. J. Dutch June-1994.
; Centre de Recherches en Physique des Plasmas, EPFL, Switzerland

function same, a, b

if (n_params() lt 1) then message, ' Usage... result = same(a, b)'

ab  = [a(uniq(a,sort(a))), b(uniq(b,sort(b)))] ;Combine unique elements of a,b
ab  = ab(sort(ab))                             ;Sort the combined elements
nab = n_elements(ab)

diff = ab(1:nab-1) - ab(0:nab-2)
ind  = where(diff eq 0)                        ;Find repeated elements

if (ind(0) eq -1) then return, -999
if (ind(0) ne -1) then return, ab(ind)

end
```

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,__o Andrew F. Loughe (Mail Code 971)
-_<, NASA Goddard Space Flight Center phone: (301) 286-5899
(*)/'(*) Greenbelt, MD 20771 email: andy.loughe@gsfc.nasa.gov