Re: vector difference

Source: http://coding.derkeiler.com/Archive/Fortran/comp.lang.fortran/2008−08/msg00146.html

- *From*: glen herrmannsfeldt <gah@xxxxxxxxxxxxxxx>
- *Date*: Wed, 06 Aug 2008 12:31:19 −0800

Gordon Sande wrote:

> On 2008−08−06 15:36:01 −0300, nospam@xxxxxxxxxxxx (Richard Maine) said:
>
> > utab <umut.tabak@xxxxxxxxx> wrote:
> >
> > > real :: a(4) = (/1.,2.,3.,4./)
> > > real :: b(1) = (/2., 3./)

(snip)

> > > result is to be
> > >
> > > res = (/1., 4./)
> > >
> > > I wondered if there is a quick way to accomplish
> > > this through intrinsic functions?
> >
> > I'd say that "pack" and "any" are your friends. I'd probably do
> > something like

(snip of actual code using PACK and ANY)

> As well as being hard to read they have the
> disadvantage that the algorithms
> being suggested are quadratic for a well/over researched problem that has
> linear (and a bit) solutions. Perfectly acceptable for toy problems but
> prone to create bottlenecks if the size grows at some later time. Having

> the inputs sorted and using that fact lowers the cost markedly. Establishing
> and maintaining a sorted order has it own costs.

In addition, the OP didn't specify the results in the case
that there are repeats in either list. The PACK/ANY method
will remove all copies of any matching element. That may or
may not be the desired result.

With linear traversal through two sorted lists one can
choose to remove all matching element, or only one in
list A for each match to list B.

−− glen

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