Subject: Re: Array manipulation
Posted by R.G.S. on Wed, 01 Nov 2000 17:44:35 GMT
View Forum Message <> Reply to Message

Leon Majewski <majewski@cygnus.uwa.edu.au> wrote in message
news:39ffa4ae.1813674@news.uwa.edu.au...
> Hello
> I was wondering whether any array minded person could suggest a way of
using array
> indicies to chop up a large array into ordered windows.
> I can't think of a way to do it with reform, translate (though i'm sure
this is my
> limitation not a reform translate limitation)
>
> ---------
> ie given an array of 30*30 elements
> return 100 3*3 elements
> or 36 5*5
> or...
>
> in=
>
> 00 01 02 03 04 05..
> 30 31 32 33 34 35..
> 60 61 62 63 64 65..
>
> out = blocks such as
> 00 01 02
> 30 31 32
> 60 61 62
>
> each block is then processed to one representative number (ie mean or
median....) and
> returned
>
> ------------
> What i've used so far is attached below (it does what i want, just slowly)
>
>
> leon
>
(snip)

> Leon Majewski
>
> Remote Sensing & Satellite Research Group
> Curtin University of Technology, Perth, Australia
>

> email: majewski@ses.curtin.edu.au

Hi Leon,
I am guessing that you can't do this with "reform".

Here is a quick array-index solution to extract a (that is, ONE) subarray.
Thus, if you have array "a" here which is 12 by 16, and you want
a 3 by3 subarray (set piecesize to 3 as done below), then run the code
below.
The srow and scol are the indices of the subarrays
(i.e. your 12 by 15 array can be thought of an array of 4 by 5 blocks,
and srow is 0..4-1 and scol is 0..5-1, get it?)

It is easy enough to turn this into a function.
If you want, this can be turned into a 3d array of indices, if you
need to produces indices for all subarrays. If you want that,
I can take another look at the indices function.

Cheers,
bob stockwell
stockwell (at) co-ra.com

```
; create a test case here
a = indgen(12,15)
ncols = (size(a))(1)


; Assumes square pieces
piecesize = 3 ; size of the square subarray (i.e. piecesize  by piecesize)
srow = 1 ; which row of the possible subsets
scol = 2 ; which column of the possible subsets

indices = indgen(piecesize,piecesize) +(intarr(piecesize) + 1) #
indgen(piecesize) * (ncols - piecesize) +piecesize*srow*ncols +
scol*piecesize
subarray = a(indices)
help,b
print,b



end
```