
Subject: Re: Array manipulation

Posted by [R.G.S.](#) on Wed, 01 Nov 2000 17:44:35 GMT

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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

>

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> 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 by 3 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 produce 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
```
