Subject: Re: (more) Efficient way to generate an array whose elements are the distance from the center
Posted by Lajos Foldy on Fri, 06 Jul 2012 20:53:29 GMT
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On Friday, July 6, 2012 10:37:35 PM UTC+2, Mike F. wrote:
> Hello all.
>
> I'm new to IDL (and coding in general), and I'm looking to find a more efficient way to generate an nxn array where each element is the distance from the center of the array.
>
> 3 x 3 Ex: 1.4 1 1.4
> 1 0 1
> 1.4 1 1.4
>
> All I can think of on my own is a nested FOR loop as such:
>
> FOR i = 0l, (n - 1) DO BEGIN
> FOR j = 0l, (n - 1) DO BEGIN
>
> plane[i,j] = SQRT((i-n/2.)^2 + (j - n/2.)^2)
>
> ENDFOR
> ENDFOR
>
> From what I've read on IDL forums, nested FOR loops are the pinnacle of sin, and I'd like to be a bit more pious if possible.
>
> Any tips would be appreciated!

Look up DIST and SHIFT in the docs:

```
IDL> print, shift(dist(3),1,1)
      1.41421      1.00000      1.41421
      1.00000      0.00000      1.00000
      1.41421      1.00000      1.41421
```

regards,
Lajos

Subject: Re: (more) Efficient way to generate an array whose elements are the distance from the center
Posted by Mike F. on Fri, 06 Jul 2012 21:05:53 GMT
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Amazing! Thanks!

Subject: Re: (more) Efficient way to generate an array whose elements are the distance from the center
Posted by Michael Galloy on Sun, 08 Jul 2012 15:39:25 GMT
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On 7/6/12 2:53 PM, fawltylanguage@gmail.com wrote:
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> 1.41421 1.00000 1.41421
> 1.00000 0.00000 1.00000
> 1.41421 1.00000 1.41421
>
> regards,
> Lajos
>

Also, DIST is written in dist.pro, so check it out in lib/ to look at
how to do this.

Mike
--
Michael Galloy
www.michaelgalloy.com

Modern IDL, A Guide to Learning IDL: http://modernidl.idldev.com
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