Subject: Re: arrays with different sizes
Posted by Michael Galloy on Fri, 20 May 2011 22:03:57 GMT
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On 5/20/11 3:31 PM, Nolan Smith wrote:
> Hello,
>
> I am new to IDL and I have the following problem.
> I have 3 different array with different sizes
> arr1=[2,3,4,5,6,10]
> arr2=[1,2,5,6]
> arr3=[4,5,7,8,9,9,12,15]
> and I am trying to create an array that will have all the different
> permutations of the above array elements.
> In the end I want to have an array that will look like this:
> 2 1 4
> 2 1 5
> 2 1 7
> .....
> .....
> 10 6 12
> 10 6 15
>
> I can not figure out a way to do this, any ideas?
> My arrays are much larger than those in the example so a quick
> solution will be appreciated too!
>
> Thank you!

How about this?

```
function mg_combo3, arr1, arr2, arr3
  compile_opt strictarr

  n1 = n_elements(arr1)
  n2 = n_elements(arr2)
  n3 = n_elements(arr3)

  ind1 = reform(rebin(reform(lindgen(n1), n1, 1, 1), $
                n1, n2, n3), $
           n1 * n2 * n3)
  ind2 = reform(rebin(reform(lindgen(n2), 1, n2, 1), $
                n1, n2, n3), $
           n1 * n2 * n3)
  ind3 = reform(rebin(reform(lindgen(n3), 1, 1, n3), $
                n1, n2, n3), $
           n1 * n2 * n3)
```

```
   result = lonarr(3, n1 * n2 * n3)
   result[0, *] = arr1[ind1]
   result[1, *] = arr2[ind2]
   result[2, *] = arr3[ind3]

   return, result
end

[121]> print, mg_combo3(indgen(2), indgen(3), indgen(4))
           0           0           0
           1           0           0
           0           1           0
           1           1           0
           0           2           0
           1           2           0
           0           0           1
           1           0           1
           0           1           1
           1           1           1
           0           2           1
           1           2           1
           0           0           2
           1           0           2
           0           1           2
           1           1           2
           0           2           2
           1           2           2
           0           0           3
           1           0           3
           0           1           3
           1           1           3
           0           2           3
           1           2           3
```

Mike
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