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Subject: Re: elegant array index expansion using INTERPOLATE

Posted by [Vince Hradil](#) on Fri, 11 Jan 2008 20:45:20 GMT

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On Jan 11, 2:33 pm, "Ryan." <rchug...@brutus.uwaterloo.ca> wrote:

> Hi All,  
>  
> If I have a range of array indices I want to be able to interpolate  
> between this to get all indices in between. What is an elegant way of  
> doing this?  
>  
> Here is an example of what I want:  
>  
> array = [0,2,4,6,8,10,12,14,16,18]  
> idxrange = [3, 6]  
>  
> expidxrange = Interpolate('idxrange') to get [3,4,5,6]  
>  
> so that I can get  
> array[expidxrange] OR [6,8,10,12]  
>  
> I would like it to be as general as possible. This is what I have, but  
> it doesn't work for a range of 1:  
>  
> expidxrange = INTERPOLATE(idx, \$  
> (1./(idxrange[1]-idxrange[0])\*FINDGEN(idxrange[1]-idxrange[0] ) ) )  
>  
> Any thoughts?  
>  
> Ryan.

Do you want:

```
expidxrange = lindgen(idxrange[1]-idxrange[0]+1)+idxrange[0]
```

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Subject: Re: elegant array index expansion using INTERPOLATE

Posted by [Ryan.](#) on Fri, 11 Jan 2008 20:50:22 GMT

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> Do you want:  
>  
> expidxrange = lindgen(idxrange[1]-idxrange[0]+1)+idxrange[0]

Thanks Vince,

I was making it more complicated than it should be! That's exactly what I wanted. It must be because it is Friday afternoon.

Leaving soon,  
Ryan.

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Subject: Re: elegant array index expansion using INTERPOLATE

Posted by [Bob\[3\]](#) on Fri, 11 Jan 2008 21:56:14 GMT

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On Jan 11, 3:33 pm, "Ryan." <rchug...@brutus.uwaterloo.ca> wrote:

> Hi All,  
>  
> If I have a range of array indices I want to be able to interpolate  
> between this to get all indices in between. What is an elegant way of  
> doing this?  
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> I would like it to be as general as possible. This is what I have, but  
> it doesn't work for a range of 1:  
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> expidxrange = INTERPOLATE(idx, \$  
> (1./(idxrange[1]-idxrange[0])\*FINDGEN(idxrange[1]-idxrange[0] ) ) )  
>  
> Any thoughts?  
>  
> Ryan.

Isn't array[expidxrange] just array[3:6] or  
array[idxrange[0]:idxrange[1]] ?  
...or are you after the explicit list of expidxrange?

Bob.

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Subject: Re: elegant array index expansion using INTERPOLATE

Posted by [Ryan.](#) on Fri, 11 Jan 2008 22:07:19 GMT

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> Isn't array[expidxrange] just array[3:6] or  
> array[idxrange[0]:idxrange[1]] ?  
> ...or are you after the explicit list of expidxrange?

Hi Bob,

'expidxrange' is just a 2-element array. I find the indices using another method and throw them into a 2-element array. I ultimately need to extract the explicit list of elements from 'array'.

Ryan.

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Subject: Re: elegant array index expansion using INTERPOLATE  
Posted by [Bob\[3\]](#) on Fri, 11 Jan 2008 22:32:55 GMT  
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On Jan 11, 5:07 pm, "Ryan." <[rchug...@brutus.uwaterloo.ca](mailto:rchug...@brutus.uwaterloo.ca)> wrote:

> > Isn't array[expidxrange] just array[3:6] or  
>  
>> array[idxrange[0]:idxrange[1]] ?  
>> ...or are you after the explicit list of expidxrange?  
>  
> Hi Bob,  
>  
> 'expidxrange' is just a 2-element array. I find the indices using  
> another method and throw them into a 2-element array. I ultimately need  
> to extract the explicit list of elements from 'array'.  
>  
> Ryan.

Looked to me like expidxrange was the 4 element array [3,4,5,6] in your example and idxrange was the 2 element array giving the endpoints of expidxrange.

Anyway, using the ':' notation on your array should get you your list of elements without having to calculate an explicit list of indexes (since you want all indexes between the endpoints).

Bob.