
Subject: Re: Array of arrays

Posted by [David Fanning](#) on Thu, 23 Feb 2006 16:53:25 GMT

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Fritz writes:

```
> One (hopefully) last question...
>
> I have the following code:
>
> nb_classes = 3
> references = ptrarr(nb_classes)
> for i=0, nb_classes-1 do begin
>   nb_samples = 5
>   list_samples = ptrarr(nb_samples)
>   for j=0, nb_samples-1 do begin
>     data = indgen(21,19,4)
>     list_samples[j] = ptr_New(data)
>   endfor
>   references[i] = ptr_new(list_samples)
> endfor
>
> This code is simplified because for each class, the number of samples may
> vary and also the size of data.
>
> The question is:
> How do I retrieve the data, let say, for sample 3 of class 2 ?
>
> In the previous example,
>> t = PtrArr(3)
>> t[0] = Ptr_New(intarr(2,5,4))
>> t[1] = Ptr_New(intarr(6,5,4))
>> t[2] = Ptr_New(intarr(7,8,4))
>
> (*t[1]) allows to acces the second element
> (*t[1])[*,*,2] allows to acces the third band of the second element.
>
> But in the code above ?
> I tried
>> dat = (*references[0])(*liste_samples[1])
> but dat is not the same as data.
>
>
> others...
```

Oh, well, we are not going to embarrass ourselves by explaining how long it takes us to understand things. That's why there is 24 hours in every day, after all. :-)

I would access the data in the third sample in class 2 like this:

```
IDL> Help, *(*references[1])[2]
```

It will help to remember that the * operator has a lower order of precedence than almost any other operator. So references[1] is a reference to a pointer in the pointer array, and *references[1] de-references that pointer, which is also a reference to a pointer array, so (*references[1])[2] is a reference to a pointer in *that* pointer array, and *(*references[1])[2] de-references that pointer.

You might find these articles worth re-reading:

http://www.dfanning.com/misc_tips/precedence.html
http://www.dfanning.com/misc_tips/pointers.html

Cheers,

David

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David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
