Subject: Re: Access array elements with String
Posted by humanumbrella on Mon, 14 Jul 2008 17:06:33 GMT
View Forum Message <> Reply to Message

On Jul 14, 12:59 pm, humanumbre...@gmail.com wrote:
> On Jul 14, 12:30 pm, Bob Crawford <Snowma...@gmail.com> wrote:
>
>
>
>> On Jul 14, 11:49 am, humanumbre...@gmail.com wrote:
>
>>> On Jul 14, 11:41 am, Bob Crawford <Snowma...@gmail.com> wrote:
>
>>>> On Jul 14, 11:16 am, humanumbre...@gmail.com wrote:
>
>>>> > Hello all,
>
>>>> > Another issue - perhaps one of you has encountered this before. It's
>>>> > sort of a neat problem. I'm attempting to build array subscripts on
>>>> > the fly based on user input. IE the number of static/variable elements
>>>> > is changing, which allows the user to pick different axes to plot.
>>>> > Nevermind all that.
>
>>>> > Anyway, let's say a user wants a particular axis to be variable. In
>>>> > this case, the dataset array where I'm attempting to pull values from
>>>> > would contain a *, to get all these elements. Unfortunately, I do not
>>>> > know in advance which dimension of the array I will be using, so I am
>>>> > attempting to build the subscript based on a string.
>
>>>> > This was my original thought:
>>>> > a = dindgen(5,5,5)
>>>> > b = ['3','3','3']
>>>> > print, a[b]
>>>> > but this just returns a[3], a[3], a[3]
>
>>>> > So, I figured I'd do it this way:
>>>> > c = '3'
>>>> > print, a[c,c,c] -- This works!
>
>>>> > Now for the gold,
>>>> > d = '*'
>>>> > print, a[c,c,d] -- error - can't convert string-> long
>>>> > so I get an idea-- maybe I'll just use the ascii value for the
>>>> > asterisk.
>>>> > d = String(42b)
>>>> > print, a[c,d,d] -- error - can't convert string-> long
>
>>>> > Any thoughts ?

>>>> > Thanks in advance
>>>> > --Justin
>
>>>> Why try to force the '*' - might not SIZE be more useful?
>>>> e.g.
>>>> s=SIZE(a)
>>>> print, a[c,c,s[3]] ; for a[c,c,d]
>>>> print, a[c,s[2],s[3]]; for a[c,d,d]
>
>>> Hey Bob,
>
>>> Thanks for the post!
>>> I think I may need to elaborate a bit more --
>>> I need the entire row of the multi-dimensional array.
>>> So, for example, let's say I have an array that is 30 x 20 x 50
>>> I will need *,0,0 to plot the first 30 values
>>> but I could just as easily need 0,*,0 or 0,0,* Depending on user
>>> input, so I can't anticipate that in advance.
>
>>> Cheers,
>>> --Justin- Hide quoted text -
>
>>> - Show quoted text -
>
>> Oops.
>> I posted too soon (thank you for the clarification Justin - that is
>> what I was trying to do)
>> Here is what I should have posted:
>
>> print, a[c,c,0:(s[3]-1)] ; for a[c,c,d]
>> print, a[c,0:(s[2]-1),0:(s[3]-1)]; for a[c,d,d]
>
>> Isn't '*' just short form notation for 0:(s[n]-1), anyway?
>
> Hey Bob,
>
> Yes, I think '*' is short for 0:(s[n]-1) but I read somewhere that you
> shouldn't use the range because of performance issues...
> Can anyone shed light on that issue?

IE:
From the "Help" pages on "Arrays"
"Processing subscript ranges is inefficient. When possible, use an
array or scalar subscript instead of specifying a subscript range
where the beginning and ending subscripts are separated by the colon
character."