
Subject: Re: indexing over structure tags
Posted by [Vapuser](#) on Thu, 19 Apr 2001 17:36:59 GMT
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Randall Skelton <rhskelto@atm.ox.ac.uk> writes:

```
> Hello,
>
> Imagine someone has a structure of structures...
>
> ; define the basic structure for each
> sm_struct = {basic_struct, comment: ' ', values: fltarr(nlev)}
>
> ; define the large structure
> data = {big_struct, so4: sm_struct, co2: sm_struct, hcl: sm_struct}
>
> The IDL manual describes how to make an array of the tags in a structure
> using:
>
> ; get the names of the tags
> names = tag_names(data)
>
> so that names = [so4, co2, hcl].
>
> That is all fine. But is it possible to index over the tag names with a
> for-loop?
>
> i.e.  for i=0, n_elements(names)-1 do data.names[i].values = i
>                                     ^^^^^^^^^^^^^^^^^^^^^
>
>
> where IDL determines what the appropriate label 'data.name[i].values' is.
>
> Thanks,
> Randall
>
```

data.(i) to iterate over that tags of data, and
data.(i).(j) to iterate over the tags of data.(i)

If each tag is an array, rather than a scalar structure instance, you
might (probably?) have to pull it out, like this

```
IDL> junk={foo, a:0, b:0l, c:0.0}
IDL> bar={bar, a:replicate({foo},3),b:replicate({foo},4)}
IDL> help,bar,/struct
** Structure BAR, 2 tags, length=84:
  A          STRUCT  -> FOO Array[3]
```

B STRUCT -> FOO Array[4]

```
IDL> .run
- FOR i=0,1 DO BEGIN
-   FOR j=0,2 DO BEGIN
-     tmp=bar.(i).(j) ;<--- I couldn't find a way to do this inline,
;                       ; but there might be one that I'm missing
-     FOR k=0,n_elements(tmp)-1 DO tmp[k]=(2^(i+1))*(3^(j+1))+k
-     bar.(i).(j)=tmp
-   endfor
- endfor
- end
```

% Compiled module: \$MAIN\$.

```
IDL> print,bar
```

```
{
  a = {    6      18   54.0000}
        {    7      19   55.0000}
        {    8      20   56.0000}

  b = {   12      36  108.000}
        {   13      37  109.000}
        {   14      38  110.000}
        {   15      39  111.000}

}
```

whd

--

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