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_struc = {basic_struct, comment: ' ', values: fltarr(nlev)}
>
> ; define the large structure
> data = {big_struct, so4: sm_struc, co2: sm_struc, hcl: sm_struc}
>
> 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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