
Subject: Re: Defining Integer Field in a Structure
Posted by [David Fanning](#) on Thu, 01 Nov 2001 22:05:42 GMT
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JD Smith (jdsmith@astro.cornell.edu) writes:

> Brian Bell wrote:

>>

>> Is there a way to define a field within a structure whose type is
>> integer? In my case, I want the field to be any integer from 0 to 4.
>> I know you can assign an actual integer to the field, but I don't want
>> to do this because I want the field value to change within certain
>> procedures and to return that value to the procedures calling it. I
>> would appreciate any help you might be able to offer.

>>

>

> This is illegal:

>

> IDL> a={0:"this", 1:"is",2:"a",3:"funny",4:"test"}

>

> so the short answer is no. However, if you just want 4 numbered
> "slots", try an array:

>

> IDL> a={vals:['this','is','a','funny','test']}

> IDL> print,a.vals[1]

> is

>

> if you'd like the types of each slot to be different, try at a pointer
> array. If you'd like the number of "slots" to be variable, try a
> pointer to a pointer array.

I have a feeling Brian was looking for something a LOT simpler than this. :-)

I think he is confused between a specific *instance* of a structure and the *definition* of a structure. Especially because he has probably seen most structured both defined and populated with the same statement. For example, like this:

```
IDL> struct = {MYSTRUCT, a:3, b:5.4}
```

Here the variable struct is a specific *instance* of the structure whose definition is defined in IDL as "MYSTRUCT". For example, you can create another structure like this:

```
IDL> struct2 = {MYSTRUCT}  
IDL> Help, struct2, /Structure
```

```
** Structure MYSTRUCT, 2 tags, length=8, data length=6:
```

```
A      INT      0  
B      FLOAT    0.000000
```

The fields in the second structure are defined *by* the fields that appeared in the original structure definition statement. These are the "null" field values, if you like.

You can assign any value you like to them:

```
IDL struct2.a = 4
```

If you wish to create a structure definition without actually creating an instance of a structure, you put the structure definition in a file, like this:

```
PRO newstruct__define.pro  
  struct = {NEWSTRUCT, a:0, b:0.0, c:fltarr(10)}  
END
```

Then you can use the structure definition whenever you like:

```
IDL> var = {NEWSTRUCT}  
IDL> var.a = 5  
IDL> var.c = Findgen(10)*5
```

Cheers,

David
Cheers,

David

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