Subject: Re: Pass by value and performance
Posted by Antonio Santiago on Thu, 15 Dec 2005 06:56:50 GMT
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Kenneth P. Bowman wrote:
> Perhaps someone can clarify this for me.
>
> I was doing this
>
> data = {values : FLTARR(...), $
> other : other stuff ...}
>
> Then pass "data" to a procedure and do this
>
> result = INTERPOLATE(data.values, x, y, z)
>
> In this case data.values is passed by reference. (p. 92 of Building IDL
> Applications)
>

Be carefull (p. 93 of Building ...)

Note:
IDL structures behave in two distinct ways. Entire structures are passed by reference, but individual structure fields are passed by value. See Parameter Passing with Structures on page 189 for additional details.

>
> If I were to use pointers, I could do something like this instead
>
> data = {values : PTR_NEW(FLTARR(...)), $
> other : other stuff ...}
>
> Pass "data" to a procedure and do this
>
> result = INTERPOLATE(*data.values, x, y, z)
>
> Is *data.values passed by reference or by value? And how does one tell?
>

I suposse yes. In the previous example:

```
PRO JUNK, var
  var = var * 5
END
```

And:

```
IDL> a = Ptr_New(5)
IDL> junk, *a
```

I like to understand pointers in IDL in this way:

1.- 'a' is a conventional variable managed by IDL and its "garbage collector".

2.- '*a' is a HEAP variable, where 'a' stores a reference to it. Also, the content of the variable 'a' is stored in the heap memory.

Then 'a' is a reference for a "normal" variable that stores a reference, and '*a' is a reference to a HEAP variable that stores a 5.

junk, *a --> The content of the HEAP memory variable is pased by value.

An then:

*a = *a * 5 is the same as b = b * 5

the diference is first is a HEAP variable and the second is a convential memory variable.

>
> Ken

Really, I have never question this until I saw your post. These are the good things of the net :)

--

Antonio Santiago Pï¿½rez
(email: santiago<<at>>grahi.upc.edu)
(www: http://www.grahi.upc.edu/santiago)
(www: http://asantiago.blogsite.org)

GRAHI - Grup de Recerca Aplicada en Hidrometeorologia
Universitat Politï¿½cnica de Catalunya
