Subject: Re: Question about using an array as an index
Posted by Thomas A. McGlynn on Wed, 26 Jun 1996 07:00:00 GMT
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David Schwab wrote:
>
> Can anyone explain why these two codes produce different results?
>
> IDL> a=[0,1,1,2,2,2]
> IDL> b=intarr(3)
> IDL> b(a)=b(a)+1
> IDL> print,b
> 1 1 1
> and
>
> IDL> a=[0,1,1,2,2,2]
> IDL> b=intarr(3)
> IDL> for i=0,5 do b(a(i))=b(a(i))+1
> IDL> print,b
> 1 2 3
>
> Thanks!
> --
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I've been caught by this one myself. Basically when you do the statment
 b(a)=b(a)+1
IDL acts as if all of the additions are being carried out in parallel,
not sequentially. I imagine that in cases where you are running on
a vectorizing system the operations are made parallel in fact. Since
the operations are parallel rather than sequential each of the additions
starts with b[a] = 0 so that the result is 1. I'd be interested in
comments as to whether the result is gauranteed to be 1 or if it's possible
that on some implementations it could differ. It would be nice to
get the kind of sequential behavior you're looking for (as an option)
but I imagine this is quite non-trivial and would probably slow down the
calculation to the rate it takes in explicit loops.

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