Subject: reversing calculation order
Posted by rclark on Mon, 24 Apr 1995 07:00:00 GMT

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I need to fill in some values for a vector from a recurrence relation.

V(0:N-1) = func(V(1:*)) ;I wish there was a shorthand for (*-1)

Where V(N) is the only value initially defined (Well actually it is
calculated from an ascending recurrence relation but the values of
V(0:N-1) from that step are of no further interest. The results of the
second recurrence are the ones returned.)

I know that ROTATE can be used to reverse the order of the vector for the
calculation, and then reverse them again to put it back in the right
order. But is it possible to eliminate these two reverse operations and do
the calculation in backwards direction? (no FOR loops, too slow!)

The vector is fairly short but this function will get called a lot.

Richard Clark
rclark@lpl.arizona.edu
--
Still working on the other 999 lines.

Subject: Re: reversing calculation order
Posted by Fergus Gallagher on Thu, 04 May 1995 07:00:00 GMT

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rclark@phantasos.lpl.arizona.edu (Richard Clark) wrote:
>
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>
> The vector is fairly short but this function will get called a lot.
>

Vector elements can be accessed with other vectors, e.g.,

```
IDL> x = fltarr(n)
IDL> i = n-1-indgen(n)

IDL> y = cumulative_sum(x(i))  ; made-function that is order dependent
IDL> z = y(i)                  ; reverse it again
```

As an additional point, any function enclosed in () becomes a vector, so
that the above could have been abbreviated to

```
IDL> y = (cumulative_sum(x(i)))(i)
```

Mind you, ROTATE is pretty fast.......

Fergus

```
==================================================
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==================================================
```

Subject: Re: reversing calculation order
Posted by amaravad on Fri, 05 May 1995 07:00:00 GMT

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Is there an IDLized way to compute the cummulative sum of an array.

```
func=findgen(N)
cumm_sum=fltarr(N)
for i=0,N-1 do cumm_sum(i)=total(func(0:i))
```

How can I eliminate the for loop in the above code.

thanks

ratty
--
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