Subject: Re: Matrix filling methods?

Posted by sjt on Fri, 19 Aug 1994 10:33:38 GMT

View Forum Message <> Reply to Message

Andy Nicholas (nicholas@dsuap1) wrote:
:
:   I'm trying to speed up some code and hence I am trying
:   to get rid of some FOR loops. I need to fill a 2-d square
:   matrix. The values above the diagonal are given by one
:   formula while those values below the diagonal are given
:   by another. this is how i currently fill the matrix:

:   for i=0,n-1 do begin
:   Matrix(i:*,i-1) = x(i-1)/x(k:*)
:   Matrix(i-1,i:*) = y(k:*)/y(k-1)
:   endfor
:   diag=findgen(n)
:   Matrix(diag,diag)=z(diag)

:   Does anyone know of a way to speed this up? Maybe a where to find the
:   matrix elements above the diagonal and one for below?
:   Any help is greatly appreciated,
:   Thanks,
:   Andy
:   nicholas.uap.nrl.navy.mil
:

This should be no problem provied you have enough memory for several
arrays of size n. Here is the way I'd do it:

l = lindgen(n,n)
lc = l mod n
lr = l / n

upper = lc gt lr
lower = lc lt lr

Matrix = fltarr(n,n)
matrix(upper) = ...
matrix(lower) = ...

If you need to include the diagonal then just replace gt or lt with ge or le

--
James Tappin, School of Physics & Space Research
  University of Birmingham
sjt@xun8.sr.bham.ac.uk

"If all else fails--read the instructions!"

```
 O__
-- V^
```