Subject: Re: a matrix whose some elements are matrixes
Posted by Paolo Grigis on Mon, 10 Jul 2006 09:12:30 GMT
View Forum Message <> Reply to Message

Here's a small example which should help you:

a=[[1,0],[0,1]]
b=[[2,2],[2,2]]

```
IDL> print,a
       1       0
       0       1
IDL> print,b
       2       2
       2       2
```

To have a matrix c=[[a,b],[b,a]] do:

c=intarr(4,4)

c[0,0]=a
c[0,2]=b
c[2,0]=b
c[2,2]=a

The output is:

```
IDL> print,c
       1       0       2       2
       0       1       2       2
       2       2       1       0
       2       2       0       1
```

The trick is to figure out where the upper left corners of the smaller matrices
fit into the larger matrix you want to build...

Ciao,
Paolo

haojuanchina@gmail.com wrote:
> I want obtain a matric whose some elements are matrixes, how to compile
> the program?
> example: Iwant to abtain the following matrix
> G I I I I I 0
> I G I 0 0 0 0
> I I G I 0 0 0

> I 0 I G I 0 0
> I 0 0 I G I 0
> I 0 0 0 I G I
> 0 0 0 0 0 I G
> in which I is an identity matrix,
> 1 0 0 0 0 0 0
> 0 1 0 0 0 0 0
> 0 0 1 0 0 0 0
> 0 0 0 1 0 0 0
> 0 0 0 0 1 0 0
> 0 0 0 0 0 1 0
> 0 0 0 0 0 0 1
> and G is a similar diagonal matrix:
> 1 -0.25 -0.25 -0.25 -0.25 -0.25 0
> -0.25 1 0 0 0 0 0
> -0.25 0 1 0 0 0 0
> -0.25 0 0 1 0 0 0
> -0.25 0 0 0 1 0 0
> -0.25 0 0 0 0 1 0
> 0 0 0 0 0 0 1
> I can compile the program of the matrix G:
> PRO Matrix
>
> diag =findgen(7)
> sub=findgen(6)
> super=findgen(6)
>
> diag[0:6]=1
> sub[0:5]=-0.25
> super[0:5]=-0.25
>
> G = DIAG_MATRIX(diag) + $
> DIAG_MATRIX(super, 1) + DIAG_MATRIX(sub, -1)
> G[0,1:5]=-0.25
> G[1:5,0]=-0.25
> print,G
>
> I= DIAG_MATRIX(diag[0:6]);*(-0.25)
> print,I
>
> END
>
> but how to get the first matrix in which include the matrix G and I ?
> Please give me a help!thanks.
>