
Subject: how to compile a matrix whose some elements are matrixes
Posted by haojuanchina@gmail.co on Fri, 14 Jul 2006 07:11:49 GMT

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Hello, everyone

I want obtain a matric whose some elements are matrixes, how to compile

the program?

example: I want to abtain the following matrix

```
G I 0 0 0 0 0  
I G I 0 0 0 0  
0 I G I 0 0 0  
0 0 I G I 0 0  
0 0 0 I G I 0  
0 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 2 0 0 0 0 0  
2 1 2 0 0 0 0  
0 2 1 2 0 0 0  
0 0 2 1 2 0 0  
0 0 0 2 1 2 0  
0 0 0 0 2 1 2  
0 0 0 0 0 2 1
```

I can compile the program of the matrix G and I:

PRO Matrix

```
diag =findgen(7)  
sub=findgen(6)  
super=findgen(6)
```

```
diag[0:6]=1  
sub[0:5]=2  
super[0:5]=2
```

```
G = DIAG_MATRIX(diag) + $  
DIAG_MATRIX(super, 1) + DIAG_MATRIX(sub, -1)  
G[0,1:5]=2
```

```
G[1:5,0]=2
```

```
print,G
```

```
I= identity(7)
```

```
print,I
```

```
END
```

but how to get the first matrix in which include the matrix G and I?

The difficulty is that I can not compile the diagonal elements (the smaller matrixes) of the larger matrix. How should I do?

Thanks!

Juan Hao
