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Subject: Re: a newbie question on code efficiency

Posted by [David Fanning](#) on Sat, 18 Aug 2001 03:47:47 GMT

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GB Smith (gogosgogos@usa.net) writes:

```
> i have a little challenge for you which i stumbled into..
> i tried to write a program which takes a 3d array,
> sets a cutoff at a certain level and then creates a mask
> of all values above that level. the mask has to be 1 and 0.
> i came up with this code, but could never get rid of the loop.
>
> any suggestions on how to get rid of the loop?
> i would prefer array operators for speed :)
>
> ;-----
>
> PRO MAKE_MASK
>
> a = dialog_pickfile()
> b = READ_BINARY(a, DATA_TYPE=1, DATA_DIMS=[160,256,256])
>
> b_dims = size(b)
> x_dim = b_dims[1]
> y_dim = b_dims[2]
> z_dim = b_dims[3]
>
> cutoff = 180
>
>
> e = b
>
> for i = 0, (x_dim-1) do begin
>   for j = 0, (y_dim-1) do begin
>     for k = 0, (z_dim-1) do begin
>
>       if e[i,j,k] lt cutoff then e[i,j,k]=0
>       if e[i,j,k] ge cutoff then e[i,j,k]=1
>
>     endfor
>   endfor
> endfor
>
> ; and so on to use the mask further in the program
>
>
> END
```

My goodness, an array operator question even I  
can handle! :-)

e = b GE cutoff

Cheers,

David

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