Subject: working of the '*' operator in IDL in the context of arrays and matrices
Posted by iqbal_hassan on Thu, 28 Aug 2003 16:27:07 GMT
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Hi Group Members,
I am working with IDL for some time. I have some doubts which are here:
I have this line of code:

A= (y1-y2)*weights#pder

where y1= one dimensional array of 'n' elements
y2= one dimensional array of 'n' elements
weights= one dimensional array of 'n' elemnts
pder= partial derivative matrix of order 4 by 'n'(4 rows 'n' columns)

Now how the multiplication of one dimensional array with a matrix is acieved. what I read from IDL documents is that first pder matrix is transposed then it is multiplied with the array. If that is the case then an 'n' element array is to be multiplied with 'n' by 4 matrix. but '#' operator needs the second matrix to have the same number of columns as the first matrix has number of rows.
So my doubt is how this condition is being achieved in the above line of code?

Another related doubt is:

B= transpose(pder)#(weights#(fltarr(m)+1)*pder)

'pder' and 'weights' are as defined above. now 'fltarr(m)' is an 'm' element array initialized to '1'. since '*' is higher in the operator precedence list so this 'm' elements one-dimensional array will be multiplied to 'pder' which is a '4 X n' matrix. so what will be resultant array or matrix like?

Please help me with this doubt. I am not able to understand how '*' operator works with matrix and arrays.

Looking forward to your response.
Thanking you,
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