Subject: Re: Very basic IDL vector question
Posted by Helder Marchetto on Tue, 03 May 2016 08:35:48 GMT
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On Tuesday, May 3, 2016 at 7:27:53 AM UTC+1, kubota wrote:
> I am trying to understand the operation of an IDL program. There are several lines using vectors which I do not understand.
>
> The first line is:
>
> fc = call_function(fun,xc)
>
> Here, xc is a vector.
>
> Is fc a scalar or vector, being that xc is a vector?
> If fc is a scalar, which element of xc is being used for the function calculation?
> If fc is a vector, does that mean that the vector fc is filled with all the function evaluations of the x values in xc?
>
> Thanks for any assistance.

Hi,
the call_function() function calls a function called with the name of your string (I suppose) "fun" and passes xc as a parameter. The return value of the function will be put into fc.

Consider these two functions:

```
function testTotal, arr
return, total(arr)
end

function testDouble, arr
return, arr*2
end
```

If you now call:

```
fun = 'testTotal'
xc = findgen(10)
fc = call_function(fun,xc)
```

then you will get a single value (scalar) in fc equal to the total of xc (in this case 45.0).
If you call:

```
fun = 'testDouble'
xc = findgen(10)
fc = call_function(fun,xc)
```

Then in fc you get an array:

```
IDL> print, fc
      0.000000       2.00000       4.00000       6.00000       8.00000       10.0000       12.0000       14.0000
  16.0000       18.0000
```

I hope it helps.

Cheers,
Helder
