
Subject: Re: Multiple values from a function?

Posted by [Martin Schultz](#) on Tue, 04 Jul 2000 07:00:00 GMT

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Simon de Vet wrote:

>
> I have a function that does a whole lot (it started out as an
> independent program). It works very well when returning one of it's
> calculated arrays.
>
> It also produces a number of other arrays which I'd like to have access
> to. Unfortunately, I have discovered that a function can only return
> one value.
>
> How can I get the other arrays out of it? The code is intertwined, so it
> would be hard to break into 2 or 3 independent functions.
>
> Concatenation of arrays is not an option, since they are all of
> different sizes. I can get around the problem by doing the calculation
> in the main level program instead of in a function, but that's a little
> awkward. Looking at the help, structures look like a possibility, but I
> don't understand how they work.
>
> Help!
>
> Simon

Second alternative: store all your results in a structure. Example:

```
function mything, in1, in2
```

```
    sum=in1+in2
```

```
    diff=in1-in2
```

```
    result = { sum:sum, diff:diff }
```

```
    return,result
```

```
end
```

You can then access the results as in:

```
thunder = mything(5.,20.)
```

```
print,'Sum is : ',thunder.sum,' Difference is : ',thunder.diff
```

One addition to Craig's answer: the parameter could also be a keyword,
e.g.

```
function mything, in, out=out
```

This is particularly recommended if you judge the output as optional.
In this case
you can use the `arg_present` function to determine whether output shall
be computed or not:

```
...
if arg_present(out) then begin
    ;; long-winded computation worth at least 3 trips to coffee maker
...
endif
```

Cheers,
Martin

```
--
[[ Dr. Martin Schultz  Max-Planck-Institut fuer Meteorologie  [[
[[      Bundesstr. 55, 20146 Hamburg      [[
[[      phone: +49 40 41173-308      [[
[[      fax:  +49 40 41173-298      [[
[[ martin.schultz@dkrz.de      [[
[[ Dr. Martin Schultz  Max-Planck-Institut fuer Meteorologie  [[
```
