Subject: Re: How to judge a Function's parameters ?
Posted by Paul Van Delst[1] on Thu, 07 May 2009 22:01:30 GMT
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Hu wrote:
> Hi,folks,
>
> I created a function 'RectArea' to calculate the rectangle area, and
> two parameters, side a and b, are needed when the function is
> employed.
>
> I want to do something like this: if a and b are omitted by the user,
> then the function will use the default values.
>
> But, How can I judge that the parameters are omitted?
>
> Thanks
>
> function RectArea,a,b
> return,a*b
> end

```
function RectArea,a,b
  if ( n_elements(a) eq 0 ) then a = 1 ; or whatever default value
  if ( n_elements(b) eq 0 ) then b = 1 ; or whatever default value
  return,a*b
end
```

Although, I would rather an error be thrown if required arguments are missing.

cheers,

paulv

Subject: Re: How to judge a Function's parameters ?
Posted by Michael Galloy on Thu, 07 May 2009 22:02:30 GMT
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Hu wrote:
> Hi,folks,
>
> I created a function 'RectArea' to calculate the rectangle area, and
> two parameters, side a and b, are needed when the function is
> employed.
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> I want to do something like this: if a and b are omitted by the user,
> then the function will use the default values.

>
> But, How can I judge that the parameters are omitted?
>
> Thanks
>
> function RectArea,a,b
> return,a*b
> end

Use N_ELEMENTS to determine if a particular parameter is omitted. I usually do something like the following:

```
function RectArea, a, b
  compile_opt strictarr

  _a = n_elements(a) eq 0L ? 1.0 : a
  _b = n_elements(a) eq 0L ? 1.0 : b

  return, _a * _b
end
```

I don't do:

```
  if (n_elements(a) eq 0L) then a = 1.0
```

because I don't want change an input variable from the user.

Mike
--
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Associate Research Scientist
Tech-X Corporation

Subject: Re: How to judge a Function's parameters ?
Posted by Paul Van Delst[1] on Thu, 07 May 2009 22:32:32 GMT
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mgalloy wrote:
> Hu wrote:
>> Hi,folks,
>>
>> I created a function 'RectArea' to calculate the rectangle area, and
>> two parameters, side a and b, are needed when the function is
>> employed.
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>> I want to do something like this: if a and b are omitted by the user,
>> then the function will use the default values.

>>
>> But, How can I judge that the parameters are omitted?
>>
>> Thanks
>>
>> function RectArea,a,b
>> return,a*b
>> end
>
> Use N_ELEMENTS to determine if a particular parameter is omitted. I
> usually do something like the following:
>
> function RectArea, a, b
> compile_opt strictarr
>
> _a = n_elements(a) eq 0L ? 1.0 : a
> _b = n_elements(a) eq 0L ? 1.0 : b
>
> return, _a * _b
> end
>
> I don't do:
>
> if (n_elements(a) eq 0L) then a = 1.0
>
> because I don't want change an input variable from the user.

Excellent point.

Being a Fortran programmer, I rely on the INTENT(IN) attribute for input-only dummy arguments in my Fortran code. I'm much lazier in my IDL dabblings.

To the OP: do what Mike says. :o)

cheers,

paulv
