
Subject: Re: Discover the name (at calling level) of passed parameter

Posted by [David Fanning](#) on Tue, 11 Feb 2003 14:15:12 GMT

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Kristian =?iso-8859-1?Q?Kj=E6r?= (Kristian.Kjaer@Risoe.DK) writes:

```
> I sometimes find myself wanting to know the name of a passed parameter:
> At the called procedure level I need to know the name that the parameter
> had at the calling level.
>
> The code below illustrates what I can_not_ do by simple means.
> Are there any dirty tricks I could employ to this end?
>
> Thanks for any pointers, Kristian
>
> ; ----- begin IDL code:
> pro test_par_name, p =
>
> help,p
> print,'The name of the passed parameter was ','?', and its value is
> ',p
> end
>
> ; ----- begin IDL command history:
> IDL> q=3D5D
> IDL> test_par_name,q
> P      DOUBLE  =3D      5.0000000
> The name of the passed parameter was ? and its value is      5.0000000
>
> ; ----- begin wish list:
> ; I'd like somehow to be able to get:
> Q      DOUBLE  =3D      5.0000000
> The name of the passed parameter was Q and its value is      5.0000000
```

Alright, here it is. But you didn't hear it from me. :-(

```
pro test_par_name, p
help,p
name = Routine_Names(p, Arg_Name=(-1))
print,'Name of passed parameter was ',name,' and its value is',p
end
```

You can find more information here:

http://www.dfanning.com/tips/access_main_vars.html

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Discover the name (at calling level) of passed parameter
Posted by [Kristian Kjaer](#) on Tue, 11 Feb 2003 15:00:41 GMT

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Brilliant!
Thanks, David and Craig.
- Kristian

```
; final example code:
pro test_par_name, p
name = Routine_Names(p, Arg_Name=(-1))
print ,helpform(name[0],p)
print , 'The name of the passed parameter was ',name[0], ' and its value
is ',p
end
```

David Fanning wrote:

```
> Alright, here it is. But you didn't hear it from me. :-(
>
>   pro test_par_name, p
>   help,p
>   name = Routine_Names(p, Arg_Name=(-1))
>   print , 'Name of passed parameter was ',name, ' and its value is',p
>   end
>
> You can find more information here:
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> (Kristian.Kjaer@Risoe.DK) writes:
>> I sometimes find myself wanting to know the name of a passed parameter:
>> At the called procedure level I need to know the name that the parameter
>> had at the calling level.
```

Subject: Re: Discover the name (at calling level) of passed parameter
Posted by [Pavel A. Romashkin](#) on Tue, 11 Feb 2003 16:20:52 GMT

I use the solution offered by David but I find that in any situation except debugging I can re-design my program to avoid this need. You never have to know the name of variable - only its contents. If you end up wanting the name, make it a structure with a Name field, I was told.

Cheers,
Pavel

Kristian Kjaer wrote:

- >
 - > I sometimes find myself wanting to know the name of a passed parameter:
 - > At the called procedure level I need to know the name that the parameter
 - > had at the calling level.
 - >
 - > The code below illustrates what I can_not_do by simple means.
 - > Are there any dirty tricks I could employ to this end?
 - >
 - > Thanks for any pointers, Kristian
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Subject: Re: Discover the name (at calling level) of passed parameter

Posted by [Mark Hadfield](#) on Tue, 11 Feb 2003 20:12:03 GMT

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news:3E48F599.E7B18502@Risoe.DK...

- > I sometimes find myself wanting to know the name of a passed
- > parameter: At the called procedure level I need to know the name
- > that the parameter had at the calling level.

Just curious: Why?

--

Mark Hadfield "Ka puwaha te tai nei, Hoesa tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: Discover the name (at calling level) of passed parameter

Posted by [Kristian Kjaer](#) on Wed, 12 Feb 2003 11:05:46 GMT

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Well, you asked for it:

<longish_explanation>

I particularly like the "I" of IDL.

I have a function ctasrd() that will read one of my data files and

return a structure containing the data.

```
IDL> a = ctasrd('dagq1234')
IDL> b = ctasrd('dagq1235')
IDL> c = ctasrd('dagq1236')
```

This will read the files 'dagq1234.dat' etc. and the resulting structures, stored in a, b and c, in fact contain a tag with the name and path of the data file (as Pavel suggests).

Now as I work with a,b,c, and many other data structures I'd have to either remember which was which, or, to remind myself, do

```
IDL> print,a.text[0]
```

I prefer

```
IDL> dagq1234 = ctasrd('dagq1234')
```

, except that here I have twice to type the name dagq1234 (that is meaningfull to me because the log book refers to it.)

But now I can change the syntax so I only need to type the name once:

```
IDL> tasget,dagq1234
```

Hooray!

I also like that IDL is command-based and I journal everything so that I can easily replay commands or extract a useful batch file (or the skeleton of a new procedure) from the journal file.

Other people like GUIs, and indeed, sometimes GUIs can replace complex typing.

I (almost) have a GUI, XsetP (widget programming by Frank Bringezu), and a command-line equivalent, SetP, that will create or modify a fit parameter structure as used by Craig Markwardt's Isfit machines mpfit.pro and mpfitfun.pro

Let's say p40 is a fit parameter structure that I want to modify before letting mpfitfun loose again.

```
IDL> XSetP ,p40 ; and click and type in the GUI
```

The trouble with the GUI is that the IDL log window and journal file will not reflect the changes made inside the GUI. If I want to do the same thing again the next day I have to click and type similarly in the GUI, and I don't have a record of what was done.

But now I can make it so that, on exit, XSetP echoes to the log window and to the journal file the equivalent command:

SetP ,ParName='PkHeight_0' ,Value=2500 ,/unFIXed ,p40 ; , say

, complete with the correct variable name (p40).

Hooray again!

</longish_explanation>

- Kristian

Mark Hadfield wrote:

> Just curious: Why?

> Kristian.Kjaer@Risoe.DK wrote in message

> news:3E48F599.E7B18502@Risoe.DK...

>> I sometimes find myself wanting to know the name of a passed

>> parameter: At the called procedure level I need to know the name

>> that the parameter had at the calling level.

Subject: Re: Discover the name (at calling level) of passed parameter

Posted by [Kristian Kjaer](#) on Wed, 12 Feb 2003 12:22:35 GMT

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Now what if I have a function instead of a procedure:

I don't suppose there is any hope with

IDL> p2=myfunction(p)

to discover, at myfunction's level, the name at the calling level
('p2'), of the variable where the function's returned value will end up?

I guess I need to convert the syntax to

IDL> p2=p & myprocedure,p ; or

IDL> myprocedure,p2,p

Or need I?

- Kristian

David Fanning wrote:

> Alright, here it is. But you didn't hear it from me. :-(

>

> pro test_par_name, p

> help,p

> name = Routine_Names(p, Arg_Name=(-1))

> print , 'Name of passed parameter was ', name, ' and its value is', p

```

> end
>
> You can find more information here:
>
> http://www.dfanning.com/tips/access_main_vars.html
>
> Cheers,
> David

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```

Subject: Re: Discover the name (at calling level) of passed parameter
 Posted by [Wim Bouwman](#) on Fri, 14 Feb 2003 06:56:19 GMT
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Hej Kristian,
 When I saw your question I knew imediately why you asked it. It brings back happy memories. Now I am again working along the same direction with my new measurements.

Kristian Kjaer wrote:

```
> IDL> a = ctasrd('dagq1234')
```

How are things going with you? I hope that you found a good place in the changing Risoe. I still meet so once in a while Jan Skov Pedersen and Kurt Clausen at conferences.

The work here is going very well. Last year we got the SESANS instrument working. We can now do SANS with particles up to a size of 2 micrometer. The results are in real space. It turns out to work well with concentrated systems.

A month ago we got our second child: Elias. He is doing well. He is easy, happy and tall. Rebekka, who has now four years finds it more difficult, even though she thinks he is very cute.

Mange hilsner til din familie,

Wim.

--

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