
Subject: Re: get variables name

Posted by [John-David T. Smith](#) on Wed, 05 Apr 2000 07:00:00 GMT

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"J.D. Smith" wrote:

>

> David Fanning wrote:

>>

>> R.Bauer (R.Bauer@fz-juelich.de) writes:

>>

>>> I like to know the name of a variable which is submitted as input to a
>>> procedure

>>>

>>> e.g

>>>

>>> pro test,var

>>> help,var

>>> end

>>>

>>> a=1

>>> test,a

>>>

>>> Is it possible to get inside test the information that test was called

>>> with a.

>>

>> My life is totally out of control at the moment, so I haven't

>> had the opportunity to write this up for my web page, but

>> here is part of a correspondence I recently received from

>> Paul Woodford, an IDL user, concerning the undocumented

>> ROUTINE_NAMES function:

>>

>> routine_names(variables=0) - variable names at current level

>> routine_names(variables=1) - variable names at main level

>> routine_names(variables=2) - variable names at one level down from main

>> routine_names(variables=-1) - variable names at one level up from current

>> routine_names(variables=-2) - variable names at two levels up from current

>>

>> But wait, that's not all... Take a look at how routine_names is used in

>> gethelp - you can use routine_names to actually fetch a variable from a

>> different level. For instance, if you have a variable named 'blah' one

>> level up from your current level, you can get it using

>>

>> blah_here = routine_names('blah', fetch=-1)

>>

> < wise cautionary matter clipped >

>

> But wait... that's still not all!

>

```

> By poking around in the library, I found:
>
> pro foo,a
>   print,routine_names(a,/ARG_NAME)
> end
>
> IDL> foo,x
> X
>
> pretty cool. And this is the coolest... I've been asking for this for years...
> easy to abuse, but oh so useful for sending variables to the command-line and
> widget program...
>
> Try this:
>
> pro foo,a
>   g=12
>   print,routine_names("gvar",g,STORE=1)
> end
>

```

By the way, I once (two years ago!) made the comment in this context:

"This presumably is the very reason Insight chooses to do real importing/exporting from the \$MAIN\$ level: it is attempting to be a general purpose analysis tool that is not tied to any one specific format of the data it deals with. As David, I also don't know the details of how Insight was written, but it is apparently written in IDL (and is restored from a save file). I am uncertain how they could achieve this flexibility without special built-in functions which they're not telling us about."

I took a look inside that .sav file, and what do I find??? "ROUTINE_NAMES", of course. Sometimes things just come together.

JD

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