Subject: Re: get variables name Posted by John-David T. Smith on Wed, 05 Apr 2000 07:00:00 GMT View Forum Message <> Reply to Message

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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'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
    q = 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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J.D. Smith |*| WORK: (607) 255-5842
Cornell University Dept. of Astronomy |*| (607) 255-6263
304 Space Sciences Bldg. |*| FAX: (607) 255-5875
Ithaca, NY 14853 |*|
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