Subject: Moving back a level...
Posted by Tdogg on Tue, 22 Feb 2005 20:17:47 GMT
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Hi there folks,

I've come here for a quick where-can-I-find type of question. If you
have more to add, well, that'd be swell. I'm at a telescope and am so
wrapped up with observing I figured some of you guys could save me a
few minutes by steering me in the right direction.

Here goes. If I put a STOP in a subroutine (or if I've encountered an
error and I'm stuck inside one) and I'd like to see what the variables
look like in the calling routine using HELP, is there any way to move
back to the calling routine but remain "stopped"? I can get back to
the calling routine by entering a return (sometimes I need a few
.skip's) but then it's off and running. This all sounds like I should
learn to make use of some type of debugging software associated with
IDL but I've never looked into any such thing. Any advice on where to
start would be hugely, hugely appreciated.

Best -Tim.

Subject: Re: Moving back a level...
Posted by Foldy Lajos on Tue, 22 Feb 2005 20:30:25 GMT
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Hi,

help, level=-1

regards,
lajos

On Tue, 22 Feb 2005, Tdogg wrote:

> Hi there folks,
>
> I've come here for a quick where-can-I-find type of question. If you
> have more to add, well, that'd be swell. I'm at a telescope and am so
> wrapped up with observing I figured some of you guys could save me a
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> .skip's) but then it's off and running. This all sounds like I should
> learn to make use of some type of debugging software associated with
> IDL but I've never looked into any such thing. Any advice on where to
> start would be hugely, hugely appreciated.
>
> Best -Tim.
>
>

Subject: Re: Moving back a level...
Posted by David Fanning on Tue, 22 Feb 2005 20:31:12 GMT
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Tdogg writes:

> Any advice on where to
> start would be hugely, hugely appreciated.

Well, you could start on this newsgroup. I think we just
answered this question yesterday. :-)

Try searching the newsgroup archives with the keywords
"stop subroutine" and look for a Feb 21st date. You should
find something.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Moving back a level...
Posted by David Fanning on Tue, 22 Feb 2005 20:34:43 GMT
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=?ISO-8859-2?Q?F=F6ldy_Lajos?= writes:

> help, level=-1

Well, clearly there is confusion about what Tim is asking

for. *What* are you trying to do, Tim?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Moving back a level...
Posted by Ben Panter on Tue, 22 Feb 2005 20:48:37 GMT
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Hi Tim,

> Here goes. If I put a STOP in a subroutine (or if I've encountered an
> error and I'm stuck inside one) and I'd like to see what the variables
> look like in the calling routine using HELP, is there any way to move
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> .skip's) but then it's off and running. This all sounds like I should
> learn to make use of some type of debugging software associated with
> IDL but I've never looked into any such thing. Any advice on where to
> start would be hugely, hugely appreciated.

I have an answer to a question that you might be asking, but I'm not
entirely sure if I understand you!

My answer would be to fire up idlde instead of idl, and run your code.
Then there are a few buttons at the top which allow you to move up and
down the calling stack from where you stopped. The variable watch area
then changes to the variables in that level.

Access to the variable watch window is one thing that I miss when I use
idlwave...

Ben

Subject: Re: Moving back a level...
Posted by Benjamin Hornberger on Tue, 22 Feb 2005 23:07:12 GMT
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Tdogg wrote:

> Hi there folks,
>
> I've come here for a quick where-can-I-find type of question. If you
> have more to add, well, that'd be swell. I'm at a telescope and am so
> wrapped up with observing I figured some of you guys could save me a
> few minutes by steering me in the right direction.
>
> Here goes. If I put a STOP in a subroutine (or if I've encountered an
> error and I'm stuck inside one) and I'd like to see what the variables
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> the calling routine by entering a return (sometimes I need a few
> .skip's) but then it's off and running. This all sounds like I should
> learn to make use of some type of debugging software associated with
> IDL but I've never looked into any such thing. Any advice on where to
> start would be hugely, hugely appreciated.
>
> Best -Tim.
>

If I understand right, what you need is one of these:

.return
.out

Benjamin

Subject: Re: Moving back a level...
Posted by Tdogg on Wed, 23 Feb 2005 00:41:00 GMT
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Benjamin Hornberger wrote:
> If I understand right, what you need is one of these:
>
> .return
> .out

Hey, wow, thanks a bunch Benjamain! .out is PRECISELY what I needed.
I have no idea how it is that I'd never learned about this.

Foldy wrote:
> help, level=-1

This keyword is new to me too, and damn useful. Thanks a bunch.

David Fanning wrote:
> Well, you could start on this newsgroup. I think we just

> answered this question yesterday. :-)

Thanks for the pointer, David. Weird thing is, I had just finished
perusing that thread this morning (I mean, How To Rerun Subroutine
ain't exactly what I was looking for, but it seemed interesting to see
what the reponses would be) but I didn't really make it past your
authoritative reply: "No." Who knew you'd have to waste keystrokes
explaining where to find an answer-in-waiting because your conservative
response suggested I needn't bother looking on? Might be a karma
thing. At any rate, thanks for pointing me there. I love to find
these new things that I wish I'd known about years ago.

Thanks everybody. -Tim.

Subject: Re: Moving back a level...
Posted by Benjamin Hornberger on Wed, 23 Feb 2005 00:53:41 GMT
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Tdogg wrote:
> Benjamin Hornberger wrote:
>
>> If I understand right, what you need is one of these:
>>
>> .return
>> .out
>
>
> Hey, wow, thanks a bunch Benjamain! .out is PRECISELY what I needed.
> I have no idea how it is that I'd never learned about this.
>

I think I know why you never learned about this. In general, if you look
up the reference for something in the IDL help, links to all related
functions and procedures are given at the bottom.

But have a look at the documentation (reference) for .step, .continue,
.return, .out etc. No hint whatsoever about the other ones. I just
stumbled over it by chance.

Benjamin

Subject: Re: Moving back a level...
Posted by mperrin+news on Wed, 23 Feb 2005 04:21:04 GMT
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Hey there Tim!

Tdogg <timrobishaw@yahoo.com> wrote:
> Here goes. If I put a STOP in a subroutine (or if I've encountered an
> error and I'm stuck inside one) and I'd like to see what the variables
> look like in the calling routine using HELP, is there any way to move
> back to the calling routine but remain "stopped"? I can get back to
> the calling routine by entering a return (sometimes I need a few
> .skip's) but then it's off and running. This all sounds like I should
> learn to make use of some type of debugging software associated with
> IDL but I've never looked into any such thing. Any advice on where to
> start would be hugely, hugely appreciated.

You want Craig Markwardt's DXDEBUG package:

http://cow.physics.wisc.edu/~craigm/idl/idl.html

The 'dxfinish' routine does exactly what you want. It sets a breakpoint right
after the current function returns to the calling routine, so as soon as you
return, it stops again rather than running off.

This routine, plus dxup, dxhelp and dxget, have completely revolutionized how
I debug IDL programs. It's as good as crack, man. ;-)

 - Marshall

Subject: Re: Moving back a level...
Posted by Craig Markwardt on Wed, 23 Feb 2005 14:06:22 GMT
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mperrin+news@cymric.berkeley.edu (Marshall Perrin) writes:
...
> You want Craig Markwardt's DXDEBUG package:
...
> This routine, plus dxup, dxhelp and dxget, have completely revolutionized how
> I debug IDL programs. It's as good as crack, man. ;-)

Umm, thanks, I guess. :-)

Craig

--
 -- --------------
Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
 -- --------------

Subject: Re: Moving back a level...
Posted by mperrin+news on Wed, 23 Feb 2005 18:27:26 GMT

Craig Markwardt <craigmnet@REMOVEcow.physics.wisc.edu> wrote:
>
> mperrin+news@cymric.berkeley.edu (Marshall Perrin) writes:
> ...
>> You want Craig Markwardt's DXDEBUG package:
> ...
>> This routine, plus dxup, dxhelp and dxget, have completely revolutionized how
>> I debug IDL programs. It's as good as crack, man. ;-)
>
> Umm, thanks, I guess. :-)

Hey, after four years living in Oakland, is it any surprise that a little
local color has slipped into my speech? ;-)

 - Marshall

Subject: Re: Moving back a level...
Posted by Tdogg on Wed, 23 Feb 2005 18:31:21 GMT

Well, in that case, Craig should start chargin!

Craig Markwardt wrote:
> mperrin+news@cymric.berkeley.edu (Marshall Perrin) writes:
> ...
>> You want Craig Markwardt's DXDEBUG package:
> ...
>> This routine, plus dxup, dxhelp and dxget, have completely
revolutionized how
>> I debug IDL programs. It's as good as crack, man. ;-)
>
> Umm, thanks, I guess. :-)
>
> Craig

Subject: Re: Moving back a level...
Posted by savoie on Wed, 23 Feb 2005 20:03:04 GMT

"Tdogg" <timrobishaw@yahoo.com> writes:

> Well, in that case, Craig should start chargin!

I think you're supposed to give it away for a while first, so you get hooked.

--
Matthew Savoie - Scientific Programmer
National Snow and Ice Data Center
(303) 735-0785   http://nsidc.org

Subject: Re: Moving back a level...
Posted by JD Smith on Thu, 24 Feb 2005 01:55:51 GMT
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On Tue, 22 Feb 2005 21:48:37 +0100, Ben Panter wrote:

> Hi Tim,
>
>> Here goes. If I put a STOP in a subroutine (or if I've encountered an
>> error and I'm stuck inside one) and I'd like to see what the variables
>> look like in the calling routine using HELP, is there any way to move
>> back to the calling routine but remain "stopped"? I can get back to
>> the calling routine by entering a return (sometimes I need a few
>> .skip's) but then it's off and running. This all sounds like I should
>> learn to make use of some type of debugging software associated with
>> IDL but I've never looked into any such thing. Any advice on where to
>> start would be hugely, hugely appreciated.
>
> I have an answer to a question that you might be asking, but I'm not
> entirely sure if I understand you!
>
> My answer would be to fire up idlde instead of idl, and run your code.
> Then there are a few buttons at the top which allow you to move up and
> down the calling stack from where you stopped. The variable watch area
> then changes to the variables in that level.
>
> Access to the variable watch window is one thing that I miss when I use
> idlwave...

Well, you shouldn't miss it, because IDLWAVE can traverse the calling
stack quite easily when you're stopped (at a breakpoint, error, etc.).

By default C-C C-d C-Up and Down will move you anywhere up and down
the stack, and you'll see your location in the minibar: [0:MyPro],
[-1:CallingPro] etc. As you navigate the stack, IDLWAVE brings you to
the exact line of source code through which the stack threads. Then
you can use the examine commands (a fun one is C-S-middle-click) which
will let you see variables at any place in the stack.

Suppose you do a lot of widget programming, and you'd like, at a
click, to know if a widget id is valid any longer. Just
C-S-middle-click it and select "Widget Valid" from the examine menu.
And the sky's the limit for your own custom examine commands: just
customize Idlwave Shell Command Setup->Idlwave Shell Examine Alist,
and make up your own crazy examine commands, like:

 IsOdd
 print,___ & 1L?"Odd":"Even"

If you have electric debug mode active (which happens by default on
breakpoints, and can be enabled on errors as well), all these features
are a single keystroke away. And you're not limited to examining
single variables: you can examine arbitrary expressions, function
results, essentially anything that IDL can evaluate.

I use this all the time when a routine stops at an error. Examine a
few variables in the current routine to see that all is well, and then
jump up the stack one level, examine some variables there to see if
the inputs were kosher, etc. A real time saver.

JD

Subject: Re: Moving back a level...
Posted by Craig Markwardt on Thu, 24 Feb 2005 02:51:05 GMT
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savoie@nsidc.org writes:

> "Tdogg" <timrobishaw@yahoo.com> writes:
>
>> Well, in that case, Craig should start chargin!
>
> I think you're supposed to give it away for a while first, so you get hooked.

Exactly. Now watch while I magically disable all copies of MPFIT
until my 1 million dollar license fee is paid.

(Evil) Craig

--
 --- --------------
Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
 --- --------------

Subject: Re: Moving back a level...
Posted by Ben Panter on Thu, 24 Feb 2005 09:45:22 GMT
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JD Smith wrote:

>> Access to the variable watch window is one thing that I miss when I use
>> idlwave...
>
>
> Well, you shouldn't miss it, because IDLWAVE can traverse the calling
> stack quite easily when you're stopped (at a breakpoint, error, etc.).

The things you learn!

Thanks JD.

  Ben
--
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
  Ben Panter, Garching, Germany
  email via www.benpanter.co.uk