Subject: Debugging overload
Posted by Fabzi on Fri, 16 May 2014 15:20:43 GMT
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Hi again,

I'll continue my whishlist with something more important. Consider the following program I'd like to debug:

```
pro debugging_overload

   h = hash('key', INDGEN(10))

   a = mean(h['key']) ; Put a breakpoint here

end
```

With the breakpoint, the program stops and I usually tip F5 (shortcut for "step-into" in the debugger). Due to the operator overloading, the "step into" is now requiring 31 (!) clicks:

```
IDL> debugging_overload
% Breakpoint at: DEBUGGING_OVERLOAD    5
% Stepped to: HASH::_OVERLOADBRACKETSRIGHTSIDE
% Stepped to: HASH::_OVERLOADBRACKETSRIGHTSIDE
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% Stepped to: HASH::GET
```

% Stepped to: HASH::GET
% Stepped to: HASH::GET
% Stepped to: HASH::GET
% Stepped to: HASH::GET
% Stepped to: HASH::_OVERLOADBRACKETSRIGHTSIDE
% Stepped to: MEAN 55
/usr/local/idlenvi/idlenvi83/idl83/lib/mean.pro

Anyone else having this issue?

Cheers,

Fabien

Subject: Re: Debugging overload
Posted by Jim Pendleton on Fri, 16 May 2014 19:44:16 GMT
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Ask to have HASH and LIST implemented at the C level instead of .pro code or to have the debugger know how to step over "special" class methods autmatically. (I need more votes for either of these!) Contact support@exelisvis.com with your vote.

Jim P.

Subject: Re: Debugging overload
Posted by chris_torrence@NOSPAM on Fri, 16 May 2014 21:58:12 GMT
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On Friday, May 16, 2014 9:20:43 AM UTC-6, Fabien wrote:
> Hi again,
>
>
>
> I'll continue my whishlist with something more important. Consider the
>
> following program I'd like to debug:
>
>
>
> pro debugging_overload
>
>
>
> h = hash('key', INDGEN(10))
>

>
>
>   a = mean(h['key']) ; Put a breakpoint here
>
>
>
> end
>
>
>
> With the breakpoint, the program stops and I usually tip F5 (shortcut
>
> for "step-into" in the debugger). Due to the operator overloading, the
>
> "step into" is now requiring 31 (!) clicks:
>
>

Can't you just do F6 or hit the Step Over button instead? Other than the fact that you can't see the pro code, I don't see much difference between this and stepping into something like "dist.pro". Also, even if you do accidentally step into a save file, you can hit F7 (Step Out) to immediately get back out.

Finally, in IDL 8.3.1 we are going to report line numbers for save files. This doesn't do you any good in this case (since you don't have the pro code) but for your own save files you might actually want to step through them as a save file but see the line numbers.

Cheers,
Chris

Subject: Re: Debugging overload
Posted by Michael Galloy on Sat, 17 May 2014 00:19:33 GMT
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On 5/16/14, 3:58 PM, Chris Torrence wrote:
> Can't you just do F6 or hit the Step Over button instead? Other than
> the fact that you can't see the pro code, I don't see much difference
> between this and stepping into something like "dist.pro". Also, even
> if you do accidentally step into a save file, you can hit F7 (Step
> Out) to immediately get back out.
>
> Finally, in IDL 8.3.1 we are going to report line numbers for save
> files. This doesn't do you any good in this case (since you don't
> have the pro code) but for your own save files you might actually
> want to step through them as a save file but see the line numbers.

So you are associating line numbers with byte code? What about a line

profiler? i.e., time spent on particular lines of code instead of just
in routines.

Mike
--
Michael Galloy
www.michaelgalloy.com
Modern IDL: A Guide to IDL Programming (http://modernidl.idldev.com)
Research Mathematician
Tech-X Corporation

Subject: Re: Debugging overload
Posted by Fabzi on Sat, 17 May 2014 08:54:28 GMT
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Hi Chris,

On 16.05.2014 23:58, Chris Torrence wrote:
> Can't you just do F6 or hit the Step Over button instead?

well I made an example with the IDL function "mean" but often when I
debug code I might want to step into the function I call to see if it's
responsible of the problem.

```
function debugging_overload_mean, array
   return, mean(array)
end

pro debugging_overload
   h = hash('key', INDGEN(10))
   a = debugging_overload_mean(h['key']) ; breakpoint
end
```

Both F6 and F7 won't allow me to "follow" the content of the hash into
the function. I guess that's what the "step-into" button is made for ;)

Thanks,

Fabien
