
Subject: Re: how to rerun subroutine only?

Posted by [David Fanning](#) on Mon, 21 Feb 2005 20:22:24 GMT

[View Forum Message](#) <> [Reply to Message](#)

u2s5thmember@yahoo.com writes:

> this is probably a beginner question, so I appreciate your patience:
>
> Suppose I compile & run a top level program, then it enters a
> subroutine. Then suppose I want the code to stop somewhere in the
> subroutine so I can plot variables or check on/plot the results of a
> calculation... or say the subroutine encounters an error. then I might
> change something in the subroutine and need to rerun the subroutine.
>
> right now I recompile the subroutine then rerun the entire code
> starting from the beginning of the toplevel program, when all I really
> need to do is have idl redo the calculations from the beginning of the
> subroutine.
>
> is there a way to do this?

No. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: how to rerun subroutine only?

Posted by [Michael Wallace](#) on Mon, 21 Feb 2005 20:57:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

>> this is probably a beginner question, so I appreciate your patience:
>>
>> Suppose I compile & run a top level program, then it enters a
>> subroutine. Then suppose I want the code to stop somewhere in the
>> subroutine so I can plot variables or check on/plot the results of a
>> calculation... or say the subroutine encounters an error. then I might
>> change something in the subroutine and need to rerun the subroutine.
>>
>> right now I recompile the subroutine then rerun the entire code
>> starting from the beginning of the toplevel program, when all I really
>> need to do is have idl redo the calculations from the beginning of the

```
>> subroutine.  
>>  
>> is there a way to do this?  
>  
>  
> No. :-)  
>
```

Short and sweet response there, David. While correct, I believe it can be expanded just a tad. :-)

If you want your code to stop running, use the 'stop' procedure. When your code encounters a stop, it will immediately stop executing and you'll be left in interactive mode. You can put the stop within a catch block of the subroutine you're working on and whenever an error is encountered the program will stop and you'll be able to look at variables, run other commands, etc. Just make sure to remove the stop before distributing your program.

If you want to redo calculations of the subroutine only, you'll need to break the subroutine out into it's own file. I don't know if anyone else does this, but I will usually first write subroutines in their own files just so I can easily test. Once tested somewhat, I'll move the subroutine to the proper location within the file where the subroutine actually belongs.

-Mike

Subject: Re: how to rerun subroutine only?
Posted by [kashyap](#) on Mon, 21 Feb 2005 21:32:51 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <1109014029.766542.641110@g14g2000cwa.googlegroups.com>, <u2s5thmember@yahoo.com> wrote:

```
> this is probably a beginner question, so I appreciate your patience:  
>  
> Suppose I compile & run a top level program, then it enters a  
> subroutine. Then suppose I want the code to stop somewhere in the  
> subroutine so I can plot variables or check on/plot the results of a  
> calculation... or say the subroutine encounters an error. then I might  
> change something in the subroutine and need to rerun the subroutine.  
>  
> right now I recompile the subroutine then rerun the entire code  
> starting from the beginning of the toplevel program, when all I really  
> need to do is have idl redo the calculations from the beginning of the  
> subroutine.  
>
```

> is there a way to do this?
>
> thanks in advance for your time!

Depends..

There is no way to move flow control to the beginning of the program (that I know of), but if simple debugging is all you want to do, then yes.

First get out of the subroutine with a ".out" or a "return" or a "return,-1", then recompile that subroutine (if it is in a separate file; this won't work if subroutine is in the same file as the main program), and simply call it with the same calling sequence as you did in the main program. Make sure you feed it the right variables in the parameters, because they may have changed in value or property in the interim.

Vinay

--

kashyap@head.cfa.harvard.edu

617 495 7173 [CfA/P-145] 617 496 7173 [F]

Subject: Re: how to rerun subroutine only?

Posted by [u2s5thmember](#) on Mon, 21 Feb 2005 22:52:39 GMT

[View Forum Message](#) <> [Reply to Message](#)

Your idea helped me figure out exactly what I was looking for! This allows me to reduce the time for this subroutine to recalculate some equations by 99.8%! I would have the subroutine as its own file, but the main program and all its prior subroutines generate the arrays used by the subroutine in question. I knew there had to be a way to do this more efficiently - THANKS!

Vinay L. Kashyap wrote:

> Depends..
>
> There is no way to move flow control to the beginning of the
> program (that I know of), but if simple debugging is all you
> want to do, then yes.
>
> First get out of the subroutine with a ".out" or a "return" or
> a "return,-1", then recompile that subroutine (if it is in a
> separate file; this won't work if subroutine is in the same file
> as the main program), and simply call it with the same calling
> sequence as you did in the main program. Make sure you feed it

> the right variables in the parameters, because they may have
> changed in value or property in the interim.
>
> Vinay
> --
>

> kashyap@head.cfa.harvard.edu 617 495 7173 [CfA/P-145] 617 496
7173 [F]
