
Subject: Re: Passing variables between procedures
Posted by [Craig Markwardt](#) on Sat, 07 Jul 2012 03:42:48 GMT
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On Friday, July 6, 2012 5:43:30 PM UTC-4, Thesource007 wrote:

> Hi all.
> This is my problem. I have two IDL procedures
> hr2altaz, hour, dec, alt, az -- which takes the HA and DEC and
> converts it to ALT and AZ
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> What I need to do, is to begin with a certain HA and DEC, execute
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> outputs to execute altaz2hr, which will convert themj back to HA and
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> The purpose being to compare the initial HA, DEC to the final (after
> 100 reps) HA, DEC.
> Is there a simple way to do this? Or I just have to use an input file
> and loops?

Applying the function and its inverse: yes, just use a loop. The overhead of executing a loop 100 times is minimal.

"An input file" : that's up to you. But you can always read your values into an array once at the beginning.

Craig

Subject: Re: Passing variables between procedures
Posted by [Thesource007](#) on Sat, 07 Jul 2012 04:28:47 GMT
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On Friday, July 6, 2012 8:42:48 PM UTC-7, Craig Markwardt wrote:

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Ok. But now the question is... how do I "transfer" the output of one procedure to be the input of the
other? I don't have a clue of how to do that.
Thank you

Subject: Re: Passing variables between procedures
Posted by [Michael Galloy](#) on Mon, 09 Jul 2012 17:36:00 GMT
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On 7/6/12 10:28 PM, Thesource007 wrote:

> On Friday, July 6, 2012 8:42:48 PM UTC-7, Craig Markwardt wrote:
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From what I understand, you just need to do this:

```
for i = 0, 99 do begin
  hr2altaz, orig_hour, orig_dec, alt, az
  altaz2hr, hour, dec, alt, az
; compare orig_hour/orig_dec to hour/dec
endfor
```

IDL passes "named variables" like orig_hour, orig_dec, etc. by reference, meaning changes to them inside the routine are passed out of the routine. So when alt/az are modified in hr2altaz, the new values are passed into altaz2hr.

On the other hand, expressions like orig_hour[*], alt[0], my_struct.x, etc. are passed by value and modifications to them inside a routine are only local to that routine.

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Research Mathematician

Tech-X Corporation

Subject: Re: Passing variables between procedures
Posted by [Thesource007](#) on Tue, 10 Jul 2012 16:13:14 GMT
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On Monday, July 9, 2012 7:36:00 AM UTC-10, Mike Galloy wrote:

> On 7/6/12 10:28 PM, Thesource007 wrote:
> > On Friday, July 6, 2012 8:42:48 PM UTC-7, Craig Markwardt wrote:
> >> On Friday, July 6, 2012 5:43:30 PM UTC-4, Thesource007 wrote:
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 > Michael Galloy
 > www.michaelgalloy.com
 > Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)
 > Research Mathematician
 > Tech-X Corporation

Thank you for your response. But now I have a question.
 How would I input the firts HA and DEC, and where should I write the code? Should be a new
 procedure?

What I did was to create a new procedure like this

```
pro doarun, hour, dec
for i = 0, 99 do begin
    hr2altaz, hour, dec, alt, az
    altaz2hr, hour, dec, alt, az
endfor
END
```

It seems to work, but I have some problems.

The numbers used to change a bit. Something like the original inputs would be dorun, 18.5666, -16.7313

and the last hour and dec(after 100 reps) would be 18.566597 & -16.730573. Good.

Now what I wanted to do is to minimize this change, so I changed my codes to calculate in double precision. Now, for every hour, dec, alt, az, they just repeat 100 times, without any change. I dont know if this is suppose to happen, or maybe every time the loop runs, it takes my initial inputs again and again, which I dont think so because the numbers used to change (they were FLOAT before, now they are DOUBLE). Could you tell me if what I did was correct? I mean, I wanted to minimize the difference between the original inputs and outputs, but now they dont change at all. I dont know if I fixed it or I just messed it up.

Thank you for your help

Subject: Re: Passing variables between procedures
Posted by [Michael Galloy](#) on Tue, 10 Jul 2012 17:47:25 GMT
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On 7/10/12 10:13 AM, Thesource007 wrote:

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If you are doing it as above, the results of the last calculation are used for the next -- they are not getting reset to the original values. Of course, it's hard to vouch for them without seeing the entire code, but since they were changing with float arrays, I would say it is highly likely you are doing it right now.

Mike

--

Michael Galloy

www.michaelgalloy.com

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Research Mathematician

Tech-X Corporation

Subject: Re: Passing variables between procedures
Posted by [Thesource007](#) on Wed, 11 Jul 2012 04:09:46 GMT
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I think is working ok then.
