Subject: Re: IDL 8.0 questions
Posted by Mike Potter on Sun, 25 Jul 2010 06:07:52 GMT
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On Jul 24, 7:24 pm, Paulo Penteado <pp.pente...@gmail.com> wrote:
> On Jul 24, 1:18 pm, Mike Potter <m...@orionsound.com> wrote:
>
>
>
>
>
>> 1) I'm trying out the new "foreach" capability. The top loop, below,
>> works, the bottom one does not.
>
>> for i=0,nf-1 do begin
>> qfile = file_names[i]
>> image = readfits( qfile )
>> sky,image,sky,sky_sig,/silent
>> q = dialog_message( "Sky = "+string(sky)+" Sigma =
>> "+string(sky_sig) ,/information )
>> endfor
>
>> foreach qfile, file_names do begin
>> image = readfits( qfile )
>> sky,image,sky_mod,sky_sig,/silent
>> q = dialog_message( "Sky = "+string(sky_mod)+" Sigma =
>> "+string(sky_sig) ,/information )
>> endforeach
>
>> After running the bottom loop, the first time readfits is called it
>> crashes and the input "qfile" has been changed and either contains two
>> characters equal to the final two characters of what qfile was on
>> input, or it returns a short string of garbage characters.
>> (file_names is a string array of filenames returned by
>> dialog_pickfile).
>
> I do not see why the second loop should not work the same as the
> first. I can only suggest to check the values in file_names before
> running each loop, or during the foreach loop, to make sure they are
> actually the same.- Hide quoted text -
>
> - Show quoted text -

Well, there's definitely something odd going on. Basically as long as there is a "foreach" loop in the code some very strange things happen. It may be some interaction with the AstroLib function READFITS - I have the latest version downloaded just a couple of days ago - shows last update as 7/16/2010. Note, though, I get similar

behavior using "FITS_READ" instead.  It really seems to be an issue
with "FOREACH" loops.

Anyway, here's what happens:

I run the following code - selecting a group of 5 FITS files...

```
pro test_foreach,dummy
compile_opt IDL2

file_names = dialog_pickfile(filter="*.fit", path="E:\AstroData", /
read, /multiple_files )

print," "
for i=0,n_elements(file_names)-1 do begin
  qfile = file_names[i]
  print,strlen(qfile)
  help,qfile
  qim = readfits( qfile )
  print,strlen(qfile)
  help,qfile
endfor
end
```

All is well - here's the output:

```
IDL> test_foreach
% Compiled module: TEST_FOREACH.
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-045.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-045.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-041.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-041.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
```

```
\CR_Boo-042.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-042.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-043.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-043.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-044.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-044.fit'

IDL>
```

But - if I put in a "foreach" loop following the "for - next" loop:

```
pro test_foreach,dummy
compile_opt IDL2

file_names = dialog_pickfile(filter="*.fit", path="E:\AstroData", /
read, /multiple_files )

print," "
for i=0,n_elements(file_names)-1 do begin
  qfile = file_names[i]
  print,strlen(qfile)
  help,qfile
  qim = readfits( qfile )
  print,strlen(qfile)
  help,qfile
  print," "
endfor

foreach qfile, file_names do begin
  qim = readfits( qfile )
endforeach
```

```
end


I get the following output:

IDL> test_foreach
% Compiled module: TEST_FOREACH.

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-045.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-045.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-041.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-041.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-042.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-042.fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-043.fit'
% READFITS: Now reading 512 by 512 array
        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-043.fit'

        41
QFILE           STRING    = '8 unsigned int, 16 & 32 int, -32 & -64
re'
% READFITS:  ERROR - Unable to locate file 8 unsigned int, 16 & 32
int, -32 & -64 re
        41
QFILE           STRING    = '8 unsigned int, 16 & 32 int, -32 & -64
re'
```

% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file re

A couple of things to note:

1) the final time through the first loop filenames get corrupted somehow - and the string that results is actually some of the code from "readfits.pro".

2) If I re-compile the exact same code for "test_foreach" I can get different results -

IDL> test_foreach
% Compiled module: TEST_FOREACH.

       41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-045.fit'
% READFITS:  ERROR - Unable to locate file fit
       41
QFILE           STRING    = 'fit'

       41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-041.fit'
% READFITS:  ERROR - Unable to locate file fit
       41
QFILE           STRING    = 'fit'

       41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-042.fit'
% READFITS:  ERROR - Unable to locate file fit
       41
QFILE           STRING    = 'fit'

       41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-043.fit'
% READFITS:  ERROR - Unable to locate file fit
       41

```
QFILE           STRING    = 'fit'

        41
QFILE           STRING    = 'E:\AstroData\2010_03_0809B
\CR_Boo-044.fit'
% READFITS:  ERROR - Unable to locate file fit
        41
QFILE           STRING    = 'fit'

% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
% READFITS:  ERROR - Unable to locate file it
```

And - in this case, note that in the "FOR" loop, the "help,qfile" line returns:

```
QFILE           STRING    = 'fit'
```

despite the fact that the line before that, "print,strlen(qfile)", insists the string length is 41 characters.

Sorry this is such a long post - I guess maybe I should send this to ITT VIS support? While editing I'm also getting frequent "freezes" of the IDLDE and must use the task manager in windows to exit idl - or the IDLDE just vanishes when I hit "compile". Is there any help in the help files describing the IDLDE?

Thanks again for any insight..

Mike Potter

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