
Subject: Read several files into one big data array?
Posted by [lucsmm](#) on Wed, 22 Oct 2014 20:57:10 GMT
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I have tons of data files in the same folder. They are named correctly with the last 5 digits representing the order

Example

FILE_00001.dat

FILE_00002.dat

....

Within this files I have data formatted like this, The length of the data varies from file to file

seconds Time data1 data2

189 00:03:09 111.20 770.62

3785 01:03:05 200.15 255.66

7345 02:02:25 198.83 779.16

10983 03:03:03 200.01 555.55

#Comments

#Comments

#Comments

I want to read all the files and storage the data in the following format

data=[

00001 4189 00:03:09 111.20 770.62

00001 3785 01:03:05 200.15 255.66

00001 745 02:02:25 198.83 779.16

00001 10983 03:03:03 200.01 555.55

00002 532 02:56:00 888.01 998.20

00002 200 23:59:52 222.00 000.10

....]

So this is what I have so far. But I am stock with getting the data from the title
PRO

files = file_search('\folder', '*.dat', COUNT=nfiles)

for i=0, nfiles-1 do begin

nlines = FILE_LINES(files[i])

data = FLTARR(nlines)

OPENR, lunit, files[i], /get_lun

READF, lunit, data, FORMAT='(6(I, C(CHI.2, ':', CMI.2, ':', CSI.2),2F))'

CLOSE, lunit

FREE_LUN, lunit

endfor

Subject: Re: Read several files into one big data array?
Posted by [David Fanning](#) on Wed, 22 Oct 2014 21:23:29 GMT
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lucsmm@gmail.com writes:

```
>
> I have tons of data files in the same folder. They are named correctly with the last 5 digits
> representing the order
> Example
> FILE_00001.dat
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> ....
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> 00002 200 23:59:52 222.00 000.10
> ....]
>
> _____
> So this is what I have so far. But I am stock with getting the data from the title
> PRO
> files = file_search('\folder', '*.dat', COUNT=nfiles)
>
> for i=0, nfiles-1 do begin
>
>
```

```
> nlines = FILE_LINES(files[i])
> data = FLTARR(nlines)
> OPENR, lunit, files[i], /get_lun
> READF, lunit, data, FORMAT='(6(I, C(CHI.2, ':', CMI.2, ':', CSI.2),2F))'
> CLOSE, lunit
> FREE_LUN, lunit
> endfor
```

I would add these two lines between your OPENR and READF lines:

```
header = ""
READF, lunit, header
```

If you want the name of each column, you could do this after you read the header line:

```
names = StrSplit(header, /Extract)
```

The variable "names" will be a four-element array containing the names of the four columns of data.

By the way, you don't need the "CLOSE, lunit" statement in your code. FREE_LUN will close the file unit for you while it is freeing it up to be used again.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Read several files into one big data array?
Posted by [lucsmm](#) on Wed, 22 Oct 2014 21:41:44 GMT
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Thanks!

I really don't care about the names of the columns, they are fixed for all the files. But when I referred to title, I meant the last 5 digits of the file's name, to be in a new column (first column). (i.e. FILE_00001.data -> extract the "00001" and storage it with the data in the first column.

Also, my code is still not working, so I am curious if this will group the data from FILE_00001.dat with FILE_00002.data and so on?

Subject: Re: Read several files into one big data array?
Posted by [David Fanning](#) on Wed, 22 Oct 2014 21:55:57 GMT
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lucsmm@gmail.com writes:

> I really don't care about the names of the columns, they are fixed for all the files. But when I referred to title, I meant the last 5 digits of the file's name, to be in a new column (first column). (i.e. FILE_00001.data -> extract the "00001" and storage it with the data in the first column.

Oh. Something like this, then:

```
locate_underscore = StrPos(filename, "_")  
fileNumber = StrMid(filename, locate_underscore, locate_underscore+5)
```

> Also, my code is still not working, so I am curious if this will group the data from FILE_00001.dat with FILE_00002.data and so on?

I doubt it, but can't tell without some code that tries to do it. :-)

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Read several files into one big data array?
Posted by [lucsmm](#) on Wed, 22 Oct 2014 22:23:48 GMT
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The title works great!. But now I having problem with the lunit number (LUNs) becuae I think it is only allow to have 1-99.
But I have over 700 files... Any idea what to do then?

Subject: Re: Read several files into one big data array?
Posted by [David Fanning](#) on Wed, 22 Oct 2014 22:49:24 GMT
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lucsmm@gmail.com writes:

> The title works great!. But now I having problem with the lunit number (LUNs) becuae I think it is only allow to have 1-99.

> But I have over 700 files... Any idea what to do then?

Oh, dear! You probably only need two of these, at most. One to read the data files (closing it after reading each file) and one to write the results to the output file.

Something like this:

```
outLun = Get_Lun()
FOR j=0,numFiles-1 DO BEGIN
  thisFile = files[j]
  OpenR, inLun, thisFile, /Get_Lun
  ReadF, inLun, ....
  Free_Lun, inLun
  ... whatever you do to manipulate the data here
  PrintF, outLun, manipulatedData
ENDFOR
Free_Lun, outLun
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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Subject: Re: Read several files into one big data array?

Posted by [David Fanning](#) on Wed, 22 Oct 2014 22:52:06 GMT

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David Fanning writes:

> Something like this:

>

```
> outLun = Get_Lun()
> FOR j=0,numFiles-1 DO BEGIN
>   thisFile = files[j]
>   OpenR, inLun, thisFile, /Get_Lun
>   ReadF, inLun, ....
>   Free_Lun, inLun
>   ... whatever you do to manipulate the data here
>   PrintF, outLun, manipulatedData
> ENDFOR
> Free_Lun, outLun
```

Whoops! Forgot to open that output file!

```
outLun = Get_Lun()
OpenW, outLun, outputfileName
FOR j=0,numFiles-1 DO BEGIN
  thisFile = files[j]
  OpenR, inLun, thisFile, /Get_Lun
  ReadF, inLun, ....
  Free_Lun, inLun
  ... whatever you do to manipulate the data here
  PrintF, outLun, manipulatedData
ENDFOR
Free_Lun, outLun
```

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Read several files into one big data array?

Posted by [Craig Markwardt](#) on Wed, 22 Oct 2014 23:05:42 GMT

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On Wednesday, October 22, 2014 4:57:12 PM UTC-4, luc...@gmail.com wrote:

> I have tons of data files in the same folder. They are named correctly with the last 5 digits representing the order

...

> data = FLTARR(nlines)

Don't you want a more complex data type there? You are reading at least four numbers (integer, time, two floating point), so either it should be FLTARR(4,nlines), or a structure.

Craig

Subject: Re: Read several files into one big data array?

Posted by [lucsmm](#) on Wed, 22 Oct 2014 23:31:10 GMT

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On Wednesday, October 22, 2014 4:05:43 PM UTC-7, Craig Markwardt wrote:

> On Wednesday, October 22, 2014 4:57:12 PM UTC-4, luc...@gmail.com wrote:

>> I have tons of data files in the same folder. They are named correctly with the last 5 digits

representing the order

> ...

>> data = FLTARR(nlines)

>

> Don't you want a more complex data type there? You are reading at least four numbers (integer, time, two floating point), so either it should be FLTARR(4,nlines), or a structure.

>

> Craig

Yes! Craig, thank for catching that!

I was getting only the first column

Subject: Re: Read several files into one big data array?

Posted by [lucsmm](#) on Wed, 22 Oct 2014 23:31:56 GMT

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On Wednesday, October 22, 2014 3:52:10 PM UTC-7, David Fanning wrote:

> David Fanning writes:

>

>> Something like this:

>>

>> outLun = Get_Lun()

>> FOR j=0,numFiles-1 DO BEGIN

>> thisFile = files[j]

>> OpenR, inLun, thisFile, /Get_Lun

>> ReadF, inLun,

>> Free_Lun, inLun

>> ... whatever you do to manipulate the data here

>> PrintF, outLun, manipulatedData

>> ENDFOR

>> Free_Lun, outLun

>

> Whoops! Forgot to open that output file!

>

> outLun = Get_Lun()

> OpenW, outLun, outputfileName

> FOR j=0,numFiles-1 DO BEGIN

> thisFile = files[j]

> OpenR, inLun, thisFile, /Get_Lun

> ReadF, inLun,

> Free_Lun, inLun

> ... whatever you do to manipulate the data here

> PrintF, outLun, manipulatedData

> ENDFOR

> Free_Lun, outLun

>

> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

David, Thanks a lot!!!!
it works, now I have a huge matrix in a separate file :D

Subject: Re: Read several files into one big data array?
Posted by on Thu, 23 Oct 2014 07:46:08 GMT
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Den torsdagen den 23:e oktober 2014 kl. 01:31:12 UTC+2 skrev luc...@gmail.com:
> On Wednesday, October 22, 2014 4:05:43 PM UTC-7, Craig Markwardt wrote:
>> On Wednesday, October 22, 2014 4:57:12 PM UTC-4, luc...@gmail.com wrote:
>>> I have tons of data files in the same folder. They are named correctly with the last 5 digits representing the order
>> ...
>>> data = FLTARR(nlines)
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>> Don't you want a more complex data type there? You are reading at least four numbers (integer, time, two floating point), so either it should be FLTARR(4,nlines), or a structure.
>>
>> Craig
>
> Yes! Craig, thank for catching that!
>
> I was getting only the first column

If you are just reading those files in order to put the contents in another file, why bother parsing the lines and putting them in an array?

It should be enough to just read each line as a string, add the file number to the beginning of that string, and then write it to the output file.
