"Karthikayan Balakrishnan" wrote...

>   I have a data file that looks like this:
> abc 1 2
> def 3 4.5
> ghij 2.3 23.44
> ...
> ...
>   The first column is string, the next two are
> floating point. Is there any way I can read such a file?

You have a couple of options depending on how strict a format your data file
adheres to.

If your file has a strict format (which it doesn't look like it does) you
can use the FORMAT keyword to READF to specify exactly how your data is
read. For example:

```
OPENR, lun, 'yourfile.dat', /GET_LUN
while (not EOF(lun)) do begin
  READF, lun, str, fl1, fl2, FORMAT='(a5,1x,f3.1,1x,f5.2)'
  PRINT, str, fl1, fl2
endwhile
FREE_LUN, lun
```

would print your file to the screen, assuming your format was fixed.

If you don't have a strict format for your file, and it starts with a
string, then you'll need to read the entire line in as a string and parse
the line for your data. Something like this:

```
OPENR, lun, 'yourfile.dat', /GET_LUN
str = ''
while (not EOF(lun)) do begin
  READF, lun, str
  data = STRSPLIT(str, ' ', /EXTRACT)
  str = data[0]
  fl1 = FLOAT(data[1])
  fl2 = FLOAT(data[2])
  PRINT, str, fl1, fl2
endwhile
FREE_LUN, lun
```

Hope this helps!

-Rick

Subject: Re: String Data file
Posted by andrew.cool on Thu, 31 Jul 2003 02:55:12 GMT
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Karthikayan Balakrishnan <lovedale27@hotmail.NOSPAM.com.PLEASEREMOVETHIS> wrote in
message news:<HIuzA3.5Mw@sysadm.physics.uiowa.edu>...
> Hello All,
>   I have a data file that looks like this:
> abc 1 2
> def 3 4.5
> ghij 2.3 23.44
> ...
> ...
>   The first column is string, the next two are
> floating point. Is there any way I can read such a file?
> I am familiar with counting the number of rows and reading
> data file with just numbers, but this combination of numbers
> and strings is too much for me.
>
> Thanks in advance,
> Karthik.

Karthik,

Try this :-

 line = 'ghij 2.3 23.44'

 READS,line,s,f1,f2,form='(a4,x,f3.1,x,f5.2)'

 Andrew

Subject: Re: String Data file
Posted by mperrin+news on Thu, 31 Jul 2003 04:26:56 GMT
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Karthikayan Balakrishnan <lovedale27@hotmail.NOSPAM.com.PLEASEREMOVETHIS> wrote:
> Hello All,
>   I have a data file that looks like this:

> abc 1 2
> def 3 4.5
> ghij 2.3 23.44
> ...
> ...
>   The first column is string, the next two are
> floating point. Is there any way I can read such a file?
> I am familiar with counting the number of rows and reading
> data file with just numbers, but this combination of numbers
> and strings is too much for me.

Grab a copy of readcol.pro from
http://idlastro.gsfc.nasa.gov/ftp/pro/misc/readcol.pro

Then it's just as simple as
readcol,"filename.txt",format="A,F,F,",col1var,col2var,col3var

 - Marshall

Subject: Re: String Data file
Posted by R.Bauer on Thu, 31 Jul 2003 07:02:23 GMT
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Karthikayan Balakrishnan wrote:
> Hello All,
>   I have a data file that looks like this:
> abc 1 2
> def 3 4.5
> ghij 2.3 23.44
> ...
> ...
>   The first column is string, the next two are
> floating point. Is there any way I can read such a file?
> I am familiar with counting the number of rows and reading
> data file with just numbers, but this combination of numbers
> and strings is too much for me.
>
> Thanks in advance,
> Karthik.

Our published read_date_file with the /vstruct keyword does not read
this file.
x=read_data_file('file.txt',/vstruct)

I missed to include first column of text type. I have fixed this in our
working library. Now I am testing the whole thing.

```
  help,x.data,/str
** Structure <83892dc>, 3 tags, length=20, data length=20, refs=2:
   VAR0        STRING    'abc'
   VAR1        FLOAT         1.00000
   VAR2        FLOAT         2.00000

  help,x.data[1],/str
** Structure <83892dc>, 3 tags, length=20, data length=20, refs=2:
   VAR0        STRING    'def'
   VAR1        FLOAT         3.00000
   VAR2        FLOAT         4.50000

  help,x.data[2],/str
** Structure <83892dc>, 3 tags, length=20, data length=20, refs=2:
   VAR0        STRING    'ghij'
   VAR1        FLOAT         2.30000
   VAR2        FLOAT         23.4400
```

If you are interested I can sent a separate copy of the changed files.

Reimar

--
Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
 --- -------
      a IDL library at ForschungsZentrum Juelich
  http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html
 === =======

Subject: Re: String Data file
Posted by Justin[2] on Thu, 31 Jul 2003 17:46:54 GMT
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Use structures. In fact always use structures for everything because
Structures Are Your Friends. They'll make your programs elegant.

```
;Use a structure to specify that each line is a string and two floats
line = {col1:"a string", col2:0.0, col3:0.0}
num_lines = 100
;Make an array of structures
data = REPLICATE(line, num_lines)
OPENR, lun, 'yourfile.dat', /GET_LUN
```

```
;Read in all the data in one go
READF, lun, data
FREE_LUN, lun
;Print out some of the data
PRINT, data[5].col1, data[7:9].col2, data.col3
```

Karthikayan Balakrishnan wrote:
> Hello All,
>   I have a data file that looks like this:
> abc 1 2
> def 3 4.5
> ghij 2.3 23.44
> ...

Subject: Re: String Data file
Posted by David Fanning on Thu, 31 Jul 2003 17:52:16 GMT
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Justin writes:

> Use structures. In fact always use structures for everything because
> Structures Are Your Friends. They'll make your programs elegant.

Actually, I think you mean "objects". :-)

Cheers,

David

--
David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Phone: 970-221-0438, E-mail: david@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: String Data file
Posted by Pavel Romashkin on Thu, 31 Jul 2003 20:38:09 GMT
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This code doesn't seem to work because the first field, a string, reads
in the entire line and the numerical variables won't have anything to read:

```
IDL> line = {col1:"a string", col2:0.0, col3:0.0}
IDL> OPENR, lun, 'untitled.txt', /GET_LUN
IDL> READF, lun, data
% READF: Input conversion error. Unit: 100
      File: SCSI data:untitled.txt
% Execution halted at: $MAIN$
```

Would work if the string was the last in the line.
Cheers,
Pavel

Justin wrote:
>
> Use structures. In fact always use structures for everything because
> Structures Are Your Friends. They'll make your programs elegant.
>
> ;Use a structure to specify that each line is a string and two floats
> line = {col1:"a string", col2:0.0, col3:0.0}
> num_lines = 100
> ;Make an array of structures
> data = REPLICATE(line, num_lines)
> OPENR, lun, 'yourfile.dat', /GET_LUN
> ;Read in all the data in one go
> READF, lun, data
> FREE_LUN, lun
> ;Print out some of the data
> PRINT, data[5].col1, data[7:9].col2, data.col3
>

Subject: Re: String Data file
Posted by R.Bauer on Fri, 01 Aug 2003 06:57:27 GMT

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Pavel Romashkin wrote:
> This code doesn't seem to work because the first field, a string, reads
> in the entire line and the numerical variables won't have anything to read:
>
> IDL> line = {col1:"a string", col2:0.0, col3:0.0}
> IDL> OPENR, lun, 'untitled.txt', /GET_LUN
> IDL> READF, lun, data
> % READF: Input conversion error. Unit: 100
>   File: SCSI data:untitled.txt
> % Execution halted at: $MAIN$
>
> Would work if the string was the last in the line.
> Cheers,
> Pavel

>

I know but if we use a byte array and some calculations it is much easier.

My routine wasn't working because it determines chars und numbers in the
first byte of each line to find out where are comments.
So it hangs because all looked like comments.

If the text column would be the second or later it works fine.

One workaround could be to add a dummy column in front of the text column.

best regards

Reimar

> Justin wrote:
>
>> Use structures. In fact always use structures for everything because
>> Structures Are Your Friends. They'll make your programs elegant.
>>
>> ;Use a structure to specify that each line is a string and two floats
>> line = {col1:"a string", col2:0.0, col3:0.0}
>> num_lines = 100
>> ;Make an array of structures
>> data = REPLICATE(line, num_lines)
>> OPENR, lun, 'yourfile.dat', /GET_LUN
>> ;Read in all the data in one go
>> READF, lun, data
>> FREE_LUN, lun
>> ;Print out some of the data
>> PRINT, data[5].col1, data[7:9].col2, data.col3
>>

--
Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)
Forschungszentrum Juelich

email: R.Bauer@fz-juelich.de
-- -------
a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html
=== =======