Subject: Re: Help with reading structure from file
Posted by jeyadev on Wed, 07 Feb 2001 17:24:22 GMT
View Forum Message <> Reply to Message

In article <3A810F7C.B69C6E28@dkrz.de>,
Martin Schultz <martin.schultz@dkrz.de> wrote:
> The solution is to use a structure. SOmething like this (no time for
> testing though):
>
>   template = { a:'', x:fltarr(7) }
>   result = replicate(template, NLINES)

This is exactly what I tried -- see the code fragment included below.

>   readf, lun, result, format='(4x,a4,7f9.3)'
>   data = result[*].x   ; not sure if this even works ;-(

No, it does not! Here is the sesssion from PV Wave:

```
WAVE> nsets = 108
WAVE> f1 = "(4x,a4,7f9.3)"
WAVE> dpt = { fullrow, id: ' ', x: fltarr(7) }
WAVE> fulldata = replicate( {fullrow}, nsets)
WAVE>
WAVE> openr, 1, 'data'
WAVE> readf, 1, fulldata, format = f1
% End of input record encountered on file unit: 1.
% Execution halted at $MAIN$   (READF).
WAVE>
```

The reason is the the format statement is being ignored. The entire
first line of data is being read as the string variable, the first
7 fields of the *second* line are read as x, the last column of the
second line is read as the string variable of the second element of
the structure array ..... need I say more! This is what should happen
is the READF did *not* have a format statement.

Curiously, the PV Wave manual has a very similar example with an
unformatted read. What they do is

```
fulldata = replicate( {fullrow, string(' ', format=f1),  $
          fltarr(7) } , nsets)
readu, lun, fulldata
```

I tried this with the formatted read and it did not work. I guess
the Excel fans have won another round :-(To avoid this, I normally
put the string labels at the end of the data rows, but this was a
"How will you do it fast?" challenge.

> Hope this helps you a little bit,
>
> Martin

Thanks for the suggestion ...

Dave (or anyone else!), Any suggestion why the format is being ignored?

> Surendar Jeyadev wrote:
>>
>> In the loosing battle with the Excel users, the latest direct
>> hit was reading
>> in a file that contained strings and numeric data in each line.
>> Having given
>> up (and as the only hold out against Excel!), I need HEEELLLPPP.
>>
>> This is the simplified problem. I am trying to read data in the following
>> format:
>>
>> 001a 312.194 76.922 296.301 21.462 0.453 289.515 0.957
>> 001b 363.748 106.090 506.188 19.430 0.528 347.252 1.176
>> 001c 398.248 138.541 724.470 17.152 0.578 383.534 1.701
>> 002a 294.593 28.525 248.744 8.532 0.428 290.497 1.268
>> 002b 353.415 46.290 449.015 7.974 0.513 349.565 2.011
>> 002c 401.279 80.260 661.701 3.341 0.582 395.403 4.529
>> ....
>> ....
>>
>> i.e. in the format "(4x,a4,7f9.3)". I would like it to go into a 2 dimensional
>> structure.
>>
>> I cannot find a way of reading it as a entire array. At present, all I can
>> come up with is
>>
>> nsets = 108 ; number of lines of data
>> f1 = "(4x,a4,7f9.3)"
>> a = string(4)
>> y = fltarr(7)
>> dpt = { fullrow, id: ' ', x: fltarr(7) }
>> fulldata = replicate({fullrow}, nsets)
>>
>> openr, 1, 'data'
>> for i=0,nsets-1 do begin
>> readf, 1, format = f1, a, y
>> fulldata(i).id = a
>> fulldata(i).x = y
>> endfor

>>   close, 1
>>
>> Is there any way of avoiding the temporary variables and the loop? I am
>> using PV-Wave CL, Ver 6.
>> --
>>
>> Surendar Jeyadev   jeyadev@wrc.xerox.com
>
> --
> [[[[[[[[[[
> [[Dr. Martin Schultz   Max-Planck-Institut fuer Meteorologie   [[
> [[Bundesstr. 55, 20146 Hamburg   [[
> [[phone: +49 40 41173-308   [[
> [[fax: +49 40 41173-298   [[
> [[martin.schultz@dkrz.de   [[
> [[[[[[[[[[

--

Surendar Jeyadev   jeyadev@wrc.xerox.com