Subject: Error using data structures while reading ASCII file with different data types
Posted by atmospheric physics on Mon, 03 Feb 2014 16:51:44 GMT
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Hello,

I have the following data in an ASCII file (filename.txt):

```
2006-01-31 08:59:26  65.04  22.92 0.207226 0.150028 0.000000 0.057198
2006-01-31 08:59:26  65.22  22.92 0.231006 0.167339 0.000000 0.063667
2006-01-31 08:59:26  65.40  22.92 0.273280 0.201961 0.000000 0.071319
2006-01-31 08:59:26  65.58  22.92 0.255984 0.190420 0.000000 0.065564
2006-01-31 08:59:26  65.76  22.92 0.303038 0.225042 0.000000 0.077996
...
...
...
```

I tried to read this file with the following lines in IDL:

```
; ---------------------------------
PRO test.pro

nlines=FILE_LINES('filename.txt')
file_data=STRARR(nlines)
OPENR,lun,'filename.txt',/GET_LUN
READF,lun,file_data
CLOSE,lun & FREE_LUN,lun

dataStruct= { yyyy:0, mm:0, dd:0, hr:0, mi:0, sec:0, $
        lon:0.0, lat:0.0, p1:0.0, p2:0.0, p3:0.0, p4:0.0 }

data=REPLICATE(dataStruct,nlines)
FOR ii=0,(nlines-1) DO BEGIN

   str=file_data[ii]

   str_array=STRSPLIT(str,' ',/EXTRACT)
   yyyymmdd=STRSPLIT(str_array(0),'-',/EXTRACT)
   hhmmss=STRSPLIT(str_array(1),':',/EXTRACT)

   year=FIX(yyyymmdd(0)) & month=FIX(yyyymmdd(1)) & day=FIX(yyyymmdd(2))
   hour=FIX(hhmmss(0)) & minutes=FIX(hhmmss(1)) & seconds=FIX(hhmmss(2))
   long=FLOAT(str_array(2)) & lat=FLOAT(str_array(3))
   par1=FLOAT(str_array(4)) & par2=FLOAT(str_array(5))
   par3=FLOAT(str_array(6)) & par4=FLOAT(str_array(7))

   data[*,ii]=[year,month,day,hour,minutes,seconds, $
          long,lat,par1,par2,par3,par4]
```

```
  ENDFOR

END
;-----------------------------------------------
```

I get the following error ...
% Conflicting data structures: POLDER_DATA,<FLOAT Array[12]>.

Can anyone suggest me where I am going wrong and what my mistake was? Any solution to my problem?

Thanks in advance ...

Subject: Re: Error using data structures while reading ASCII file with different data types
Posted by Matthew Argall on Mon, 03 Feb 2014 17:21:35 GMT
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You have an array of data structures, so you need to pass in a structure. Right now you are passing an array. Instead of this:

```
data[*,ii]=[year,month,day,hour,minutes,seconds, $
        long,lat,par1,par2,par3,par4]
```

try:

```
data[ii].year = year
data[ii].month = month
data[ii].day = day
...
...
```

Or look at the Struct_Assign procedure
http://exelisvis.com/docs/STRUCT_ASSIGN.html

Subject: Re: Error using data structures while reading ASCII file with different data types
Posted by David Fanning on Mon, 03 Feb 2014 17:41:47 GMT
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Madhavan Bomidi writes:

> Can anyone suggest me where I am going wrong and what my mistake was? Any solution to my problem?

Try doing a .reset and running your program again. I think IDL is just
confused. :-)

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: Error using data structures while reading ASCII file with different data types
Posted by atmospheric physics on Tue, 04 Feb 2014 10:12:25 GMT
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Thanks Matthew ...This works!!!

Subject: Re: Error using data structures while reading ASCII file with different data types
Posted by Matthew Argall on Tue, 04 Feb 2014 14:07:43 GMT
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On Tuesday, February 4, 2014 5:12:25 AM UTC-5, Madhavan Bomidi wrote:
> Thanks Matthew ...This works!!!

You are welcome! After thinking a little more, you could also use a structure, similar to the original:

```
data[ii] = { YYYY:year, MM:month, DD:day, HR:hour, MI:minutes, SEC:seconds, $
        LON:long, LAT:lat, P1:par1, P2:par2, P3:par3, P4:par4 }
```

By using square brackets, you created a numeric array and forced all of your numbers to be floats. An array of floats cannot fit into an array of structures. You can, however, use curly brackets to create a structure.

Subject: Re: Error using data structures while reading ASCII file with different data types

Posted by atmospheric physics on Wed, 05 Feb 2014 09:04:55 GMT
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It's been a great learning experience on data structures. This also work fine ... Matthew!