Subject: Re: reading multiple data types into arrays
Posted by Josh on Mon, 09 Jul 2007 22:38:42 GMT
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(to clarify: the example data I gave is all on one line. this post
makes it look like two lines on my computer) -josh

Subject: Re: reading multiple data types into arrays
Posted by greg.addr on Tue, 10 Jul 2007 06:57:47 GMT
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On Jul 10, 12:36 am, Josh <joshuamonta...@gmail.com> wrote:
> Hi,
>
> I'm trying to read in data from a file that has the following format:
>
> 231359152 09/25/2003 18:38:35.816 20.013574 25.668425
> 626.779 14.396667
>
> I'm having no problems getting the fourth, fifth, and sixth columns of
> data into double arrays with a statement like this:
>
> readf, lun, recNum, date, time, lat, lon, elev, geoid
>
> and a for loop. But I would like to get the second column in an
> array, too. My intuition says it should be a string because of the
> nasty /'s in it (ultimately, I'd like these dates to be the
> independant axis values).
>
> I tried declaring the variable date as a string beforehand (date = '
> '), but then that slurps the entire line (all columns) into that
> variable. If I don't declare it as a string and try to put it into a
> string array (strArr), it becomes 9.00000.
>
> I'm reading the documentation for explicitly formatted input, but am
> having trouble figuring out how to apply it here.
>
> As always, all suggestions are greatly appreciated!
> -Josh

I'd probably read the whole line as a string then split it on the
spaces with strsplit() and convert after. Better still, you might just
read the whole file into a string array and chop it up with strpos()
and strmid().

Greg

Subject: Re: reading multiple data types into arrays
Posted by rkombiyil on Tue, 10 Jul 2007 11:28:18 GMT
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On Jul 10, 7:36 am, Josh <joshuamonta...@gmail.com> wrote:
> Hi,
>
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>
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> -Josh

I usually use structures for my needs. You could just declare them as integers and read with a format specifier for these leaving out the slashes.
Assuming data is like above and with the 'nX' denoting the number of spaces I have between your data (in my file - may be different for you.), you can use:

```
;type declaration
IDL> recnum=0L & day=0 & month=0 & yyyy=0
IDL> hh=0 & mm=0 & ss=0 & dec_sec=0
IDL> lat=0. & lon=0. & elev=0. & geoid=0.
;read data from lun=2
IDL>readf,2,recnum,day,month,yyyy,hh,mm,ss,dec_sec,$
lat,lon,elev,geoid,$
format='(i9,1x,2(i2,1x),i4,1x,3(i2,1x),i3,2(2x,f9.6),$
       1x,f7.3,1x,f9.6)'
IDL>print,recnum,day,month,yyyy,hh,mm,ss,dec_sec,lat,lon,$
```

elev,geoid
231359152 9 25 2003 18 38 35
816 20.0136 25.6684 626.779 14.3967
--
I suggest using structures. I found them very helpful. And if you have
header information that you need to make use of, for your calculations
(I do), then open the file, read in those required header info first,
and then define structure for the (homogeneous) data part like above,
and then use "replicate" to populate.
--
Hth,
/rk

Subject: Re: reading multiple data types into arrays
Posted by Gadhavi on Tue, 10 Jul 2007 13:42:10 GMT
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I also face the same problem as that of Josh. The real problem is to
have one column of string type with many columns to read. Currently I
handle this problem by either reading whole line as string and later
on splitting it, or using explicit format statement as mentioned in
previous two posts.

However, I wish there would have been someway to specify multiple
delimiter such as ",", "/", tab and spaces in one-go for free format
statement, that will make things much easier.

hari

Subject: Re: reading multiple data types into arrays
Posted by Matt[2] on Tue, 10 Jul 2007 15:03:07 GMT
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Josh <joshuamontague@gmail.com> writes:
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If you want to read it in one line. I'm going to take a stab.

; i_rec_ndx MM/DD/YYYY HH:MM:SS.sss Lat Lon i_elev(meters)
interpolated(i_gdHt)(meters)
;
; format='(%"%11d %2.2d/%2.2d/%4.4d %2.2d:%2.2d:%2.2d.%3.3d %10.6f
%10.6f %11.3f %15.6f")';

I think that should work for your data. Not that I have any knowledge
of how it's written....

--
Matthew Savoie - Scientific Programmer
National Snow and Ice Data Center
(303) 735-0785 http://nsidc.org

Subject: Re: reading multiple data types into arrays
Posted by Josh on Tue, 10 Jul 2007 19:49:14 GMT
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On Jul 10, 12:57 am, greg.a...@googlemail.com wrote:
> On Jul 10, 12:36 am, Josh <joshuamonta...@gmail.com> wrote:
>
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> spaces with strsplit() and convert after. Better still, you might just
> read the whole file into a string array and chop it up with strpos()
> and strmid().
>
> Greg

Thanks, Greg. For me, this turned out to be the easiest way to
achieve this task. Much appreciated. -J
