Subject: Reading fortran
Posted by panblosky on Tue, 20 Sep 2005 09:54:33 GMT
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Hi all,

does somebody knows how to read this (fortran way)

```
      do 210 j=1,ngr2
        write(10) real(rhoc(j)),
     2            real(psi1(j)),real(psi2(j)),real(psi3(j))
        write(10) aimag(rhoc(j)),
     2            aimag(psi1(j)),aimag(psi2(j)),aimag(psi3(j))
210    continue
```

in IDL? I managed, but it takes forever for big "ngr2". This is what I do:

```
rhoc=fltarr(ng3)
psi1=fltarr(ng3)  &  psi2=fltarr(ng3)  &  psi3=fltarr(ng3)

For i=0l,ng3-1l do begin
   readu,lun,tmp1,tmp2,tmp3,tmp4
   rhoc[i]=tmp1
   psi1[i]=tmp2
   psi2[i]=tmp3
   psi3[i]=tmp4
Endfor
```

but this takes a long time... Anybody knows a fast way?
Thanks!!

Subject: Re: Reading fortran
Posted by David Fanning on Thu, 27 Nov 2008 15:51:49 GMT
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Andres writes:

```
> perhaps it is an easy one, but I am having problems reading the
> following in IDL:
>
>  open(11,file='file_name',form='unformatted')
>  rewind 11
>  do i3=1,np3
>    write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)
>  end do
>  close(11)
```

>
> any ideas?

Uh, that looks like FORTRAN code. Any IDL code to look at?

Cheers,

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

Subject: Re: Reading fortran
Posted by Peter Clinch on Thu, 27 Nov 2008 16:04:36 GMT
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Andres wrote:

> perhaps it is an easy one, but I am having problems reading the
> following in IDL:
>
> open(11,file='file_name',form='unformatted')
> rewind 11
> do i3=1,np3
> write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)
> end do
> close(11)
>
> any ideas?

IDL is a language in itself: it isn't FORTRAN, and it doesn't read FORTRAN.

So you'll need to rewrite the above in IDL. It will be quite similar,
but compilers don't do "similar" :-(

Look at OPENU to read unformatted stuff and FOR to do DO loops.

Pete.
--
Peter Clinch Medical Physics IT Officer
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net p.j.clinch@dundee.ac.uk http://www.dundee.ac.uk/~pjclinch/

Subject: Re: Reading fortran
Posted by Jean H. on Thu, 27 Nov 2008 16:05:46 GMT
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Please correct me if I am wrong... it's from old souvenirs...

> perhaps it is an easy one, but I am having problems reading the
> following in IDL:
>
> open(11,file='file_name',form='unformatted')

open the file

> rewind 11

go to the beginning of the file

> do i3=1,np3
> write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)
> end do

ok, that's the "fun" part. You have 3 loops here.
you could read it as follow:
```
 for i3=1, np3
  for i1 = 1, np1
   for i2=1, np2
    write(i1,i2,i3)
```

Please double check that I haven't inverter i1 and i3's loops...
Read http://docs.hp.com/cgi-bin/doc3k/B3150190022.12120/15 for more explanations

Jean

> close(11)
>
> any ideas?
>
> Thanks!!

Subject: Re: Reading fortran
Posted by Jean H. on Thu, 27 Nov 2008 16:06:45 GMT
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>> do i3=1,np3
>> write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)

>>   end do
>
> Please double check that I haven't inverter i1 and i3's loops...

==> should read i1 and i2's loops

> Read http://docs.hp.com/cgi-bin/doc3k/B3150190022.12120/15 for more
> explanations

Subject: Re: Reading fortran
Posted by panblosky on Thu, 27 Nov 2008 16:37:15 GMT
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Yes - I forgot to mention that I was trying to write an IDL code that
will read that FORTRAN output...

Thanks!

Subject: Re: Reading fortran
Posted by David Fanning on Thu, 27 Nov 2008 16:39:02 GMT
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Andres writes:

> Yes - I forgot to mention that I was trying to write an IDL code that
> will read that FORTRAN output...

Yes, and we are waiting to see what you came up with so
we can help you. :-)

Cheers,

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

Subject: Re: Reading fortran
Posted by R.G. Stockwell on Fri, 28 Nov 2008 22:24:25 GMT
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"Andres" <panblosky@gmail.com> wrote in message

news:2ee32df7-524b-4cc9-901f-40ec0fe87288@f40g2000pri.google groups.com...
> Hi all,
>
> perhaps it is an easy one, but I am having problems reading the
> following in IDL:
>
> open(11,file='file_name',form='unformatted')
> rewind 11
> do i3=1,np3
> write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)
> end do
> close(11)

wild guess, but i'd say it looks like you are writing
a 3D array in binary, and i'll guess it is a floating point number array.

so in IDL do

datain = fltarr(np1, np2, np3)

openr,1,'filename'
readu,1,datain
close,1

This won't work, cause you'll have to figure out
byteswapping, and dimension order.
So, make a fake file in fortran so you know what the
data is (numbers like delta[1,1,1] = 111, delta[4,8,5] = 485 etc.)
and see what you get. Then simply debug it into existence.

Cheers,
bob

Subject: Re: Reading fortran
Posted by Norbert Hahn on Mon, 01 Dec 2008 15:39:10 GMT
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"R.G. Stockwell" <nothanks@noemail.com> wrote:

>
> "Andres" <panblosky@gmail.com> wrote in message
> news:2ee32df7-524b-4cc9-901f-40ec0fe87288@f40g2000pri.google groups.com...
>> Hi all,
>>
>> perhaps it is an easy one, but I am having problems reading the
>> following in IDL:
>>

>> open(11,file='file_name',form='unformatted')
>> rewind 11
>> do i3=1,np3
>>   write(11) ((delta(i1,i2,i3),i1=1,np1),i2=1,np2)
>> end do
>> close(11)
>
> wild guess, but i'd say it looks like you are writing
> a 3D array in binary, and i'll guess it is a floating point number array.

Fortran writes the number of bytes of each logical record implicitly to
the data, so ...
> so in IDL do
>
> datain = fltarr(np1, np2, np3)
>
> openr,1,'filename'

openr,1,'filename', /F77_UNFORMATTED

should be added to make IDL aware of the additional bytes in the records.

Norbert
