
Subject: Re: how to link the strname with the same name of variables

Posted by [R.Bauer](#) on Tue, 14 Jul 2009 07:37:37 GMT

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mengran schrieb:

> Hi,everyone.

>

> I want to output a batch of variables to different files, and the
> variable names like c1, c2,c3,,,,. I use the arrstring to save the
> variable names and get the real variable data from different bands of
> a image. The problem confused me is that it is not possible to output
> the variable in a for loop, although the elements of strarr have the
> same name as the true variable names. There must be some skills that I
> do not know, could you tell them to me please?Thanks a lot!

> best wishes,

>

you should use a structure read about by entering ?create_struct at the
idl prompt in the online help and also you may want to write a function
which returns your structure.

cheers

Reimar

Subject: Re: how to link the strname with the same name of variables

Posted by [Tony](#) on Tue, 14 Jul 2009 12:23:20 GMT

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On Jul 13, 8:35 pm, mengran <mengra...@gmail.com> wrote:

> Hi,everyone.

>

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> variable names like c1, c2,c3,,,,. I use the arrstring to save the
> variable names and get the real variable data from different bands of
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> the variable in a for loop, although the elements of strarr have the
> same name as the true variable names. There must be some skills that I
> do not know, could you tell them to me please?Thanks a lot!

> best wishes,

>

mengran

> pro sub_test

> Path_08 = 'D:\mengr_2\spot_vege\2008_byte\project_pof'

> Path_99 = 'D:\mengr_2\spot_vege\1999_byte\project_pof'

> out_path='D:\mengr_2\sub'

> outFl = strarr(5) & ref = strarr(5)

> for i=1,5 do begin

```

> outFI[i-1] = strjoin([out_path, strtrim(string(i), 2), '.img']) ;the
> full path of output files
> ; outh = strjoin([out_path, strtrim(string(i), 2)])
> ref[i-1] = strjoin(['c', strtrim(string(i), 2)]) ; the output
> variable names
> endfor
> ;get the data to variables
> envi_open_file,Path_08,r_fid = fid1
> envi_file_query,fid1,nb = nb1, ns = ns1, nl = nl1, dims = dims1
> a1 = ENVI_GET_DATA(fid = fid1,pos = [0], dims = dims1)
> a2 = ENVI_GET_DATA(fid = fid1,pos = [1], dims = dims1)
> a3 = ENVI_GET_DATA(fid = fid1,pos = [3], dims = dims1)
> a4 = ENVI_GET_DATA(fid = fid1,pos = [5], dims = dims1)
> a5 = ENVI_GET_DATA(fid = fid1,pos = [7], dims = dims1)
> map_info = envi_get_map_info(fid = fid1)
> proj = ENVI_GET_PROJECTION(FID = fid1)
> envi_open_file,Path_99,r_fid = fid2
> envi_file_query,fid2,nb = nb2, ns = ns2, nl = nl2, dims = dims2,
> INTERLEAVE = INTERLEAVE
> b1 = ENVI_GET_DATA(fid = fid2,pos = [0], dims = dims2)
> b2 = ENVI_GET_DATA(fid = fid2,pos = [1], dims = dims2)
> b3 = ENVI_GET_DATA(fid = fid2,pos = [3], dims = dims2)
> b4 = ENVI_GET_DATA(fid = fid2,pos = [5], dims = dims2)
> b5 = ENVI_GET_DATA(fid = fid2,pos = [7], dims = dims2)
> c1 = fltarr(ns1,nl1) & c2 = fltarr(ns1,nl1)& c3 = fltarr(ns1,nl1)& c4
> = fltarr(ns1,nl1)& c5 = fltarr(ns1,nl1)
> for k = 0,ns1-1 do begin
>   for j = 0,nl1-1 do begin
>     do something
>   endfor
> endfor
>
> for i=0,4 do begin
>   openw,unit,outFI[i],/get_lun
>   writeu,unit,ref[i] ;only can output the string but not the real
> data
>   free_lun,unit
>   ENVI_SETUP_HEAD, map_info=map_info, data_type = 4, nb=1,ns = ns1,nl
> = nl1,offset = 0,INTERLEAVE = INTERLEAVE,FNAME=outFI[i]
> endfor

> ;openw,unit,outFI[0],/get_lun
> ;writeu,unit,c1
> ;free_lun,unit
> ;openw,unit,outFI[1],/get_lun
> ;writeu,unit,c2
> ;free_lun,unit
> ;openw,unit,outFI[2],/get_lun

```

```
> ;writeu,unit,c3
> ;free_lun,unit
> ;openw,unit,outFI[3],/get_lun
> ;writeu,unit,c4
> ;free_lun,unit
> ;openw,unit,outFI[4],/get_lun
> ;writeu,unit,c5
> ;free_lun,unit
>
> end
```

My first thought (let me know if I didn't read your code well enough :) is the 'execute' command. You could do something like this:

```
> for i=0,4 do begin
>   openw,unit,outFI[i],/get_lun
>   diditwork=execute('writeu,'+string(unit)+'+',ref[i]) ;only can
output the string but not the real
```

I didn't actually try that code, but you get the idea :) Check out 'execute' in the IDL help

Tony

Subject: Re: how to link the strname with the same name of variables
Posted by [Jean H.](#) on Tue, 14 Jul 2009 13:23:03 GMT
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mengran wrote:

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>
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> the variable in a for loop, although the elements of strarr have the
> same name as the true variable names. There must be some skills that I
> do not know, could you tell them to me please?Thanks a lot!
>     best wishes,
>                               mengran
```

Hi,

ok, you have 2 solutions. The first one is to create an array holding your c's values... so you have c1 = fltarr(x,y), c2 = fltarr(x,y) etc, you would end up with c = fltarr(x,y,nbBands). Then you can use C in

your loop (writeu, lun, c[*,*,i]) . Alternatively, you can use an array of pointers (if you don't have enough memory).

Otherwise, have a look at SCOPE_VARFETCH It will allow you to retrieve the content of your variable.

Jean

Subject: Re: how to link the strname with the same name of variables

Posted by [David Fanning](#) on Tue, 14 Jul 2009 13:58:37 GMT

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Jean H. writes:

> Otherwise, have a look at SCOPE_VARFETCH It will allow you to retrieve
> the content of your variable.

Oh, my gosh. SCOPE_VARFETCH!? EXECUTE!? This is a person who is just learning how to write a program! How about letting him in on arrays, so he doesn't have to give a unique name to every single variable in his program?

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: how to link the strname with the same name of variables

Posted by [Tony](#) on Tue, 14 Jul 2009 14:35:24 GMT

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On Jul 14, 9:58 am, David Fanning <n...@dfanning.com> wrote:

> Jean H. writes:

>> Otherwise, have a look at SCOPE_VARFETCH It will allow you to retrieve
>> the content of your variable.

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> Cheers,
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> 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.")

Of course David is right, as long as all the variables are the same size. The 'execute' trick comes in handy if you have variables which are of different lengths and would not neatly fit into an array.

Tony

Subject: Re: how to link the strname with the same name of variables
Posted by [R.Bauer](#) on Tue, 14 Jul 2009 17:29:37 GMT
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Tony schrieb:

> On Jul 14, 9:58 am, David Fanning <n...@dfanning.com> wrote:
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> Of course David is right, as long as all the variables are the same
> size. The 'execute' trick comes in handy if you have variables which
> are of different lengths and would not neatly fit into an array.
>
> Tony

/me hates evil EXECUTE

Subject: Re: how to link the strname with the same name of variables

Posted by [Jean H.](#) on Tue, 14 Jul 2009 19:14:25 GMT

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> Of course David is right, as long as all the variables are the same
> size. The 'execute' trick comes in handy if you have variables which
> are of different lengths and would not neatly fit into an array.
>
> Tony

hum, an array of pointers would be suitable in this case

Jean
