Subject: defining structure after ascii template
Posted by spluque on Mon, 16 Sep 2013 15:56:27 GMT
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Hello,

As far as I can see, it is not possible to define a structure using a template as the one built via ascii_template(). Essentially, extract a sub-structure from the template returned by ascii_template, containing the column names as tags and the field type. What is the proper way to do this?

Thanks,
Seb

Subject: Re: defining structure after ascii template
Posted by David Fanning on Mon, 16 Sep 2013 16:02:11 GMT
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spluque@gmail.com writes:

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I honestly have no idea what this question means. Why don't you explain
to us what you are trying to do.

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: defining structure after ascii template
Posted by spluque on Mon, 16 Sep 2013 17:02:18 GMT
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On Monday, September 16, 2013 11:02:11 AM UTC-5, David Fanning wrote:

> spluque@gmail.com writes:
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>
>> As far as I can see, it is not possible to define a structure using a template as the one built via ascii_template(). Essentially, extract a sub-structure from the template returned by ascii_template, containing the column names as tags and the field type. What is the proper way to do this?
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> I honestly have no idea what this question means. Why don't you explain
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> to us what you are trying to do.

Sorry for the terse initial post. Here is what I am trying to do:

1. I've prepared a template with ascii_template() for reading in an ASCII file via read_ascii().

2. Before reading the data with read_ascii(), I need to prepare an *array* of structures, where each element is a record (row) in a number of files to be read with the template in (1).

3. read_ascii() creates a structure that looks like this:

```
help, data, /structures
** Structure <57e3008>, 23 tags, length=7800864, data length=7800864, refs=1:
   FIELD01        LONG      Array[84792]
   FIELD02        FLOAT     Array[84792]
   FIELD03        LONG      Array[84792]
...[many more fields]
```

So the array of structures to be created would like this (abbreviating the number of fields for brevity here):

```
p={'foo', FIELD01:0L, FIELD02:0.0, FIELD03:0L}
replicate(p, n_recs)
```

where n_recs is the total number of records expected.

So the question is how can p be created from the information already there in the template created in (1)?

Thanks,
Seb

Subject: Re: defining structure after ascii template

spluque@gmail.com writes:

>
> On Monday, September 16, 2013 11:02:11 AM UTC-5, David Fanning wrote:
>> spluque@gmail.com writes:
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> help, data, /structures
> ** Structure <57e3008>, 23 tags, length=7800864, data length=7800864, refs=1:
> FIELD01 LONG Array[84792]
> FIELD02 FLOAT Array[84792]
> FIELD03 LONG Array[84792]
> ...[many more fields]
>
> So the array of structures to be created would like this (abbreviating the number of fields for brevity here):
>
> p={'foo', FIELD01:0L, FIELD02:0.0, FIELD03:0L}
> replicate(p, n_recs)
>
> where n_recs is the total number of records expected.
>
> So the question is how can p be created from the information already there in the template created in (1)?

Well, p *is* the structure you obtained. I guess I don't see the
problem:

```
IDL> struct = ascii_template()
IDL> help, struct
** Structure <701c24d0>, 10 tags, length=320, data length=313, refs=1:
   VERSION         FLOAT           1.00000
   DATASTART       LONG                 0
   DELIMITER       BYTE        32
   MISSINGVALUE    FLOAT             NaN
   COMMENTSYMBOL   STRING    ''
   FIELDCOUNT      LONG                10
   FIELDTYPES      LONG      Array[10]
   FIELDNAMES      STRING    Array[10]
   FIELDLOCATIONS  LONG      Array[10]
   FIELDGROUPS     LONG      Array[10]
IDL> data = Replicate(struct, 100)
```

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: defining structure after ascii template
Posted by spluque on Mon, 16 Sep 2013 17:51:20 GMT
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On Monday, September 16, 2013 12:24:29 PM UTC-5, David Fanning wrote:
> spluque@gmail.com writes:
>
>
>
>>
>
>> On Monday, September 16, 2013 11:02:11 AM UTC-5, David Fanning wrote:
>
>>> spluque@gmail.com writes:
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>>>
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>>>

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>>>
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>>>> As far as I can see, it is not possible to define a structure using a template as the one built via ascii_template(). Essentially, extract a sub-structure from the template returned by ascii_template, containing the column names as tags and the field type. What is the proper way to do this?
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>> 3. read_ascii() creates a structure that looks like this:
>
>>
>
>> help, data, /structures
>
>> ** Structure <57e3008>, 23 tags, length=7800864, data length=7800864, refs=1:
>
>> FIELD01 LONG Array[84792]
>
>> FIELD02 FLOAT Array[84792]
>
>> FIELD03 LONG Array[84792]

>
>> ...[many more fields]
>
>>
>
>> So the array of structures to be created would like this (abbreviating the number of fields for brevity here):
>
>>
>
>> p={'foo', FIELD01:0L, FIELD02:0.0, FIELD03:0L}
>
>> replicate(p, n_recs)
>
>>
>
>> where n_recs is the total number of records expected.
>
>>
>
>> So the question is how can p be created from the information already there in the template created in (1)?
>
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> Well, p *is* the structure you obtained. I guess I don't see the
>
> problem:
>
>
>
> IDL> struct = ascii_template()
>
> IDL> help, struct
>
> ** Structure <701c24d0>, 10 tags, length=320, data length=313, refs=1:
>
> VERSION FLOAT 1.00000
>
> DATASTART LONG 0
>
> DELIMITER BYTE 32
>
> MISSINGVALUE FLOAT NaN
>
> COMMENTSYMBOL STRING ''
>
> FIELDCOUNT LONG 10

>
>   FIELDTYPES   LONG   Array[10]
>
>   FIELDNAMES   STRING   Array[10]
>
>   FIELDLOCATIONS LONG   Array[10]
>
>   FIELDGROUPS   LONG   Array[10]
>
> IDL> data = Replicate(struct, 100)

Thanks for your patience David. The problem is that the template structure is not quite the same as the one created by read_ascii(); compare the output you got with the one in point (2) of my previous message. In other words, what I need to replicate is an element of the output of read_ascii(), but without having to call it first. Hopefully, this is clearer.

Cheers,
Seb

Subject: Re: defining structure after ascii template
Posted by David Fanning on Mon, 16 Sep 2013 17:58:29 GMT
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spluque@gmail.com writes:

> Thanks for your patience David. The problem is that the template structure is not quite the same as the one created by read_ascii(); compare the output you got with the one in point (2) of my previous message. In other words, what I need to replicate is an element of the output of read_ascii(), but without having to call it first. Hopefully, this is clearer.

Sorry, it's just not getting through to me. Maybe someone else will have
some luck. :-)

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: defining structure after ascii template
Posted by markb77 on Wed, 18 Sep 2013 10:14:48 GMT
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I think the structure you get back from ascii_template is actually correct - you just use it with the read_ascii command. You don't need to create a new structure.

Mark