

---

Subject: Re: index arrays of structures

Posted by [Vince Hradil](#) on Sat, 15 Mar 2008 21:07:08 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Mar 15, 3:53 pm, Raghu <raghuram.narasim...@gmail.com> wrote:

```
> Hi,
>
> With reference to my recent posting (IDL batch indexing), i understood
> that i could structures. However, i haven't been able to figure out
> one step.
>
> Here is my code as of now:
> ; I want to search for all the images(files) in the directory trials,
> read them into the structure named data, and access each file within
> the structure.
>
> pro strcutres
> dir1='D:\trials'
> cd,dir1
> files=FILE_SEARCH('*[^\.{hdr}]', /QUOTE,count=numfiles)
> i=0
> while i lt numfiles do begin
>   named=files(i)
>   print,named
>   data={ID:'a',sizes:fltarr(2179,761)}
>   data=replicate(data,numfiles)
>   data.sizes=findgen(numfiles)
>   openr,1,named
>   readu,1,data[i].sizes
>   close,1
>   i=i+1
> endwhile
> end
>
> ERROR message- READU: Expression must be named variable in this
> context: <FLOAT   Array[2179, 761]>.
>
> I am getting the error here because it seems like i am not able to
> read in the LUN 1 or named, into data[i].sizes.
>
> Where am i going wrong ?
>
> Raghu
```

Hoo boy - here you go.

1-Yes, you need to use a named variable to readu

2-You already defined "sizes" (weird name, by the way, how about

"values"), when you made the structure.

How about this:

```
pro strcutres
dir1='D:\trials'
cd,dir1
files=FILE_SEARCH('*[^\.{hdr}]*', /QUOTE,count=numfiles)

data={ID:'a',values:fltarr(2179,761)}
data=replicate(data,numfiles)
tempval = fltarr(2179,761)

for i=0L, numfiles-1 do begin
  named=files(i)
  print,named

  openr,1,named
  readu,1,tempval
  free_lun,1
  data[i].values = tempval

endfor

return
end
```

---

---

Subject: Re: index arrays of structures

Posted by [Vince Hradil](#) on Sun, 16 Mar 2008 02:31:19 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Mar 15, 4:07 pm, Vince Hradil <hrad...@yahoo.com> wrote:

> On Mar 15, 3:53 pm, Raghu <raghuram.narasim...@gmail.com> wrote:

>

>> Hi,

>

>> With reference to my recent posting (IDL batch indexing), i understood

>> that i could structures. However, i haven't been able to figure out

>> one step.

>

>> Here is my code as of now:

>> ; I want to search for all the images(files) in the directory trials,

>> read them into the structure named data, and access each file within

>> the structure.

>

>> pro strcutres

>> dir1='D:\trials'

```

>> cd,dir1
>> files=FILE_SEARCH('[^\.{hdr}]', /QUOTE,count=numfiles)
>> i=0
>> while i lt numfiles do begin
>>   named=files(i)
>>   print,named
>>   data={ID:'a',sizes:fltarr(2179,761)}
>>   data=replicate(data,numfiles)
>>   data.sizes=findgen(numfiles)
>>   openr,1,named
>>   readu,1,data[i].sizes
>>   close,1
>>   i=i+1
>> endwhile
>> end
>
>> ERROR message- READU: Expression must be named variable in this
>> context: <FLOAT   Array[2179, 761]>.
>
>> I am getting the error here because it seems like i am not able to
>> read in the LUN 1 or named, into data[i].sizes.
>
>> Where am i going wrong ?
>
>> Raghu
>
> Hoo boy - here you go.
>
> 1-Yes, you need to use a named variable to readu
> 2-You already defined "sizes" (weird name, by the way, how about
> "values"), when you made the structure.
>
> How about this:
>
> pro strucutres
>   dir1='D:\trials'
>   cd,dir1
>   files=FILE_SEARCH('[^\.{hdr}]', /QUOTE,count=numfiles)
>
>   data={ID:'a',values:fltarr(2179,761)}
>   data=replicate(data,numfiles)
>   tempval = fltarr(2179,761)
>
>   for i=0L, numfiles-1 do begin
>     named=files(i)
>     print,named
>
>     openr,1,named

```

```
> readu,1,tempval
> free_lun,1
> data[i].values = tempval
>
> endfor
>
> return
> end
```

BTW - why do you want to use a structure again? The above code makes all the data.id's = 'a'.

Why can't you just read the data into a matrix? If you want the structure to contain the filename then add data[i].id = named inside the loop.

---

Subject: Re: index arrays of structures

Posted by [raghuram](#) on Sun, 16 Mar 2008 04:04:57 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Mar 15, 7:31 pm, Vince Hradil <hrad...@yahoo.com> wrote:

> On Mar 15, 4:07 pm, Vince Hradil <hrad...@yahoo.com> wrote:

>

>

>

>

>

>> On Mar 15, 3:53 pm, Raghu <raghuram.narasim...@gmail.com> wrote:

>

>>> Hi,

>

>>> With reference to my recent posting (IDL batch indexing), i understood  
>>> that i could structures. However, i haven't been able to figure out  
>>> one step.

>

>>> Here is my code as of now:

>>> ; I want to search for all the images(files) in the directory trials,

>>> read them into the structure named data, and access each file within  
>>> the structure.

>

>>> pro strcutres

>>> dir1='D:\trials'

>>> cd,dir1

>>> files=FILE\_SEARCH('[^\.]{hdr}]\*', /QUOTE,count=numfiles)

>>> i=0

>>> while i lt numfiles do begin

>>> named=files(i)

```

>>> print,named
>>> data={ID:'a',sizes:fltarr(2179,761)}
>>> data=replicate(data,numfiles)
>>> data.sizes=findgen(numfiles)
>>> openr,1,named
>>> readu,1,data[i].sizes
>>> close,1
>>> i=i+1
>>> endwhile
>>> end
>
>>> ERROR message- READU: Expression must be named variable in this
>>> context: <FLOAT   Array[2179, 761]>.
>
>>> I am getting the error here because it seems like i am not able to
>>> read in the LUN 1 or named, into data[i].sizes.
>
>>> Where am i going wrong ?
>
>>> Raghu
>
>> Hoo boy - here you go.
>
>> 1-Yes, you need to use a named variable to readu
>> 2-You already defined "sizes" (weird name, by the way, how about
>> "values"), when you made the structure.
>
>> How about this:
>
>> pro strcutres
>> dir1='D:\trials'
>> cd,dir1
>> files=FILE_SEARCH('*[^\.{hdr}]', /QUOTE,count=numfiles)
>
>> data={ID:'a',values:fltarr(2179,761)}
>> data=replicate(data,numfiles)
>> tempval = fltarr(2179,761)
>
>> for i=0L, numfiles-1 do begin
>>   named=files(i)
>>   print,named
>
>>   openr,1,named
>>   readu,1,tempval
>>   free_lun,1
>>   data[i].values = tempval
>
>> endfor

```

```
>
>> return
>> end
>
> BTW - why do you want to use a structure again? The above code makes
> all the data.id's = 'a'.
>
> Why can't you just read the data into a matrix? If you want the
> structure to contain the filename then add data[i].id = named inside
> the loop.- Hide quoted text -
>
> - Show quoted text -
```

Hi,

Are you asking why i'm using structures in the first place ?

If yes, my initial idea (from python lessons) was to create something like an empty array and then read in each file into this empty array by concatenation. That way each element would have a unique ID which i could use to access them.

But it seems like i can't create an empty 2-d array of a certain size and number of files to be read ('numfiles' in my case).

When you say create a matrix, is this what you meant ?

I got the idea of using structures only from responses in my previous emails on 'batch indexing'.

-R

---

Subject: Re: index arrays of structures

Posted by [Vince Hradil](#) on Sun, 16 Mar 2008 12:49:23 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Raghu wrote:

```
>> On Mar 15, 4:07 pm, Vince Hradil <hrad...@yahoo.com> wrote:
```

```
>>
```

```
>>
```

```
>>
```

```
>>
```

```
>>
```

```
>>> On Mar 15, 3:53 pm, Raghu <raghuram.narasim...@gmail.com> wrote:
```

```
>>
```

```
>>>> Hi,
```

```
>>
```

```
>>>> With reference to my recent posting (IDL batch indexing), i understood
```

```
>>>> that i could structures. However, i haven't been able to figure out
```

```

>>>> one step.
>>
>>>> Here is my code as of now:
>>>> ; I want to search for all the images(files) in the directory trials,
>>>> read them into the structure named data, and access each file within
>>>> the structure.
>>
>>>> pro strcutres
>>>> dir1='D:\trials'
>>>> cd,dir1
>>>> files=FILE_SEARCH('*[^\.{hdr}]', /QUOTE,count=numfiles)
>>>> i=0
>>>> while i lt numfiles do begin
>>>>   named=files(i)
>>>>   print,named
>>>>   data={ID:'a',sizes:fltarr(2179,761)}
>>>>   data=replicate(data,numfiles)
>>>>   data.sizes=findgen(numfiles)
>>>>   openr,1,named
>>>>   readu,1,data[i].sizes
>>>>   close,1
>>>>   i=i+1
>>>> endwhile
>>>> end
>>
>>>> ERROR message- READU: Expression must be named variable in this

>>
>>>> I am getting the error here because it seems like i am not able to
>>>> read in the LUN 1 or named, into data[i].sizes.
>>
>>>> Where am i going wrong ?
>>
>>>> Raghu
>>
>>> Hoo boy - here you go.
>>
>>> 1-Yes, you need to use a named variable to readu
>>> 2-You already defined "sizes" (weird name, by the way, how about
>>> "values"), when you made the structure.
>>
>>> How about this:
>>
>>> pro strcutres
>>> dir1='D:\trials'
>>> cd,dir1
>>> files=FILE_SEARCH('*[^\.{hdr}]', /QUOTE,count=numfiles)
>>

```

```

>>> data={ID:'a',values:fltarr(2179,761)}
>>> data=replicate(data,numfiles)
>>> tempval = fltarr(2179,761)
>>
>>> for i=0L, numfiles-1 do begin
>>>   named=files(i)
>>>   print,named
>>
>>>   openr,1,named
>>>   readu,1,tempval
>>>   free_lun,1
>>>   data[i].values = tempval
>>
>>> endfor
>>
>>> return
>>> end
>>

>> all the data.id's = 'a'.
>>

>> structure to contain the filename then add data[i].id = named inside
>> the loop.- Hide quoted text -
>>
>> - Show quoted text -
>
> Hi,
>
> Are you asking why i'm using structures in the first place ?
> If yes, my initial idea (from python lessons) was to create something
> like an empty array and then read in each file into this empty array
> by concatenation. That way each element would have a unique ID which i
> could use to access them.
> But it seems like i can't create an empty 2-d array of a certain size
> and number of files to be read ('numfiles' in my case).
> When you say create a matrix, is this what you meant ?
>
> I got the idea of using structures only from responses in my previous
> emails on 'batch indexing'.
>
> -R

```

I guess I'm still confused. I was suggesting just doing:  
data = fltarr(nx,ny,numfiles)

then for each files[i] the image is data[\*,\*,i]



It's unique simply by the index.

---