
Subject: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 04:14:01 GMT
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I'm trying to write a large array into a data file.

The array is 8 columns with up to 6000 rows. I have tried to do this using printf mainly. Now below you will see a main problem with one of the columns, but overall the 8 columns keep stacking. I can't seem to get 8 individual columns with 6000 rows, each column having the correct set of data. Instead I get 8 columns where the data is being written horizontally instead of vertically.

An even bigger problem I am having is trying to printf an array of hexadecimal values into a data file. The values '2b40e2200ff00007' are only showing up as ' 2' in the data file. It seems that the printf function is only writing the first digit. I've been using the 'Z' format code just FYI.

PS. the 8 column array was constructed from 8 separate arrays each containing 6000 values.

Thanks in advance

Subject: Re: Writing an 8 Column array into a data file
Posted by on Sat, 15 Feb 2014 09:29:24 GMT
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Den lördagen den 15:e februari 2014 kl. 05:14:01 UTC+1 skrev drewc...@gmail.com:

> I'm trying to write a large array into a data file.

>

> The array is 8 columns with up to 6000 rows. I have tried to do this using printf mainly. Now below you will see a main problem with one of the columns, but overall the 8 columns keep stacking. I can't seem to get 8 individual columns with 6000 rows, each column having the correct set of data. Instead I get 8 columns where the data is being written horizontally instead of vertically.

Instead of 8 columns and 6000 rows you get 8 rows and 6000 columns? Maybe you want to do printf, transpose(data) rather than printf, data.

Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 15:31:57 GMT
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Thanks for the response, but what I'm getting is 8 columns by 6000. The problem is that the data keeps on getting layered by row instead of column. Each column needs it's own set of data, belo

is what I want where one column contains 1's data, the second contains 2's...

1-2-3-4
1-2-3-4
1-2-3-4
1-2-3-4
1-2-3-4

Instead I get:

1-1-1-1
1-2-2-2
2-2-3-3
3-3-3-4
4-4-4-4

Does that make sense?

Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 15:33:52 GMT
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Let me also point out that this 8 column array was is really 8 separate 1 column arrays, each with it's own set of data.

Subject: Re: Writing an 8 Column array into a data file
Posted by [David Fanning](#) on Sat, 15 Feb 2014 15:34:42 GMT
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drewciampa@gmail.com writes:

> Thanks for the response, but what I'm getting is 8 columns by 6000. The problem is that the data keeps on getting layered by row instead of column. Each column needs it's own set of data, belo is what I want where one column contains 1's data, the second contains 2's...

> 1-2-3-4
> 1-2-3-4
> 1-2-3-4
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> 1-2-3-4
>

> Instead I get:

> 1-1-1-1
> 1-2-2-2
> 2-2-3-3
> 3-3-3-4
> 4-4-4-4
>

> Does that make sense?

What would make sense is you showing us some code so we have some idea what the hell it is you are talking about. :-)

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: Writing an 8 Column array into a data file

Posted by [David Fanning](#) on Sat, 15 Feb 2014 15:43:23 GMT

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drewciampa@gmail.com writes:

>

> Let me also point out that this 8 column array was is really 8 separate 1 column arrays, each with it's own set of data.

I presume your code doesn't look like this:

```
FOR j=0,N_Elements(A)-1 DO BEGIN
```

```
  PrintF, lun, A[j], B[j], C[j], D[j], E[j], F[j], G[j], H[j]
```

```
ENDFOR
```

Cheers,

David

--

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Subject: Re: Writing an 8 Column array into a data file

Posted by _____ on Sat, 15 Feb 2014 17:33:23 GMT

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Den lördagen den 15:e februari 2014 kl. 16:33:52 UTC+1 skrev drewc...@gmail.com:

> Let me also point out that this 8 column array was is really 8 separate 1 column arrays, each

with it's own set of data.

Let me point out that you originally wrote that you had constructed the 8-column array. Now you are saying you are not constructing it at all?

I agree with David, show us what you are doing!

Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 17:46:12 GMT
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Ahh stupid me, I assumed when I created my array using 'tbget' that it would put it in a 1 column array. Unfortunately it created an array with 6000 columns and 1 row haha, this is why the data is stacking. Sorry about the stupid question!

Also, maybe you guys could still help with whats going on with the hexadecimal data. That array contains string type variable, and when I write it to a file I only get the first number of each element. some sample code is below:

```
array1    STRING    = Array[1, 5]
```

the array contains:

```
[2b40e2200ff00007, 2b40e2200ff00009, 2b40e2200ff0000c, 2b40e2200ff00011,  
2b40e2200ff00019]
```

```
openw, lun, 'test.dat', /get_lun  
printf, lun, array1, FORMAT='(Z16)'  
close,lun
```

what I get is:

```
2  
2  
2  
2  
2
```

Any clue why this might be?

Subject: Re: Writing an 8 Column array into a data file
Posted by [David Fanning](#) on Sat, 15 Feb 2014 17:48:00 GMT
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drewciampa@gmail.com writes:

> Ahh stupid me, I assumed when I created my array using 'tbget' that it would put it in a 1

column array. Unfortunately it created an array with 6000 columns and 1 row haha, this is why the data is stacking. Sorry about the stupid question!

This seems totally unlikely to me. :-)

Cheers,

David

--

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Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 17:48:27 GMT
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Im not good at this am I haha sorry

I had 8 arrays and I used the concatenating function to combine them. The structure is now fine, my problem is the string array.

My apologies

Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 17:51:49 GMT
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>
>> Ahh stupid me, I assumed when I created my array using 'tbget' that it would put it in a 1 column array. Unfortunately it created an array with 6000 columns and 1 row haha, this is why the data is stacking. Sorry about the stupid question!

>

>

>

> This seems totally unlikely to me. :-)

>

One-Dimensional array rather than a two-dimensional array [1,]

Subject: Re: Writing an 8 Column array into a data file
Posted by [David Fanning](#) on Sat, 15 Feb 2014 17:59:51 GMT
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drewciampa@gmail.com writes:

> Also, maybe you guys could still help with whats going on with the hexadecimal data. That array contains string type variable, and when I write it to a file I only get the first number of each element. some sample code is below:

```
>
> array1    STRING  = Array[1, 5]
>
> the array contains:
> [2b40e2200ff00007, 2b40e2200ff00009, 2b40e2200ff0000c, 2b40e2200ff00011,
2b40e2200ff00019]
>
> openw, lun, 'test.dat', /get_lun
> printf, lun, array1, FORMAT='(Z16)'
> close,lun
>
> what I get is:
>      2
>      2
>      2
>      2
>      2
>
> Any clue why this might be?
```

Confusion on your part, I'm going to guess. :-)

What exactly are you trying to do? The array does NOT look like it contains string variables. If it *did* contain string variables, you could just write them out as strings. If you are trying to write the strings out as hexadecimal numbers, then IDL has to convert them to hexadecimal to write them. A number "b" doesn't make much sense in this conversion process, so IDL does what I would do, gives up and goes gets a beer. What would you do?

Cheers,

David

--

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Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 18:06:42 GMT
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>
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> hexadecimals to write them. A number "b" doesn't make much sense in this
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> conversion process, so IDL does what I would do, gives up and goes gets
>
> a beer. What would you do?
>

I got it working. The Format Code '(Z)' was not the right choice. Instead I should've used '(A)' just to transfer character data. This now gives me the proper strings and written into a file correctly. Guess it just took a little bit of trial and error.

Thanks for the help. And David, the Coyote webpage is great, better than any language tutorial and resource location I've used. Keep it going

Thanks again

Subject: Re: Writing an 8 Column array into a data file
Posted by [David Fanning](#) on Sat, 15 Feb 2014 18:13:25 GMT
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drewciampa@gmail.com writes:

> Thanks for the help. And David, the Coyote webpage is great, better than any language tutorial

and resource location I've used. Keep it going

Well, it is in danger of disappearing unless people support it. There is a limit to how much free information I am willing to give away and some days frustration and cynicism pushes me closer to it. ;-)

Cheers,

David

--

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Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 18:29:17 GMT
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> a limit to how much free information I am willing to give away and some
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Well I do have one last question. Hopefully it is simple. Now that I have my 8 arrays each with 1 column, I'm trying to combine them using 'combine=[a1,a2,a3,a4,a5,a6,a7,a8]' but my first array is a STRING array...the rest being FLOAT or DOUBLE. After I combine the arrays my final array becomes a DOUBLE variable array and my STRING array becomes decimals. So now when I print out the final array, the first column is only numbers rather than the string variable.

Using concatenation, can I maintain the string throughout the process?

Thanks

Subject: Re: Writing an 8 Column array into a data file
Posted by [David Fanning](#) on Sat, 15 Feb 2014 18:32:50 GMT
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drewciampa@gmail.com writes:

> Well I do have one last question. Hopefully it is simple. Now that I have my 8 arrays each with 1

column, I'm trying to combine them using 'combine=[a1,a2,a3,a4,a5,a6,a7,a8]' but my first array is a STRING array...the rest being FLOAT or DOUBLE. After I combine the arrays my final array becomes a DOUBLE variable array and my STRING array becomes decimals. So now when I print out the final array, the first column is only numbers rather than the string variable.

>

> Using concatenation, can I maintain the string throughout the process?

No.

Cheers,

David

--

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Subject: Re: Writing an 8 Column array into a data file

Posted by [wlandsman](#) on Sat, 15 Feb 2014 18:40:15 GMT

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On Saturday, February 15, 2014 12:46:12 PM UTC-5, drewc...@gmail.com wrote:

> Ahh stupid me, I assumed when I created my array using 'tbget' that it would put it in a 1 column array. Unfortunately it created an array with 6000 columns and 1 row haha, this is why the data is stacking. Sorry about the stupid question!

Yes, this is a subtlety of FITS files, which start with a basic table structure of rows and columns. But each element of the table can be an array, so some users choose to store their data in a single row with each element containing a "column" of data. This is why TBGET() can return a 1 x 6000 array. --Wayne

Subject: Re: Writing an 8 Column array into a data file

Posted by [wlandsman](#) on Sat, 15 Feb 2014 18:51:31 GMT

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On Saturday, February 15, 2014 1:29:17 PM UTC-5, drewc...@gmail.com wrote:

> Well I do have one last question. Hopefully it is simple. Now that I have my 8 arrays each with 1 column, I'm trying to combine them using 'combine=[a1,a2,a3,a4,a5,a6,a7,a8]' but my first array is a STRING array...the rest being FLOAT or DOUBLE. After I combine the arrays my final array becomes a DOUBLE variable array and my STRING array becomes decimals. So now when I print out the final array, the first column is only numbers rather than the string variable.

As David said you can't do this with ordinary arrays, but this is why IDL now has lists
<http://www.exelisvis.com/docs/LIST.html>

Subject: Re: Writing an 8 Column array into a data file
Posted by [drewciampa](#) on Sat, 15 Feb 2014 19:19:02 GMT
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>
>
> As David said you can't do this with ordinary arrays, but this is why IDL now has lists
>
> <http://www.exelisvis.com/docs/LIST.html>

Awesome thanks!
