
Subject: Re: Read ASCII File with tab separator
Posted by [David Fanning](#) on Wed, 02 Mar 2011 17:20:02 GMT
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naoh writes:

```
> I'm trying to read an ascii file with tabs as separator. The catch is
> that when the value equals zero, it is not actually written into the
> file. Example 1 gives the file as it should look like if zeros were
> present. Example 2 gives the actual file ('0' 'TAB' have been replaced
> by 'TAB' only).
> I've used the following code for example 1 but can't figure out how to
> read example 2 without messing the data up.
>   data = fltarr(4,4)
>   readf, lun, data
>
> Thank very much for your help!
>
> EXAMPLE 1:
> 1 0 0 0
> 2 0 10 10
> 3 0 12 12
> 4 0 10 10
>
> EXAMPLE 2:
> 1
> 2 10 10
> 3 12 12
> 4 10 10
```

Who in the world thinks up these bizarre data formats!?
That would be a fun job. :-)

Cheers,

David

P.S. I don't know what to tell you, except that
what you're trying ain't gonna work. :-)

--

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

Subject: Re: Read ASCII File with tab separator
Posted by [Michael Galloy](#) on Wed, 02 Mar 2011 17:30:28 GMT
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On 3/2/11 10:01 AM, naoh wrote:

```
> Hi everyone,  
>  
> I'm trying to read an ascii file with tabs as separator. The catch is  
> that when the value equals zero, it is not actually written into the  
> file. Example 1 gives the file as it should look like if zeros were  
> present. Example 2 gives the actual file ('0' 'TAB' have been replaced  
> by 'TAB' only).  
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> EXAMPLE 1:  
> 1 0 0 0  
> 2 0 10 10  
> 3 0 12 12  
> 4 0 10 10  
>  
> EXAMPLE 2:  
> 1  
> 2 10 10  
> 3 12 12  
> 4 10 10
```

```
[507]> d = read_ascii('test.txt', missing_value=0, delimiter=string(9B))
```

```
[508]> help, d
```

```
** Structure <15b14b8>, 1 tags, length=64, data length=64, refs=1:
```

```
  FIELD1      FLOAT   Array[4, 4]
```

```
[509]> print, d.field1
```

1.00000	0.00000	0.00000	0.00000
2.00000	0.00000	10.0000	10.0000
3.00000	0.00000	12.0000	12.0000
4.00000	0.00000	10.0000	10.0000

Mike

--

www.michaelgalloy.com
Research Mathematician
Tech-X Corporation

Subject: Re: Read ASCII File with tab separator
Posted by [David Fanning](#) on Wed, 02 Mar 2011 17:41:21 GMT
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Michael Galloy writes:

```
> [507]> d = read_ascii('test.txt', missing_value=0, delimiter=string(9B))
> [508]> help, d
> ** Structure <15b14b8>, 1 tags, length=64, data length=64, refs=1:
>   FIELD1      FLOAT   Array[4, 4]
> [509]> print, d.field1
>   1.00000    0.00000    0.00000    0.00000
>   2.00000    0.00000    10.0000   10.0000
>   3.00000    0.00000    12.0000   12.0000
>   4.00000    0.00000    10.0000   10.0000
```

This is the first time in my life I've ever had
cause to think READ_ASCII might actually be useful. ;-)

Cheers,

David

--

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

Subject: Re: Read ASCII File with tab separator
Posted by [Michael Galloy](#) on Wed, 02 Mar 2011 17:50:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

On 3/2/11 10:30 AM, Michael Galloy wrote:

```
> On 3/2/11 10:01 AM, naoh wrote:
>> Hi everyone,
>>
>> I'm trying to read an ascii file with tabs as separator. The catch is
>> that when the value equals zero, it is not actually written into the
>> file. Example 1 gives the file as it should look like if zeros were
>> present. Example 2 gives the actual file ('0' 'TAB' have been replaced
>> by 'TAB' only).
>> I've used the following code for example 1 but can't figure out how to
>> read example 2 without messing the data up.
>> data = fltarr(4,4)
>> readf, lun, data
```

```

>>
>> Thank very much for your help!
>>
>> EXAMPLE 1:
>> 1 0 0 0
>> 2 0 10 10
>> 3 0 12 12
>> 4 0 10 10
>>
>> EXAMPLE 2:
>> 1
>> 2 10 10
>> 3 12 12
>> 4 10 10
>
> [507]> d = read_ascii('test.txt', missing_value=0, delimiter=string(9B))
> [508]> help, d
> ** Structure <15b14b8>, 1 tags, length=64, data length=64, refs=1:
> FIELD1 FLOAT Array[4, 4]
> [509]> print, d.field1
> 1.00000 0.00000 0.00000 0.00000
> 2.00000 0.00000 10.0000 10.0000
> 3.00000 0.00000 12.0000 12.0000
> 4.00000 0.00000 10.0000 10.0000
>
> Mike

```

By the way, here is another (slightly more verbose) way of doing this that gives a bit more control over data types, etc:

```

[501]> t = { version: 1., datastart:0L, delimiter:9B, missingvalue:0L,
commentsymbol:", fieldcount:4L, fieldtypes:lonarr(4) + 3L,
fieldnames:'col' + strtrim(sindgen(4), 2), fieldlocations:lindgen(4),
fieldgroups:lindgen(4) }
[502]> data = read_ascii('test.txt', template=t)
[504]> help, data
** Structure <201e848>, 4 tags, length=64, data length=64, refs=1:
    COL0      LONG      Array[4]
    COL1      LONG      Array[4]
    COL2      LONG      Array[4]
    COL3      LONG      Array[4]
[505]> print, data.col0
      1      2      3      4
[506]> print, data.col1
      0      0      0      0
[507]> print, data.col2
      0     10     12     10
[508]> print, data.col3

```

0 10 12 10

You could also read into a single big array:

```
[515]> t = { version: 1., datastart:0L, delimiter:9B, missingvalue:0L,  
commentsymbol:", fieldcount:4L, fieldtypes:lonarr(4) + 3L,  
fieldnames:'col' + strtrim(sindgen(4), 2), fieldlocations:lindgen(4),  
fieldgroups:lonarr(4) }
```

```
[516]> data = read_ascii('test.txt', template=t)
```

```
[517]> help, data
```

```
** Structure <1597048>, 1 tags, length=64, data length=64, refs=1:
```

```
COL0      LONG      Array[4, 4]
```

```
[518]> print, data.col0
```

1	0	0	0
2	0	10	10
3	0	12	12
4	0	10	10

Mike

--

www.michaelgalloy.com

Research Mathematician

Tech-X Corporation

Subject: Re: Read ASCII File with tab seperator

Posted by [Carsten Lechte](#) on Wed, 02 Mar 2011 18:12:45 GMT

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Hi,

after firmly kicking the person responsible for this abomination ;)
you can try this little sed command on the data to generate non-broken files:
(all needs to go into one line)

```
sed <asdf.tab -e 's/\t\t\t\t\t/g' -e 's/\t\t\t\t\t/g' -e 's/\t\t\t\t\t/g' -e 's/\t$/\t\t\t\t\t/g'
```

asdf.tab:

```
1 2 3 4  
2   3  
3 5 5
```

result:

```
1 2 3 4  
2 0 0 3  
3 5 5 0
```

chl

Subject: Re: Read ASCII File with tab separator
Posted by [wlandsman](#) on Wed, 02 Mar 2011 18:19:37 GMT
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Another way to read it is with readcol.pro
(<http://idlastro.gsfc.nasa.gov/ftp/pro/misc/readcol.pro>) --Wayne

```
IDL> readcol,'test.dat',c1,c2,c3,c4,delim=string(9b),/preserve_nu ll
IDL> print,c1,c2,c3,c4
  1.00000    2.00000    3.00000    4.00000
  0.00000    0.00000   12.0000    10.0000
  0.00000   10.0000   12.0000   10.0000
  0.00000   10.0000    0.00000    0.00000
```

Subject: Re: Read ASCII File with tab separator
Posted by [penteado](#) on Wed, 02 Mar 2011 18:27:17 GMT
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On Mar 2, 2:20 pm, David Fanning <n...@idlcoyote.com> wrote:
> Who in the world thinks up these bizarre data formats!?

I always wondered that. People deliberately trying to make things bad?

Maybe it is a psychology experiment, to measure how much suffering
others will put up with.

Subject: Re: Read ASCII File with tab separator
Posted by [Paul Van Delst\[1\]](#) on Wed, 02 Mar 2011 19:09:35 GMT
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Paulo Penteado wrote:
> On Mar 2, 2:20 pm, David Fanning <n...@idlcoyote.com> wrote:
>> Who in the world thinks up these bizarre data formats!?
>
> I always wondered that. People deliberately trying to make things bad?
>
> Maybe it is a psychology experiment, to measure how much suffering
> others will put up with.

I reckon it's due to three things:
- a general human tendency to (want to) assume symmetry (if it's easy to write the format then it
must be easy to

read, right?)

- the lack of appreciation for the importance of tacit knowledge (the "works-for-me!" syndrome :o)
- people are time-crunched (writing generic software is, generally, not a quickly accomplished task).

Or it's a psychology experiment.

Whichev.

:o)

Subject: Re: Read ASCII File with tab seperator

Posted by [Mark Piper](#) on Thu, 03 Mar 2011 16:03:18 GMT

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I'm a huge fan of READCOL (along with RDFLOAT and READFMT) because its syntax models the file -- I see columns in the text file, so I list variables which give back arrays containing those columns.

Subject: Re: Read ASCII File with tab seperator

Posted by [noahh.schwartz](#) on Fri, 04 Mar 2011 14:16:34 GMT

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Thanks everyone! You've been most helpful!

I can now read my data properly. Yes, it is a bizarre data format, but what can I do ;-P

Cheers,

Noah
