
Subject: Re: ascii-template

Posted by [btt](#) on Wed, 18 May 2005 12:48:02 GMT

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Lasse Clausen wrote:

> does anybody know if i can directly manipulate the saved ascii
> template? the documentation of the structure ASCII_TEMPLATE produces is
> rather poor.
>

Hi,

Yes, you may change the template's individual fields or you can compose one of you own on the fly since it is simply an anonymous structure.

```
IDL> t = ascii_template('example.txt')
```

```
IDL> help, t,/str
```

```
** Structure <38f2410>, 10 tags, length=104, data length=101, refs=2:
```

```
VERSION      FLOAT      1.00000  
DATASTART    LONG       0  
DELIMITER    BYTE       9  
MISSINGVALUE  FLOAT      NaN  
COMMENTS符BOL STRING    "  
FIELDcount   LONG       3  
FIELDTYPES   LONG      Array[3]  
FIELDNAMES   STRING     Array[3]  
FIELDLOCATIONS LONG     Array[3]  
FIELDGROUPS  LONG      Array[3]
```

```
IDL> print, t.fieldnames
```

```
ICECREAM PICKLES COLLARDS
```

```
IDL> t.fieldnames[2] = 'CANDY'
```

```
IDL> print, t.fieldnames
```

```
ICECREAM PICKLES CANDY
```

It seems to me that you might prefer to have some routine handle the whole thing for you. This is pretty easy if you can ensure that the text files have a predictable layout. Something like the following might suffice...

```
IDL> data = readmyascii('myexample.txt',count = n)
```

```
IDL> for i = 0, n-1 do print, data[i]
```

```
{ 0.00000 3.70000e-06 0.0300000}  
{ 1.00000 0.0892474 0.0300000}  
{ 2.00000 0.00911740 0.0300000}  
{ 3.00000 0.0279552 0.0300000}  
{ 4.00000 0.0209155 0.0300000}
```

```
{ 5.00000 2.43000e-05 0.0300000}
{ 6.00000 0.0107673 0.0300000}
{ 7.00000 4.94000e-05 0.0300000}
{ 8.00000 6.98000e-05 0.0300000}
{ 9.00000 0.0589265 0.0300000}
{ 10.0000 0.000136500 0.0300000}
```

```
IDL> plot, data.thisX, data.thisY
```

```
IDL> plots, data[3].thisX, data[3].thisY, psym = 5
```

Here's the code and example data.

Cheers,
Ben

```
*****START*****
```

```
FUNCTION ReadMyASCII, file, COUNT = count
```

```
if n_elements(file) EQ 0 then file = 'myexample.txt'
```

```
;the number of records is one less than
```

```
;the number of lines in the file
```

```
COUNT = FILE_LINES(file)-1
```

```
OPENR, U, file, /GET_LUN
```

```
;read in the line of fieldnamers
```

```
alpha = "
```

```
READF, U, alpha
```

```
;break up the line of fieldnames and
```

```
;compose a template structure
```

```
beta = STRSPLIT(alpha, STRING(9B), /EXTRACT, COUNT = nFields)
```

```
t = CREATE_STRUCT(beta[0], 0.0)
```

```
FOR i = 1, nFields-1 DO t = CREATE_STRUCT(t, beta[i], 0.0)
```

```
;build an vector of structures
```

```
data = REPLICATE(t, COUNT)
```

```
;read in the data - note that the formatting
```

```
;is not specified, but could be if you wanted to get fancy
```

```
READF, U, data
```

```
FREE_LUN, U
```

```
Return, data
```

```
END
```

```
*****END*****
```

And here's some example data...

*****START*****

THISX THISY THISZ

0.0000000	0.0000037	0.0300000
1.0000000	0.0892474	0.0300000
2.0000000	0.0091174	0.0300000
3.0000000	0.0279552	0.0300000
4.0000000	0.0209155	0.0300000
5.0000000	0.0000243	0.0300000
6.0000000	0.0107673	0.0300000
7.0000000	0.0000494	0.0300000
8.0000000	0.0000698	0.0300000
9.0000000	0.0589265	0.0300000
10.0000000	0.0001365	0.0300000

*****END*****
