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Subject: Dynamically create variable from header when reading in ascii data

Posted by [rjp23](#) on Mon, 09 May 2011 11:59:46 GMT

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I'm sat here defining a huge list of variables to be read in from an  
ascii file and I'm sure there must be an easier way...

I have an ascii file with multiple columns of data, each column has  
the column name on the first row. There are then thousands of rows of  
data.

I started off with just a few columns but as things have progress I  
now have a lot (hundreds) of columns and doing it this way is getting  
frustrating.

This is what I'm doing:

```
header=strarr(1)
data=strarr(file_lines(summary_file)-n_elements(header))
openr, lun, summary_file, /get_lun
readf, lun, header
readf, lun, data
free_lun, lun
```

```
col_titles=strsplit(header, ' ', /extract)
```

```
ap_pres_01=fltarr(n_elements(data))
ap_pres_02=fltarr(n_elements(data))
ap_pres_03=fltarr(n_elements(data))
ap_pres_04=fltarr(n_elements(data))
ap_pres_05=fltarr(n_elements(data))
ap_pres_06=fltarr(n_elements(data))
etc etc
```

```
for i=0L,n_elements(data)-1 do begin
  ap_pres_01[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_01'))]
  ap_pres_02[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_02'))]
  ap_pres_03[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_03'))]
  ap_pres_04[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_04'))]
  ap_pres_05[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_05'))]
  ap_pres_06[i]=(strsplit(data[i], ' ', /extract))
  [where(strmatch(col_titles, 'ap_pres_06'))]
  etc etc
```

endfor

What I'd like to do is dynamically create the variables from the col\_titles variable and then populate them. I wrote something that did this using the execute command to create the variables but it was a bit messy and I believe I'm right in saying that execute won't work in the virtual machine (not that I necessarily need it to but possibly might in the future so I'm reluctant to build the whole code around it if there's a nicer alternative).

Thanks in advance

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Subject: Re: Dynamically create variable from header when reading in ascii data  
Posted by [Brian Wolven](#) on Mon, 09 May 2011 15:43:01 GMT  
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If you're not running IDL 8+ yet (in which case the hash approach isn't available), you might also use create\_struct to generate structure elements with the tag name set to the col\_titles value and the tag contents set to the data values. If you've initialized the structure (defined first tag), repeated calls to create\_struct will then append each new variable to the structure, which may then be passed back to the calling procedure as a single entity.

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