Subject: Re: Evaluate a string as a variable name
Posted by Michael Galloy on Mon, 03 May 2010 22:24:40 GMT
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On 5/3/10 4:02 PM, laurel wrote:
> I have a structure that has multiple name/value pairs, and I want to
> extract the value that corresponds with the name. However, I am only
> passing in a string of the name, not the structure.name, so I need a
> way to combine the two such that I am evaluating the string. It might
> be easier to explain with an example:
>
> ***
> ;create a simple structure
> struct={name1:9, $
>   name2:5, $
>   name3:1}
>
> ;variable that matches the part of the structure I want
> x='name2'
>
> ;create a string that if it were a variable, it would be part of the
> structure, 'struct.name2'
> y='struct'+'.'+x
>
> ;want to have z=5, or z=struct.name2 rather than z='struct.name2'
> ;Here evaluate stands in for whatever I would do to make that happen
> z=evaluate(y)
> ***
>
> Does anyone know how to make z equal to the value corresponding with
> struct.name2?

How about this:

```
x = 'name2'
struct = { name1:9, $
        name2:5, $
        name3:1 }
names = tag_names(struct)
ind = where(strupcase(x) eq names, count)
if (count gt 0L) then z = struct.(ind[0])
```

Mike
--
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Subject: Re: Evaluate a string as a variable name
Posted by laurel on Tue, 04 May 2010 14:48:28 GMT
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Brilliant! Thanks so much.
-Laurel

On May 3, 4:24 pm, mgalloy <mgal...@gmail.com> wrote:
> On 5/3/10 4:02 PM, laurel wrote:
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> Mike
> --www.michaelgalloy.com
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Subject: Re: Evaluate a string as a variable name
Posted by Craig Markwardt on Wed, 05 May 2010 02:31:06 GMT

On May 4, 10:48 am, laurel <laur...@gmail.com> wrote:
> Brilliant! Thanks so much.
> -Laurel

The IDL Astronomy library also has the very handy routine TAG_EXIST(),
which allows you to query structure members by name.

You would do something like this.
if tag_exist(struct, x, index=ii) then begin
  y = struct.(ii)
endif else begin
  message, "ERROR: could not find '"+x+"' in structure"
endelse

TAG_EXIST() appears to be completely stand-alone, i.e. no dependencies
on other functions in the library.
 http://idlastro.gsfc.nasa.gov/ftp/pro/structure/tag_exist.pr o

Craig