
Subject: Re: "shrink" structures

Posted by [David Fanning](#) on Mon, 08 Feb 2010 13:16:05 GMT

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Johannes Korn writes:

```
>
> Hi,
>
> I usually read ascii tables using read_ascii with a ascii template which
> gives me an anonymous structure with fields of the same length.
>
> for example
> d=READ_ASCII('file', TEMPLATE=templ)
>
> afterwards d is d.date, d.time and d.value
>
> I would like to "shrink" d to contain only a specific date.
>
> Something like
> ind=where(d.date eq '10052000')
> d = d[ind]
>
> This doesn't work of course but I thought at least d.date = d.date[ind]
> should. But this doesn't resize d.date but only fills all locations with
> the values of d.date[ind].
>
> Is there any other way than to copy everything to arrays?
```

How about a shrunken structure? Consider this function:

```
.*****
;
Function ShrinkStruct, struct, indices

    tags = N_Tags(struct)
    fieldNames = Tag_Names(struct)

    newStruct = Create_Struct(fieldNames[0], $
                             (struct.(0))[indices])
    FOR j=1,tags-1 DO BEGIN
        newStruct = Create_Struct(newStruct, fieldnames[j], $
                                   (struct.(j))[indices])
    ENDFOR

    RETURN, newStruct

END
.*****
;
```

You can use it like this:

```
IDL> s = {a:Findgen(101), b:sindgen(101), c:randomu(seed, 101)}
IDL> indices = Where(s.a gt 60 and s.a lt 75)
IDL> n = shrinkStruct(s, indices)
IDL> help, n, /struct
** Structure <3918610>, 3 tags, length=336, data length=336, refs=1:
  A      FLOAT   Array[14]
  B      STRING  Array[14]
  C      FLOAT   Array[14]
IDL> print, n.a
 61.0000 62.0000 63.0000 64.0000 65.0000 66.0000 67.0000
 68.0000 69.0000 70.0000 71.0000 72.0000 73.0000 74.0000
```

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
