Subject: Re: number format in structure
Posted by David Fanning on Mon, 26 Sep 2005 02:01:45 GMT
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kl_tah@hotmail.com writes:

> does anyone happen to know how I can specify the format to which
> numbers stored in structure tags should adhere?
>
> for example, I'd like to (hypothetically) be able to do
>
> s={a:3.2f,b=2.3f}
>
> s.a=123.12345678
>
> will yield
>
> print,s.a
> 123.12

I think I would just use the FORMAT keyword on the PRINT
statement, where it make a *lot* more sense:

```
  print, s.a, format='(F6.2)'
 123.12
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: number format in structure
Posted by Craig Markwardt on Mon, 26 Sep 2005 02:51:21 GMT
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kl_tah@hotmail.com writes:
> Hi All,
>
> does anyone happen to know how I can specify the format to which
> numbers stored in structure tags should adhere?
>
> for example, I'd like to (hypothetically) be able to do
>

> s={a:3.2f,b=2.3f}
>
> s.a=123.12345678
>
> will yield
>
> print,s.a
> 123.12

You could store the format in the structure, as in,
```
  s = {a:0., a_format: '3.2F', $
       b:0., b_format: '5.3F' }
```
and
```
  print, s.a, format=s.a_format
```

This is still not easy if you want to make a compound print statement
with many fields.

Also, beware that a single precision floating point number can't store
the 11 significant figures of the number you entered. You would have
to use double precision (single = 6-7 decimal digits; double = 17
decimal digits).

Good luck,
Craig

--

 -- --------------
Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
 -- --------------

Subject: Re: number format in structure
Posted by Koh Leong Tah on Mon, 26 Sep 2005 05:06:06 GMT
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Hi David, Craig,

Thanks for the tips.
However, what I was really wanting to do was to output a long string of
numbers, each entry with a different format, to a file (which will
ultimately be used in a tex table).
So I have, for eg.

```
line=[strtrim(3.45,2),'&',strtrim(5.678,2),'\\']    ;and lots more
printf,lun,line
```

This would probably mean appending a long string for formats to printf.
If I could get each entry in to a format I want before putting them in
an array this would really save on a lot of counting. Perhaps there's a
way to write a program that does something like

a=3.55677
a=format(a,'(F4.2)')
print,a
3.55

?

Thanks,
KL

Subject: Re: number format in structure
Posted by peter.albert@gmx.de on Mon, 26 Sep 2005 10:07:43 GMT
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Hi,

if it's just for output purpose and you don't plan to do any subsequent
calculations, you could store all data into a string array and format
its contents properly when filling the array up with data. But I doubt
that that really helps, somewhere along the line you will have all the
"format" statements, be it here or later together with the "print"
statement.

Regards,

Peter

Subject: Re: number format in structure
Posted by Paolo Grigis on Mon, 26 Sep 2005 12:04:48 GMT
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kl_tah@hotmail.com wrote:
> Hi David, Craig,
>
> Thanks for the tips.
> However, what I was really wanting to do was to output a long string of
> numbers, each entry with a different format, to a file (which will
> ultimately be used in a tex table).
> So I have, for eg.

>
> line=[strtrim(3.45,2),'&',strtrim(5.678,2),'\\'] ;and lots more
> printf,lun,line
>
> This would probably mean appending a long string for formats to printf.
> If I could get each entry in to a format I want before putting them in
> an array this would really save on a lot of counting. Perhaps there's a
> way to write a program that does something like
>
> a=3.55677
> a=format(a,'(F4.2)')
> print,a
> 3.55
The command "string" does that for you
a=3.55677
b=string(a,format='(F4.2)')
print,b

3.56 (rounded, not truncated)

Now you can loop over your values, appending
the new values and the separators you need using the
+ operator for strings (e.g. output=output+b+'&')

Cheers,
Paolo
>
>
> ?
>
> Thanks,
> KL
>

Subject: Re: number format in structure
Posted by Koh Leong Tah on Mon, 26 Sep 2005 18:10:10 GMT
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Hi Paolo,

Thanks for the tip. It works for positive numbers. Do you happen to
know how to get it to work for negative numbers?
I get:

IDL> help,a
A   FLOAT   =   -4.35660
IDL> print,string(a)

-4.35660
IDL> print,string(a,format='(4.2)')
****

Thanks,
KL

> The command "string" does that for you
> a=3.55677
> b=string(a,format='(F4.2)')
> print,b
>
> 3.56 (rounded, not truncated)
>
> Now you can loop over your values, appending
> the new values and the separators you need using the
> + operator for strings (e.g. output=output+b+'&')
>
> Cheers,
> Paolo
>>
>>
>> ?
>>
>> Thanks,
>> KL
>>

Subject: Re: number format in structure
Posted by R.G. Stockwell on Mon, 26 Sep 2005 18:34:33 GMT
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<kl_tah@hotmail.com> wrote in message
news:1127758210.699607.161150@g47g2000cwa.googlegroups.com.. .
> Hi Paolo,
>
> Thanks for the tip. It works for positive numbers. Do you happen to
> know how to get it to work for negative numbers?
> I get:
>
> IDL> help,a
> A FLOAT = -4.35660
> IDL> print,string(a)
> -4.35660
> IDL> print,string(a,format='(4.2)')
> ****

you need to specify enough "digits" (you also forget an 'f' in your format).

try
print,string(-4.35660,format='(f5.2)')
-4.36

Note that there are 5 characters in the printout, including the negative sign and the decimal.

Cheers,
bob

PS the **** indicates that the number does not fit into the defined format statement.
The answer is usually to make the format bigger.
