Subject: Re: Relational Operators on Windows
Posted by David Fanning on Sat, 26 Jun 2010 01:45:20 GMT
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wlandsman writes:

>
> Sometimes as shortcut for explicitly testing for NaN values, I use the
> fact that NaN is never less than, equal to, or more than a numeric
> value. So if I need to get the values less than 3 in the following
> array
>
> a = [3.2, !VALUES.F_NAN, 2]
>
> I simply say
>
> a = a [where(a lt 3)]
>
> and the NaN values are excluded along with the values larger than
> 3. This works fine on Linux and Mac OSX. But someone pointed me
> to the IDL help on relational operators which says,
>
> "On the Windows platform, using relational operators with the values
> infinity or NaN (Not a Number) causes an "illegal operand" error."
>
> Unfortunately, neither of us has access to a Windows machine. Does
> one really get an "illegal operand" value on Windows with the above
> code (so that I need to use the FINITE() function)? Thanks, --Wayne

Yes. :-)

```
IDL> a = [3.2, !VALUES.F_NAN, 2]
IDL> a = a [ where(a lt 3) ]
% Program caused arithmetic error: Floating illegal operand
IDL> print, a
      2.00000
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Relational Operators on Windows
Posted by penteado on Sat, 26 Jun 2010 06:18:12 GMT
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On Jun 25, 10:45 pm, David Fanning <n...@dfanning.com> wrote:
> Yes. :-)
>
> IDL> a = [3.2, !VALUES.F_NAN, 2]
> IDL> a = a [where(a lt 3)]
> % Program caused arithmetic error: Floating illegal operand
> IDL> print, a
> 2.00000

That is just a floating point exception. It does not keep the where()
from working, does not interrupt the program, and can be suppressed
changing !except.

Subject: Re: Relational Operators on Windows
Posted by wlandsman on Sun, 27 Jun 2010 13:56:30 GMT
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On Jun 26, 2:18 am, Paulo Penteado <pp.pente...@gmail.com> wrote:

>> IDL> a = [3.2, !VALUES.F_NAN, 2]
>> IDL> a = a [where(a lt 3)]
>> % Program caused arithmetic error: Floating illegal operand
>> IDL> print, a
>> 2.00000
>
> That is just a floating point exception. It does not keep the where()
> from working, does not interrupt the program, and can be suppressed
> changing !except.

That is all true, but I think one wants to avoid spurious floating
point exception messages (and not suppress them) when possible,
because sometimes a FP exception can indicate a real problem. Since
no FP exception for the above code occurs on Mac or Linux, I thought I
could get away without using FINITE(), but I will now add it to my
code. --Wayne