Subject: Re: Recognizing double precision?
Posted by edward.s.meinel@aero. on Wed, 10 Oct 2007 18:21:52 GMT
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On Oct 10, 11:53 am, "R.G. Stockwell" <noem...@please.com> wrote:
> <mei...@aero.org> wrote in message
>
> news:1192025265.336346.261400@o3g2000hsb.googlegroups.com...
>
>
>
>> On Oct 9, 11:50 am, "R.G. Stockwell" <noem...@please.com> wrote:
>>> "wlandsman" <wlands...@gmail.com> wrote in message
>
>>> news:1191597160.614557.153160@50g2000hsm.googlegroups.com...
>
>>>> About once a year I receive a complaint about my code because someone
>>>> inputs a Julian date like this
>
>>>> IDL> jd = 2441636.1
>
>>> btw, this may be obvious to all, but you can force the input
>>> with a read command, read it as string, and cast it to double.
>
>>> IDL> .GO
>
>>> : 2441636.1
>
>>> S STRING = ' 2441636.1'
>
>>> 2441636.1
>
>>> single:
>
>>> 2441636.00000
>
>>> double
>
>>> 2441636.10000
>
>>> Cheers,
>>> bob
>
>> Sure, you _could_ do that, but that is even worse than
>
>> IDL>jd = 2441636.1d
>
> Not worse, just different. The problem is that we are talking about

> different things. One is a user interface, in which the developer should
> be responsible for inputting the correct variable type. (thus, read string,
> and then do error checking, range checking, valid input checking and casting
> to the appropriate type). Because one thing is certain, if a user _can_
> do something that will crash the code, then the user _will_do something
> to crash the code (I've even run into malicious users who try to crash
> the code so they can stop working.)
>
> The second, above, is input at the IDL command line. That is, in my
> opinion, identical to a line of code in a program. If the developer types in
> jd = 2441636.1
> in their routine when they should have made it a double, then that is a
> programming error.
> It is entirely the programmers responsibility to have the correct type for
> their variables.
>
> I don't think the compiler should take the defined floating point variable
> and force it to double unless the programmer tells it to (either explicitly
> or implicitly). Just my opinion anyway.
>
> Cheers,
> bob

Oh, I absolutely agree with the GUI issue. I do the same thing you do.

The thing is that Wayne was complaining about command line inconsistency, not a problem with his routine. IDL correctly assigns integer types, but not floating point types. Once you type something on the command line and it gets assigned a variable type, if it is the wrong one, you're hosed. Example:

IDL>jd = 2441636.1
IDL>result = WL_ROUTINE(jd)

IDL just changed the value of jd without notifying the user. Do you consider that good programming practice? The programming error is on IDL's part, not Wayne.

Ed