Subject: Re: Converting Doubles to Strings
Posted by biophys on Sun, 06 Nov 2005 03:20:22 GMT
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oops, i'm sorry i forgot the D. it does work fine!
IDL> print,inputform_float(-22.1234567890D, '(d)', /dconvert)
-22.1234567889999987D
biophys wrote:
> Hi, Craig
>
> I tried your inputform_float and It seems that it won't do max
> precision with '(d)',
>
> IDL> print,inputform_float(-22.1234567890, '(d0)', /dconvert)
> -22.123457D
>
> IDL> print,inputform_float(-22.1234567890, '(d)', /dconvert)
> -22.1234570D
>
>
>
> Craig Markwardt wrote:
>
>> David, the "D" format (without zeroes) is probably what you want. I
>> have a utility routine in INPUTFORM which converts a floating point
>> number to a string. It tries both the G and E formats and takes the
>> shortest version that is still correct. See below.
>>
>> Craig
>>
>> ;; Convert a floating style value to a string. Note the conversion
>> ;; happens twice, once as a E and once as a G. The shortest correct
>> ;; version of the two is used.
>> ;; X - number to convert, scalar or array, float or double
>> ;; FORMAT - optional format to use (set to '(E)' or '(D)' for max precision)
>> ;; DCONVERT - set this if the output should be double precision
>> function inputform_float, x, format, dconvert=dcon
>>   n = n_elements(x)
>>   str = string(x(*), format=format)
>>   sz = size(x) & tp = sz(sz(0)+1)
>>
>>   ;; Sorry, there appears to be no other way to make nice looking
>>   ;; floating point numbers.
>>   str1 = string(x(*), format='(G0)')
>>   if tp EQ 4 then x1 = float(str1)
>>   if tp EQ 5 then x1 = double(str1)
>>   wh = where(x-x1 EQ 0, ct)
>>   if ct GT 0 then str(wh) = str1(wh)

```
>>    str1 = 0
>>    str = strtrim(str,2)
>>
>>    p = strpos(str(0), 'E')  ;; Make sure at least one element is float-type
>>    ;; Note, the space is needed in case the string is placed inside
>>    ;; another expression down the line.
>>    if p LT 0 then begin
>>       if keyword_set(dcon) then str(0) = str(0) + 'D' $
>>       else str(0) = str(0) + 'E'
>>    endif
>>    if keyword_set(dcon) then begin
>>       ;; Convert from floating to double
>>       p = strpos(str, 'E')
>>       wh = where(p GE 0, ct)
>>       for i = 0L, ct-1 do begin
>>          str1 = str(wh(i))
>>          strput, str1, 'D', p(wh(i))
>>          str(wh(i)) = str1
>>       endfor
>>    endif
>>    ;; Construct format like (N(A,:,","))
>>    fmt = '('+strtrim(n,2)+'(A,:,","))'
>>    return, string(str, format=fmt)
>>  end
>>
>>
>>
>>  --
>>   ------------------------------------------------------------ --------------
>>  Craig B. Markwardt, Ph.D.      EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
>>  Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
>>   ------------------------------------------------------------ --------------
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