Subject: Re: fastest operations/fctns.
Posted by Craig Markwardt on Sat, 21 Apr 2001 00:46:36 GMT
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Johnny Lin <donotreply@interbulletin.bogus> writes:
> hi folks,
>
> i was wondering, has anyone compiled a ranked list of the relative
> speeds of IDL operations functions? i've read postings re general
> rules of thumb, but was wondering if anything more specific and
> complete is available online anywhere.

The fastest operation is the one that takes the least amount of time
:-)

Actually I'm being quite serious. If you really have a deep question
about the speed difference between two implementations, then go ahead
and try both and see which is fastest.

Things to bear in mind:

 * vectorize where you can; if you can vectorize the inner loop, then
   you are usually fine.

 * there really are not *that* many different ways to do things; You
   add with the "+" symbol, divide with the "/" symbol, etc.

 * the RSI web page does have some good tips about speeding up your
   code. Things like "group scalars into parentheses;" or "take
   common expressions outside of FOR loops;" or "how to speed up array
   indexing assignments"

 * not all platforms are the same speed; some do certain operations
   faster than others, even with the same IDL code.

Some techniques discussed here are not really about speed. For
example, I and others have mentioned "chunking," or dividing your huge
array up into smaller segments for processing. While this may save
time, what it really does is save *memory*. If you use too much
memory then your computer slows way down.

One legitimate question was over how to quickly expand an array (using
REBIN vs the "#" operator). You can find the newsgroup discussion --
with timings -- here:

 http://cow.physics.wisc.edu/~craigm/idl/archive/msg00327.htm l

There are some other fancy tips like using NOZERO keyword for array

creation, but this is getting to be a fairly "niche" optimization.

Search around the archive and you can find other examples.

Craig

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Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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Subject: Re: fastest operations/fctns.
Posted by Johnny Lin on Mon, 23 Apr 2001 20:53:47 GMT
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Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in article
> [...]
>
> Things to bear in mind:
>
> [...]
>
> One legitimate question was over how to quickly expand an array (using
> REBIN vs the "#" operator). You can find the newsgroup discussion --
> with timings -- here:
>
thanks for the tips!...actually, the REBIN vs. "#" comment touches
upon something i'm curious on. i've noticed in the newsgroup that
oftentimes the soln. for a problem either involves:

- REBIN
- matrix multiplication, or
- HISTOGRAM

amongst these methods, which one is usually faster? i guess i'm asking
to try and figure out if i should finally make the time investment and
learn how to do those neat HISTOGRAM solns. JD Smith posts :)

thanks!

best,
-Johnny

Johnny Lin

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