Subject: Re: "clamping" an array to a maximum value?
Posted by davidf on Mon, 21 Dec 1998 08:00:00 GMT
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Kevin Ivory (Kevin@Ivory.de) writes:

> Martin Schultz wrote:
>> ... but be careful to use parantheses when you want to clamp min and
>> max at the same time:
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> In that case I don't use parantheses either, because I think the
> following "looks" nicer ;-)
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I agree with Kevin. Having nice looking programs is as important
as having programs that work correctly. :-)

The only problem with Kevin's approach is that I am usually
clamping from some mininum value to some maximun-minus-one
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```
twoodle_array = min_val > twoodle_array < max_val - 1
```

I've been bit so many times with this that I've given up
all aesthetics and wrap those damn parentheses around anything
that moves. :-(

Happy Holidays,

David
--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Progamming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

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Have nice holidays,
Kevin
--
  Kevin Ivory   Tel: +49 5556 979 434
  Max-Planck-Institut fuer Aeronomie   Fax: +49 5556 979 240
  Max-Planck-Str. 2   mailto:Kevin@Ivory.de
D-37191 Katlenburg-Lindau, GERMANY   http://ivory.de/

Subject: Re: "clamping" an array to a maximum value?
Posted by Martin Schultz on Mon, 21 Dec 1998 08:00:00 GMT
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Kevin Ivory wrote:

> dEdmundson@Bigfoot.com wrote:
>> I have a 2d array of floats. All elements having
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> That's easy:
>   twod_array = twod_array < max_val
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> Kevin
> --
>   Kevin Ivory   Tel: +49 5556 979 434
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Martin.

--
Dr. Martin Schultz
Department for Engineering&Applied Sciences, Harvard University
109 Pierce Hall, 29 Oxford St., Cambridge, MA-02138, USA

phone: (617)-496-8318
fax : (617)-495-4551

e-mail: mgs@io.harvard.edu
Internet-homepage: http://www-as.harvard.edu/people/staff/mgs/
 -- -------

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Subject: Re: "clamping" an array to a maximum value?
Posted by Mark Buckley on Mon, 21 Dec 1998 08:00:00 GMT
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dEdmundson@Bigfoot.com wrote in message <75l3vinit1@nnrp1.dejanews.com>...
>
>
> It's late here in Oz and my brain refuses to find an
> easy solution to the following seemingly trivial
> problem:
>
> I have a 2d array of floats. All elements having
> a value greater than max_val I want to set equal
> to max_val. My solution is a rather complicated-
> looking use of the "where" function.

a = a < maxval

where a is the array, should do it...

cheers,

Mark

Subject: Re: "clamping" an array to a maximum value?
Posted by Craig Markwardt on Tue, 22 Dec 1998 08:00:00 GMT
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Martin Schultz <mgs@io.harvard.edu> writes:
> Yup,
>
> that's what I really intended to say/write. BTW: How about a "last
> element" operator? I very often need something like
> subdata = data[*,0:n_elements(data[0,*])-1]
> which is not very aesthetic ;-) is it? It would just be great if one
> could write something like
> subdata = data[*,0:(*)-1] or anything with a similar short syntax
> In this case the parantheses would serve to distinguish between "all
> elements" and "last element". That's probably a little dangerous. Anyone
> with a better idea?

Yes, yes, a billion times yes! A billion is about the number of times
I could have used this capability.

Some present-day scripting languages allow you to supply negative
subscripts, to indicate indexing from the end rather than the front of
the array. data[-1] would indicate the last element, data[-2] the
second to last, etc. Powerful, but maybe *too* powerful.

Craig

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

Subject: Re: "clamping" an array to a maximum value?
Posted by Martin Schultz on Tue, 22 Dec 1998 08:00:00 GMT
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Posted by Kevin Ivory on Wed, 23 Dec 1998 08:00:00 GMT
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Martin Schultz wrote:
> BTW: How about a "last element" operator? I very often need something like
> subdata = data[*,0:n_elements(data[0,*])-1]

Just for completeness: that's probably supposed to be
subdata = data[*,0:n_elements(data[0,*])-2]
Otherwise your problem is trivial and you might as well write
subdata = data

Sorry, no better idea for the original problem, though. Everything
I can think of at the moment is even more complicated. :-(
(Or equivalent:
n_elements(data[0,*]) is the same as (size(data))[2]
which admittedly is not much clearer.)

Happy holidays,
Kevin
--
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