Subject: Re: Comparing 2 arrays
Posted by Jean H. on Tue, 28 Aug 2007 16:20:42 GMT
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perfect!! ... we had to move all the equipment form our lab so I couldn't participate in the debate (never send a post on Sunday if you don't know what you will be doing on Monday :-)

Thanks all for the clarity of the answer/article!

David, in your example (in this message), you use
NUMBER = (array_1 > array_2) * epsilon
and
NUMBER = (array_1 > array_2) * epsilon * 2 in your article...

Also, but that is for pure curiosity, could it be possible to read directly the mantissa and the power (see David's article if it sounds like a foreign language) and to compare them for our 2 numbers? ... 1) look a the power, if they have any difference, the two values can not be equal. Then look at the mantissa and asses if the digit values are the same or not...

Jean

David Fanning wrote:
> Jean H. writes:
>
>> to get back to a previous discussion we had a few month ago about being
>> "sufficiently close to zero", shouldn't it be (data1.A - data2.B) LT
>> epsilon * data1.A , with epsilon=(machar()).eps?
>
> OK, I found that discussion and read it eight or ten times until
> I finally understood it. (Probably why I forgot it before.)
>
> I've put a significantly edited discussion of this
> problem here:
>
> http://www.dfanning.com/code_tips/comparearray.html
>
> In my preferred solution now, I choose a number that
> is "sufficiently close" to zero like this:
>
> epsilon = (MACHAR()).eps
> NUMBER = (array_1 > array_2) * epsilon
>
> Then, the comparison between arrays is done like this:

>
>   IF Total(Abs(array_1 - array_2) LT NUMBER) EQ N_Elements(array_1) $
>   THEN RETURN, 1 ELSE RETURN, 0
>
> Additional comments welcome if you want to argue further. :-)
>
> Cheers,
>
> David
