Subject: Re: How to extract a datarange from a multidimensional array?
Posted by David Lopez Pons on Fri, 28 Jan 2005 10:33:05 GMT
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aeon@gmx.de wrote:

> Hi,
>
> i have following example data:
> x = [0,5,2,6,5,3,9]
> y = [1,5,7,4,3,4,8]
>
> to get the (x,y)-pairs in a special range i used the following:
> points = WHERE((x LE (5))AND(x GE (2))AND(y LE (7))AND(y GE (3)),count)
>
> Because i accept now the fact, that IDL works faster with array
> operations instead of for-loops ;)
> i want to do the following:
> xy=[[0,5,2,6,5,3,9],[1,5,7,4,3,4,8]]
>
> points=???
>
> i tried
> points= WHERE ((xy LE[5,7])AND(xy GE[2,3]),count)
> but this dont works for me.
>
> I know the solution is for sure simple one, but i cant find it.
> THX for every idea.
>
>
>
May be this is enough for you:

```
IDL> xy=[[0,5,2,6,5,3,9],[1,5,7,4,3,4,8]]
IDL> points2 = WHERE((xy[*,0] LE (5))AND(xy[*,0] GE (2))AND(xy[*,1] LE
(7))AND(xy[*,1] GE (3)),count)
IDL> print,points2
         1         2         4         5
```

I supose that you want yhe same results for points and points2 :)...

Bye.

Subject: Re: How to extract a datarange from a multidimensional array?
Posted by Bismarck on Fri, 28 Jan 2005 10:43:26 GMT
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Ok, i am officially a nerd. I cant see trees in a forest. But as i thought, it was really simple.

THX made

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Subject: Re: How to extract a datarange from a multidimensional array?
Posted by JD Smith on Fri, 28 Jan 2005 16:22:55 GMT
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On Fri, 28 Jan 2005 11:33:05 +0100, David Lopez Pons wrote:

> aeon@gmx.de wrote:
>
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>>
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> IDL> points2 = WHERE((xy[*,0] LE (5))AND(xy[*,0] GE (2))AND(xy[*,1] LE
> (7))AND(xy[*,1] GE (3)),count)
> IDL> print,points2
>  1 2 4 5

This will actually be slower than the original method proposed,

keeping X & Y separate, since essentially you're doing the same amount of comparison work, but must also generate subscripting indices to divide the xy array back into x and y 4 times.  Check out http://www.dfanning.com/misc_tips/submemory.html for more info on why higher-order subscripting can get you into trouble.

JD

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