Subject: Re: help with sorting vector elements in to subarrays
Posted by greg.addr on Mon, 21 May 2012 15:54:35 GMT
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I can't follow exactly what you want to do, but whatever it is, I think you'd find the uniq() function would make it simpler.

Greg

Subject: Re: help with sorting vector elements in to subarrays
Posted by Russell Ryan on Mon, 21 May 2012 19:16:52 GMT
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On May 21, 10:33 am, Trifon Trifonov <tito_trifo...@abv.bg> wrote:
> Hallo!
>
> I have this vector: zz = [5,6,9,10,11]
>
> Anybody can tell me how I can sort it like zz1 = [5,6], zz2 =[9,10,11]?
>
> Here is the code:
>
> zz =[]
> f=indgen(n_elements(amp))
>
> ;;I have amp[i] on witch some of the elements are identical.
> ;I need to take this [i]indexies and
> ;1-st to take it out
> ;2nd to write it to another array [sub arrays]
>
> for i=0L, n_elements(amp)-1 do begin
> a = where(amp[i] eq amp ,count)
> if count gt 0.0 then begin
> if n_elements(a) gt 1 then begin
> zz = [zz,i]
> endif
> endif
> endfor
>
> if n_elements(zz) ne 0.0 then begin
> match2,f,zz,subf,subzz
> f[subzz] = -1
> f = f[where(f[*] NE -1)]
> endif
>
> zz = Long[5]
> 4 5 9 10 11

>
> f = Int[13]
> 0 1 2 3 6 7 8 12 13
 14
> 15 16 17
>
> All the best,
> Trifon

You're not making much sense... How does zz=[5,6,9,10,11] sort into
zz1=[5,6] and zz2=[9,10,11]? Are you just taking the first two and
last three elements?

Russell

But, yes, uniq() is probably going to help you. Just remember, uniq
only works correctly on arrays which are sorted!

Subject: Re: help with sorting vector elements in to subarrays
Posted by Tito on Mon, 21 May 2012 20:22:09 GMT
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> You're not making much sense... How does zz=[5,6,9,10,11] sort into
> zz1=[5,6] and zz2=[9,10,11]? Are you just taking the first two and
> last three elements?
>
> Russell
>
> But, yes, uniq() is probably going to help you. Just remember, uniq
> only works correctly on arrays which are sorted!

Dear Greg and Russel,

I know the Uniq() routine. I try it several times with no success.

I am trying to select spectral lines with the same depths. It is a very long story why they are with the same depths....
As you can imagine amp[i] has a different values ranging from 0 to 1 for each wavelength thats why I cant Sort() them (at least I don't know how)

zz=[5,6,9,10,11] in particular 5,6 and 9,10,11 are the indexes of very close lines in the spectra and they are basically blended. Thats why I want to take them out from the array make a multigauss fit and the result Gaussian I will pass it again as one gaussian(Lorentzian actually) sum of the gaussians of line[5,6] or line[9,10,11]

this is just a simple example sometimes I have 4 close lines or 3-4 pairs.

with the above code [ugly I admit] I am taking out the closed lines in an array

zz=[5,6,9,10,11] but then i need to split it to zz1=[5,6] and zz2=[9,10,11]
this is all that i need in order to start the multigaussian fitting automatically.

I have huge amount of data and I want this to be automatic.

I am sure there is an easy way but this somehow is working and I am happy.

Anyway I will continue trying... any feed back is more than welcome.

Trifon

Subject: Re: help with sorting vector elements in to subarrays
Posted by greg.addr on Tue, 22 May 2012 12:27:58 GMT
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If you know these line groups in advance, and you just want to label the groups, you could use something like:

```
zz = [5,6,9,10,11]

n_groups=2
group=[0,0,1,1,1]

for i=0,n_groups-1 do begin
 q=where(group eq i)

 ...some operation on zz[q]...
endfor
```

If you don't know in advance, maybe you can create this group vector out of your amp array. If amp is a float representing amplitude, I can't see how you'd do that, but I'm just guessing what you have.

Greg

Subject: Re: help with sorting vector elements in to subarrays
Posted by Tito on Wed, 23 May 2012 15:35:12 GMT
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On Tuesday, May 22, 2012 2:27:58 PM UTC+2, (unknown) wrote:
> If you know these line groups in advance, and you just want to label the groups, you could use something like:

>
> zz = [5,6,9,10,11]
>
> n_groups=2
> group=[0,0,1,1,1]
>
> for i=0,n_groups-1 do begin
> q=where(group eq i)
>
> ...some operation on zz[q]...
> endfor
>
> If you don't know in advance, maybe you can create this group vector out of your amp array. If amp is a float representing amplitude, I can't see how you'd do that, but I'm just guessing what you have.
>
> Greg

Greg I will try it! But yes amp[i] is a float representing amplitude. For now I exclude this blended lines but I will definitely need them later. I will probably make another ugly loop that will handle with that (I hope) I was just searching for a simple method that might separate this trivial vector to neighboring sub arrays but i guess it is not that easy...
I will write when I get solution. I have something in mind.

Trifon

Subject: Re: help with sorting vector elements in to subarrays
Posted by Tito on Thu, 31 May 2012 12:07:32 GMT
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OK I tried and I fail.... I did this:

```
zz = []
f=indgen(n_elements(amp))   ;; (f=[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15])

for i=0L, n_elements(amp)-1 do begin
 a = where(amp[i] eq amp ,count)
 if count gt 0.0 then begin
  if n_elements(a) gt 1 then begin
     zz = [zz,i]    ;; (zz =[3,4,6,7,8,9,10])
  endif
 endif
endfor

if n_elements(zz) ne 0.0 then begin
 match2,f,zz,subf,subzz
 f[subzz] = -1
```

```
 f = f[where(f[*] NE -1)] ;; (f = [0,1,2,5,11,12,13,14,15]) So far great!

 ;;amp[zz] = [0.5538, 0.5538, 0.5524, 0.5524, 0.5524, 0.1255, 0.1255]

  ss = unique(amp[zz],count) ;; (ss=[0.5538, 0.5524, 0.1255])
  dd = dblarr(n_elements(ss),20)*0-1
  for i = 0L , n_elements(ss)-1 do begin
    a = where(ss[i] eq amp,count)
    dd[i,a] = a
  endfor
endif

;; Now dd = Double[3, 20]
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
       3.0000000      -1.0000000      -1.0000000
       4.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000       6.0000000      -1.0000000
      -1.0000000       7.0000000      -1.0000000
      -1.0000000       8.0000000      -1.0000000
      -1.0000000      -1.0000000       9.0000000
      -1.0000000      -1.0000000       10.000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
      -1.0000000      -1.0000000      -1.0000000
```

And the question... how can I remove the '-1' and to get 3 diferent vector [3,4] [6,7,8] and [9,10] ???

thank you !

Subject: Re: help with sorting vector elements in to subarrays
Posted by greg.addr on Thu, 31 May 2012 12:36:29 GMT
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Would this do it?

```
  for i = 0L, n_elements(ss)-1 do print,where(ss[i] eq amp)
```