Subject: cutting/grouping
Posted by Seb on Thu, 05 Sep 2013 15:41:58 GMT
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Hi,

I've been unsuccessfully searching the docs for a function that would "break" an array. For any R users in the list: something like the 'cut' function, which does the following:

```
R> (a <- 1:10)
 [1]  1  2  3  4  5  6  7  8  9 10
R> (b <- seq(0, 10, 2))
[1]  0  2  4  6  8 10
R> cut(a, breaks=b)
 [1] (0,2]  (0,2]  (2,4]  (2,4]  (4,6]  (4,6]  (6,8]  (6,8]  (8,10]
 (8,10]
Levels: (0,2] (2,4] (4,6] (6,8] (8,10]
```

Is there a particular module that needs to be loaded?

Thanks,

--
Seb

Subject: Re: cutting/grouping
Posted by Heinz Stege on Thu, 05 Sep 2013 21:39:47 GMT
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Hi Seb,

I have absolutely no knowledge about R. The following may help you, or may not. Look for the value_locate function in the IDL documentation. It can reproduce the results of your R calculation:

```
IDL> a=indgen(10)+1
IDL> b=indgen(6)*2
IDL> pos=value_locate(b,a)
IDL> pos-=b[pos] eq a
IDL> print,b[pos]
       0       0       2       2       4
       4       6       6       8       8
IDL> print,'('+strtrim(b[pos],2)+','+strtrim(b[pos+1],2)+']'
(0,2] (0,2] (2,4] (2,4] (4,6] (4,6] (6,8] (6,8] (8,10] (8,10]
IDL> u=uniq(pos)
IDL>  print,'('+strtrim(b[pos[u]],2)+','+strtrim(b[pos[u]+1],2)+'] '
```

(0,2] (2,4] (4,6] (6,8] (8,10]

Cheers, Heinz

Subject: Re: cutting/grouping
Posted by Seb on Fri, 06 Sep 2013 04:15:54 GMT
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On Thu, 05 Sep 2013 23:39:47 +0200,
Heinz Stege <public.215.967@arcor.de> wrote:

> Hi Seb, I have absolutely no knowledge about R. The following may help
> you, or may not. Look for the value_locate function in the IDL
> documentation. It can reproduce the results of your R calculation:

```
IDL> a=indgen(10)+1 b=indgen(6)*2 pos=value_locate(b,a) pos-=b[pos] eq a
IDL> print,b[pos]
>           0 0 2 2 4 4 6 6 8 8
IDL> print,'('+strtrim(b[pos],2)+','+strtrim(b[pos+1],2)+']'
> (0,2] (0,2] (2,4] (2,4] (4,6] (4,6] (6,8] (6,8] (8,10] (8,10]
IDL> u=uniq(pos)
IDL>  print,'('+strtrim(b[pos[u]],2)+','+strtrim(b[pos[u]+1],2)+'] '
> (0,2] (2,4] (4,6] (6,8] (8,10]
```

Thanks, this is a great tool. I see though that it's limited to cases
where 'a' increases monotonically.

Cheers,
--
Seb

Subject: Re: cutting/grouping
Posted by Heinz Stege on Fri, 06 Sep 2013 12:48:19 GMT
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On Thu, 05 Sep 2013 23:15:54 -0500, Seb wrote:

> Thanks, this is a great tool. I see though that it's limited to cases
> where 'a' increases monotonically.

This may be due to the uniq function. Try

```
  u=uniq(pos,sort(pos))
```

instead of u=uniq(pos) and it should work for random a's.

Good luck, Heinz
