Subject: Re: Array element deletion
Posted by David Fanning on Fri, 12 Sep 2003 13:31:20 GMT
View Forum Message <> Reply to Message

Edd Edmondson writes:

> Supposing I have a big array and I also have an array containing indices
> of unwanted elements. Is there a neat way of removing those elements from
> the array?
>
> Attempts using WHERE() have failed for me* and currently I'm looping
> through the array of indices and deleting them one at a time - which is
> fine when I've only got 20 or 30 of them but I doubt it'll scale well.

Here is a function from my web page:

```
FUNCTION SetDifference, a, b

   ; = a and (not b) = elements in A but not in B

mina = Min(a, Max=maxa)
minb = Min(b, Max=maxb)
IF (minb GT maxa) OR (maxb LT mina) THEN RETURN, a ;No intersection...
r = Where((Histogram(a, Min=mina, Max=maxa) NE 0) AND $
         (Histogram(b, Min=mina, Max=maxa) EQ 0), count)
IF count eq 0 THEN RETURN, -1 ELSE RETURN, r + mina
END
```

Here is how it works. Suppose you have an array:

```
   array = [3.5, 4.8, 9.3, 2.1, 7.6, 4.6]
```

And an array of indices you don't want:

```
   bad = [2, 4]
```

You would do this:

```
   possible = Indgen(N_Elements(array))
   good = SetDifference(possible, bad)
   Print, possible
   Print, good
   newArray = array[good]
   Print, newArray
```

You can learn more about these set methods here:

http://www.dfanning.com/tips/set_operations.html

Cheers,

David

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