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Subject: Interesting property of sort

Posted by [cmancone](#) on Wed, 16 May 2007 12:41:05 GMT

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while attempting to build a faster star matching algorithm, I "discovered" an interesting property of sort - or, an interesting use for it. Of course, you guys have all probably seen this before anyway, but I thought I would share it because it can be very useful. Essentially, I found the easy way to make a sort lookup table. So, let's say you have the array:

```
test = [5,4,1,3,2]
```

and you sort it:

```
sortindex = sort(test)
sorted = test[sortindex]
```

now, what if you want to know where the 5 (or any other number) ended up in the sorted array? It turns out that you can make a lookup table by simply sorting sortindex.

```
lookup = sort(sortindex)
```

so, if you wanted to know where the first element of test ended up in the sorted list, you would say:

```
print,lookup[0]
; prints "4"
print,sorted[lookup[0]]
; prints "5"
```

In retrospect, I suppose this result isn't suprising, and probably should have been immediately obvious. Still, I thought I'd share.

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