Subject: Re: Mode????

Posted by S Penzes on Thu, 14 Jan 1999 08:00:00 GMT

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RobertKehoe wrote:

- > Hi there
- > I am trying to find an IDL function that returns the mode out of an array
- > of numbers anyone know a way of doing this. It strange that there does not
- > seem to be a function for this.
- > Rob.
- > --
- > The opinions expressed in this communication are my own and do not
- > necessarily reflect those of my employer.

Hi,

If by "mode" you mean the number that occurs most frequently in a vector then take a look at this piece of code. It comes from the very first "Widget Programming" course (heck my manuals are all stamped DRAFT). It was put forward as an example of a piece of code that would forego the use of loops. To me it was a classic example and I periodically revive it to show what can be done.

Hope this is what you were looking for.

```
Function Mode, Value
NumElements = N_ELEMENTS( Value )
SortedValue = [ Value( SORT( Value )),0]
SortedValue(NumElements)= NOT( SortedValue( NumElements-1 ))
ShiftedValue = SHIFT( SortedValue,1)
RunLengths = WHERE( SortedValue NE ShiftedValue )
RunsShifted = SHIFT( RunLengths, 1 )
          = MAX( Runlengths - RunsShifted, Index )
MaxRun
Mode
        = SortedValue( RunsShifted( Index ))
Return, Mode
End
IDL> input=[3,3,4,4,4,2,2,5,5,5,5]
IDL> print,mode(input)
   5
```

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Note: remove "nospam" from Reply-To and .signature