
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 )
MaxRun       = MAX( Runlengths - RunsShifted, Index )
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
