
Algorithm 3.1.29 Find a mode from a list of nondecreasing integers.

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1: procedure MODE( $a_1, a_2, \dots, a_n$ : list of nondecreasing integers)
2:    $mode \leftarrow \perp$ 
3:    $count \leftarrow 1$ 
4:    $frequency \leftarrow 1$ 
5:   for  $i = 1$  to  $n - 1$  do
6:     if  $a_i \neq a_{i+1}$  then  $count = 1$  else  $count += 1$ 
7:     if  $count > frequency$  then  $\triangleright$  Found new sublist mode.
8:        $mode \leftarrow a_i$ 
9:        $frequency \leftarrow count$   $\triangleright$  Set mode in memory.
10:    end if
11:  end for
12:  return  $mode$ 
13: end procedure
```
