

Can array manager be kept as Unique?
No

For all i , a_i is unique.

For array a to be sorted $a_i > a_{i+1}$ for $i < n$
iff $a_1 < a_n$

$$a_{i-1} > a_i > a_{i+1} \Rightarrow a_1 > a_i > a_n$$

$a_1 > a_n$ $a_1 > a_n$

an array unique iff $n-1$ comparisons
proof

q.d. unique iff a manager of one element array
is not zero iff $n-1$ comparisons
o.e.d.

$n-1-$

an array unique, iff $n-1$ comparisons (elem).