Intuition

From the problem statememt, we can conclude that if we make all subarray of size 3 beautiful, then all subarray of size greater than 3 will also be beautiful and ultimately our array becomes beautiful. So we have to think only about of size 3 subarray.

Approach

Any element can be a part of atmost 3 subarray because we have to think only about of size 3 subarray. So, we can conclude that we have only 3 options.

- Option 1 : Select first element of the subarray and go to the next subarray.
- Option 2 : Select second element of the subarray and go to the next subarray.
- Option 3 : Select third element of the subarray and go to the next subarray.
  Now, we can iterate on the given array from 0 to n-3(because in a array of length n we have atmost n-2 subarray) and return minimum of all the three options.

Complexity

- Time complexity: O(n)
- Space complexity: O(n)