@LeetCode

Given an unsorted array return whether an increasing subsequence of length 3 exists or not in the array.

Formally the function should:

Return true if there exists i, j, k

such that $arr[i] < arr[j] < arr[k]$ given $0 \leqslant i < j < k \leqslant n{-}1$ else return false.

Note: Your algorithm should run in O(n) time complexity and O(1) space complexity.

Example 1:

Input: `[1,2,3,4,5]`

Output: `true`

Example 2:

Input: `[5,4,3,2,1]`

Output: `false`