

## Arrays

### (Assignment Questions)

#### (EASY)

**Question 1 :** Given an integer array nums, return true if any value appears at least twice in the array, and return false if every element is distinct. [[link](#)]

*Examples :*

*Input:* nums = [1,2,3,4]

*Output:* false

*Input:* nums = [1,1,1,3,3,4,3,2,4,2]

*Output:* true



#### (MEDIUM)

**Question 2 :** There is an integer array nums sorted in ascending order (with distinct values).

Prior to being passed to your function, nums is possibly rotated at an unknown pivot index k ( $1 \leq k < \text{nums.length}$ ) such that the resulting array is  $[\text{nums}[k], \text{nums}[k+1], \dots, \text{nums}[\text{n}-1], \text{nums}[0], \text{nums}[1], \dots, \text{nums}[\text{k}-1]]$  (0-indexed). For example,  $[0,1,2,4,5,6,7]$  might be rotated at pivot index 3 and become  $[4,5,6,7,0,1,2]$ .

Given the array nums after the possible rotation and an integer target, return the index of target if it is in nums, or -1 if it is not in nums.

You must write an algorithm with  $O(\log n)$  runtime complexity. [[link](#)]

*Examples :*

*Input:* nums = [4,5,6,7,0,1,2], target = 0

*Output:* 4

*Input:* nums = [4,5,6,7,0,1,2], target = 3

*Output:* -1

ashika.mittal05@gmail.com

**(MEDIUM)**

**Question 3 :** Given an integer array nums, find a subarray that has the largest product, and return the product. The test cases are generated so that the answer will fit in a 32-bit integer. [\[link\]](#)

**Note -** This Qs might feel difficult as a beginner because it uses DP approach.

*Examples :*

*Input: nums = [2,3,-2,4]*

*Output: 6*

*Explanation: [2,3] has the largest product 6.*

*Input: intervals =nums = [-2,0,-1]*

*Output: 0*

*Explanation: The result cannot be 2, because [-2,-1] is not a subarray.*



ashika.mittal05@gmail.com