540. Single Element in a Sorted Array <medium>

int singleNonDuplicate(vector<int>& nums) {

int lo = 0;

int hi = nums.size() - 1;

while(lo < hi){

int mid = lo + (hi - lo) / 2;

bool even = (hi - mid) % 2 == 0;

if(nums[mid] == nums[mid+1]){

if(even)

lo = mid + 2;

else

hi = mid - 1;

}

else if(nums[mid] == nums[mid-1]){

if(even)

hi = mid - 2;

else

lo = mid + 1;

}

else{

return nums[mid];

}

}

return nums[lo];

}