# 162. Find Peak Element

A peak element is an element that is strictly greater than its neighbors.

Given a 0-indexed integer array nums, find a peak element, and return its index. If the array contains multiple peaks, return the index to any of the peaks.

You may imagine that nums[-1] = nums[n] = -∞. In other words, an element is always considered to be strictly greater than a neighbor that is outside the array.

You must write an algorithm that runs in O(log n) time

## SOLUTION IN C++

class Solution {

public:

int findPeakElement(vector<int>& nums) {

int l = 0;

int r = nums.size() - 1;

while (l < r) {

const int m = (l + r) / 2;

if (nums[m] >= nums[m + 1])

r = m;

else

l = m + 1;

}

return l;

}

};