

287. Find the Duplicate Number

```
class Solution {  
public:  
    int findDuplicate(vector<int>& nums) {  
        int slow = nums[0];  
        int fast = nums[0];  
        do {  
            slow = nums[slow];  
            fast = nums[nums[fast]];  
        } while (slow != fast);  
        slow = nums[0];  
        while (slow != fast) {  
            slow = nums[slow];  
            fast = nums[fast];  
        }  
        return slow;  
    }  
};
```

The screenshot displays the LeetCode interface for the problem '287. Find the Duplicate Number'. The left panel shows the problem description: 'Given an array of integers `nums` containing `n + 1` integers where each integer is in the range `[1, n]` inclusive. There is only **one** repeated number in `nums`, return *this* repeated number. You must solve the problem **without** modifying the array `nums` and using only constant extra space.' It includes three examples with input arrays and their corresponding outputs. The right panel shows the submission status as 'Accepted' with 59/59 testcases passed. It displays performance metrics: Runtime is 0 ms (Beats 100.00%) and Memory is 65.13 MB (Beats 41.16%). A bar chart shows the distribution of runtime times across various percentiles. At the bottom, there are tabs for 'Testcase' and 'Test Result'.