ARRAY : Video - 58

Medium

Leetcode -287

E.A.S.Y

Find The Duplicate Number

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287. Find the Duplicate Number

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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 uses only constant extra space. O(1)

Example 1:

```
Input: nums = [1,3,4,2,2]
Output: 2
```

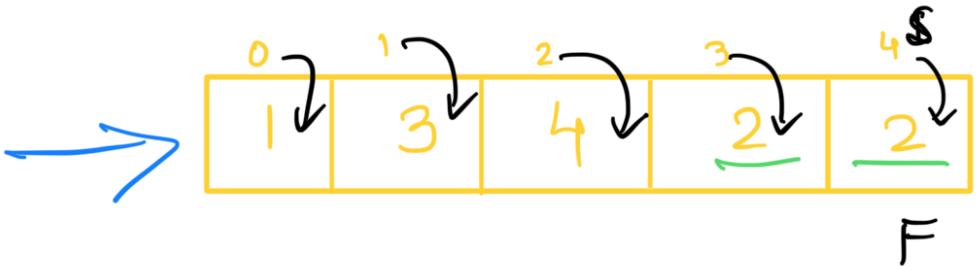

Approach without modifying array :- (Linear Runtime)

How I identify Hare & Tortoise Algorithm ???

→ (·) Duplicacy . ✕

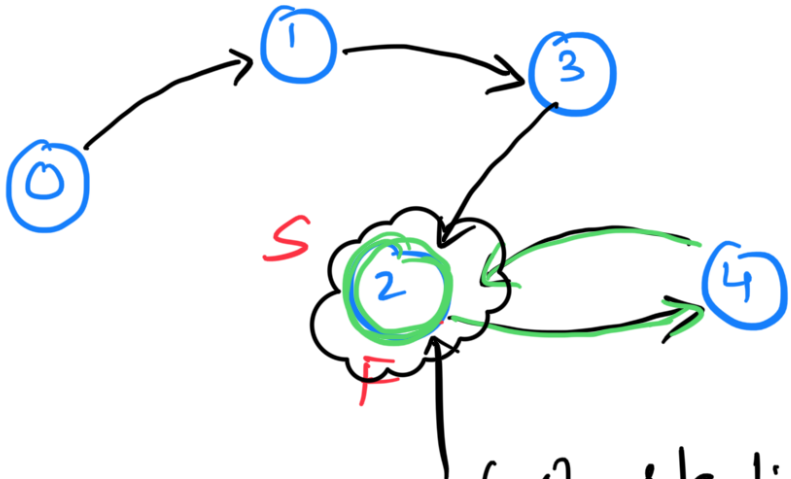
→ (·) Traverse through indices . (1 <= nums[i] <= n)

Hare & Tortoise (Slow - Fast Pointer)



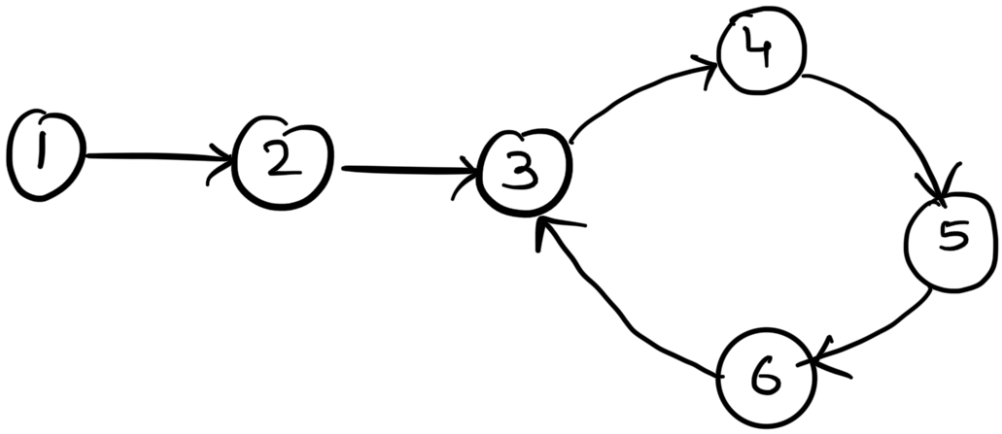
(S == F)

Detect Cycle → "There is a Cycle"



(S == F)

Detect cycle. ↵

Cycle starting Point (duplicate no).

Intuition :-