**Missing Number**

It is an implementation of a solution to the "Missing Number" problem. Specifically, it finds the missing number in an array of distinct numbers within a given range [0, n].

1. **Problem solving:**

**Initialize Variables:**

Let n be the length of the array (nums.length).

Initialize a variable result with n. This is because the missing number could be at the end of the array.

**XOR Operation:**

Iterate through the array and the indices from 0 to n.

Use the XOR (^) operation to cancel out elements and indices.

The final value of result will be the missing number.

**Return Result:**

The value stored in result after XOR operations is the missing number.

Return the result.

1. **Flow chart**

**Start**

**Initialize Variables n = nums.length result = n**

**result ^= i ^ nums[i]**

**Calculate mid point**

**output**

**End**

**Loop through array and indices**

**End of Loop**

**Return result**

**End**

**End**

1. **Output** 