**Unique element in an array where all elements occur k times except one**

Given an array that contains all elements occurring k times, but one occurs only once. Find that unique element.  
**Examples:**

***Input  :****arr[] = {6, 2, 5, 2, 2, 6, 6}  
            k = 3****Output :****5****Explanation:****Every element appears 3 times accept 5.*

***Input  :****arr[] = {2, 2, 2, 10, 2}  
            k = 4****Output:****10****Explanation:****Every element appears 4 times accept 10.*

**use bitwise AND**to find the unique element in O(n) time and constant extra space.

1. Create an array **count[]** of size equal to number of bits in binary representations of numbers.
2. Fill count array such that count[i] stores count of array elements with i-th bit set.
   1. Form result using count array. We put 1 at a position i in result if count[i] is not multiple of k. Else we put 0.

**Time Complexity:** **O(n)**  
**Auxiliary Space: O(1)**