

High – level Questions

Q.1. Given an integer array A of N integers, find the pair of integers in the array which have minimum XOR value. Report the minimum XOR value.

Input:

A = [0, 2, 5, 7]

Output:

2

Explanation:

0 XOR 2 = 2

Input:

A = [0, 4, 7, 9]

Output:

3

Q.2. Given an integer A find the Ath number whose binary representation is a palindrome.

NOTE:

- Consider the 1st number whose binary representation is palindrome as 1, instead of 0
- Do not consider the leading zeros, while considering the binary representation.

Input:

A = 1

Output:

1

Explanation:

1st Number whose binary representation is palindrome is 1

Input:

A = 9

Output:

27

Explanation

9th Number whose binary representation is palindrome is 27 (11011)

Q.3. Find all possible subsets of a given array using bitmasking.

Input:

A={1, 2, 3}

Output:

0

1

2

1 2

3

1 3

2 3

1 2 3

Q.4. Given a set of numbers, you have to find the sum of all subsets.

Input:

A={1, 2, 3}

Output:

24

Explanation:

All sub sets of A

0

1

2

1 2

3

1 3

2 3

1 2 3

And sum of all these sets is 24.