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Bit Practice Question

Question1: Given an array of integers, find the maximum bitwise AND value of any two integers in the array.

Input: [3, 5, 8, 10, 12]

Output: 8

Explanation: The maximum bitwise AND value of any two integers in the array is 8, which is the result of the bitwise AND operation between 10 (1010 in binary) and 12 (1100 in binary).

Question2: Given a non-negative integer n, find the number of integers x such that $0 \leq x \leq n$ and $n \& x == x$

Input: n = 5

Output: 4

Explanation: The integers x that satisfy the condition are 0, 1, 4, and 5.

```
1: class MaxBitwiseAnd{

    static int calculate(int arr[],int n){
        int result=0;
        for(int i=0;i<n;i++){
            for(int j=i+1;j<n;j++){
                if((arr[i]&arr[j])>0){
                    result= arr[i]&arr[j];
                }
            }
        }
        return result;
    }

    public static void main(String[] args) {

        int arr[]={3,5,8,10,12};
        System.out.println("Maximum Bitwise AND = "+calculate(arr,arr.length));
    }
}
```

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```
2. public class question2 {  
  
    public static void main(String[] args) {  
  
        int n=5;  
  
        for(int i=0;i<=n;i++){  
            if((n&i)==i){  
                System.out.print(i+" ");  
            }  
        }  
    }  
}
```