1356. Sort Integers by The Number of 1 Bits

Description

You are given an integer array `arr`. Sort the integers in the array in ascending order by the number of `1`'s in their binary representation and in case of two or more integers have the same number of `1`'s you have to sort them in ascending order.

Return *the array after sorting it*.

Example 1:

```
Input: arr = [0,1,2,3,4,5,6,7,8]
Output: [0,1,2,4,8,3,5,6,7]
Explantion: [0] is the only integer with 0 bits.
[1,2,4,8] all have 1 bit.
[3,5,6] have 2 bits.
[7] has 3 bits.
The sorted array by bits is [0,1,2,4,8,3,5,6,7]
```

Example 2:

```
Input: arr = [1024,512,256,128,64,32,16,8,4,2,1]
Output: [1,2,4,8,16,32,64,128,256,512,1024]
Explantion: All integers have 1 bit in the binary representation, you should just sort them in ascending order.
```

Constraints:

- `1 <= arr.length <= 500`
- `0 <= arr[i] <= 10^4`