DAY 20

INTERVIEW BIT PROBLEMS :

1. Wave Array

Given an array of integers, sort the array into a wave like array and return it,
In other words, arrange the elements into a sequence such that a1 >= a2 <= a3 >= a4 <= a5.....
Example
Given [1, 2, 3, 4]
One possible answer : [2, 1, 4, 3]
Another possible answer : [4, 1, 3, 2]

NOTE : If there are multiple answers possible, return the one thats **lexicographically smallest**.
So, in example case, you will return [2, 1, 4, 3]

CODE :

PYTHON

```python
class Solution:
    # @param A : list of integers
    # @return a list of integers
    def wave(self, A):
        A.sort()
        n=len(A)
        if n==0 or n==1:
            return A
        for i in range(0,n-1,2):
            A[i],A[i+1]=A[i+1],A[i]
        return A
```

C++

```cpp
vector<int> Solution::wave(vector<int> &A) {
    sort(A.begin(),A.end());
    int n=A.size();
    for(int i=0;i<n-1;i+=2){
        swap(A[i],A[i+1]);
    }
    return A;
}
```