Boss Hierarchy

HackerRank

Problem Statement

Zozo joins a company named Yolo today. He is very new here and doesn't know about the leading hierarchy of the company.But he knows who is the CEO and knows he always stays in the middle.

There are **n** rank in the company and **2^n -1** number of employees.Each employee has two employees working under him(except the most junior ones).Each level of the hierarchy has employees managing the same number of workers, except for the lowest level.

Zozo wants you to help him understand the hierarchy of the company.

You are given an integer **n**. The number of ranks in the company and **2^n-1** integers.The employees of the company.You need to output the employee hierarchy serially.

It is guaranteed that the CEO stays in the middle.

For example, **n = 3** and **employees = [4,2,5,1,6,3,7]**,here **CEO = 1** and the hierarchy will be **[1,2,3,4,5,6,7]**

Input Format

- The first line of the input will consist of one integer n ($1 \leq n \leq 15$) the number of rank in the company.
- The next line will consist of 2^n-1 integers the employees number($0 \leq employee[i] \leq 10^{18}$).

Constraints

- $1 \leq n \leq 15$
- $0 \leq employees[i] \leq 10^{18}$

Output Format

- Output the employee hierarchy serially.

Sample Input 0

```
3
73 35 92 1 60 88 52
```

Sample Output 0

```
1 35 88 73 92 60 52
```

Sample Input 1

```
4
8 4 9 2 10 5 11 1 12 6 13 3 14 7 15
```

Sample Output 1

```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
```