1718. Construct the Lexicographically Largest Valid Sequence

Description

Given an integer `n`, find a sequence that satisfies all of the following:

- The integer `1` occurs once in the sequence.
- Each integer between `2` and `n` occurs twice in the sequence.
- For every integer `i` between `2` and `n`, the **distance** between the two occurrences of `i` is exactly `i`.

The **distance** between two numbers on the sequence, `a[i]` and `a[j]`, is the absolute difference of their indices, `|j - i|`.

Return *the **lexicographically largest** sequence. It is guaranteed that under the given constraints, there is always a solution.*

A sequence `a` is lexicographically larger than a sequence `b` (of the same length) if in the first position where `a` and `b` differ, sequence `a` has a number greater than the corresponding number in `b`. For example, `[0,1,9,0]` is lexicographically larger than `[0,1,5,6]` because the first position they differ is at the third number, and `9` is greater than `5`.

Example 1:

```
Input: n = 3
Output: [3,1,2,3,2]
Explanation: [2,3,2,1,3] is also a valid sequence, but [3,1,2,3,2] is the lexicographically largest valid sequence.
```

Example 2:

```
Input: n = 5
Output: [5,3,1,4,3,5,2,4,2]
```

Constraints:

- `1 <= n <= 20`