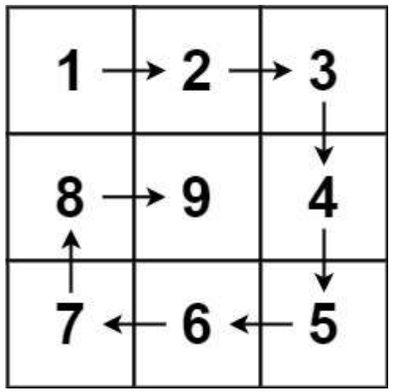
59. Spiral Matrix II

Medium 2809 166 Add to List Share

Given a positive integer `n`, generate an `n x n matrix` filled with elements from `1` to n^2 in spiral order.

Example 1:




```
Input: n = 3
Output: [[1,2,3],[8,9,4],[7,6,5]]
```

Example 2:

```
Input: n = 1
Output: [[1]]
```

Constraints:

- `1 <= n <= 20`

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Seen this question in a real interview before? Yes No

Companies

Java Autocomplete

```java
class Solution {
    public int[][] generateMatrix(int n) {

        int[][] matrix = new int[n][n];

        int counter = 1;
        int top = 0;
        int left = 0;
        int bottom = n - 1;
        int right = n - 1;

        while(true){

            for(int i = left; i <= right; i++){
                matrix[top][i] = counter++;
            }

            top++;

            if(left > right || top > bottom)
                break;

            for(int i = top; i <= bottom; i++){
                matrix[i][right] = counter++;
            }

            right--;

            if(left > right || top > bottom)
                break;

            for(int i = right; i >= left; i--){
                matrix[bottom][i] = counter++;
            }

            bottom--;

            if(left > right || top > bottom)
                break;

            for(int i = bottom; i>= top; i--){
                matrix[i][left] = counter++;
            }

            left++;

            if(left > right || top > bottom)
                break;
        }

        return matrix;
    }
}
```